

4th ANNUAL  
TEXAS  
ENVIRONMENTAL  
SUPERCONFERENCE



*"In the Groove"*

Thursday, August 6, 1992  
and

Friday, August 7, 1992

Four Seasons Hotel

98 San Jacinto Blvd.

Austin, Texas

**FOURTH ANNUAL TEXAS ENVIRONMENTAL SUPERCONFERENCE**  
***"In the Groove"***

**Thursday, August 6, 1992**

8:45 - 9:00 Welcoming Remarks--Jeff Civins, Co-Chair  
Kelly, Hart & Hallman

**I. FACILITY START-UP AND EXPANSION -- *"We've Only Just Begun"***

9:00-10:30 **Roundtable Discussion** - Regulatory Programs - Preparing Applications -  
Hearing Process - Citizen Participation

Moderator: Fran Phillips  
Gardere & Wynne  
Dallas, Texas

Panel: Pat Finn	Mary Sahs
Fulbright & Jaworski	Office of Public Interest Counsel
Austin, Texas	Texas Water Commission

Jim Morriss	Teresa Salamone
Thompson & Knight	Geraghty & Miller
Dallas, Texas	Austin, Texas

Tom Aubry  
Sullins, Johnston, Rohrbach, Magers & Herbert  
Houston, Texas

10:30-10:45 Break

**II. ONGOING OPERATIONS/COMPLIANCE AND RISK REDUCTION -- *"I Walk the Line"***

10:45-12:15 **Roundtable Discussion** - Waste Minimization and Recycling - Treatment, Storage, & Disposal - Spill,  
Release & Emergency Reporting - On-Site Contamination - Violations - Compliance Programs

Moderator: Paul Gosselink  
Lloyd, Gosselink, Fowler, Blevins & Mathews  
Austin, Texas

Panel: Mary Kelly	Joe Curtis
TX Center for Policy Studies	Baker-Hughes, Inc.
Austin, Texas	Houston, Texas

Nancy Worst	Pam Giblin
Pollution Prevention	Jones, Day, Reavis & Pogue
/Conservation	Austin, Texas
Austin, Texas	

Allen Beinke	Kelly O'Shieles Byars
Jenkins & Gilchrist	Lichliter\Jameson
Austin, Texas	Houston, Texas (paper only)

12:15-1:30      Lunch

**III. THE TEXAS NATURAL RESOURCES CONSERVATION COMMISSION -- *"Happy Together"***

1:30-2:00      Jesus Garza  
Executive Director  
Texas Water Commission

**IV. AIR QUALITY -- Moderator: Dick Flannery  
Texas Air Control Board, Region 7**

2:00-2:25      Title V Permitting -- *"Easier Said than Done"*  
Steve Spaw  
Law Environmental, Inc.  
Austin, Texas

2:25-2:50      Air Toxics -- *"Take My Breath Away"*  
Eli Bell  
Benckenstein, Oxford & Johnson  
Austin, Texas

2:50-3:20      Ozone -- *"Eight Miles High"*  
Bev Hartsock  
Government & Community Affairs  
Texas Air Control Board

3:20-3:35      Break

**V. WATER QUALITY -- Moderator: Carol Batterton, Co-Chair  
Texas Water Commission**

3:35-4:15      Underground Water -- *"Cry Me a River"*  
James Kowis  
Director-Watershed Management  
Texas Water Commission

Mark Jordan  
Assistant Director-Legal Services  
Texas Water Commission

4:15-4:40      Watershed Management -- *"Splish Splash"*  
Barbara Britton  
Director-Standards & Assessments  
Texas Water Commission

4:40-5:15      Water Toxics -- *"Bridge Over Troubled Waters"*  
Jim Davenport  
Team Leader-Water Quality Standards  
Texas Water Commission

Peggy Glass  
Allan Plummer & Associates  
Austin, Texas

5:15-6:30      Cash Bar

**Friday, August 7**

**VI. SOLID WASTE** -- Moderator: Cindy Smiley  
Jones, Day, Reavis & Pogue

8:30-9:00        Solid Waste Disposal and Classification -- *"Did You Ever Have to Make Up Your Mind"*  
Grace Montgomery  
Chief-Waste Evaluation Section  
Texas Water Commission

9:00-9:30        Municipal Waste -- *"Where Have All the Flowers Gone?"*  
Dan Eden  
Director-Municipal Solid Waste Management  
Texas Water Commission

9:30-10:00       Petroleum Storage Tanks -- *"Subterranean Homesick Blues"*  
Tom Bohl  
Austin, Texas

10:00-10:30      Innovative Remedial Technologies -- *"All I Need is a Miracle"*  
Robert G. Hornsby  
AWD Technologies  
Houston, Texas

10:30-10:45      Break

**VII. MISCELLANEOUS** -- Moderator: Jan Horn  
Browning-Ferris Industries, Inc.

10:45-11:45      Environmental Issues Facing Building and Real Property Owners -- *"We've Gotta Get Out of This Place"*  
  
Carie McKinney  
Margaret Menicucci  
Kelly, Hart & Hallman  
Austin, Texas

11:45-12:15      Environmental Issues Facing Small Business -- *"Down in the Boondocks"*  
Dick O'Neil  
Davidson, Troilo, & Booth  
San Antonio, Texas

12:15-1:30        Lunch

Moderator:       Debra Baker  
Mayor, Day, Caldwell & Keeton

1:30-2:00        Texas New Ethics Rules -- *"Turn Out the Lights . . . the Party's Over"*  
Mark Smith  
Brown McCarroll & Oaks Hartline  
Austin, Texas

2:00-2:30      Agency Enforcement -- *"Ain't Too Proud to Beg"*  
Terrell Hunt  
Bracewell & Patterson  
Houston, Texas

2:30-2:45      Break

2:45-3:15      Pesticide Regulation -- *"Wipeout"*  
Geoff Connor  
General Counsel

3:15-5:15      Agency Policy Making and Open Mike -- *"If You Could Read My Mind"*

Moderator: J. D. Head  
Ford & Ferraro  
Austin, Texas

Panel: Manuel Aguirre  
Deputy Director, Regulatory Ops.  
Texas Air Control Board

George Alexander  
Regional Counsel  
U.S. EPA, Region VI

Jim Haley  
Deputy Executive Director  
Legal Services & Compliance  
Texas Water Commission

Lori Wrotenberry  
Assistant Director  
Underground Injection Control  
Texas Railroad Commission

5:15      Adjourn

## **I. FACILITY START-UP AND EXPANSION -- "We've Only Just Begun"**

### ***Procedures and Insights for the Regulated Community***

Tom Aubry  
Sullins, Johnston, Rohrbach, Magers & Herbert  
Houston, Texas

### ***TACB Permitting Process***

Pat Finn  
Fulbright & Jaworski  
Austin, Texas

### ***Hazardous Waste Permitting***

James C. Morriss III  
Caroline M. LeGette  
Thompson & Knight  
Dallas, Texas

### ***Expediting Complex Hearings***

Mary K. Sahs  
Public Interest Counsel  
Texas Water Commission

### ***Permitting Requirements Under the Clean Water Act***

Teresa B. Salamone  
Geraghty & Miller, Inc.  
Austin, Texas

## FACILITY START-UP AND EXPANSION SCENARIO

Gulf American Builders Assistants, Inc. ("GABA") manufactures cement at its sole facility near the Gulf Coast of Texas. GABA has recently executed several new contracts that will require it to greatly increase its cement output for the foreseeable future. As a result, GABA must expand its operations and is considering either adding a second kiln and associated components at its current location or opening a new facility at another location.

Because timing is critical and the environmental considerations crucial, GABA filed a partially complete application to amend its environmental permits at the existing facility on June 1, 1991 even though the decision on whether to expand or start up a new facility has not yet been made. This strategy was recommended by one of the majority stockholders, Ocean Shale Corporation ("Ocean Shale"), a Louisiana waste disposal company.

I. The Existing Facility. The facility is located in an essentially rural area. There is a summer camp to the east of the property and farmland to the south. The Baptist Church owns the entire western boundary and a small church is located on the northeast corner of the Baptist's property adjacent to GABA's property. Rumor has it that several farms at the southern boundary have been purchased by a developer from Houston who plans to construct a retirement village and golf course on the land.

The main components of GABA's existing facility are a cement kiln, loading docks for incoming and outgoing materials, storage tanks for kiln fuel, raw and finished materials storage areas, and a landfill for the disposal of kiln dust. GABA currently uses a blend of hazardous wastes and solvents as a significant portion of its fuel.

The cement kiln is located on the top of a rise, approximately 1/4 mile from a navigable tributary of the Colorado River, which eventually discharges into Matagorda Bay. The area is an attainment area for criteria pollutants.

If the facility is expanded, GABA will have to increase the size of the materials storage areas and loading dock areas as well as the size and number of fuel storage tanks. The landfill capacity may be sufficient but it warrants further investigation. GABA would like to build the second kiln "downhill" from the existing kiln, allowing access to river barge shipments of fuel.

GABA has heard that the local Chamber of Commerce and a national environmental organization have requested a copy of the permit amendment applications. The Chamber is concerned about the impact of the expansion on the development of the retirement village. The rural economy is suffering and the retirement village would be a real "shot in the arm" for county businesses. The national environmental organization is purportedly concerned about "wetlands" and "endangered species." Ocean Shale has had experience with environmentalists in Louisiana and believes that any concerns can be resolved in the public meeting process.

II. The New Facility. GABA is looking at several new sites on the Gulf. One is between Houston and Beaumont and the other is near Brownsville. Ocean Shale is pushing the company to consider becoming a maquiladora facility in Matamoras.

The plant layout for the new facility would be essentially the same as the existing facility - a kiln, loading docks, materials storage areas, fuel storage tanks, and a landfill unit for the disposal of the kiln dust.

## FACILITY START-UP AND EXPANSION: DISCUSSION QUESTIONS

1. From the environmental perspective, what are the primary considerations when choosing between facility expansion or new facility start-up; e.g. regulatory burdens, site impairments, public opinion?
2. What advantages or obstacles to expansion or relocation are presented in the scenario?
3. In response to the fact scenario, what general approach or strategy would you employ as applicant and what next steps need to be taken immediately? As interested party?
4. What can be done before an application is filed to facilitate the process?

In the fact scenario, GABA filed a partially complete permit application prior to making a final decision on whether to relocate or to expand. Is this advisable? What are the benefits and risks? What impact does the early filing have upon any claims by the developers of the retirement community?

In addition to the technical information required, what information must an applicant provide or disclose that should be considered in the preapplication planning stages; e.g. shareholders, compliance history and financial information?

5. What steps must interested parties take to participate in the permit process? What does party status involve and include? What are the ways to defray the costs of participation by the public in a permit process?
6. What is the best way to resolve controversy in the public meeting and hearing process as well as throughout the permitting process? If controversy is inevitable, is there a better way to deal with it?

How can you use the procedural aspects of the process to your advantage in highly publicized controversial situations; e.g. docket control, discovery, standing and privilege issues?

7. What advantages/disadvantages are created by the active participation of the Office of Public Interest Counsel in the process?

From the applicants perspective? From the interested parties' perspective?

8. What elements of construction can an applicant begin during the hearing process? If the permit is granted yet appealed, should the applicant construct?

9. Is there a role for formal or informal mediation outside the prescribed regulatory process?
10. Given everything you know about GABA and the alternatives, would you advise the company to move to Matamoros?

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# *Facility Start-Up and Expansion: Procedures and Insights for the Regulated Community*

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4TH ANNUAL  
TEXAS ENVIRONMENTAL SUPERCONFERENCE

THURSDAY, AUGUST 6, 1992  
AND  
FRIDAY, AUGUST 7, 1992

FOUR SEASONS HOTEL  
98 SAN JACINTO BLVD.  
AUSTIN, TEXAS

**FACILITY START-UP AND EXPANSION:  
PROCEDURES AND INSIGHTS  
FOR THE REGULATED COMMUNITY**

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## **I. INTRODUCTION**

The purpose of this paper is to lay the basic groundwork for an understanding of the thing known as the "permit process." No attempt will be made in these few pages to create the definitive work on permitting but rather, we seek here only to provide the broad brush strokes.

In order to construct and then operate a facility with known environmental impacts one must first obtain from one or more agencies some form of authorization. This permission may take the form of a registration or a formal request for an exemption from regulation. Some facilities which began operation prior to the Clean Air Act are entitled to grandfather status, which prevents the Texas Air Control Board from exercising jurisdiction over the facility.

Once obtained, such registration, exemption, or other such special status will free the facility from the long and often arduous task of obtaining a permit. Therefore, most clients will prefer to obtain such authorization rather than a permit, which is more difficult to obtain. It should be noted, however, that achieving grandfather status is severely limited by the facility's method of operation. Modification of a facility's operation will result in the loss of that exemption.

While it is certainly true that an exemption under the Texas Air Control Board Standard Exemption List is a speedier and less expensive process than the lengthy permit process, it severely curtails a company's flexibility. The same is basically true of the recycling registration program created pursuant to 31 TAC § 335.211, et seq. Activities

associated with oil and gas exploration, development and production may be exempt. See, Tex. Health & Safety Code Ann. § 361.025 (Vernon 1992) (all references are to the Tex. Health & Safety Code Ann. unless otherwise noted). Generally, the applicant, and its counsel and consultants, should determine the availability of an exemption, registration or other such non-permit authorizations which could allow the client to operate. Whether the speed and cost savings of such an approach outweigh the inherent lack of flexibility can only be determined on a case by case basis.

One should also consider the effect on the facility and client if the claimed standard exemption is not accepted by the Texas Air Control Board. When an agency decides that a company is not entitled to a standard exemption, but instead should have applied for and obtained a permit, there are potentially severe ramifications. This is especially true in this new age when enforcement actions have become not only more commonplace but also more expensive. If, for example, the agency determines that the standard exemption is unavailable, the agency might then assume that the company has been operating without a permit.

## **II. THE PERMIT PROCESS**

Once a company has determined that the less rigorous, more expeditious forms of authorization are unavailable, its attention must turn to the permit process. Despite the efforts made in the last six years to create a one-stop permit process, a major facility may need formal authority from: (1) the Environmental Protection Agency, for non-point

source discharges of stormwater and for air emissions under the Prevention of Significant Deterioration (PDS) program; (2) the United States Army Corps of Engineers, for any dredge and fill work necessary for the project; (3) the Texas Water Commission, for any point source discharges of treated or untreated industrial and/or municipal discharges and for any on-site disposal of industrial solid wastes; and (4) the Texas Air Control Board, for any air emissions to be produced at the facility including such rather mundane sources of pollution as unpaved roads.

The substantive requirements of any of these programs are well beyond the scope of this work. The prudent applicant should conduct a thorough review of his proposed facility with an eye toward obtaining all permits in a timely fashion, hoping that no permit will contain provisions which will inhibit either operation of the facility or the facility's ability to comply with its other permits.

Finally, local ordinances on zoning bridge load limits, building codes, and use of potable or percolating water are also an important regulatory concern of any business, especially one which is environmentally sensitive. Such a regulated business, however, is likely to "enjoy" a much deeper and closer scrutiny from local officials and local citizens than a more run-of-the-mill operation. Several provisions of the Tex. Health & Safety Code Ann. delimit a local regulatory program. See, § 361.094-5.

## A. THE TWO KINDS OF PERMITS

The statutes, rules and court decisions speak of a permit, issued by an administrative agency, which authorizes the construction and/or operation of a facility with environmental impacts. This permit conditions the right to so operate. Once obtained, there is only one type of such permit.

It is in the getting, however, that there are two types.

On the one hand is the uncontested permit, which is obtained through negotiation with the agency without significant input from interested parties. On the other hand is the contested permit, which is obtained only after the close of a contested case hearing as defined in the Administrative Procedures and Texas Register Act, Tex. Rev. Civ. Stat. Ann. art. 6252-13a (1992 Supp.) (hereinafter APTRA). The level of effort expended in obtaining a permit differs greatly between an uncontested and a contested case hearing. With some rare exceptions, an applicant may not discover whether he is on the uncontested or contested path until most, if not all, of the crucial decisions on the design of the facility have already been made. Therein lies the rub. In the words of an unnamed engineer: "Hindsight is always 1,000 percent."

A chronological review of the permit process prior to the notice of hearing called for by statute is in order here. See, e.g., Tex. Health & Safety Code Ann. §§ 361.066, 361.079-361.083 (Vernon 1992). The steps and activities discussed below do not necessarily reflect each step taken in each permit application proceeding, but rather reflect the author's experiences of the typical flow of events.

## **B. THE UNCONTESTED PERMIT PROCESS**

An applicant for a permit to construct and operate an environmentally sensitive business will have made a host of technical, legal and business decisions well in advance of his first contact with the agency or agencies having jurisdiction. The need for the product or service, the economics of fulfilling that need, the reliability of the technology and the availability of the proposed site are just a few of those decisions. The applicant's prior environmental track record has already been established and will be illuminated in the process, § 361.084, and his ability to fund construction and operation is probably in place. § 361.085.

With these decisions behind him, an applicant will seek a meeting with the staff of the various agencies which have the authority to issue the needed permit or permits. § 361.0635. While this provision seems to envision one meeting, history tells us that the contact between a prospective applicant and the agency is often prolonged and continuous, extending after the application is filed. Not only will the agency staff meet with the applicant, but staff members will invariably extend similar courtesies to interested persons as well.

These pre-application meetings provide a forum in which to assist the agency and applicant in evaluating the project and the environmental controls necessary for the project to comply with the regulations and statutes. Even though each agency has published its rules and regulations in the Federal Register or Texas Register, whichever applies, and has published many guidelines and internal memoranda outlining the

agency's outlook on various technologies and control strategies, an applicant will almost always find its informal discussions on site-specific issues very illuminating.

The author has found that not all permit engineers within an agency equally adhere to the letter or the perceived spirit of the regulations. One permit engineer's construction of a particular regulation or technical guidance document may vary from that of another, which can be expected when judgment is applied to the application of scientific or engineering principles to a given design. Given the turnover which affects the agencies, great reliance upon the views of the permit engineer at the agency at this early stage of the life of the permit application is risky at best, even if one were to assume that a negotiated permit will be the final outcome of the project. Where a public notice results in a public hearing with significant opposition, an applicant's reliance upon these early representations of the permit engineer can become fatal.

Armed with its business, legal and technical research, coupled with the insight gained from contact with the agency staff, the applicant then files its permit application. Pursuant to § 361.064, the agency will provide "... a thorough and timely review of and a timely issuance or denial of any permit application for a solid waste management facility."

At this stage, the affected state Senator and Representative receive notice, §§ 361.0641 and 382.0516, as does the general public, by way of newspaper and the Texas Register. §§ 361.0665, 361.079, 382.031 and 382.0517. The applicant has 270 days after filing its application to submit to the agency a permit application which is

"administratively complete," which means that the proper filing fee has been paid, the forms or "Part A" have been filed, and it is ready for a technical review. § 361.068. Additional time may be granted under "extenuating circumstances" to prevent automatic dismissal of the permit application. § 361.066.

Even after filing the permit application, neither the agency nor the applicant can be sure if significant opposition will arise. In this next phase, the applicant's technical case is on file with the agency and is placed under review by the permit-issuing agency as well as other state agencies. § 361.076. That review culminates in one or more versions of the Technical Notice of Deficiency (T-NOD). The applicant's response to the T-NOD becomes incorporated into the permit application and may have a great or small impact upon the facility's design. Likewise, the changes to the facility may have a large or small impact upon potential interested parties or opponents. These alterations of the technical information making up the permit application are made in response to the inquiries of the agency. Issues important to local government and citizens may remain submerged throughout the 270-day time period, only to surface after a hearing has been called.

It should be noted that the Texas Air Control Board takes the position that the Board, the Hearing Examiner and the reviewing staff are prohibited from ex parte contact once the permit application is administratively complete. The Texas Water Commission prohibition on ex parte contact contained in § 361.0831 is narrower, but contact seems to have been less ubiquitous in recent years. Contact between any party or its counsel,

and the staff of the Texas Air Control Board is not forbidden, but rather all interested parties must be notified and allowed to attend.

Once the Texas Water Commission or the Texas Air Control Board have ironed out their respective differences with the applicant, a draft permit is completed. By and large, it reflects the agency's opinion on the proper conditions, legal, technical and operational, which should attach to the permit to construct or operate the facility. History tells us that the applicants concur with these restrictions, having negotiated them over the prior months or years.

Through this stage the applicant has made literally thousands of business, legal and technical decisions and has responded to numerous questions, suggestions and some criticism from the reviewing agency. All of this has been done without knowing whether significant opposition will arise. In many cases an applicant will have endured the preapplication review process detailed in § 361.063, and may have engaged in sophisticated public relations campaigns. Despite this, an applicant may still not be aware of or comprehend the level of opposition, let alone the technical or legal grounds for that opposition.

Many times the applicant will be made aware of opposition to its proposed facility and will make strong efforts to allay concerns or to ameliorate perceived problems. Sometimes the level of opposition is known well before notice of the public hearing is posted, but the exact nature of the legal or technical reason for opposing the permit is not known until after the public hearing process begins.

### C. THE PUBLIC HEARING PROCESS

At this stage the permit application has been reviewed by the permit-issuing agency and the other agencies listed in § 361.067, and a draft permit incorporating negotiated changes has been reduced to written form. Only then is the general public and local government put to an election. Notice is mailed as called for in the statutes and regulations and affected or interested parties are invited to ask for a public hearing on the permit application. Even if no affected person asks for a hearing, one can be held nevertheless. See, e.g., §§ 361.082 and 361.088.

Once the notice requirement is met, the hearing is convened at the appointed time and place. If no interested or affected person seeks party status, the hearing examiner's job is limited to considering the question of jurisdiction, acknowledging the statutory parties, hearing evidence to establish applicant's prima facie case, and establishing a schedule for the filing of the proposal for decision and final decision. In this instance, the draft permit becomes the permit actually issued to the applicant. In effect, the application process which began before the filing and continued through the date of the public hearing comes to fruition, and the uncontested case results in a permit.

When there is no substantial public input, the agency's negotiated draft permit generally is placed before the decision-making body. The issues raised and resolved and the perceptions of the solutions to these engineering questions are sometimes weighted down by bureaucratic memory and the permit engineer's individuality, and generally

reflect the technical side of the agency viewpoint. When the permit is issued in an uncontested venue, the view of the agency's legal department is typically minimized.

However, in the context of a contested case hearing, the decision of whether to issue a permit and if so, the nature of the permit requirements, is made by the hearing examiner, a lawyer. This examiner depends upon agency counsel and other interested parties to frame the "legal" issues to be decided. Consequently, the addition of an interested party into the calculus results in more than merely adding another party, another lawyer, another expert or another viewpoint, but rather, this addition alters the agency's orientation. The agency's lawyer generally does not have a history of pre-application meetings with the applicant's consultants, and therefore approaches the case with a legal orientation rather than a technical orientation, and with a certain amount of skepticism common to lawyers. That different orientation and skepticism, when coupled with the resources of a significant opposing force, can provide a formidable challenge to the negotiated draft permit.

#### **D. THE CONTESTED CASE HEARING: A FEW SELECT PROCEDURAL ISSUES**

##### **1. Notice**

The authority for holding public hearings on contested case matters springs from the APTRA art. 6252-13a, et seq. Sections 13, 14, 14a, 15, 16, 17, 18, 19, and 20 form the basis for the agencies' authority to conduct hearings. Any final order produced pursuant to a hearing which fails to adhere to these provisions is subject to being

overturned after judicial review is obtained. Section 13 of APTRA provides that all interested parties must be provided with notice at least ten (10) days prior to the beginning of the hearing, with such notice referring to "the particular sections of the statutes and rules involved." The local citizens and governmental authorities must be provided with "a short and plain statement of the matters asserted". Id. § 13. Agency practice generally provides a lengthier time period than the ten days discussed here. In the event that the agency is unable to make such a short and plain statement, the initial notice may be somewhat more limited. However, a party may request that the agency provide a "more definite and detailed statement", if such a request is made three (3) days prior to the hearing.

## **2. Evidence**

Generally, a hearing before a hearing examiner of one of the agencies with environmental jurisdiction is conducted much like a non-jury trial in district court. All testimony taken at the hearing is by question and answer. Objections based upon the rules of evidence can be sustained or overruled by the hearing examiner. In large part, the rules of evidence apply in contested case hearings before a hearing examiner much like they apply in district court. There is one statutory exception to the hearsay rule which appears to apply only in contested case hearings.

The rules of evidence as applied in non-jury civil cases in the district courts of this state shall be followed. When necessary to ascertain facts not reasonably susceptible of proof under those rules, evidence not admissible thereunder may be

admitted, except where precluded by statute, if it is of a type commonly relied upon by reasonably prudent men in the conduct of their affairs.

Id. § 14(a).

### **3. Prefiled Direct Testimony and Its Uses**

Recently, Texas administrative agencies have begun to follow the federal practice of taking testimony in prefiled form. Instead of conducting a live direct examination of each witness, transcribed by a court reporter, each party is directed to provide all parties with a written direct examination in question and answer form. Such testimony may be taken over a speaker phone and captured by dictation equipment. Written versions can then be transmitted between the expert or other witnesses and counsel by facsimile transmission.

The author recently participated in a contested hearing which utilized prefiled direct testimony. In re American Envirotech, Inc., hearing before an examiner of the Texas Water Commission, proposed permits nos. HW50299 and 03319 (hearing Mar. 30, 1992 - July 20, 1992) (decision pending Oct. 15, 1992). In the AEI case, the examiner ordered all parties to prefile their direct examination on a date certain, the applicant filing first, followed by an opportunity for interested parties to depose the applicant's witnesses. The interested parties were then directed to file their prepared direct case. A similar opportunity to depose their witnesses was provided to the applicant. The staffs of the two agencies were then ordered to prefile, and time was set aside for depositions. The

applicant was afforded an opportunity and a deadline by which to prefile its rebuttal case. Midway through the hearing, the applicant claimed that new and unanticipated testimony from the Texas Air Control Board concerning modelling made its prior prefiled testimony on modelling somewhat obsolete. It sought and was granted leave to file additional testimony to counter the Texas Air Control Board's modelling testimony. Additionally, all parties seemed to "need" to put on some "live direct" as the case progressed. Much of the "live direct" was in response to testimony elicited from other witnesses on cross or on redirect. The process was fluid, yet disciplined.

In addition to the requirement of prefiled direct testimony, each party was required to prefile objections to the prefiled direct testimony. The objections were clear, crisp and for the most part, well thought out. Prolonged and bitter arguments, which seem to be the hallmark of permit litigation, were largely absent because of this procedure. Moreover, endless voir dire on expert qualifications was largely done away with.

However, there are negative features of this practice. A witness who is uncomfortable or unfamiliar with the process is deprived of that slow, methodical questioning which enhances confidence and credibility, and produces fewer hours of live direct. Instead, the witness is almost immediately subject to criticism by opposing counsel. With such a witness, additional preparation and simulated cross-examination are necessary when the direct case is prefiled.

While prefiling certainly reduces the time spent on direct, in some cases it can prolong the cross-examination, especially in the case of an expert witness. During a live

direct, counsel will certainly attempt to gauge the reaction of the hearing examiner to determine whether a point or issue has been made clear. Where counsel and the expert feel that a point is not clear, the party would make another attempt at clarification. However, in the case of a prefiled case, that gauge is missing, and opposing counsel may have the job of clarifying the issue. Despite these negative features, the author is surprisingly pleased with the procedure for prefiled cases.

#### **4. Fact Findings and Assumptions**

Unlike state district court litigation, the facts at issue in permit litigation before environmental agencies have not yet taken place. In state district court litigation, the jury or judge, as the finder of fact, generally attempts to determine the facts of the case based upon the physical evidence and testimony offered at trial. In other words, the fact finder determines who "ran the red light". However, in permit litigation, the facts are determined prospectively. Additionally, the thrust of the case centers upon the testimony of expert witnesses. The issue is whether the facility, as schematically designed, can and will be operated in such a fashion that the impact of the facility will not contravene any aspect of the regulation or the statute. In essence, the applicant will seek to prove through the testimony of these expert witnesses that this unbuilt facility will be capable of operating in a safe fashion, and that its environmental impact will not exceed certain regulatory levels.

Based upon the agency's views on the role of enforcement as separate and distinct from its permit jurisdiction, Texas agencies have identified two important assumptions not provided by statute or regulation. These tacitly made assumptions are:

1. No agency requires an applicant to provide construction drawings at the permit stage; and
2. The agencies tend to accept at face value all representations and warranties made by applicant.

These two "givens" will be discussed in the above order.

Although detailed construction drawings would undoubtedly be helpful in understanding some aspects of the proposed facility, the cost of these drawings would be very high, especially in light of the applicant's penchant for making changes to the design from the witness stand. Proponents of this argument believe that requiring construction drawings would unnecessarily increase the cost of the design package with little corresponding benefit to the agency or the public at large. Nonetheless, contrary arguments for the inclusion of more detailed construction style drawings can be made.

An applicant for a facility which could potentially emit air pollution is generally not required to submit any drawings indicating its source of electrical power. The rules also do not require a facility dependent upon the delivery of electrical power to have two separate and distinct sources of power. The ability of a facility to maintain its permitted level of emissions is often dependent upon an uninterrupted supply of electrical power. Since detailed drawings on how electricity is to be supplied to the plant are not required,

an opposition group's ability to effectively question the manner in which electrical power is supplied to the plant is squelched.

Similarly, construction style drawings of the water supply to a facility are not generally required by any agency. Nor will the Texas Water Commission or the Texas Air Control Board require an applicant to provide detailed drawings of fire control facilities. In one recent case, an applicant proposed installing a sprinkler system in a building where a variety of dry hazardous waste would be stored. Such a sprinkler system could be activated at a time when the facility was storing wastes which were reactive with water. The applicant "represented" that the sprinkler system would not be turned on when the building stored reactive wastes. The manner in which the system would be deactivated was not thoroughly explained, except to say that it was a detail which would be handled when construction drawings were made.

While the necessity of construction style drawings may be raised in a hearing, at this time no agency rule seems to require them. Whether the tremendous costs of such drawings can be justified at the permit application stage is a policy decision which only the agencies can make.

The other "given," which tends to make the presentation of the opponents' case somewhat more difficult, is the agency's perception that each of the applicant's representations in the permit application, in the testimony before the agency, and in the various "permit amendments" offered at the hearing must be accepted as truthful. In City of San Antonio v. C.D.J. Enterprises, 402 S.W.2d 573, 576 (Tex. Civ. App.--San

Antonio 1966, writ ref. n.r.e), the Court ruled that it "... must presume that the Board will follow its mandate in supervising this plant and that [the permit applicant] will fulfill the requirements of its permit."

In large part this "given," that the applicant's representations are to be taken as truthful and as actually accomplished, has a sound basis in reality. For example, an applicant's representation that it will operate the facility for no more than two shifts per day, five days a week, for an entire year, can generally be transformed into an effective written permit condition. The breach of such permit condition by operating more than two shifts can be proved or disproved, and therefore is probably correctly accepted by the agency as truthful. While clearly there would be no corresponding permit condition requiring a device which would automatically shut down the plant if operated beyond these limitations, the permit condition limiting the hours of operation can objectively be demonstrated or rebutted in an enforcement style hearing.

Other representations, made either in the permit application or by the applicant or its agents in the permit hearing, which are less susceptible to objective scrutiny, are often also accepted by the agency as truthful. An opposition lawyer who attempts to portray this representation as conjecture, or to offer testimony that the proposed facility will not be operated within those permit parameters is not likely to receive a warm reception. The rationale appears to be that the hours of operation will be incorporated into the permit, and a violation of those hours of operation constitutes an enforcement issue rather than a permit issue.

However, those representations made by the applicant during the course of the hearing process which are not so objectively discernable often receive the same level of acceptance by the agency staff and the hearing examiner. Representations which are not objectively proven at the hearing, or subject to objective proof at an enforcement hearing by the party having the burden of proof, should not be accepted at face value.

## **E. FEE SHIFTING AND COST RECOVERY**

There are three situations in which an interested or affected party may seek to compel an applicant to pay some part or all of its costs. These situations are as follows:

1. In certain hazardous waste management facility applications pursuant to the Preapplication Local Review Committee process promulgated in Tex. Health & Safety Code Ann. § 361.063 (Vernon 1992);
2. In new hazardous waste management facility applications where the party has furnished information regarding technical studies of the area, expert testimony, or land use surveys pursuant to § 361.0833(a)-(b); or
3. In new hazardous waste management facility applications when it is shown that applicant knowingly made false or misleading statements in the application, during the hearing, or failed to present the material evidence in its possession, § 361.0833(c).

### **1. The Pre-Application Review Process**

In the event that an applicant has consented to engage in the formal preapplication review process described in § 361.063, it subjects itself to a highly structured review of its facility design and its corporate structure by local opposition groups and leaders. The

Commission may not award fees to any affected party if the applicant in good faith attempts to create the committee called for in the statute but no opposition surfaces, and no other party enters into the process. § 361.063(k).

If an applicant does in fact establish such a committee, only those persons who "participated" in the process are eligible to receive an award of costs. In the event that an applicant elects not to enter into this form of dialogue prior to the actual hearing, the requirement of "participation" in the process is waived. § 361.063(g).

If a local review committee is established or the requirement of participation is waived, a party/participant may receive an award of up to \$25,000.00 for costs and fees for technical studies and expert witness associated with issues which were not resolved at the public hearing. The Commission will consider whether:

1. The evidence or analysis provided by the studies, reports, and witnesses is significant to the evaluation of the application;
2. The evidence or analysis would otherwise not have been provided in the proceeding; and
3. The local review committee was established in accordance with Commission rules.

This section and the one discussed below reference only the recoupment of "costs for technical studies and reports and expert witnesses", § 361.063(f), and costs for "technical studies," "expert testimony," and "surveys of land use." § 361.0833. It appears that the regulated community widely believes that other fees may be recoverable.

## **2. Cost Recovery Based Upon Technical Information Provided**

In the event that a contested case hearing is held, an interested party who seeks recovery of costs as described above is required to make some satisfactory showing to the Commission of the following elements:

1. Application is for a new hazardous waste management facility. § 361.0833(d);
2. "Information" was presented in the form of a technical study of the area, expert witness testimony or a survey of land use. § 361.0833(b);
3. The award of costs is reasonable, and the costs were actually incurred. § 361.0833(a);
4. The information provided was "material", and led to the denial of the permit or significant changes in the facility's design or operation. § 361.0833(e)(1);
5. The information might not have been presented otherwise. § 361.0833(e)(2).

## **3. Cost Recovery for Misrepresentation**

In addition to the cost recovery mechanism provided for the presentation of information by an interested or affected party, the Commission is authorized to require an applicant to reimburse its opponents for costs incurred by him showing that applicant:

1. Knowingly made false or misleading statements in the application;
2. Knowingly made false or misleading statements during the hearing;  
or

3. Failed to present information that the applicant had in its possession that would have materially affected the issues of fact and law on which the decision of the Commission was based.

§ 361.0833(c)(1-3). It would appear that the elements necessary for cost recovery based on technical information provided, in addition to those elements contained in of § 361.0833(c), would also be considered for cost recovery for misrepresentation. The same requirements for the presentation of "information" and the right to a recovery of "reasonable costs" is common to both subsections (a) and (c). Moreover, the Commission is directed to "consider" whether the information led to the denial or modification of a permit, and whether the information would have been otherwise presented. § 361.0833(e)(1-2).

#### **4. Amount of Cost Recovery**

The amount of recovery awarded by the Commission to an interested party will vary depending upon the nature of the facility and the applicable section. The following cost recovery structure has been established.

1. A preapplication committee award pursuant to § 361.063 is limited to a total of \$25,000.00 to be shared by all parties who qualify. § 361.063(f).
2. An award to an interested party who offers information in a hearing on a new commercial hazardous waste management facility is limited to \$100,000.00, while the award is limited to \$20,000.00 if the facility is noncommercial. § 361.0833(d).
3. An award to an interested party who provides information establishing a knowing misrepresentation or concealment in a hearing for a commercial hazardous waste management facility is limited to

\$150,000.00, while the award is limited to \$30,000.00 if the facility is noncommercial. § 361.0833(d).

Arguments can be marshalled either way on the issue of stacking costs eligible for recovery. It is not clear as to whether a party is limited to recovery under only one of these provisions, or if the party may stack recovery using multiple provisions. For example, may an interested party receive an award for reasonable costs incurred of \$25,000.00 for preapplication review, an award of \$100,000.00 for providing technical information to the Commission, and an award of \$150,000.00 for demonstrating a knowingly false statement on concealment?

To ensure payment, an interested party may request that the applicant furnish a bond or other financial assurances to guarantee payment of any sum ordered pursuant to § 361.0833. Strangely enough, the amount of the bond can only be \$100,000.00 in the case of a commercial facility and \$20,000.00 for a noncommercial new hazardous waste management facility. § 361.082(g).

### **III. SUMMARY**

In order to construct and operate a facility with known environmental impacts, one must obtain authorization from one or more agencies. If no registration, exemption, or special status is obtained, a permit is required. Obtaining an exemption is less expensive and a speedier process than obtaining a permit; however, exemptions are both limited and limiting, and denial of an exemption may have adverse effects on the facility and client.

One should be aware that a major facility may need formal authority from several different agencies, and that local ordinances must also be considered.

There is only one type of permit, yet there are two types of permit processes. One method of obtaining a permit consists of negotiation with the agency without significant input from interested parties. This process is without contest. The second method results in a permit only after a contested case hearing has been held.

The uncontested process includes: initial business, legal and technical decisions; pre-application meetings and informal discussions with the agency staff; the filing of the permit application; notice to the appropriate government officials and the general public; review of the application by the permit-issuing agency; ending with a public hearing on the reviewed draft permit. If uncontested, the draft becomes the actual permit. One should note that an applicant may not be aware of or comprehend any opposition for quite some time.

The contested case hearing involves several unique procedural issues, including notice requirements, evidentiary rules, prefiled testimony, a unique fact-finding role, as well as agency-created assumptions. Notice of the hearing must be provided to all interested parties ten (10) days prior to the hearing, and must include the particular sections of the statutes and rules involved, and a short and plain statement of the matters asserted. The evidentiary rules of a contested case hearing are largely similar to the rules in district court, with minor exceptions. Agencies have begun to follow the practice of prefiled direct testimony, despite its shortfalls. Permit litigation is unique, in that fact-

finding is prospective. The facts at issue have not yet taken place, and the thrust of the case centers upon the testimony of expert witnesses. Agencies make two assumptions during hearings. These assumptions are that construction drawings are not required at the permit stage, and all representations made by the applicant are accepted at face value. Arguments against these assumptions include the idea that, although expensive, construction drawings are helpful and sometimes necessary; and, representations not proven or subject to objective proof should not be accepted at face value.

An interested or affected party may be awarded costs to be paid by the applicant in three situations. In the pre-application review process, participants may recover costs when the participant is in a committee established by the applicant, when the participant is in a local review committee, or when the participation requirement is waived. There is dispute as to what types of costs and fees are recoverable. Costs may also be recovered for technical information provided in the event of a contested case hearing upon a satisfactory showing as to several elements. The elements address the type of facility, the technical character of the information provided, the reasonableness of the costs, and the materiality and necessity of the information provided. The above elements also apply to cost recovery when the applicant either knowingly makes a false misrepresentation or omits pertinent information.

The amount of recovery awarded by the Commission to an interested party will vary depending upon the nature of the facility and the applicable provision. It is not clear

whether recovery may be stacked, or if recovery may only be obtained pursuant to one provision.



TACB PERMITTING PROCESS  
ENVIRONMENTAL LAW: SUPERCONFERENCE

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## I. SCOPE OF PAPER

The Texas Air Control Board (TACB), the state agency with the primary jurisdiction over air quality in Texas, was created in 1965. The cornerstone of air emission control in Texas has been the state permitting program which became effective on September 1, 1971. To date, the state permitting program has been far more comprehensive than the federal air permitting program. However, with the enactment of the federal Clean Air Act Amendments of 1990, the federal permitting program will be greatly enhanced. In 1991 the Texas Clean Air Act was amended to incorporate the federal amendment provisions into the state permitting program and new requirements were added to the state program thereby making the TACB permitting program an even more effective tool for controlling air emissions as well as a vehicle for enhancing enforcement efforts within the state. The following is a discussion of the TACB's permitting program.

## II. FACILITIES REQUIRING PERMITS

### A. State Permitting Requirements

Section 382.0518 of the Texas Clean Air Act and TACB Rule 116.1(a) provide that before work is begun on the construction of a new facility or a modification of an existing facility that may emit air contaminants, the person planning the construction or modification must obtain a permit from the TACB. (See Texas Health & Safety Code, § 382.0518 (Vernon Supp. 1992) and 31 Texas Administrative Code (TAC) Rule 116.1(a)). A "facility" is defined as "a discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source, including appurtenances other than emission control equipment. A mine, quarry, or road is not considered to be a facility." (*Id.*, § 382.003(5)). A "modification" means "any physical change in, or change in the method of operation of, a stationary source in a manner that increases the amount of any air pollutant emitted by the source into the atmosphere or that results in the emission of any air pollutant not previously emitted." (*Id.*, § 382.003(7))

Obviously, the Legislature defined the term "facility" to be as comprehensive as possible. The definition can cover the smallest process unit or extend to an entire process line or building in which the process equipment will be housed. Further, any facility that emits any air contaminant is subject to the permitting requirement of the statute.

## B. Federal Permitting Requirements

New major stationary sources of air pollution and major modifications to major stationary sources are required by the Clean Air Act to obtain an air permit before commencing construction. The process is called new source review and is required whether the major source or modification is planned for an area where the national ambient air quality standards (NAAQS) are exceeded (nonattainment areas) or an area where air quality is acceptable (attainment and unclassifiable areas). Permits for sources in attainment areas are referred to as prevention of significant air quality deterioration (PSD) permits. Permits for sources located in nonattainment areas are referred to as nonattainment area permits.

Under PSD, a "major stationary source" is any source type belonging to a list of 28 source categories which emits or has the potential to emit (after controls) 100 tons per year or more of any pollutant subject to regulation under the Act, or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tons per year. A stationary source generally includes all pollutant-emitting activities which belong to the same industrial grouping, are located on contiguous or adjacent properties, and are under common control. A "major modification" is generally a physical change or a change in the method of operation of a major stationary source which would result in a contemporaneous significant net emissions increase in the emissions of any regulated pollutant. The requirements for obtaining a PSD permit will be discussed in more detail in Section V.F. below.

Prior to the 1990 Amendments to the federal Clean Air Act, a "major source" or "major modification" under the nonattainment review program was any stationary source which emitted or had the potential to emit (after controls) 100 tons per year of volatile organic compounds. The 1990 Amendments to the federal Clean Air Act revised the emission limits for major sources and major modifications based on the severity of the pollution problem in an area. For example, in Houston a major source will now be one that emits 25 tons per year of Volatile Organic Compounds (VOCs). If a source must undergo a nonattainment permit review, it will be required to (1) achieve the lowest achievable emission rate (LAER); (2) obtain the required emission reductions (offsets) of the nonattainment pollutant from other existing sources which impact the same area as the proposed source; and (3) certify that all other sources owned by the applicant in the State are complying with all applicable requirements of the federal Clean Air Act, including all applicable requirements in the State Implementation Plan. The PSD and the nonattainment permit review programs have been delegated to the State of Texas.

### III. GRANDFATHERED FACILITIES

#### A. Status Under the Texas Clean Air Act

In establishing the permitting requirements, the Legislature determined that it would not be economically reasonable and technically feasible to require existing sources to retrofit controls. Consequently, existing sources were "grandfathered" out of the state permitting program until such time as they were "modified" at which time process controls and abatement devices could be more effectively incorporated into a new design. A modification would include physical changes such as replacement or additional reactors, dryers, amine regenerators, catalyst beds, etc. as well as replacement or additional abatement equipment if the equipment itself constitutes a source such as flares, incinerators, sulfur recovery units and some scrubbers. In addition to physical changes, a change in the method of operation, such as production increases, changes in temperature, pressure, catalyst, reactant and raw material purity, may also constitute a modification. It is important to understand that potential increases in emissions at a source, not just the stack, are considered in determining whether a modification has taken place.

In addition to the above physical changes or changes in the method of operation, the TACB considers other, less obvious changes as modifications. For example, a grandfathered facility is considered to have been "modified" if there is an increase in actual production or operating rate over the maximum rate achieved during 12 consecutive months of operation prior to 1992 and as a result, there is an increase in emissions (prior to controls). An increase in emissions of a grandfathered facility due to an increase in hours alone is not considered to be a modification. When a grandfathered facility becomes subject to the permitting program, the emissions from the entire facility, not just the incremental increase, are included in the permit review.

#### B. Effect of the Federal Clean Air Act as Amended in 1990

On November 15, 1990, President George Bush signed into law substantial amendments to the federal Clean Air Act. (See 42 U.S.C. 7401, et seq.) The 1990 Amendments greatly expanded the definition of a "major source" which would be required to obtain a federal operating permit. (See Section II.B. for a discussion of the previous definitions of a "major source" or "major modification.") Pursuant to the 1990 Amendments, any new or existing sources that are subject to any one of the following federal regulations will be required to obtain a federal operating permit: (1) sources subject to the federal New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAPS) programs; (2) sources which are subject to the Prevention of Significant Deterioration of Air Quality (PSD) or nonattainment review programs; (3) sources which emit ten tons per year or more

of any one of 189 toxic compounds listed in the federal Clean Air Act, as amended, or 25 tons per year or more of any combination of those compounds, or any compounds added to this list by the United States Environmental Protection Agency ("EPA"); and (4) sources which are subject to the acid rain provisions of the federal Clean Air Act, as amended. Many currently grandfathered facilities are subject to NESHAPS or emit the designated toxics in amounts greater than 10 ton/25 ton limitations, or exceed the revised emission limits for major sources in non-attainment areas. Consequently, federal operating permits will be required for many facilities that are operating under grandfather status and have never before been required to obtain a state or federal permit.

The TACB staff was asked by Mr. William Reilly, Administrator of the United States Environmental Protection Agency (EPA), to work closely with EPA in developing the federal operating permit program. As a result, many of the features of Texas' permitting program have been incorporated into the federal operating permit program. However, the "grandfathering" of certain facilities out of the federal permitting program is not be one of those features. As a result, the days of many "grandfathered" facilities are numbered.

#### IV. EXEMPTED FACILITIES

Section 382.057 of the Texas Clean Air Act provides that the TACB may exempt certain facilities from the permitting requirements if the TACB determines that emissions from the facilities will not result in significant emissions to the atmosphere. (See Texas Health & Safety Code, § 382.057 (Vernon Supp. 1992)). In the past, the TACB has created two types of exemptions: standard and special exemptions.

##### A. Standard Exemptions

Standard Exemptions were created in 1972 to authorize the construction and operation of small sources without the need for obtaining construction or operating permits. Prior to 1985, a source merely had to meet the criteria set forth in a Standard Exemption List to qualify for an exemption. Exempted sources included facilities such as asphalt plants, sandblasters and storage tanks. The Texas Clean Air Act was amended in 1985 to authorize the TACB to adopt a standard exemption only after rulemaking. TACB Rule 116.6, which was adopted on March 15, 1985, established additional criteria for qualifying for a standard exemption and incorporated the Standard Exemption List by reference. (See 31 TAC 116.6). The List has been revised from time to time, as needed. The last version of the Standard Exemption List was adopted on July 3, 1992 and is available at all Regional Offices or the Central Office of the TACB.

In order to qualify for a standard exemption, emissions from the facility may not exceed 250 tons per year (T/yr) or more of carbon monoxide (CO) or nitrogen oxides (NO<sub>x</sub>) or more than 25 T/yr of any other air contaminant. In addition, total emissions from the property (from exempted facilities) may not exceed 250 T/yr or more of CO and NO<sub>x</sub> or 25 T/yr or more of any other air contaminant unless at least one facility on-site has been subject to the public notification requirements of Chapter 116 (Permits for New or Modified Facilities). Individual exemptions may provide even more restrictive emission limitations. In addition to the above limitations, construction must begin before the exemption list is changed, and the facility must comply with any applicable NSPS or NESHAPS. Once a facility qualifies for a standard exemption, it must comply with all applicable TACB rules and regulations. Even if all of the above criteria are met, a facility cannot qualify for a standard exemption if PSD or the non-attainment provisions of the federal Clean Air Act apply.

Although standard exemptions have been used extensively by a broad range of industries, they have unique aspects which should always be carefully evaluated when considering whether or not to construct a facility pursuant to such an exemption. The greatest advantage of using a standard exemption is that construction on the new or modified facility can begin expeditiously. In addition, standard exemptions have no expiration date so there are no new control technologies, permit fees or review periods with which to contend. However, standard exemptions have limitations. They are strictly construed. They cannot be amended. The TACB frowns on the use of standard exemptions to begin construction of a new facility at a greenfield site if the company intends to obtain a permit for the rest of the project. Notwithstanding, if an exemption applies, generally the TACB cannot preclude a company from using it. However, on July 3, 1992 the TACB adopted an amendment to TACB Rule 116.4 which limits the ability of a permittee to use a standard exemption to authorize construction of new equipment. Specifically, Rule 116.4 provides that upon a specific finding by the executive director that an increase of a particular pollutant could result in a significant impact on the environment or could cause the facility to be subject to non-attainment or prevention of significant deterioration review, the executive director could include a special permit condition which states that without prior approval by the executive director, the permittee may not use the authority of a standard exemption to construct an additional source at that facility which will result in a net emissions increase of this particular pollutant. If a company is able to use a standard exemption to modify a facility authorized by a permit, the permit must be amended to reflect the change even though the TACB does not require the company to wait for the amendment before beginning work. However, the TACB does require the company to submit an application for an amendment at the same time the company initiates construction under the standard exemption.

Finally, any company that has used standard exemptions to authorize construction at a site should be cognizant of three caveats. First, anyone using a

standard exemption should be careful that the installation of the facility under the standard exemption does not increase process throughput which would require a permit of grandfathered units and/or a permit amendment of permitted facilities. Second, the federal Clean Air Act, as amended in 1990, will require many facilities operating under standard exemptions to obtain federal operating permits, thereby eliminating many standard exemptions. Third, those exemptions that remain will likely be revised to include more requirements, such as, the registration of more facilities, restrictions on the size of a project, requirements for more emission control equipment, sampling, recordkeeping, reporting, etc.

#### B. Special Exemptions

Prior to 1985, the TACB also issued "special" exemptions to facilities which it determined contributed insignificant emissions to the atmosphere but which did not strictly conform to the criteria set forth on the Standard Exemption List. As with Standard Exemptions, special exemptions authorized expeditious construction of a facility and did not expire. However, in 1985 the Legislature amended the Texas Clean Air Act to require that any exemption authorized by the TACB must be done in accordance with rulemaking. Consequently, there was no statutory authority to issue new special exemptions after that time. However, the TACB continued to amend special exemptions which had been previously issued until late 1990 when a Travis County District Court ruled that the TACB could not amend special exemptions since it could no longer issue such exemptions.

There are several caveats associated with special exemptions just as there are for standard exemptions. First, special exemptions cannot be amended. Consequently, if the company exempted ever wishes to vary the operation covered by the special exemption, it must either obtain a permit or qualify for a standard exemption (if one is available). Second, many facilities operating under special exemptions will fall within the definition of a "major source" under the federal Clean Air Act, as amended in 1990 and therefore, will be required to obtain a federal operating permit in the near future.

#### V. TACB PERMITTING PROGRAM

The TACB's permitting program provides one of the most comprehensive air emission reviews in the country. The TACB staff conducts an extensive analysis of the air contaminants to be emitted, potential control technologies and potential offsite impacts on human health, welfare, animal life, vegetation and property. The major components of the TACB staff's review is described in this section.

#### A. Preconstruction Review

As mentioned earlier, Section 382.0518 of the Texas Clean Air Act and TACB Rule 116.1(a) provides that before work on the construction of a new facility or the modification of an existing facility that may emit air contaminants may begin, the person planning the construction or modification must obtain a construction permit from the TACB. Over the years, the TACB has been asked for guidance regarding permissible activities at a site prior to the issuance of the permit. The TACB staff has offered the following guidance:

- (1) The construction of a building to be used to contain process equipment is permitted provided that no actual construction begins on the foundations for the specific process units until such time as the necessary permits have been obtained (See letter of July 30, 1979 from Lawrence E. Pewitt, Director of Permits, to Ford, Bacon & Davis);
- (2) Equipment may be received at a plantsite and stored provided that no attempt is made to assemble the equipment and no attempt is made to connect the equipment to any electrical or plumbing system. Portable equipment such as hot mix asphalt plants and rock crushers may be placed on the property provided that no work is done to assemble or erect equipment (See memorandum of May 19, 1981 from Eli Bell, TACB Executive Director); and
- (3) The construction of security fences, in-plant roads and drainage systems, the main administration building, maintenance shop, raw water reservoir, raw waste supply piping, main underground firewater supply piping, underground drinking water line, underground purified water line and underground sanitary sewer line have been allowed (See letter of April 21, 1989 to Formosa). All other work on-site is prohibited until a permit is obtained from the TACB.

#### B. Criteria For Obtaining a State Permit

The TACB has established fifteen criteria, which are set forth in 31 TAC 116.3, for obtaining a permit. In order to obtain a permit, an applicant must demonstrate:

- (1) that emissions from the facility will comply with all applicable rules and regulations of the TACB including the protection of the public's health and physical property;

- (2) there will be provisions for measuring significant air contaminants from the facility;
- (3) the facility will utilize best available control technology (BACT) considering the technical practicability and economic reasonableness of reducing or eliminating the emissions resulting from the facility;
- (4) the facility will comply with any applicable NSPS promulgated by the EPA;
- (5) the facility will comply with any applicable NESHAPS promulgated by EPA;
- (6) the facility is able to achieve the performance specified in the application;
- (7) this federal requirement is not applicable after June 30, 1979;
- (8-12) the facility will comply with applicable non-attainment requirements, such as the utilization of the lowest achievable emission rate, the demonstration of compliance and the obtaining of proper offsets;
- (13) the facility will comply with applicable requirements under the PSD provisions of the federal Clean Air Act;
- (14) the facility will comply with the good engineering practice requirements; and
- (15) permits for hazardous waste management facilities may not be issued if the facility is to be located in the vicinity of specified public access areas under certain specified circumstances.

In order to make the demonstration, an applicant must submit at a minimum the following:

- (1) a signed PI-1 form;
- (2) the name and address of the applicant;
- (3) an area map with sufficient detail regarding the proximity of nearby residences, elementary and secondary schools and businesses;
- (4) a plot plan;

- (5) the type and quantity of each air contaminant and its source;
- (6) a process flow diagram;
- (7) a process description;
- (8) a BACT analysis;
- (9) dispersion modeling to predict potential offsite impacts;
- (10) a Franchise Tax Certification;
- (11) the required permit fee; and
- (12) a registered (in Texas) professional engineer's seal for projects for which the estimated capital cost exceeds two million dollars (\$2,000,000.00) unless specifically exempted by the Texas Engineering Practice Act.

For ten dollars (\$10.00), an applicant can purchase a 5-1/2" floppy diskette from the TACB in WordPerfect 5.0 containing the PI-1 form, a Permit Instruction Manual and a checklist used by the agency for determining the administrative completeness of an application.

### C. The Administrative Process

#### 1. Pre-permit Meeting

Any applicant may request a meeting with the TACB staff prior to the submission of an application to discuss issues of concern such as BACT, appropriate methods of quantifying emissions, the applicability of the PSD or non-attainment provisions of the federal Clean Air Act or the NSPS or NESHAPS programs, dispersion modeling requirements and potential offsite impacts. Applicants of unusually large or particularly complex projects often request such meetings.

In 1988, the TACB established a CORE Division to review incoming applications to determine their administrative completeness. Any requests for pre-permit meetings were made to the CORE Division. A representative of the CORE Division would arrange to have other appropriate TACB staff members at the meeting, such as a permit engineer, a modeler and a toxicologist, depending on the issues to be discussed. Due to the loss of many of the experienced permit engineers from the CORE Division, this group has been temporarily disbanded. However, it is the TACB's intent to re-establish this group. In the meantime, the individual permit engineers are performing the functions of the CORE Division.

## 2. CORE Review

The CORE Division (for now, the individual permit engineers) verifies that all of the required administrative components have been submitted. The application is evaluated for satisfactory completion of each item contained on a detailed checklist (Fact Sheet 19, which is included in the diskette mentioned earlier). The CORE Division will notify an applicant if any particular item has not been adequately addressed in the application and will request the information be provided within a given timeframe. In the past, if the information was not provided in a timely fashion, the application was voided. The TACB staff has indicated that in the future it may deny a permit if an applicant fails to submit the requested information in a timely fashion.

If the information is provided and the application is then deemed complete, the application will be assigned to a permit engineer for a technical review. It is important to understand that the CORE review is only a preliminary assessment of the completeness of the application. The more comprehensive requests for information will come from the permit engineer assigned to conduct the technical review.

## 3. Technical Completeness Determination

The permit engineer assigned to review the application evaluates all of the information submitted to determine whether the application addresses the criteria set forth in Rule 116.3. Typically, the permit engineer and the applicant exchange questions and information for several months before the engineer recommends issuance or denial of the permit. The most important portions of the technical review involve BACT and the analysis of potential offsite impacts.

## 4. Best Available Control Technology Determination

BACT is determined by the TACB permit engineer using a three-tiered approach. In the first tier, controls which have been accepted as BACT in a recently issued permit for the same process or industry are accepted as BACT in a current application if no new technical developments have been made which would justify additional control. Controls which have been utilized in practice in that process or industry are deemed to be both technically practicable and economically reasonable.

The second tier examines control technologies in other industries and is often referred to as "technology transfer." This approach takes into consideration control technologies used on similar streams in a different process or a different industry. Although not as directly applicable as the first-tier approach, the second-tier approach does provide persuasive evidence that the technology is practicable in that it has

proven to be effective in controlling like air contaminants. Because this transfer technology has been deemed to be economically reasonable to employ in other applications, the TACB permit engineer is likely to determine that it is also economically reasonable to employ that technology at the proposed facility.

The third-tier approach involves a detailed technical and economic analysis of all control options for the proposed facility. In determining the technical practicability of controls, the TACB staff evaluates (1) the demonstrated success of a control technology as determined by previous use; (2) an assessment of the predicted success of a new technology; and (3) the availability and reliability of the proposed control system. In determining the economic reasonableness of utilizing the technology, the TACB staff considers the dollars per ton of reducing emissions and does not take into account the effect of the cost of controls on an individual corporation's economic situation.

#### 5. Potential Impacts Analysis

The potential offsite impacts of air emissions from a facility are evaluated by comparing the results of dispersion modeling with applicable federal and state statutory and regulatory standards and requirements. Dispersion modeling is a mathematical method of predicting potential offsite concentrations of emissions from a facility using complicated computer models developed by EPA and the TACB. Specifically, the TACB staff compares predicted concentrations with the federal National Ambient Air Quality Standards (NAAQS) as well as the state limitations for total suspended particulates and PM<sup>10</sup> (Regulation I); sulfur dioxide, hydrogen sulfide and sulfuric acid (Regulation II); as well as inorganic fluorides and beryllium (Regulation III). Predicted concentrations of compounds for which no NAAQS or federal or state regulatory limits have been set and which may be odorous, toxic or cause significant material damage are evaluated by comparing the predicted concentrations with concentrations determined to be acceptable by the Effects Evaluation Section of the TACB. These acceptable concentrations are referred to as "Effects Screening Levels" (ESLs) and are used as guidelines by the TACB staff in evaluating whether predicted offsite concentrations are of any concern. If the predicted concentrations do not exceed the ESLs, then no further review is conducted. However, if the predicted offsite concentrations do exceed the ESLs, then the TACB staff reviews the available scientific information further to determine whether the predicted concentrations would likely adversely affect human health or welfare, animal life, vegetation or property. If such adverse effects are likely, the TACB staff considers the human toxic or odor response, the frequency and magnitude of the impacts and the distance to the nearest residences or businesses. After considering these factors, the TACB staff may conclude that the exceedances are acceptable. If the exceedances are not acceptable, then the TACB staff requires either additional controls or better dispersion of the air contaminants.

## 6. Disaster Review

In addition to the potential offsite impacts analysis conducted of reasonably anticipated emissions from the facility, the TACB may also require a disaster review depending on the chemicals to be handled, the location of the facility and the process involved. In this review, the permit engineer will evaluate the emissions that might occur during a catastrophe such as a tank rupture or line failure. The review consists of an engineering analysis of the process arrangement, process operation and equipment redundancies incorporated into the facility design as well as a health effects review of the predicted impacts due to a catastrophic release. The purpose of such a review is to prevent, minimize or mitigate emissions that would occur due to a catastrophic release.

## 7. Upset/Maintenance Review

In addition to reviewing reasonably expected emissions and those that could occur due to a catastrophic event, the TACB staff also evaluates emissions which would not normally be expected or would not regularly occur from a process. These emissions may be due to upset, maintenance, startup and shutdown activities. Essentially, the applicant is required to demonstrate that the criteria of TACB Rule 101.11 (Exemption for Upset, Maintenance, Startup, Shutdown Emissions) would be met should excessive emissions due to one of these activities occur. (See 31 TAC 101.11) The staff incorporates into the permit review an assessment of whether or not releases due to these activities could be avoided, the corrective action that could be implemented, whether nuisance conditions could be avoided, and might incorporate into the permit provisions specific amounts of emissions and limitations on the duration of the emissions that could occur due to one of these activities. It should be noted that the federal Clean Air Act as amended in 1990 will require that a compliance plan be incorporated into the federal operating permit in the form of an operation and maintenance plan. Consequently, this portion of the TACB's review will continue in the federal operating permit program.

## 8. Permit Provisions

The permit provisions placed in a TACB permit fall within one of four categories: (1) those in the permit certificate; (2) general provisions; (3) standard general provisions; and (4) special provisions.

### a. The Permit Certificate

The permit certificate is the front page of the permit which contains conditions applicable to all permittees. Specifically, the permit certificate addresses issues such as permit transference; voidance of the permit due to a permittee's failure

to begin construction within 18 months of the date of issuance, or discontinuance of construction for a period of 18 consecutive months or more; conditions regarding startup and monitoring; and a prohibition against causing or contributing to a nuisance condition. A copy of the permit certificate is attached as Appendix "A."

b. General Provisions

There are six standard general provisions included in all permits which define responsibilities for demonstrating equivalency of emission control methods, construction progress, recordkeeping, and maintenance of emission control systems. Sampling requirements and the administrative appeal process are also set out in the standard general provisions. A copy of the General Provisions is attached as Appendix "B."

c. Standard Special Provisions

These provisions specify sampling methodology for certain processes. There are over 170 standard special provisions. An example of this type of special provision is the compliance provision currently placed in permits which requires that within 180 days of startup, the permit holder must submit documentation which demonstrates that the facility is in compliance. Copies of sample Standard Special Provisions are attached as Appendix "C."

d. Special Provisions

Special provisions are written specifically for a particular permit. These provisions typically incorporate into the permit the operating parameters of the facility which were represented in the permit application, as well as incorporating BACT requirements. Examples of operating parameters include abatement efficiency, capture efficiency, equipment specifications, capacity limits, recordkeeping and reporting, operation under upset conditions, startup, shutdown and maintenance. In addition, a maximum allowable emission rate table is incorporated into the permit setting forth the maximum allowable emissions that can be emitted from the facility covered in the permit. A sample copy of special provisions for two different types of facilities is attached as Appendix "D."

D. Operating Permits

Section 382.054 of the Texas Clean Air Act and TACB Rule 116.3(b) provided that a person in charge of a facility for which a construction permit has been issued had to apply for an operating permit not later than the 60th day after the date on which the facility begins operation. However, effective September 1, 1991, Section 382.055 of the Act amended Section 382.054 to delete the requirement of obtaining an

operating permit. Hereafter, an applicant needs only to obtain a pre-construction permit.

#### E. Permit Continuance

For almost 15 years after the TACB permitting program was established, permits did not contain an expiration date. In 1985, the Texas Clean Air Act was amended to require the review of operating permits every 15 years. In 1991, the permitting provisions of the Texas Clean Air Act were amended again. Effective September 1, 1991, the holder of a construction permit no longer has to apply for and obtain a separate operating permit for a facility. In addition, effective December 1, 1991, permits issued by the TACB are limited to a term of five years.

The TACB staff is required to notify a permittee 180 days before the expiration of the TACB permit and the permit holder must submit a complete application for renewal within 90 days from receipt of the notice. In order to obtain a continuance of its permit, the permittee must demonstrate: (a) that the facility is in compliance with all TACB rules and regulations; (b) that the facility is in compliance with all of the provisions of the existing permit; (c) that there are means to measure emissions from the permitted unit; (d) that the control technology is reasonable and practicable considering the age of the unit and impacts; (e) that the facility is in compliance with applicable NSPS; and (f) that the facility is in compliance with applicable NESHAPS.

In making its compliance demonstration in the past, the permittee has been required to demonstrate that it is in "substantial compliance." Substantial compliance is deemed to have been achieved provided: (1) there are no unresolved, non-clerical notices of violation; (2) there are no ongoing confirmed complaints; and (3) the company has a reasonable upset/maintenance record. If the TACB staff determines that the application meets the above requirements, then a permit will be issued. Oftentimes, the permit which is continued is amended to reflect changes in the construction of the facility that had not been previously authorized or changes in the method of control or an increase in emissions or a change in the character of emissions. A permit fee is required for a continuance of a permit. Two or more permits may be combined at the request of the permit holder provided that all permits are undergoing a continuance review and the combination will be for related facilities. Public notice of the continued permit is required and an opportunity for a contested case hearing on the above application is also afforded the public. The issue of how an applicant's compliance history will factor into the permit renewal process is currently under agency review and will be discussed in more detail in Section VI.A. below.

#### F. Prevention of Significant Deterioration Permitting Requirements

As with the nonattainment review program, the TACB has incorporated the PSD permitting requirements into its state permitting program. The PSD program was recently delegated to the State of Texas which is now responsible for issuing and enforcing PSD permits. In order to obtain a PSD permit, an applicant must submit an application to the TACB and demonstrate the following:

- (1) that the facility will utilize BACT, considering the energy, environmental, and economic impacts in determining the maximum degree of reduction achievable for the proposed source or modification;
- (2) through an air quality analysis, that the new pollutant emissions would not violate either the applicable NAAQS or the applicable PSD increment;
- (3) that the direct effect of the sources emissions as well as the indirect impacts from general commercial, residential, industrial, and other growth associated with the proposed source or modification will not impair visibility or adversely affect soil or vegetation;
- (4) that the emissions from the facility will not have an impact on a Class I area (i.e., a pristine area such as a national park); and
- (5) that the specific public notice requirements and public comment period have been followed.

#### VI. SENATE BILL 2

The Texas Clean Air Act was amended in July 1991 adding several important provisions to the state permitting program.

##### A. Compliance History

Section 382.0518(c) of the Act provides:

"In considering the issuance, amendment or renewal of a permit, the board may consider any adjudicated decision or compliance proceeding within the five years before the date on which the application was filed that addressed the applicant's past performance and compliance with the laws of the state, another state, or the United States governing air contaminants or with the terms of any permit or order issued by the board."

There has been a great deal of controversy over how compliance history should be factored into the decision to grant or deny a TACB permit. Last year the TACB staff mailed letters to applicants requesting that they submit detailed information about their compliance history at any facility owned or operated by them anywhere in the United States. Many applicants strongly objected to having to obtain so much information which they argued would be largely irrelevant and unduly burdensome. As a result, the TACB decided to consider rules governing the compilation of an applicant's compliance history and its use in permitting. The TACB staff will propose a new Rule 116.14 to address the issues involving compliance history. However, as yet, the rulemaking process has not begun.

#### B. Renewal

Section 382.055 of the Act provides that a permit issued or renewed on or after December 1, 1991 is subject to review every five years after the date of issuance to determine whether the authority to operate should be renewed. A permit issued before December 1, 1991 is subject to review 15 years after the date of issuance. The TACB does not consider an amendment to a permit after December 1, 1991 as affecting the term of the permit.

#### C. Public Hearing Procedures

Section 382.0291 of the Act provides that an applicant for a license, permit, registration, or similar form of permission required by law to be obtained from the Board may not amend the application after the 31st day before the date on which a public hearing on the application is scheduled to begin. If an amendment of an application would be necessary within that period, the applicant shall resubmit the application to the Board and must again comply with notice requirements and any other requirements of law or Board rule as though the application were originally submitted to the Board on that date. This provision is applicable to an application which is submitted on or after September 1, 1991.

### VII. FEDERAL OPERATING PERMIT PROGRAM

The federal operating permit program was authorized in Title V of the 1990 Amendments to the federal Clean Air Act. The federal regulations will be codified in a new part 70 of Chapter I of title 40 of the Code of Federal Regulations. While Title V generally does not impose substantive new requirements, it will result in all of the requirements applicable to a source being incorporated into a single document and will require that fees be imposed on sources and that certain measures be followed, especially with respect to determining compliance with underlying applicable requirements. The federal operating permit program will make the federal air permits

more consistent with the permits issued under the Resource Conservation and Recovery Act and the Clean Water Act.

As mentioned previously, the categories of "major sources" under the federal statute has been greatly expanded. A major source is defined in terms of all emission units under common control at the same plant site (i.e., within a contiguous area in the same major group, two-digit, industrial classification). Once subject to the part 70 operating permit program for one pollutant, a major source will be required to submit a permit application including all emissions of all regulated air pollutants from all emission units located at the plant, except that only a generalized list need be included for insignificant events or emission levels. The program applies to all geographical areas within each state, regardless of their attainment status.

EPA has established minimum elements of a state operating permit program, including the following:

- (1) standard application forms and criteria for determining the completeness of applications;
- (2) monitoring and reporting requirements;
- (3) a permit fee system;
- (4) provisions for adequate personnel and funding to administer the program;
- (5) authority to issue permits and assure that each permitted source complies with applicable requirements under the federal Clean Air Act;
- (6) authority to terminate, modify, or revoke and reissue permits "for cause;"
- (7) authority to enforce permits, permit fee requirements, and the requirement to obtain a permit, including civil penalty authority in a maximum amount of not less than 10,000 per day for each violation, and "appropriate criminal penalties;"
- (8) authority to assure that no permit will be issued if EPA timely objects to its issuance;
- (9) adequate, streamlined, and reasonable procedures for expeditiously determining when applications are complete and for processing

applications; for public notice, including offering an opportunity for public comment and a hearing; for expeditious review of permit actions, and State court review of the final permit action;

- (10) authority and procedures to provide that the permitting authority's failure to act on a permit or renewal application within the deadlines specified in the federal Clean Air Act (section 503 and the deadlines for permitting under acid rain provisions in Title IV) shall be treated as a final permit action solely to allow judicial review by the applicant or anyone else who participated in the public comment process to compel action on the application;
- (11) authority and procedures to make available to the public any permit application, compliance plan for noncomplying sources, permit, emissions or monitoring report, and compliance report or certification, subject to the confidentiality provisions similar to those of section 114(c) of the federal Clean Air Act; the contents of the permit itself are not entitled to confidentiality protection; and
- (12) provisions to allow operational flexibility at the permitted facility.

## VIII. CONCLUSION

Agencies are coming under increasing pressure to streamline their permit review procedures. There are several obvious reasons for the length of time taken in a permit review. Agency staffs have heavy workloads. The agency employee turn-over rate is increasing and many new people are being hired now so that they can be properly trained by the time that the federal operating permit program comes into play. Consequently, less experienced personnel have had to be hired to do the work and these people are not as efficient as more experienced personnel would be. These are factors that are not easily controlled.

However, another reason that the review period is so long is that incomplete or deficient applications are submitted by applicants with the view that they will "work" with the permit engineer to see what else is needed. While there is a certain amount of "working" with the permit engineer that cannot be avoided given the "case-by-case review" that is made of TACB permit applications, applicants can expect that the TACB permit engineers will become more demanding about the quality of permit applications they review and will void incomplete applications or deny permits if an applicant fails to provide information in a timely manner. In fact, the TACB permit engineers have been doing this now for over two years and with increasing frequency. Applicants should expect to have more comprehensive sampling, recordkeeping and

reporting requirements placed in their permits than have been required in the past. Also, it appears that previous noncompliance with agency rules and regulations will play a large role in the agency's decision regarding whether a permit should be issued and if so, the additional requirements that should be imposed. It is more critical than ever for permit applications to be complete when submitted to the TACB and that timely responses be made to requests for information.

The requirements for obtaining a permit from the TACB are becoming more complex every day. Applicants should treat the permitting process seriously because their project depends on it. When time is of the essence, the quality of the application submitted will often be the greatest single factor in the length of time the application remains in the review process. To this extent, the applicant is in control.



# TEXAS AIR CONTROL BOARD

A PERMIT IS HEREBY ISSUED TO

AUTHORIZING THE CONSTRUCTION AND OPERATION OF  
TO BE LOCATED AT

and which is to be constructed and operated in accordance with and subject to the Texas Clean Air Act (Texas Health and Safety Code, Chapter 382) and all Rules, Regulations and Orders of the Texas Air Control Board. Said permit is subject to any additional or amended Rules, Regulations and Orders of the Board adopted pursuant to the Act and to all of the following conditions:

1. This permit may not be transferred, assigned or conveyed by the holder, and applies only to the location specified herein.
2. This permit is automatically void upon the occurrence of any of the following:
  - a. Failure to begin construction within eighteen months of the date of issuance.
  - b. Discontinuance of construction prior to completion for a period of eighteen consecutive months or more.
  - c. Failure to complete construction within a reasonable time.
3. The facilities covered by this permit shall be constructed and operated as specified in the application for the permit.
4. All representations regarding construction plans and operation procedures contained in the permit application, unless specifically changed in the application for this permit, become conditions upon which this permit is issued. It shall be unlawful for any person to vary from such representation if the change will cause a change in the method of control of emissions, the character of the emissions or will result in an increase in the discharge of the various emissions, unless he first makes application to the Executive Director to amend this permit in that regard and such amendment is approved.
5. The Board shall be notified prior to the start-up of the facilities authorized by this permit in such a manner that a representative of the Texas Air Control Board may be present at the time of start-up.
6. The Board shall be notified prior to the start of any required sampling and/or monitoring of the facilities authorized by this permit in such a manner that a representative of the Texas Air Control Board may be present during the required sampling and/or monitoring. Upon request by the Executive Director, the holder of this permit shall make sufficient stack sampling analyses, or other tests, to prove satisfactory equipment performance. All sampling and testing procedures shall be approved by the Executive Director and coordinated with the regional representatives of the Texas Air Control Board.
7. This permit does not absolve the holder from the responsibility for the consequences of noncompliance with all Rules, Regulations and Orders of the Texas Air Control Board or with the requirements of the Texas Clean Air Act.
8. The facilities covered by this permit shall not be operated unless all associated air pollution abatement equipment is maintained in good working order and operating properly during normal facility operations.
9. Emissions from this facility must not cause or contribute to a condition of 'air pollution' as defined in Section 382.003(2) of the Texas Clean Air Act or violate Section 382.085 of the Texas Clean Air Act. If the Executive Director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
10. Provisions:

Acceptance of the permit constitutes an acknowledgement and agreement that the holder will comply with all Rules, Regulations and Orders of the Board issued in conformity with the Act and the conditions precedent to the granting of this permit. Failure to comply with all conditions and special provisions of this permit will subject the holder to the enforcement provisions of the Texas Clean Air Act.

This permit expires 5 years from date of issuance unless renewed as defined in Section 382.055 of the Texas Clean Air Act.

PERMIT NO. \_\_\_\_\_ DATE \_\_\_\_\_

\_\_\_\_\_  
EXECUTIVE DIRECTOR, TEXAS AIR CONTROL BOARD

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## GENERAL PROVISIONS

1. Equivalency of Methods - It shall be the responsibility of the holder of this permit to demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods and monitoring methods proposed as alternatives to methods indicated in the provisions of this permit. Any request for alternate or equivalent methods from those specified under Title 40 Code of Federal Regulations Parts 60 and 61 (40 CFR 60 and 61), except for waivers authorized under the delegation of 40 CFR 60 and 61 from the Environmental Protection Agency (EPA) to the Texas Air Control Board (TACB), shall be approved by the EPA prior to their use in fulfilling any requirements of the permit.
2. Sampling Requirements - If sampling of stacks or process vents is required, the holder of this permit must contact the Source and Mobile Monitoring Division of the TACB prior to sampling to obtain the proper data forms and procedures. The holder of this permit is also responsible for providing sampling facilities and conducting the sampling operations at his own expense.
3. Construction Progress - Start of construction, construction interruptions exceeding 45 days, completion of construction and start-up shall be reported to the TACB not later than 10 working days after occurrence of the event.
4. Recordkeeping - Information concerning production, operating hours, fuel type and fuel sulfur content, if applicable, shall be maintained at the plant site and made available at the request of personnel from the TACB, the local air pollution control program or the EPA.

Revised: 02/06/91

## GENERAL PROVISIONS

1. Equivalency of Methods - It shall be the responsibility of the holder of this permit to demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods and monitoring methods proposed as alternatives to methods indicated in the provisions of this permit. Alternative methods shall be applied for in writing and shall be reviewed and approved by the Executive Director prior to their use in fulfilling any requirements of this permit.
2. Sampling Requirements - If sampling of stacks or process vents is required, the holder of this permit must contact the Source and Mobile Monitoring Division of the Texas Air Control Board (TACB) prior to sampling to obtain the proper data forms and procedures. The holder of this permit is also responsible for providing sampling facilities and conducting the sampling operations at his own expense.
3. Appeal - This permit may be appealed pursuant to Rule 103.81 of the Procedural Rules of the TACB and Section 382.032 of the Texas Clean Air Act. Failure to take such appeal constitutes acceptance by the applicant of all terms of the permit.
4. Construction Progress - Start of construction, construction interruptions exceeding 45 days and completion of construction shall be reported to the appropriate regional office of the TACB not later than 10 working days after occurrence of the event. This provision shall not apply to operating permits.
5. Recordkeeping - Information and data concerning production, operating hours, sampling and monitoring data, if applicable, fuel type and fuel sulfur content, if applicable, shall be maintained in a file at the plant site and made available at the request of personnel from the TACB or any local air pollution control program having jurisdiction. The file shall be retained for at least two years following the date that the information or data is obtained.
6. Maintenance of Emission Control - The facilities covered by this permit shall not be operated unless all air pollution emission capture equipment and abatement equipment are maintained in good working order and operating properly during normal facility operations.

## GENERAL PROVISIONS

Piping, Valves, Flanges, Pumps and Compressors in Volatile Organic Compound (VOC) Service

- A. These provisions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.5 psia at 100°F or at maximum process operating temperature if less than 100°F, or (2) to piping and valves two inches nominal size and smaller or (3) where the operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure.
- B. Construction of new and reworked piping, valves and pump and compressor systems shall conform to applicable ANSI, API, ASME or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring period after initial installation or replacement, all new or reworked connections shall be gas tested or hydraulically tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Flanges shall be inspected by visual, audible and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug or a second valve.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including but not limited to bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure gauge shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.
- G. Except as may be provided for in the special provisions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a

shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. Seal systems that prevent emissions may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure or seals degassing to vent control systems kept in good working order.

Submerged pumps or sealless pumps (including but not limited to diaphragm, canned or magnetic driven pumps) may be used to satisfy the requirements of this provision and need not be monitored.

- H. Damaged or leaking valves, flanges, compressor seals and pump seals found to be emitting VOC in excess of 10,000 ppmv or found by visual inspection to be leaking (e.g. dripping liquids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The Executive Director, at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.
- I. The results of the required fugitive monitoring and maintenance program shall be made available to the Executive Director or his designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results and corrective actions taken. Records of flange inspections are not required unless a leak is detected.
- J. Fugitive emission monitoring required by TACB Regulation V, an applicable New Source Performance Standard (NSPS), Title 40 Code of Federal Regulations Part 60 (40 CFR 60) or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) (40 CFR 61) may be used in lieu of Items F through I of this provision.

Compliance with the requirements of this provision does not assure compliance with requirements of TACB Regulation V, NSPS or NESHAPS and does not constitute approval of alternative standards for these regulations.

## GENERAL PROVISIONS

Piping, Valves, Flanges, Pumps and Compressors in Volatile Organic Compound (VOC) Service - Directed Maintenance

- A. These provisions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.5 psia at 100°F or at maximum process operating temperature if less than 100°F, or (2) to piping and valves two inches nominal size and smaller or (3) where the operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure.
- B. Construction of new and reworked piping, valves and pump and compressor systems shall conform to applicable ANSI, API, ASME or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled monthly monitoring period after initial installation or replacement, all new or reworked connections shall be gas tested or hydraulically tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Flanges shall be inspected by visual, audible and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug or a second valve.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least monthly using an approved gas analyzer. Sealless/leakless valves (including but not limited to bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure gauge shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.
- G. Except as may be provided for in the special provisions of this permit, all pump and compressor seals shall be monitored with an approved gas analyzer at least monthly or be equipped with a shaft

sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. Seal systems that prevent emissions may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure or seals degassing to vent control systems kept in good working order.

Submerged pumps or sealless pumps (including but not limited to diaphragm, canned or magnetic driven pumps) may be used to satisfy the requirements of this provision and need not be monitored.

- H. Damaged or leaking valves, flanges, compressor seals and pump seals found to be emitting VOC in excess of 10,000 ppmv or found by visual inspection to be leaking (e.g. dripping liquids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The Executive Director, at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.
- I. The results of the required fugitive monitoring and maintenance program shall be made available to the Executive Director or his designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results and corrective actions taken. Records of flange inspections are not required unless a leak is detected.
- J. Compliance with the requirements of this provision does not assure compliance with requirements of TACB Regulation V, an applicable New Source Performance Standard or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations.

## GENERAL PROVISIONS

Piping, Valves, Flanges, Pumps and Compressors in \_\_\_\_\_ Service  
- Intensive Directed Maintenance

Except as may be provided for in the special provisions of this permit, the following requirements apply to the above referenced equipment.

- A. These provisions shall not apply (1) where the \_\_\_\_\_ concentration in the stream is less than \_\_\_\_\_ percent by weight or (2) where the volatile organic compounds (VOC) have an aggregate partial pressure or vapor pressure of less than 0.05 psia at 20°C, or (3) to piping and valves two inches nominal size and smaller or (4) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this provision shall be identified in a list to be made available upon request.
- B. Construction of new and reworked piping, valves and pump and compressor systems shall conform to applicable ANSI, API, ASME or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas tested or hydraulically tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Flanges shall be inspected by visual, audible and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug or a second valve.
- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. Sealless/leakless valves (including but not limited to bellows and diaphragm valves) and relief valves equipped with a rupture disc or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure gauge shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be

replaced at the earliest opportunity but no later than the next process shutdown.

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained.

- G. All new and replacement pumps and compressors shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including but not limited to diaphragm, canned or magnetic driven pumps) may be used to satisfy the requirements of this provision and need not be monitored.

All other pump and compressor seals emitting VOC shall be monitored with an approved gas analyzer at least quarterly.

- H. Damaged or leaking valves, flanges, compressor seals and pump seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g. dripping liquids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The Executive Director, at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.
- I. The results of the required fugitive monitoring and maintenance program shall be made available to the Executive Director or his designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results and corrective actions taken. Records of flange inspections are not required unless a leak is detected.
- J. Compliance with the requirements of this provision does not assure compliance with requirements of TACB Regulation V, an applicable New Source Performance Standard or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations.

## GENERAL PROVISIONS

Storage and Loading of Volatile Organic Compounds (VOC)

- A. These provisions shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.5 psia at the maximum expected operating temperature or (2) to storage tanks smaller than 25,000 gallons.
- B. An internal floating roof or equivalent control shall be installed on all tanks.
- C. An open top tank containing a floating roof which uses double seal or secondary seal technology shall be an approved control alternative to an internal floating roof tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal and the secondary seal is rim-mounted. A weathershield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.
- D. For any tank equipped with a floating roof, the integrity of the floating roof seals shall be verified annually and records maintained to describe dates, seal integrity and corrective actions taken.
- E. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650, Appendix C or an equivalent degree of flotation, except that an internal floating cover need not be designed to meet rainfall support requirements.
- F. Uninsulated tank exterior surfaces exposed to the sun shall be white.
- G. For purposes of assuring compliance with VOC emission limitations, the holder of this permit shall maintain a monthly emissions record which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method used, tank or vessel capacity in gallons, name of the material stored or loaded, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date in gallons and total tons of emissions including controls for the previous month and year-to-date. This record shall be maintained at the plant site for at least two years and be made available to representatives of the TACB upon request.
- H. Emissions for tanks and loading operations shall be calculated using the edition of AP-42, "Compilation of Air Pollutant Emission Factors," in effect on the date this permit was issued (or the edition in effect on the last date the permit was amended if the permit has been amended).

- I. Controlled and uncontrolled emissions of VOC shall be calculated for storage tanks using the following meteorological data as monthly average values:

Monthly Average

Daily temperature change, °F  
Wind speed, mph  
Station pressure, psia

## GENERAL PROVISIONS

Carbon Compound Waste Gas Streams

- A. Except as may be provided for in the special provisions of this permit, all waste gas from point sources containing volatile organic compounds (VOC) and/or other organic compounds (hydrocarbons and/or hydrocarbon derivatives excluding carbon dioxide) shall be routed to (a flare) (an incinerator) (a recovery system). The (flare shall operate with no less than 98 percent efficiency in disposing of) (the incinerator shall operate with no less than 99.9 percent efficiency in disposing of) (recovery system shall operate with no less than 95 percent efficiency in recovery of) the carbon compounds captured by the collection system. The waste gas streams shall include process vents, relief valves, analyzer vents, steam jet exhausts, upset emissions, start-up and shutdown-related emissions or purges, blowdowns or other system emissions of waste gas. Storage tank vents, cooling tower exhaust and process fugitive emissions are excluded from this requirement. Any other exception to this provision requires prior review and approval by the Executive Director and such exceptions may be subject to strict monitoring requirements.
- B. The holder of this permit shall perform sampling and other testing as necessary to establish the pounds per hour of VOC being emitted into the atmosphere from the cooling tower and wastewater system associated with this permit. All sampling and testing methods shall be subject to approval of the Executive Director prior to their implementation. The VOC concentration (ppmv) in the exhaust from the air stripping system or equivalent and the corresponding pounds of strippable VOC/gallon of cooling water should be reported. These will be used to determine the level (either ppmv or lb/VOC/gal) at which a leak into cooling water will be assumed in the ongoing monitoring program. Within 30 days after completion of sampling, copies of the test report shall be submitted to the TACB Permits Program and the TACB regional office.
- C. VOC associated with cooling tower water shall be monitored monthly with an approved air stripping system or equivalent. The appropriate equipment shall be maintained so as to minimize fugitive VOC emissions from the cooling tower. Faulty equipment shall be repaired at the earliest opportunity, but no later than the next scheduled shutdown of the process unit in which the leak occurs. The results of the monitoring and maintenance efforts shall be recorded and such records shall be maintained for a period of two years. The records shall be made available to the Executive Director upon request.

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January 1992  
~~November 1990~~

## SPECIAL PROVISIONS

### Stack Sampling Ports

- 1.1 Sampling ports and platform(s) shall be incorporated into the design of \_\_\_\_\_ stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the Regional Director or the Director of the Source and Mobile Monitoring Division.
- 1.2 Stack sampling ports and platform(s) as specified in the attachment entitled "Chapter 2, Stack Sampling Facilities" or an alternate design may be required at a later date if determined necessary by the Regional Director or the Director of the Source and Mobile Monitoring Division.

## Sampling Procedures

- 2.1 The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the \_\_\_\_\_.

The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

- A. The appropriate TACB regional office in the region where the source is located shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

1. Date for pretest meeting.
2. Date sampling will occur.
3. Name of firm conducting sampling.
4. Type of sampling equipment to be used.
5. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit provisions or TACB or Environmental Protection Agency (EPA) sampling procedures shall be made available to the TACB prior to the pretest meeting. The Regional Director or the Director of the Source and Mobile Monitoring Division shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this provision shall be submitted to the TACB Permits Program. Test waivers and alternate/equivalent procedure proposals for New Source Performance Standard (NSPS) testing which must have EPA approval shall be submitted to the TACB Source and Mobile Monitoring Division in Austin.

- B. Air contaminants emitted from the \_\_\_\_\_ to be tested for include (but are not limited to) \_\_\_\_\_.
- C. Sampling shall occur within 60 days after initial start-up of the facilities and at such other times as may be required by the Executive Director of the TACB. Requests for additional time to perform sampling shall be submitted to the regional office.

Additional time to comply with the applicable requirements of 40 CFR 60 and 40 CFR 61 requires EPA approval and requests shall be submitted to the TACB Source and Mobile Monitoring Division in Austin.

D. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

E. Three copies of the final sampling report shall be forwarded to the TACB within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TACB Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TACB regional office.

One copy to each appropriate local air pollution control program.

One copy to the Source and Mobile Monitoring Division, TACB, Austin Office.

F. (optional) Stack sampling shall be repeated every five years after the initial sampling in conformity with Conditions A, B and D of this provision.

2.2 The holder of this permit shall perform stack sampling and other testing to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the \_\_\_\_\_ engine. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

A. The appropriate TACB regional office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

1. Date for pretest meeting.
2. Date sampling will occur.
3. Name of firm conducting sampling.
4. Type of sampling equipment to be used.
5. Method or procedure to be used in sampling.
6. Procedure to be used to determine engine horsepower load during sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit provisions or TACB or Environmental Protection Agency (EPA) sampling procedures shall be made available to the TACB prior to the pretest meeting.

The Regional Director or the Director of the Source and Mobile Monitoring Division shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this provision shall be submitted to the TACB Permits Program. Test waivers and alternate/equivalent procedure proposals for New Source Performance Standard (NSPS) testing which must have EPA approval shall be submitted to the TACB Source and Mobile Monitoring Division in Austin.

- B. Air contaminants emitted from the \_\_\_\_\_ to be tested for include (but are not limited to) \_\_\_\_\_.
- C. Engine emissions shall be determined by EPA Methods 1, 2, 3, 4, 10 and 20 (as modified by proposed NSPS, Subpart FF, Paragraph 60.324, entitled "Test Methods and Procedures," for the sampling site location, traverse points and required engine operating data) or any other methods approved by the Regional Director or the Director of the Source and Mobile Monitoring Division prior to sampling. Emissions shall be sampled at four points over the normal load range of the engine, including the minimum and maximum of the range. At each test load, the following operating parameters shall be varied to identify the range over which the allowable emission limits are not exceeded: (air-fuel ratio as measured by exhaust oxygen content, engine speed and spark ignition timing for clean-burn gas-fired engines) (intake manifold temperature and pressure or air-fuel ratio as measured by exhaust oxygen content, engine speed, injector timing for dual-fuel or diesel engines). The nitrogen oxides (NO<sub>x</sub>) concentration limit of the proposed Subpart FF is not applicable and hence the correction to 15 percent oxygen specified in Method 20 and Subpart FF is not applicable to the engine tests. The NO<sub>x</sub> emission level measured by Reference Method 20 shall be adjusted to reference ambient conditions in accordance with Section 60.324 of the proposed NSPS Subpart FF and reported. The unadjusted NO<sub>x</sub> emission level shall

be used to determine compliance with the brake-specific emission limit of this permit.

D. Gaseous sampling ports for the engines shall consist of 2 two-inch diameter or larger schedule 40 couplings or 2 three-inch long pipe nipples installed in the exhaust system according to EPA Method 1 at a location where the full flow to the engine exhaust sweeps by the sampling point and where sufficient turbulence (no stratification) may be expected to insure a representative sample. Platforms shall be incorporated into the design of the engine's stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternatively, a temporary work platform for sampling operations is acceptable if proper safety and accessibility are provided. All other requirements detailed in Chapter 2 of the TACB Sampling Procedures Manual pertaining to monorails, loading, clearance and power must be met by the temporary facilities. Alternate sampling facility designs must be submitted for approval by the Regional Director or the Director of the Source and Mobile Monitoring Division.

E. Sampling shall occur within 60 days after initial start-up of the facilities and at such other times as may be required by the Executive Director of the TACB. Requests for additional time to perform sampling shall be submitted to the regional office. Additional time to comply with the applicable requirements of 40 CFR 60 and 40 CFR 61 requires EPA approval and requests shall be submitted to the TACB Source and Mobile Monitoring Division in Austin.

F. Three copies of the final sampling report shall be forwarded to the TACB within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TACB Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TACB regional office.  
One copy to each appropriate local air pollution control program.

One copy to the Source and Mobile Monitoring Division, TACB, Austin Office.

2.3 In order to demonstrate that the emission limit of \_\_\_\_\_ grams per horsepower-hour (gm/hp-hr) of nitrogen oxides (NO<sub>x</sub>) is continuously met, the holder of this (permit)(exemption) shall perform the following on the \_\_\_\_\_ engine(s) identified as Emission Points No. \_\_\_\_\_ covered by this permit:

(Manual Monitoring)

- A. Check (carbon monoxide [CO])(oxygen) content of exhaust at the inlet to the catalytic converter at least (daily)(weekly - unmanned sites) with a meter and adjust carburetor as necessary to maintain operating conditions for optimum catalyst performance. Inlet (CO)(oxygen) concentration shall be maintained in the range of (3000 to 5500 CO)(1000 to 5000 oxygen) ppmv. This monitoring shall begin within 30 days after the engine begins operation and shall continue (daily)(weekly) until the Regional Director or the Director of the Source and Mobile Monitoring Division approves an alternate monitoring schedule. A minimum of (120 days)(52 weeks - unmanned sites) of monitoring data shall accompany any alternate schedule request.

(Oxygen Sensor in Exhaust Linked to Dummy Lights)

- A. Monitor oxygen content of exhaust at the inlet to the catalytic converter with a continuous sensor and adjust carburetor as necessary to maintain operating conditions for optimum catalyst performance. (Visual) (Audible) output of the sensor shall be checked at least daily. Inlet oxygen concentration shall be maintained in the range of 1000 to 5000 ppmv. The exhaust oxygen monitoring system shall be maintained properly, including periodic calibration and replacement of the oxygen sensor as needed.

(Oxygen Sensor in Exhaust Linked to Carburetor)

- A. Monitor oxygen content of exhaust at the inlet to the catalytic converter with a continuous sensor and operate automatic air-fuel ratio controller to maintain operating conditions for optimum catalyst performance. Inlet oxygen concentration shall be maintained in the range of 1000 to 5000 ppmv. The exhaust oxygen monitoring system shall be maintained properly, including periodic calibration and replacement of the oxygen sensor as needed.
- B. Conduct an annual evaluation of catalyst degradation by measuring NO<sub>x</sub> concentrations upstream and downstream of the catalytic converter. The initial evaluation shall be conducted within 30 days after start-up of the engine. The use of stain tube indicators specifically designed for measuring NO<sub>x</sub> concentrations in ppm is acceptable for this evaluation. A hot air probe or equivalent should be used with stain tubes to prevent introduction of error in results because of high stack temperatures. Any other method approved by the Regional Director or the Director of the Source and Mobile Monitoring Division is also acceptable.

If the average difference between the readings indicates less than an 80 percent reduction in NO<sub>x</sub>, the catalyst shall either be cleaned or replaced as

deemed necessary to attain the 2.0 gm/hp-hr emission rate. Three sets of upstream and downstream reductions should be averaged to determine the reduction.

(Manual Monitoring)

- C. Written records of all (CO)(oxygen) monitoring results, carburetor adjustments and annual NO<sub>x</sub> evaluations shall be maintained at the plant site for three years and shall be made available to the Regional Director or the Director of the Source and Mobile Monitoring Division within 30 days after each annual monitoring check is completed.

(Oxygen Sensor in Exhaust Linked to Dummy Lights)

- C. Written records of all oxygen monitoring results, carburetor adjustments, oxygen sensor calibrations and replacements and catalyst evaluations shall be made available to the Regional Director or the Director of the Quality Assurance Division within 30 days after each annual monitoring check is completed.

(Oxygen Sensor in Exhaust Linked to Carburetor)

- C. Written records of all oxygen sensor calibrations and replacements and catalyst evaluations shall be made available to the Regional Director or the Director of the Source and Mobile Monitoring Division within 30 days after each annual monitoring check is completed.
- 2.4 A. Sampling required in Special Provision No. \_\_\_\_\_ to establish the actual pattern and quantity of air contaminants emitted from the \_\_\_\_\_ when firing fuel oil may be waived by the Executive Director as a condition for applying for an operating permit provided that fuel oil has not been used in the facilities covered by this permit.
- B. Within 30 days of the commencement of burning fuel oil in these facilities, the holder of this permit shall submit a schedule for testing to the Executive Director and the appropriate regional office of the TACB. Air contaminants to be tested for shall be those specified in Special Provision No. \_\_\_\_\_ of the construction permit. The testing shall be completed and reports submitted within 60 days of the date of commencement of oil firing. If the facilities fail to meet the emission limits for fuel oil burning as required by the construction permit, the holder of this permit shall cease burning oil immediately upon notification of such failure by the Executive Director. The Executive

Director may specify retesting on an appropriate schedule. In addition, and notwithstanding any other requirement, the composition of the fuel oil burned shall be either that specified in the application for the permit to construct or consistent with the most recent composition (if any) published in the Texas Register pursuant to Rule 116.10(d), whichever is more restrictive.

- 2.5 If the normal production rate of \_\_\_\_\_ from these facilities exceeds by more than 10 percent the \_\_\_\_\_ per \_\_\_\_\_ maintained during sampling, the company must notify, in writing, the appropriate regional office of the TACB; and the source may be subject to additional sampling to demonstrate continued compliance with all applicable state and federal regulations.
- 2.6 Upon request by the Executive Director of the TACB or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) utilized in these facilities or shall allow air pollution control agency representatives to obtain a sample for analysis.

Sampling Procedures (Ground Level Sampling) use with 2.1D

- 3.1 Upon completion of the \_\_\_\_\_, one upwind sample and one downwind sample for ground level concentrations of particulate matter shall be made simultaneously and the results of such samples shall be reported to this agency not later than \_\_\_\_\_ days after initial start-up of the facilities. Ground level sampling shall be performed in accordance with Chapter 11 (particulate matter) and/or Chapter 12 (gaseous pollutants) of the TACB Sampling Procedures Manual.
- 3.2 The holder of this permit shall perform \_\_\_\_\_-hour tests for net ground level concentrations of \_\_\_\_\_. Each test shall consist of one upwind and one downwind sample taken simultaneously. The test(s) shall be performed during normal operation of the facilities. Ground level sampling shall be performed in accordance with Chapter 11 (particulate matter) and/or Chapter 12 (gaseous pollutants) of the TACB Sampling Procedures Manual.

## Boilers and Combustion Units

- 4.1 Initial sampling of the emissions from the boiler stack must be performed within 60 days after start-up of these facilities. This sampling must be performed while operating on (gaseous) (liquid) and (solid) fuels and must include analysis for particulate matter, sulfur oxides and nitrogen oxides.
- 4.2 The holder of this permit shall install, calibrate and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of \_\_\_\_\_ from \_\_\_\_\_.

- A. The CEMS shall meet the design and performance specifications, pass the field tests and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specifications No. 1 through 6, 40 CFR 60, Appendix B. If there are no applicable performance specifications in 40 CFR 60, Appendix B, contact the TACB in Austin for requirements to be met.
- B. The system shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR 60, Appendix B or as specified by the TACB if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days, unless the monitor is required by a subpart of New Source Performance Standards or National Emission Standards for Hazardous Air Pollutants, in which case zero and span shall be done daily without exception.

Each monitor shall be quality assured at least quarterly in accordance with 40 CFR 60, Appendix F, Procedure 1, Section 5.1.2. For non-NSPS sources, an equivalent method approved by the TACB may be used.

- C. The monitoring data shall be reduced to (hourly)(      ) average concentrations at least once every (day)(      ), using a minimum of four equally spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in (ppm)(lb/MMBTU)(lb/hr) at least once every (week)(month)(      ).
- D. All monitoring data and quality assurance data shall be maintained by the source for a period of two years and shall be made available to the Executive Director or his designated representative upon request. The data from the CEMS may, at the discretion of the TACB, be used to determine compliance with the provisions of this permit.

- E. All cylinder gas audit exceedances of  $\pm 15$  percent accuracy and any CEMS downtime shall be reported to the appropriate Regional Director and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate Regional Director.
- F. For NSPS sources subject to Appendix F, the appropriate TACB regional office shall be notified at least 30 days prior to each annual relative accuracy testing audit in order to provide TACB staff the opportunity to observe the testing.

[NOTE TO ENGINEER: Performance Spec 1 is for opacity, 2 for SO<sub>2</sub> and NO<sub>x</sub>, 3 for O<sub>2</sub> and CO<sub>2</sub>, 4 for CO and 5 for TRS.]

- 4.3 Fuel for \_\_\_\_\_ shall be either sweet natural gas as defined in the General Rules adopted by the TACB, liquid petroleum gas, diesel or No. 2 fuel oil. All liquid fuels must be first-run refinery grade and shall not consist of a blend containing waste oils or solvents. Use of any other fuel will require prior approval of the Executive Director of the TACB.
- 4.4 In-stack concentration of \_\_\_\_\_ from \_\_\_\_\_ shall not exceed \_\_\_\_\_ ppm by volume, averaged over \_\_\_\_\_ (hours) (days).
- 4.5 Incinerator operating instructions shall be established and must be posted such that they are available for all incinerator operators.
- 4.6 Disposal of ash must be accomplished in a manner which will prevent the ash from becoming airborne.
- 4.7 Emissions of nitrogen oxides from (gas fired) (No. 2 fuel oil fired) (No. 6 fuel oil-fired) heaters and boilers shall not exceed (0.12 lb per million Btu) (0.16 lb/MM Btu) (0.3 lb MM Btu) of heat input.

Opacity

- 5.1 Opacity of emissions from the \_\_\_\_\_ must not exceed \_\_\_\_\_ percent averaged over a 6-minute period, except for those periods described in Rule 111.111(a)(1)(E) of Regulation I.
- 5.2 (Fugitive Emissions Opacity) Opacity of fugitive emissions from the \_\_\_\_\_ shall not exceed \_\_\_\_\_ percent averaged over a 6-minute period as determined by EPA Method 9.

Emission Limitations and Operating Schedule

- 6.1 The total emissions of \_\_\_\_\_ from these facilities shall not exceed \_\_\_\_\_ (tons, pounds) per hour and \_\_\_\_\_ tons per year.
- 6.2 The total emissions of \_\_\_\_\_ from any of the sources shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."
- 6.3. Operation of the \_\_\_\_\_ is limited to \_\_\_\_\_ hours per day, \_\_\_\_\_ days per week and \_\_\_\_\_ weeks per year or \_\_\_\_\_ hours per year. The emission limitations specified are based on this operating schedule.
- 6.4. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table.
- 6.5. Operation of the \_\_\_\_\_ is limited to \_\_\_\_\_ hours per year. The emission limitations specified are based on this operating schedule.

Additional Engineering Data (Reference Form Letter C-16)

- 7.1 The holder of this permit shall forward to the staff of the TACB more detailed engineering data on the abatement equipment as it becomes available. This information shall include but is not limited to: \_\_\_\_\_,

NSPS and NESHAPS

- 8.1 These facilities shall comply with all requirements of Environmental Protection Agency Regulations on Standards of Performance for New Stationary Sources promulgated for \_\_\_\_\_ in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subparts A and \_\_\_\_\_.
- 8.2 These facilities shall comply with all requirements of Environmental Protection Agency Regulations on National Emission Standards for Hazardous Air Pollutants promulgated for \_\_\_\_\_ in Title 40 Code of Federal Regulations Part 61 (40 CFR 61), Subparts A and \_\_\_\_\_.
- 8.3 Add standard or other special provisions as necessary to require sampling, testing or monitoring.

Hoods, Ducts, Collection Systems

- 9.1 The holder of this permit shall demonstrate that all hooding, duct and collection systems are effective in capturing emissions from this equipment and in preventing fugitive emissions from buildings.
- 9.2 Disposal of \_\_\_\_\_ must be accomplished in a manner that will prevent the \_\_\_\_\_ from becoming airborne.

Portable and Aggregate Industry

- 10.1 Plant roads shall be (oiled) (paved and cleaned) (sprinkled with water and/or chemicals) as necessary to achieve maximum control of dust emissions.
- 10.2 \_\_\_\_\_ stockpiles shall be sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.
- 10.3 Water sprays shall be installed and operated as necessary at all material transfer points, inlet and exit of all crushers and all shaker screens in order to achieve maximum control of dust emissions.
- 10.4 The cement weigh hopper shall be enclosed and vented to the cement silo or a fabric filter.
- 10.5 The beds of all trucks transporting aggregate materials shall be covered to prevent dust emissions from the materials being transported.
- 10.6 An abatement device capable of capturing at least \_\_\_\_\_ percent of all dust emissions shall be used in connection with all drilling operations.
- 10.7 A sprinkling system shall be installed for the purpose of spraying all material being transported in open bodied trucks or trailers. The aggregate load of all transporting vehicles leaving the plant site shall be sprayed with water or covered with a canvas or similar type covering firmly secured to reduce particulate emissions.
- 10.8 A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or the local air pollution control agency.
- 10.9 This permit will fulfill permit requirements for future operation of this unit at other sites within Region \_\_\_\_\_ provided that the following conditions are complied with:
  - A. Approval must be obtained from the TACB Region \_\_\_\_\_ Office prior to operation of the unit at the new site.
  - B. If this unit is to be located within the corporate limits of any city and/or county having an air pollution control program, approval must be obtained from those respective air pollution control programs having jurisdiction of the proposed new site before construction commences at the new site.
  - C. The operator of this unit must have applied for an operating permit.

Agricultural and Rendering

- 11.1 This permit allows for the construction of a feedlot to house a maximum of \_\_\_\_\_ head of cattle.
- 11.2 All dead animals must be disposed of properly within 48 hours after death.
- 11.3 Runoff water in the holding ponds must not become a source of odors that cause or contribute to a condition of 'air pollution' as defined in Section 382.003 of the Texas Clean Air Act.
- 11.4 Excess moisture must be drained from pen areas to prevent ponding. Good pen drainage must be maintained at all times either by uniform slopes of 2-4 percent or by mounding manure in flat pens.
- 11.5 When it becomes necessary to stockpile manure outside the pen area, the moisture content must be maintained between 10 and 30 percent (wet basis) in the top 6 inches of the pile or it must be successfully demonstrated by the feedlot operator that the stockpile is not a source of odors. The stockpile must be crowned with sides sloped and located in a well-drained area to assure rapid dewatering.
- 11.6 Solid set sprinklers or portable spray equipment must be available and used as necessary to control dust.
- 11.7 Cleaning or scraping of pens and removal of manure from the stockpiles must be performed under favorable atmospheric conditions (wind direction must not be out of the \_\_\_\_\_, \_\_\_\_\_ or \_\_\_\_\_)
- 11.8 This permit allows for the construction of farrowing, nursery and finishing houses having a total capacity of \_\_\_\_\_ hogs.
- 11.9 At such times that it becomes necessary to pump out the collection pits or holding ponds, they must be chemically or biologically treated to minimize odors.
- 11.10 When the liquid slurry from the collection pits is applied to the adjacent farmland, it must be injected beneath the soil surface at a depth such that odors do not cause or contribute to a condition of 'air pollution' as defined in Section 382.003 of the Texas Clean Air Act.
- 11.11 The capacity of the \_\_\_\_\_ cookers shall not exceed \_\_\_\_\_ pounds per hour of raw materials made up of offal, bone and suet. This raw material shall enter the process within 10 hours after slaughter has finished unless these materials have been stored under refrigeration until time of pickup. The operating schedule for this cooker shall not exceed \_\_\_\_\_ hours per day, \_\_\_\_\_ days per week for \_\_\_\_\_ weeks per year.

- 11.12 The daily throughput of the \_\_\_\_\_ blood drier shall not exceed \_\_\_\_\_ pounds per day of blood received from \_\_\_\_\_. This blood shall be dried within 16 hours after the animals have been slaughtered. The operating schedule of this drier is limited to \_\_\_\_\_ hours per day, \_\_\_\_\_ days per week and \_\_\_\_\_ weeks per year. Visible and odorous emissions due to product scorching and/or burning in the blood drying system are prohibited. In the event these conditions occur, the company shall cease blood drying until corrective action is implemented to improve combustion efficiency. In addition, automatic control equipment shall be installed to improve combustion and prevent the scorching and/or burning of the product.
- 11.13 All rendering raw materials received on the plant site shall be placed in the rendering process building immediately or shall be stored in such manner as to prevent a nuisance condition.
- 11.14 All areas of the building where odors can be produced shall be maintained under negative pressure during all rendering operations including the receiving of raw material, cooker operations, processing of finished product, and during any maintenance period which might result in odorous emissions. All plant air discharged during the above conditions shall be treated by plant air scrubbers before being exhausted into the atmosphere.
- 11.15 Sodium hypochlorite or equivalent and sodium hydroxide or equivalent shall be injected into the plant air packed tower scrubber solution along with fresh makeup water as specified by the manufacturer. A minimum residual-free chlorine concentration of 10 ppm and a minimum pH of 11 shall be maintained in the plant air scrubber recycle tank.
- 11.16 Sulfuric acid and chlorine gas or equivalent shall be injected into the first blood drier - condenser low velocity packed bed scrubber solution (model no. \_\_\_\_\_) along with fresh makeup water as specified by the manufacturer. A minimum residual-free chlorine concentration of 5 ppm and a maximum pH of 3 shall be maintained in this scrubber recycle tank.
- 11.18 The temperature of the vapors discharged from the air cooled condenser shall not exceed 130°F. This temperature shall be continuously monitored and recorded. These records shall be retained for a minimum of 6 months and made available for state and local agency inspection.

- 11.19 All air pollution abatement equipment shall be properly maintained and operated during the operation of these facilities. Cleaning and maintenance of the abatement equipment shall be performed as recommended by the manufacturer and as necessary so that the equipment efficiency can be adequately maintained. The tubes in the air cooled condenser shall be inspected and cleaned if necessary each year just prior to the start of summer.
- 11.20 All tallow storage tanks and blood meal silo baghouse exhaust shall be vented into the rendering process building.
- 11.21 There shall be no visible emissions from bagfilters and gravity loadout operations. All truck loadout operations shall be enclosed to prevent visible emissions.
- 11.22 The premises of these permitted facilities shall be kept clean and free from collection of raw and finished products, refuse, waste materials and standing pools of water to prevent the occurrence of a nuisance condition. Plant roads, truck loading and unloading areas and parking areas shall be paved and cleaned as necessary to prevent the occurrence of nuisance conditions. Vessels used for transporting raw and finished products shall be washed and kept free of odors while stored on the property.
- 11.23 An odor detection tube shall be installed in the scrubber exhaust stacks so that samples of the discharge air may be evaluated for odorous conditions at ground level.
- 11.24 Operations of this facility shall not exceed 144 hours per week. This facility shall not process more than the following amounts of poultry by-products:

Raw Offal/Meat/Bone:

\_\_\_\_\_ tons/hr \_\_\_\_\_ tons/day \_\_\_\_\_ tons/yr

Raw Feathers/Blood:

\_\_\_\_\_ tons/hr \_\_\_\_\_ tons/day \_\_\_\_\_ tons/yr

Storage Tank Permits Provision Options

- 12.1 The floating roof seals must be properly maintained at all times to minimize vapor loss.
- 12.2 The holder of this permit shall reduce the temperature and/or vapor pressure of the stored material as needed to maintain a vapor pressure of less than \_\_\_\_\_ psia at actual storage conditions.
- 12.3 This storage tank must be equipped with a permanent submerged fill pipe.
- 12.4 The emissions from these facilities must be discharged to the atmosphere at a level no lower than \_\_\_\_\_ feet above ground level.

Sour Crude Storage Tanks

- 13.1 This tank must be served by a vapor recovery system which discharges into the gas sales line during normal operating conditions.
- 13.2 Vapors from this tank must be properly burned such that 99.5 percent of reduced sulfur compounds are converted to sulfur dioxide. The sulfur dioxide must be dispersed properly from an elevated flue which discharges to the atmosphere at a height no lower than \_\_\_\_\_ feet above ground level.
- 13.3 The dissolved hydrogen sulfide in the crude shall not exceed \_\_\_\_\_ ppm by weight in any sample.
- 13.4 The holder of this permit shall determine the dissolved hydrogen sulfide concentration of each crude oil stock to be stored in this permit unit vessel. Records are to be made available to the Executive Director of the TACB upon request.

## Gas Sweetening Plants

- 14.1 All acid gas or other waste gases from these facilities shall be burned in the (flare(s))(incinerator) specified in the permit application. It is not permissible under any conditions to vent waste gases directly to the atmosphere.
- 14.2 Fuel for these facilities shall be (sweet natural gas)(fuel gas containing no more than \_\_\_\_\_ volume percent total sulfur calculated as hydrogen sulfide)(fuel gas containing no more than 0.1 grain of hydrogen sulfide per dry standard cubic foot)(fuel oil containing no more than \_\_\_\_\_ weight percent sulfur compounds calculated as sulfur on an hourly average basis).
- 14.3 The holder of this permit shall keep daily records of all flow rates and total sulfur content of gas processing streams and combustion unit fuel streams. Total sulfur content shall be calculated as volume percent hydrogen sulfide for gaseous fuels and weight percent sulfur compounds calculated as sulfur for liquid fuels. Records shall be made available to the Executive Director of the TACB upon request.
- 14.4 This permit authorizes processing a maximum of \_\_\_\_\_ MMSCFD of gas containing not more than (\_\_\_\_\_ volume percent) (\_\_\_\_\_ parts per million by volume) total sulfur calculated as hydrogen sulfide on a daily average basis.
- 14.5 The holder of this permit shall install, calibrate and maintain a continuous emission monitoring instrument(s) to continuously monitor and record emissions of \_\_\_\_\_ from \_\_\_\_\_.  
The continuous emission monitor(s) shall meet the performance specifications, pass the field tests and meet the installation requirements and the data analysis and reporting requirements specified in Performance Specifications No. 1, 2 and 3, 40 CFR 60, Appendix B. The monitor(s) shall be zeroed and spanned daily and corrective action taken when the instrument drift exceeds the amounts specified in 40 CFR 60, Appendix B. The monitoring data shall be collected and analyzed every \_\_\_\_\_ (time interval), shall be reduced to units of the permit allowable emission rate every \_\_\_\_\_ (time interval), shall be maintained by the source for a period of two years and shall be made available to the Executive Director or his designated representative upon request. The data from the continuous emission monitor(s) may be used to determine compliance with the provisions of this permit. The continuous emission monitor(s) required by this permit shall be subject to all future quality assurance requirements as they are published in the TACB Sampling Procedures Manual.
- 14.6 The incinerator firebox exit temperature shall be continuously monitored and recorded.

14.7 The (tail gas)( ) incinerator shall be operated with not less than (25 percent)( ) percent) excess air (3 percent oxygen in the incinerator stack) and not less than (1200 F)( ) F) incinerator firebox exit temperature.

14.8 The minimum sulfur recovery efficiency for this permit unit shall be \_\_\_\_\_ percent. The sulfur recovery efficiency shall be determined by calculation as follows:

$$\text{Efficiency} = \frac{(\text{S recovered}) * (100)}{(\text{S acid gas})}$$

Where: Efficiency = sulfur recovery efficiency, percent

S recovered = (S acid gas - S stack), lbs/hr

S acid gas = sulfur in acid gas stream, lbs/hr

S stack = sulfur in incinerator stack, lbs/hr.

14.9 Sampling - Use 2.1 A through D plus:

E. Test results shall include but are not limited to the date of sampling, flow rate and composition of the acid gas and tail gas incinerator stack streams, total sulfur rates determined and calculations demonstrating sulfur recovery efficiency. Acid gas stream analysis shall include (but is not limited to) hydrogen sulfide, carbon disulfide and carbonyl disulfide. Tail gas incinerator stack gas stream composition analysis shall include (but is not limited to) sulfur dioxide, sulfur trioxide, carbon monoxide, hydrogen sulfide, carbonyl sulfide, carbon disulfide, volatile organic compounds, particulate matter, oxygen and nitrogen oxides. If continuous sulfur dioxide and oxygen monitoring are required, that data should also be reported for this test period.

F. The first performance test shall be conducted within \_\_\_\_\_ ( ) days after start-up of the facilities and the results submitted in support of the application for permit to operate. The second and third performance tests shall be conducted in the sixth month and twelfth month, respectively, following the first performance test. Results for each test are to be submitted within 60 days following the date of testing.

G. If the normal production rate of sulfur from these facilities exceeds by more than 10 percent the production rate in long tons per day maintained during sampling, the company must notify, in writing, the Executive Director of the Texas Air Control Board; and the source may be subject to additional sampling to demonstrate continued compliance with all applicable state and federal regulations.

- 14.10 The in-stack concentration of sulfur dioxide from the tail gas incinerator shall not exceed \_\_\_\_\_ ppm by volume calculated as an hourly average on a dry and air-free basis.
- 14.11 There shall be no visible emissions from the tail gas incinerator stack.
- 14.12 The holder of this permit shall report under Rules 101.6 or 101.7 of the TACB General Rules anytime the sulfur recovery plant or tail gas incinerator is not working properly. In the event that the sulfur recovery plant is not operating, the acid gas feed stream may be routed to the plant flare for a period not to exceed \_\_\_\_\_ only if the hydrogen sulfide feed rate to the flare does not exceed \_\_\_\_\_ pounds per hour and there are no visible emissions from the flare.
- 14.13 The holder of this permit shall retain at (these facilities) (the closest office of the applicant to these facilities) a copy of the contingency plan consistent with the requirements of Rule 36 (051.02.02.036) of the Texas Railroad Commission.
- 14.14 For purposes of minimizing the impact of emergency releases of hydrogen sulfide to the atmosphere, the holder of this permit shall install and maintain an ambient hydrogen sulfide monitoring system consistent with the requirements of Rule 36 (051.02.02.036) of the Texas Railroad Commission.
- 14.15 At least three times per week, leaks from tank hatches, valves and other fugitive sources shall be monitored with lead acetate detector tape and repairs shall be made as needed to prevent hydrogen sulfide leakage.
- 14.16 At least once per month, fresh water and chemicals shall be used to flush the separators and allied equipment to remove accumulated salts and sulfur.
- 14.17 All truck drivers loading salt water shall be given detailed instructions and requirements to prevent hydrogen sulfide emissions during loading operations.
- 14.18 Purging of the \_\_\_\_\_ is exempt from General Provision No. \_\_\_\_\_. In addition, the following valves are also exempt from the conditions of this general provision: (list valves).
- 14.19 In determining compliance with emission limits in this permit, emissions from volatile organic compound loading operations shall be calculated using the edition of AP-42, "Compilation of Air Pollutant Emission Factors," in effect on the date this permit was issued (or the edition in effect on

the last date the permit was amended if the permit has been amended), Sections 4.3 and 4.4, published by the Environmental Protection Agency, OAQPS, Research Triangle Park, North Carolina, 27711.

- 14.20 Flares shall be designed and operated in accordance with 40 CFR 60.18 including specifications of minimum heating value of the waste gas, maximum tip velocity and pilot flame monitoring. If necessary to insure adequate combustion, sufficient fuel gas shall be added to make the gases combustible. An infrared monitor is considered equivalent to a thermocouple for flame monitoring purposes.
- 14.21 The holder of this permit shall monitor the hydrogen sulfide (H<sub>2</sub>S) content of the inlet fuel gas once every eight hours using the stain tube method. Stain tube sampling and certification shall follow the procedures specified in Attachment A. Any single stain tube reading that is greater than 150 ppm of H<sub>2</sub>S in the fuel gas may constitute a violation of this permit. If any single stain tube reading is greater than 90 ppm, then four more stain tube samples shall be taken at half-hour intervals. The average of these five samples shall determine the H<sub>2</sub>S reading for that period. If the average of the five samples (described above) is greater than 113 ppm, then the permit holder has the following options:
- A. Continue taking stain tube samples of the fuel gas at half-hour intervals until the rolling 2-hour average is less than 113 ppm and then resume a once every 8 hours stain tube sampling frequency.
  - B. Perform Environmental Protection Agency (EPA) Method 11 as found in 40 CFR 60, Appendix A, within 24 hours of the last averaged sample and continue taking stain tube samples at 1-hour intervals until Method 11 is performed. Once Method 11 is performed, resume a once every 8 hours sampling frequency.
  - C. Switch to burning only natural gas as fuel for these facilities. The permit holder may resume burning fuel gas at these facilities provided that a single stain tube sample taken within half an hour of refiring the fuel gas reads less than 90 ppm of H<sub>2</sub>S.

Records will be kept of ppm H<sub>2</sub>S detected, date and time detected and corrective action taken if necessary. Records of the sampling and certification results shall be maintained at the plant site for two years and shall be used to determine compliance with Special Provision

No. 4. These records shall be made available upon request of TACB personnel and any other local authorized air pollution control agency. The holder of this permit shall install an H<sub>2</sub>S continuous monitor when performance specifications for such monitors are promulgated by EPA.

## Attachment A

### Stain Tube Sampling Procedures

Fuel gas sampling shall be conducted at the fuel gas header supplying gas to the combustion units covered under this permit. The monitoring will be conducted by the use of color detection tubes capable of measuring H<sub>2</sub>S content in the range from 2 ppm to 200 ppm. Each batch of tubes will be refrigerated immediately upon receipt and each individual tube will be allowed to reach room temperature at least eight hours before use. The stain tube sample can be taken either by direct connection to the fuel gas stream line with a slip stream connection or through the use of a plastic collection bag. If a collection bag is used, it must be shown to neither adsorb nor absorb H<sub>2</sub>S. A Tedlar bag is an acceptable option. Also, it must be clean and capable of holding at least one cubic foot of gas from the fuel header. The bag will then be immediately tested by connecting a new color detector tube and drawing a sample of gas through the tube according to the manufacturer's recommendations. The ppm indicated will then be recorded. The excess gas, the color detection tube and the plastic bag (unless it is reusable) will then be properly disposed of.

### Stain Tube Certification Procedures

Three tubes per batch of 100 will be checked against a high quality H<sub>2</sub>S standard of gas or permeation device with approximately 110 ppm H<sub>2</sub>S concentration. If the gas used to certify the stain tubes will be supplied in a cylinder, only materials made of aluminum, stainless steel or glass will contact the gas before entering the stain tube. If a permeation device is used, only nitrogen or other TACB approved gas (not air) may be used as the carrier gas. The results of these checks shall be recorded.

## Offset Provisions

- 15.1 Add tailored and very specific provisions which document the actions necessary to achieve emission reductions necessary to accomplish an offset.
- 15.2 This permit is conditioned on the permanent allocation of \_\_\_\_\_ tons per year from the total of \_\_\_\_\_ tons per year of (volatile organic compound [VOC]) (particulate matter) emissions reduction. The reduction will be \_\_\_\_\_  
o b t a i n e d b y \_\_\_\_\_.
- \_\_\_\_\_ . This allocated reduction of emissions shall occur not later than the commencement of operation of these permit facilities to offset the resulting \_\_\_\_\_ tons per year of growth in (VOC) (particulate matter) emissions. The holder of this permit shall maintain records of these emission reductions and provide access and/or copies to the Executive Director or his representative upon request.
- 15.3 If this facility subsequently becomes a major modification solely by virtue of relaxing the limitations on the hours of operation of any of the \_\_\_\_\_, then PSD review should be required for the entire facility to construct the \_\_\_\_\_ as though construction had not yet commenced.

## Storage and Loading

- 16.1 The service of the tanks in this permit is limited to the storage of the chemicals appearing on the attached lists or chemicals that are covered by one of the TACB standard exemptions. Storage of other chemicals is prohibited unless prior approval for such storage is obtained from the Executive Director of the TACB. It will not be necessary to obtain reapproval for chemicals previously approved for storage in a specific tank. A revised Table 7 shall be sent to the Texas Air Control Board promptly when there is any change in service of these tanks.
- 16.2 Storage and loading operations at these facilities are limited to the handling of the chemicals appearing on the attached lists or chemicals that are covered by one of the TACB standard exemptions. Storage and loading of other chemicals are prohibited unless prior approval is obtained from the Executive Director of the TACB. It will not be necessary to obtain reapproval for chemicals previously approved for handling at this facility. A revised Table 7 shall be sent to the TACB promptly when there is any change in service of these tanks.
- 16.3 Loading operations at these facilities are limited to the handling of the chemicals appearing on the attached lists or chemicals that are covered by one of the TACB standard exemptions. Loading of other chemicals is prohibited unless prior approval is obtained from the Executive Director of the TACB. It will not be necessary to obtain reapproval for chemicals previously approved for handling at these facilities.
- 16.4 A. Storage and loading operations at these facilities are limited to the handling of the chemicals appearing on the attached lists. Storage and loading of other chemicals are prohibited unless prior approval is obtained from the Executive Director of the TACB. It will not be necessary to obtain reapproval for chemicals previously approved for handling in this permit unit. A revised Table 7 shall be sent to the TACB promptly when there is any change in service of these tanks.
- B. Storage and loading operations at these facilities are limited to the handling of the chemicals appearing on the attached lists. Storage and loading of other chemicals are prohibited unless prior approval is obtained from the Executive Director of the TACB, or unless the procedures are followed as described in Attachment I, Review and Notification Requirements for Adding New Materials to the Approved Chemical List.
- 16.5 Emissions from loading operations shall be minimized by the use of a vapor recovery system when loading (specify compounds) and volatile organic compounds with vapor pressures greater than or equal to 0.5 psia at the maximum loading temperature. The abatement equipment

shall be operated and maintained such that the recovery of product vapors is at least 95 percent or such that emissions are not greater than 0.3 pounds per thousand gallons loaded.

16.6 For purposes of determining compliance with Special Provision No. (12.6), the holder of this permit shall perform sampling and other testing as required to demonstrate the performance of the vapor recovery system. Sampling methods and procedures must be approved by the Executive Director prior to sampling. The Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling. Sampling shall occur within 60 days after the vapor recovery system starts operation and three copies of the final sampling and testing report shall be forwarded to this agency within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TACB Sampling Procedures Manual. (Note: Standard sampling provisions could be used instead).

16.7 At all times, \_\_\_\_\_ (EPN) shall vent through a carbon adsorption system (CAS) consisting of at least two activated carbon canisters that are connected in series.

- A. The CAS shall be sampled and recorded continuously or \_\_\_\_\_ (1) to determine breakthrough of volatile organic compounds (VOC). The sampling point shall be at the outlet of the initial canister but before the inlet to the second or final polishing canister. Sampling shall be done during operating conditions, reflecting maximum emission venting to the CAS. (Example: during loading, tank filling, process venting)
- B. The method of VOC sampling and analysis shall be by flame ionization detector (FID), or a TACB approved equivalent (2). On each day that sampling is required, the FID shall be calibrated prior to sampling with a certified gas mixture at 0 ppmv  $\pm$  10 percent and at \_\_\_\_\_ (3) ppmv  $\pm$  10 percent.
- C. Breakthrough shall be defined as a measured VOC concentration of \_\_\_\_\_ (4) ppmv. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister immediately. Within 4 hours of detection of breakthrough, a fresh canister shall be placed as the new final polishing canister. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above specified time frames.

D. Records of the CAS monitoring maintained at the plant site, shall include (but are not limited to) the following:

1. sample time and date
2. monitoring results (ppmv)
3. corrective action taken including the time and date of that action
4. process operations occurring at the time of sampling

These records shall be made available to representatives of the TACB and local programs upon request and shall be retained for at least two years following the date that the data is obtained.

E. The holder of this permit may request a change in frequency of breakthrough sampling after completing at least one year of sampling as specified above. The request shall include a copy of the CAS monitoring records specified in Paragraph D of this provision and shall be submitted to the Austin TACB Permits Program for review and response. The permit holder may not change the sampling frequency until written approval is received from the Executive Director of TACB.

NOTES TO THE ENGINEER REFERRED TO IN THE PROVISION:

- (1) Frequency of breakthrough sampling should be decided by the permit engineer on a case-by case basis and should be based on the canister's capacity and expected uncontrolled emissions. For example, if the canister has the capacity to adsorb 50 lbs of the compounds emitted and the facility emits at a rate of 1 lb/hr then the breakthrough sampling should be done on a daily basis or perhaps even once per shift.
- (2) If a sampling method other than FID is proposed, the permit engineer and Quality Assurance (QA) should review the specific method and calibration procedures. Generally the approved alternatives would be gas chromatography. Stain Tubes are generally not acceptable because of their inherent inaccuracy but may be accepted if the applicant will agree to QA procedures similar to those used for fuel gas H<sub>2</sub>S sampling.
- (3) The higher concentration for calibration should be the same as the concentration defined as breakthrough.
- (4) The concentration defined as breakthrough should be established on a case by case basis based on the total gas flow rate and the proposed emission rate from the final canister. Generally that concentration would be between 10 and 100 ppmv.

GENERAL NOTE:

Carbon is most effective in control of one compound stream. For multiple compound streams (e.g. different molecular weights and vapor pressures) the system should be designed with extra capacity in it and continuous monitoring for breakthrough should probably be required to ensure effectiveness and reliability.

- 16.8 For the purpose of assuring compliance with the hydrogen chloride and hydrogen bromide emission limitations, the holder of this permit shall maintain a monthly emissions record which describes calculated halocarbon venting to the (flare)(specify other control device) from all storage, transfer and loading operations. The records shall include tank or loading point identification number, control method used, tank or vessel capacity in gallons, name of material stored or loaded, appropriate temperatures, estimated vapor volumes displaced to the (flare)(specify other control device) and expected emission rates. Emission rates shall be calculated in terms of pounds per day and shall be totaled in terms of tons per month. This record shall be made available to representatives of the TACB or of the local air pollution control programs upon request.
- 16.9 An internal floating roof or equivalent control shall be installed on Tanks No. ( ). An open top tank containing a floating roof which uses double seal or secondary seal technology shall be an approved control alternative to an internal floating roof tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal and the secondary seal is rim-mounted.

Relief Valve Exemption From General Provision 32M(A)

- 17.1 Safety relief valves that discharge to the atmosphere only as a result of fire or failure of utilities are exempt from General Provision No. \_\_\_\_\_, provided that each valve is equipped with a rupture disc upstream. A pressure gauge shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown. In addition, the following valves are also exempt from the conditions of this general provision: (list actual valve numbers).

## Waste Fuel for Asphalt Plants

17.2 Fuel for the dryer shall be either sweet natural gas as defined in the General Rules adopted by the TACB, liquid petroleum gas, diesel fuel, No. 2 fuel oil, No. 4 fuel oil, fuel oil with a maximum sulfur content of 1.5% or reclaimed industrial oil containing no more than the indicated amounts of the substances listed below:

<u>Substance</u>	<u>Concentration In Oil</u>
Antimony	180 ppm
Arsenic	3 ppm
Beryllium	1 ppm
Cadmium	18 ppm
Chromium	9 ppm
Mercury	37 ppm
Nickel	5 ppm
Selenium	75 ppm
Thallium	37 ppm
Vanadium	18 ppm
Lead	1030 ppm
Chlorinated Aromatic Compounds	20 ppm
Short-Chained Chlorinated Aliphatic Compounds (only allowed when a wet scrubber is used to control emissions from the dryer)	5000 ppm

Upon request by the Executive Director of the TACB, documentation from an approved independent testing laboratory must be provided showing that constituents of the oil do not exceed the amounts tabulated above.

Upon request by the Executive Director of the TACB or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) utilized in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Inspection and Maintenance Program

17.3 Piping, Valves, Pumps and Compressors in Anhydrous Hydrogen Chloride (HCl) Railcar Loading Service

- A. Audio, olfactory and visual checks for anhydrous HCl leaks within the operating area shall be made every four hours during loading operations.
- B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:
  - 1. Isolate the leak.
  - 2. Commence repair or replace of the leaking component.
  - 3. Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the TACB upon request.

SPECIAL PROVISIONS

1. This permit will fulfill TACB permit requirements for construction and operation of these facilities at this site. The permitted facilities may also relocate at future sites provided that:
  - A. The holder of this permit submits written notification of the intent to construct these facilities at a proposed site to the Executive Director of the TACB or to the regional office of the TACB having jurisdiction over the area to which those facilities are to be moved. The notification shall include:
    - (1) Company name  
Address  
Person in charge  
Telephone number.
    - (2) Type of facilities.
    - (3) Account identification number and permit number assigned by the TACB.
    - (4) Quantity and type of air pollution control equipment utilized.
    - (5) Location that plant is to be moved from (city, county, exact location description).
    - (6) Location that plant is to be moved to (city, county, exact location description).
    - (7) An area map showing location of new site.
    - (8) Proposed date for start of construction.
    - (9) Proposed date for start of operation.
    - (10) Expected length of time at new location.
  - B. Before construction of the plant begins at any site, written approval is received from the Executive Director of the TACB.
  - C. The plant is located at least 1/2 mile from any recreational area, residence or facility not occupied by the applicant proposing to install the facilities or occupied by lessor of the facility's property.

- D. All appropriate local air pollution control programs and zoning offices are notified prior to start of construction.
  - E. Replacement of air pollution control equipment is accomplished with identical equipment.
2. These facilities shall comply with all requirements of Environmental Protection Agency (EPA) Regulations on Standards of Performance for New Stationary Sources promulgated for asphalt concrete plants in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subparts A and I.
  3. Sampling ports and platform(s) shall be incorporated into the design of the exhaust stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the Executive Director of the TACB.
  4. Stack sampling analysis for particulate matter will not be required of the holder of this permit provided adequate documentation including copies of past test results demonstrates to the satisfaction of the Executive Director that the model of the hot mix plant being constructed has been tested and shown to meet the 0.04 gr/dscf allowable, and provided that the permitted facilities' emissions are equal to or less than 5 percent opacity. (See Special Provision No. 5.) This documentation must include a description of the aggregate material used in previous tests.
  5. Upon being informed by the Executive Director that the staff has documented visible emissions from these facilities exceeding 5 percent opacity averaged over six consecutive minutes, the holder of this permit shall conduct stack sampling analyses or other tests to prove satisfactory equipment performance and demonstrate compliance with the 0.04 gr/dscf allowable. Sampling must be conducted in accordance with appropriate procedures of the TACB Sampling Procedures Manual or in accordance with applicable EPA Code of Federal Regulations procedures. Any deviations from those procedures must be approved by the Executive Director prior to sampling.
  6. A pretest meeting concerning the required monitoring shall be held with personnel from the TACB before the

required tests are performed. Air contaminants to be tested for shall be determined at this pretest meeting.

- A. Sampling shall occur within 60 days after the facilities go into normal operation.
- B. The TACB regional office shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice to the regional office shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

- C. The sampling report shall include the following:

- (1) Plant production rate during tests.
- (2) Type of fuel.
- (3) Fuel consumption rate.
- (4) Percent sulfur in fuel.

- D. Three copies of the final sampling report shall be submitted within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TACB Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TACB regional office.  
One copy to each appropriate local air pollution control program.

One copy to the Source and Mobile Monitoring Division, TACB Austin Office.

- 7. Upon request by the Executive Director of the TACB or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) utilized in these facilities or shall allow air pollution control agency representatives to obtain a sample for analysis.
- 8. Plant roads and aggregate stockpiles shall be sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.

9. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or the local air pollution control agency.
10. Total emissions from these facilities shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."

HOT MIX ASPHALT PLANTS  
TRANSIENT PREVIOUSLY SAMPLED  
NSPS ACP-2 4/88

SPECIAL PROVISIONS

1. This permit will fulfill TACB permit requirements for construction and operation of these facilities at this site. The permitted facilities may also relocate at future sites provided that:
  - A. The holder of this permit submits written notification of the intent to construct these facilities at a proposed site to the Executive Director of the TACB or to the regional office of the TACB having jurisdiction over the area to which those facilities are to be moved. The notification shall include:
    - (1) Company name  
Address  
Person in charge  
Telephone number.
    - (2) Type of facilities.
    - (3) Account identification number and permit number assigned by the TACB.
    - (4) Quantity and type of air pollution control equipment utilized.
    - (5) Location that plant is to be moved from (city, county, exact location description).
    - (6) Location that plant is to be moved to (city, county, exact location description).
    - (7) An area map showing location of new site.
    - (8) Proposed date for start of construction.
    - (9) Proposed date for start of operation.
    - (10) Expected length of time at new location.
  - B. Before construction of the plant begins at any site, written approval is received from the Executive Director of the TACB.
  - C. The plant is located at least 1/2 mile from any recreational area, residence or facility not occupied by the applicant proposing to install the facilities or occupied by lessor of the facility's property.

- D. All appropriate local air pollution control programs and zoning offices are notified prior to start of construction.
  - E. Replacement of air pollution control equipment is accomplished with identical equipment.
2. These facilities shall comply with all requirements of Environmental Protection Agency (EPA) Regulations on Standards of Performance for New Stationary Sources promulgated for asphalt concrete plants in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subparts A and I.
  3. Sampling ports and platform(s) shall be incorporated into the design of the exhaust stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the Executive Director of the TACB.
  4. Stack sampling analysis for particulate matter will not be required of the holder of this permit provided adequate documentation including copies of past test results demonstrates to the satisfaction of the Executive Director that the model of the hot mix plant being constructed has been tested and shown to meet the 0.04 gr/dscf allowable, and provided that the permitted facilities' emissions are equal to or less than 5 percent opacity. (See Special Provision No. 5.) This documentation must include a description of the aggregate material used in previous tests.
  5. Upon being informed by the Executive Director that the staff has documented visible emissions from these facilities exceeding 5 percent opacity averaged over six consecutive minutes, the holder of this permit shall conduct stack sampling analyses or other tests to prove satisfactory equipment performance and demonstrate compliance with the 0.04 gr/dscf allowable. Sampling must be conducted in accordance with appropriate procedures of the TACB Sampling Procedures Manual or in accordance with applicable EPA Code of Federal Regulations procedures. Any deviations from those procedures must be approved by the Executive Director prior to sampling.
  6. A pretest meeting concerning the required monitoring shall be held with personnel from the TACB before the

required tests are performed. Air contaminants to be tested for shall be determined at this pretest meeting.

- A. Sampling shall occur within 60 days after the facilities go into normal operation.
  - B. The TACB regional office shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice to the regional office shall include:
    - (1) Date for pretest meeting.
    - (2) Date sampling will occur.
    - (3) Name of firm conducting sampling.
    - (4) Type of sampling equipment to be used.
    - (5) Method or procedure to be used in sampling.
  - C. The sampling report shall include the following:
    - (1) Plant production rate during tests.
    - (2) Type of fuel.
    - (3) Fuel consumption rate.
    - (4) Percent sulfur in fuel.
  - D. Three copies of the final sampling report shall be submitted within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TACB Sampling Procedures Manual. The reports shall be distributed as follows:
    - One copy to the appropriate TACB regional office.
    - One copy to each appropriate local air pollution control program.
    - One copy to the Source and Mobile Monitoring Division, TACB Austin Office.
- 7. Upon request by the Executive Director of the TACB or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) utilized in these facilities or shall allow air pollution control agency representatives to obtain a sample for analysis.
  - 8. Plant roads and aggregate stockpiles shall be sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.
  - 9. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or the local air pollution control agency.

10. Total emissions from these facilities shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."

HOT MIX ASPHALT PLANTS  
TRANSIENT-NON-NSPS  
ACP-3 4/88

SPECIAL PROVISIONS

1. This permit will fulfill TACB permit requirements for construction and operation of these facilities at this site. The permitted facilities may also relocate at future sites provided that:
  - A. The holder of this permit submits written notification of the intent to construct these facilities at a proposed site to the Executive Director of the TACB or to the regional office of the TACB having jurisdiction over the area to which those facilities are to be moved. The notification shall include:
    - (1) Company name  
Address  
Person in charge  
Telephone number.
    - (2) Type of facilities.
    - (3) Account identification number and permit number assigned by the TACB.
    - (4) Quantity and type of air pollution control equipment utilized.
    - (5) Location that plant is to be moved from (city, county, exact location description).
    - (6) Location that plant is to be moved to (city, county, exact location description).
    - (7) An area map showing location of new site.
    - (8) Proposed date for start of construction.
    - (9) Proposed date for start of operation.
    - (10) Expected length of time at new location.
  - B. Before construction of the plant begins at any site, written approval is received from the Executive Director of the TACB.
  - C. The plant is located at least 1/2 mile from any recreational area, residence or facility not occupied by the applicant proposing to install the facilities or occupied by lessor of the facility's property.

- D. All appropriate local air pollution control programs and zoning offices are notified prior to start of construction.
  - E. Replacement of air pollution control equipment is accomplished with identical equipment.
2. Upon request by the Executive Director of the TACB or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) utilized in these facilities or shall allow air pollution control agency representatives to obtain a sample for analysis.
  3. There shall be no excessive fugitive emissions from the rotary dryer, hot elevator, shaker screens, oversized aggregate chute and hot aggregate bins.
  4. Plant roads and aggregate stockpiles shall be sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.
  5. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or the local air pollution control agency.
  6. Total emissions from these facilities shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."

ROCK CRUSHING PLANTS - TRANSIENT  
RCP-1 4/88

SPECIAL PROVISIONS

1. This permit will fulfill TACB permit requirements for construction and operation of these facilities at this site. The permitted facilities may also relocate at future sites provided that:
  - A. The holder of this permit submits written notification of the intent to construct these facilities at a proposed site to the Executive Director of the TACB or to the regional office of the TACB having jurisdiction over the area to which those facilities are to be moved. The notification shall include:
    - (1) Company name  
Address  
Person in charge  
Telephone number.
    - (2) Type of facilities.
    - (3) Account identification number and permit number assigned by the TACB.
    - (4) Quantity and type of air pollution control equipment utilized.
    - (5) Location that plant is to be moved from (city, county, exact location description).
    - (6) Location that plant is to be moved to (city, county, exact location description).
    - (7) An area map showing location of new site.
    - (8) Proposed date for start of construction.
    - (9) Proposed date for start of operation.
    - (10) Expected length of time at new location.
  - B. Before construction of the plant begins at any site, written approval is received from the Executive Director of the TACB.
  - C. The plant is located at least 1/2 mile from any recreational area, residence or facility not occupied by the applicant proposing to install the facilities or occupied by lessor of the facility's property.
  - D. All appropriate local air pollution control programs and zoning offices are notified prior to start of construction.

- E. Replacement of air pollution control equipment is accomplished with identical equipment.
2. Upon request by the Executive Director of the TACB, the holder of this permit shall perform high volume air sampling for net groundlevel concentration of particulate matter in accordance with Chapter 11 of the TACB Sampling Procedures Manual.
  3. Water sprays shall be installed and operated at all material transfer points, inlet and exit of all crushers and all shaker screens. The water sprays shall be operated as necessary to achieve maximum control of dust emissions.
  4. Facility roads and aggregate stockpiles shall be sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.
  5. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or the local air pollution control agency.
  6. Total emissions from these facilities shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."

CONCRETE BATCH PLANTS - TRANSIENT  
CBP-1 4/88

SPECIAL PROVISIONS

1. This permit will fulfill TACB permit requirements for construction and operation of these facilities at this site. The permitted facilities may also relocate at future sites provided that:
  - A. The holder of this permit submits written notification of the intent to construct these facilities at a proposed site to the Executive Director of the TACB or to the regional office of the TACB having jurisdiction over the area to which these facilities are to be moved. The notification shall include:
    - (1) Company name  
Address  
Person in charge  
Telephone number.
    - (2) Type of facilities.
    - (3) Account identification number and permit number assigned by the TACB.
    - (4) Quantity and type of air pollution control equipment utilized.
    - (5) Location that plant is to be moved from (city, county, exact location description).
    - (6) Location that plant is to be moved to (city, county, exact location description).
    - (7) An area map showing location of new site.
    - (8) Proposed date for start of construction.
    - (9) Proposed date for start of operation.
    - (10) Expected length of time at new location.
  - B. Before construction of the plant begins at any site, written approval is received from the Executive Director of the TACB.
  - C. All appropriate local air pollution control programs and zoning offices are notified prior to start of construction.

- D. Replacement of air pollution control equipment is accomplished with identical equipment.
2. Upon request by the Executive Director of the TACB, the holder of this permit shall perform high volume air sampling for net ground level concentration of particulate matter in accordance with Chapter 11 of the TACB Sampling Procedures Manual.
  3. As necessary to achieve maximum control of dust emissions, in-plant roads and aggregate stockpiles shall be sprinkled with water and/or chemicals.
  4. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or the local air pollution control agency.
  5. Total emissions from these facilities shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."

HOT MIX ASPHALT PLANTS  
SITE SPECIFIC-NSPS  
ACP-4 4/88

SPECIAL PROVISIONS

1. These facilities shall comply with all requirements of Environmental Protection Agency (EPA) Regulations on Standards of Performance for New Stationary Sources promulgated for asphalt concrete plants in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subparts A and I.
2. Sampling ports and platform(s) shall be incorporated into the design of the exhaust stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the Executive Director of the TACB.
3. Stack sampling analysis for particulate matter will not be required of the holder of this permit provided adequate documentation including copies of past test results demonstrates to the satisfaction of the Executive Director that the model of the hot mix plant being constructed has been tested and shown to meet the 0.04 gr/dscf allowable, and provided that the permitted facilities' emissions are equal to or less than 5 percent opacity. (See Special Provision No. 5.) This documentation must include a description of the aggregate material used in previous tests.
4. Upon being informed by the Executive Director that the staff has documented visible emissions from these facilities exceeding 5 percent opacity averaged over six consecutive minutes, the holder of this permit shall conduct stack sampling analyses or other tests to prove satisfactory equipment performance and demonstrate compliance with the 0.04 gr/dscf allowable. Sampling must be conducted in accordance with appropriate procedures of the TACB Sampling Procedures Manual or in accordance with applicable EPA Code of Federal Regulations procedures. Any deviations from those procedures must be approved by the Executive Director prior to sampling.
5. A pretest meeting concerning the required monitoring shall be held with personnel from the TACB before the

required tests are performed. Air contaminants to be tested for shall be determined at this pretest meeting.

- A. Sampling shall occur within 60 days after the facilities go into normal operation.
- B. The TACB regional office shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice to the regional office shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

- C. The sampling report shall include the following:

- (1) Plant production rate during tests.
- (2) Type of fuel.
- (3) Fuel consumption rate.
- (4) Percent sulfur in fuel.

- D. Three copies of the final sampling report shall be submitted within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TACB Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TACB regional office.  
One copy to each appropriate local air pollution control program.

One copy to the Source and Mobile Monitoring Division, TACB, Austin Office.

- 6. Upon request by the Executive Director of the TACB or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) utilized in these facilities or shall allow air pollution control agency representatives to obtain a sample for analysis.
- 7. Plant roads and aggregate stockpiles shall be sprinkled with water and/or chemicals as necessary to achieve maximum control of dust emissions.

8. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or the local air pollution control agency.
9. These facilities shall not be operated unless all abatement equipment is installed and operating properly.
10. Total emissions from these facilities shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."

SPECIAL PROVISIONS

1. If the trench burner is operated when the wind speed is equal to or greater than 20 miles per hour, the trench burner shall be operated at least 700 feet from any recreational area, residence or other structure not occupied or used solely by the owner of the trench burner. When the wind speed is less than 20 miles per hour, the trench burner shall be operated at least 300 feet from any such area, residence or other structure.
2. The trench shall be opened in undisturbed soil not previously excavated, built up, compacted or used in any type of landfill operation.
3. The trench shall be no wider than 12 feet with a minimum depth of 10 feet. The maximum length of the burning area as measured along the bottom of the trench shall not exceed by more than 5 feet the length of the manifold. The walls of the trench must be maintained such that they remain vertical.
4. Operation of the trench burner is limited to the hours between 8:00 a.m. and 6:00 p.m. and is limited to a total of 8 hours per day and 1000 hours per year. A written record or log of the hours of operation of the trench burner shall be maintained at the site and made available at the request of personnel from the TACB or any local air pollution control program having jurisdiction. This record or log shall be organized such that the compliance status of this special provision can be readily determined.
5. All material added to the trench each day of operation shall be consumed by 6:00 p.m.
6. The blower must remain on until all material is consumed so that any remaining material in the trench will not smoke when the blower is turned off.
7. The trench burner shall not be operated when an air stagnation advisory is in effect for the area in which the trench burner is located.

8. Opacity of emissions from the trench and from operation of the blower shall not exceed 20 percent, averaged over a 5-minute period, except for a startup period which shall not exceed 20 minutes. Opacity shall be measured as outlined in Chapter 13, "Visible Emissions Evaluation," of the TACB Sampling Procedures Manual, as revised and published in July 1985, or as amended by the TACB.
9. Materials to be burned in the trench are limited to trees, brush and untreated wood products. (Treatment shall include, but not be limited to, application of preservatives [e.g. pentachlorophenol, creosote, Wolman, etc.], halogenated fire retardants, paints, stains or glues.) Material not being worked and material being stockpiled to be burned at a later date must be kept at least 75 feet from the trench.
10. Material shall not be added to the trench in such a manner as to be stacked above the air curtain at any time.
11. The ash generated by this operation shall be removed from the trench as necessary to maintain a minimum trench depth of 10 feet. The ash must be removed in such a manner as to minimize the ash becoming airborne. All material removed from the trench must be completely extinguished prior to disposal in a landfill or any other area where contact with combustible material is likely to occur.
12. A copy of this permit shall be kept at the burn site and made available at the request of personnel from the TACB or any local air pollution control program having jurisdiction.
13. Operating instructions shall be posted at the burn site and all operators shall read and have knowledge of these instructions. The operating instructions shall be made available at the request of personnel from the TACB or any local air pollution control program having jurisdiction.
14. An operator must remain with the trench burner at all times when it is operating.
15. Upon notification by a representative of the TACB or any local air pollution control program having jurisdiction that the trench burner is not complying with the provisions of this permit, no additional material shall

be added to the trench until compliance with such provisions has been effected.

16. The Texas Department of Health (TDH) shall be notified by the owner or operator of the trench burner prior to use of the trench burner at a TDH permitted landfill.
17. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table.
18. Upon removal of the trench burner from the burn site, the trench shall be completely filled with uncombustible material.
19. This permit will fulfill permit requirements for future operation of this trench burner at other sites within the state provided that all the foregoing provisions and the following provisions are complied with:
  - A. Approval shall be obtained from the TACB regional office having jurisdiction of each proposed new site before construction of the trench burner commences at the new site.
  - B. If this trench burner is to be located within the corporate limits of any city and/or county having an air pollution control program, approval shall be obtained from those respective air pollution control programs having jurisdiction of each proposed new site before construction of the trench burner commences at the new site.
  - C. The holder of this permit has applied for an operating permit.

TRENCH BURNER  
EXEMPTION CONDITIONS  
TBX-1 4/88

SPECIAL CONDITIONS

1. If the trench burner is operated when the wind speed is equal to or greater than 20 miles per hour, the trench burner shall be operated at least 700 feet from any recreational area, residence or other structure not occupied or used solely by the owner of the trench burner. When the wind speed is less than 20 miles per hour, the trench burner shall be operated at least 300 feet from any such area, residence or other structure.
2. The trench shall be opened in undisturbed soil not previously excavated, built up, compacted or used in any type of landfill operation.
3. The trench shall be no wider than 12 feet with a minimum depth of 10 feet. The maximum length of the burning area as measured along the bottom of the trench shall not exceed by more than 5 feet the length of the manifold. The walls of the trench must be maintained such that they remain vertical.
4. Operation of the trench burner is limited to the hours between 8:00 a.m. and 6:00 p.m. and is limited to a total of 8 hours per day and 1000 hours per year. A written record or log of the hours of operation of the trench burner shall be maintained at the site and made available at the request of personnel from the TACB or any local air pollution control program having jurisdiction. This record or log shall be organized such that the compliance status of this special condition can be readily determined.
5. All material added to the trench each day of operation shall be consumed by 6:00 p.m.
6. The blower must remain on until all material is consumed so that any remaining material in the trench will not smoke when the blower is turned off.
7. The trench burner shall not be operated when an air stagnation advisory is in effect for the area in which the trench burner is located.

8. Opacity of emissions from the trench and from operation of the blower shall not exceed 20 percent, averaged over a 5-minute period, except for a startup period which shall not exceed 20 minutes. Opacity shall be measured as outlined in Chapter 13, "Visible Emissions Evaluation," of the TACB Sampling Procedures Manual, as revised and published in July 1985, or as amended by the TACB.
9. Materials to be burned in the trench are limited to trees, brush and untreated wood products. (Treatment shall include, but not be limited to, application of preservatives [e.g. pentachlorophenol, creosote, Wolman, etc.], halogenated fire retardants, paints, stains or glues.) Material not being worked and material being stockpiled to be burned at a later date must be kept at least 75 feet from the trench.
10. Material shall not be added to the trench in such a manner as to be stacked above the air curtain at any time.
11. The ash generated by this operation shall be removed from the trench as necessary in order to maintain a minimum trench depth of 10 feet. The ash must be removed in such a manner as to minimize the ash becoming airborne. All material removed from the trench must be completely extinguished prior to disposal in a landfill or any other area where contact with combustible material is likely to occur.
12. A copy of this exemption shall be kept at the burn site and made available at the request of personnel from the TACB or any local air pollution control program having jurisdiction.
13. Operating instructions shall be posted at the burn site and all operators shall read and have knowledge of these instructions. The operating instructions shall be made available at the request of personnel from the TACB or any local air pollution control program having jurisdiction.
14. An operator must remain with the trench burner at all times when it is operating.
15. Upon notification by a representative of the TACB or any local air pollution control program having jurisdiction that the trench burner is not complying with the conditions of this exemption, no additional material

shall be added to the trench until compliance with such conditions has been effected.

16. The Texas Department of Health (TDH) shall be notified by the owner or operator of the trench burner prior to use of the trench burner at a TDH permitted landfill.
17. This exemption covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table.
18. Upon removal of the trench burner from the burn site, the trench shall be completely filled with uncombustible material.
19. This exemption will fulfill exemption requirements for operation of this trench burner at all sites within the state provided that all the foregoing conditions and the following conditions are complied with:
  - A. Approval shall be obtained from the TACB regional office having jurisdiction of each proposed site before construction of the trench burner commences at the site.
  - B. If this trench burner is to be located within the corporate limits of any city and/or county having an air pollution control program, approval shall be obtained from those respective air pollution control programs having jurisdiction of each proposed site before construction of the trench burner commences at the site.

SPECIAL PROVISIONS

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EMISSION STANDARDS AND OPERATING LIMITATIONS

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table. The annual limits are based on a rolling 12-month period.
2. Opacity of emissions from any emission point except STAK 04 must not exceed 5 percent averaged over a 6-minute period, except for those periods described in Rule 111.111(a)(1)(E) of Regulation I. The opacity of emissions from STAK 04 must not exceed 15 percent.
3. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or any air pollution control agency with appropriate jurisdiction.
4. Material Safety Data Sheets for all materials currently in use and those in use for the two previous years shall be kept at the plant site.
5. All spray coating operations at this facility shall have the following operating restrictions:
  - A. No spray coating materials that contain lead, chrome, cadmium or selenium shall be used.
  - B. Electrostatic, airless or high volume low pressure (HVLP) spray guns shall be used for all spray coating operations at this facility.
  - C. The booth exhausts shall be equipped with filters or an electrostatic precipitator that achieve an arrestance of at least 98 percent. These particulate removal systems shall be maintained in good condition at all times and the filters shall be changed as necessary. Documentation of paint overspray deposition originating from this facility beyond the property lines of this facility shall be considered as demonstrating that the filters are not being maintained in good condition.
6. All coating operation exhaust stacks shall be at least the heights represented in the modeling addendum to the application.

MATERIAL USAGE LIMITATIONS

7. The coatings raw material usage for this facility shall be limited as follows:

Dip Coatings	207,330 gal/yr
Spray Coatings	34,020 gal/yr
Flow Coatings	1,060 gal/yr
Cleanup Solvents	5,810 gal/yr

All other materials used at this facility are limited to the representations made in the permit file.

8. On an average daily basis, the quantity of volatile organic compounds (VOC) per gallon of coating applied at the facility, including all thinners, reducers or solvents added, less water and exempt solvents, shall be no more than 3.5 pounds, unless a more stringent requirement in Regulation V is applicable.

RECORDKEEPING

9. The following records shall be maintained at the plant site on a two-year rolling retention basis and be made immediately available at the request of personnel of the TACB or any air pollution control agency with jurisdiction.
- A. Data of daily coatings, thinner and cleanup solvent usage, the VOC content of each and the amount of waste coatings and solvents disposed. Data of the actual hours of each coating operation.
  - B. The data recorded in Special Provision No. 9(A) shall be reduced and a report produced monthly that represents the facility emissions in pounds per hour on a daily basis and tons emitted for the previous 12 months. The monthly report shall also include a total usage of the raw materials listed in Special Provision No. 7 for the previous 12 months.
  - C. An annual summary of the monthly reports required in Special Provision No. 9(B) which includes the annual facility emissions in tons per year and total raw material usage. A copy of this annual summary shall be sent to the TACB regional office within 30 days after the end of the calendar year for which the report is prepared.

SPECIAL PROVISIONS

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- D. The daily, monthly and annual records required in Special Provisions No. 9(A), (B) and (C) shall be kept in a central location at the plant site with examples of the method of data reduction including units, conversion factors, assumptions and the basis of the assumptions.

COMPLIANCE

10. The records required in Special Provision No. 9 shall constitute the method of demonstrating continuous compliance with the limits specified in Special Provision No. 1.
11. Within 60 days of the issuance of this permit, the holder of this permit shall submit to the TACB Regional Director or his representative, documentation which demonstrates that the holder of this permit is achieving compliance with all the general and special provisions of this permit. This documentation shall consist of a detailed statement explaining how each requirement in a provision is being met. It shall include a sample of each record sheet required to be maintained by any provision and/or New Source Performance Standard requirements and a listing of all testing required with test dates.

MISCELLANEOUS

12. Particulate trapped in the filters and dust collector shall be contained in such a way that when removed from the filters and collector, stored awaiting disposal or upon disposal, they shall not be allowed to escape into the atmosphere.
13. When the spray booths are scraped and cleaned, the over spray that is removed shall be stored and disposed of in such a manner that it shall not be allowed to escape into the atmosphere.
14. The holder of this permit shall physically identify (by tagging, labeling, engraving, etc.) all stack emission points corresponding to the stack emission point identification numbers on the maximum allowable emission rates table.

SPECIAL PROVISIONS

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FUEL SPECIFICATIONS AND LIMITATIONS

1. This permit covers those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that table. The annual rates are based on a rolling 12-month period rather than the calendar year.

If one emission rate limitation is more stringent than another emission rate limitation, then the more stringent limitation shall govern and be the standard by which compliance will be demonstrated.

2. Upon request by the Executive Director of the TAC or any other local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or analysis of the fuel used in this facility or shall allow air pollution control agency representatives to obtain a sample for analysis.
3. Fuel shall be limited to pipeline-quality sweet natural gas containing no more than 0.25 grains of hydrogen sulfide and 5 grains of total sulfur per 100 dry standard cubic feet. Use of any other fuel requires an amendment to this permit.
4. Opacity of emissions shall not exceed 5 percent averaged over a 6-minute period, except for those periods described in Rule 111.111.(a)(1)(E) of Regulation I.

CONTINUOUS DETERMINATION OF COMPLIANCE

5. Recordkeeping required by Special Provision No. 7 shall constitute continuing compliance.
6. The holder of this permit shall, upon request by TACB, perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere by the boilers. The holder shall provide sampling and testing facilities and conduct the sampling and testing operation at his expense.

Air contaminants to be tested for at full load would include, but not be limited to, carbon monoxide, nitrogen oxide and oxygen. One boiler would be tested. If that boiler failed the performance test, then one or more of the remaining boilers would be tested at the discretion of the TACB regional office.

RECORDKEEPING AND REPORTING

7. Records of each boiler's operations shall be kept on-site for two years on a rolling retention basis and provided on request to TACB or other air pollution control programs with jurisdiction. Records shall include:
  - A. Periodic natural gas analyses from supplier.
  - B. Monthly fuel use, operating hours, and steam production rate in pounds per hour.
  - C. Outage dates and description of maintenance and repairs.
  - D. Results of all stack sampling maintained in a permanent form suitable for inspection.
8. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TACB or any air pollution control agency with jurisdiction. In addition, the holder of this permit shall mark, or physically identify with weatherproof tags, all equipment at the property that has the potential to emit air contaminants. Permitted emission points shall be identified corresponding to the emission point numbering on the maximum allowable emission rates table; grandfathered or exempt facilities shall be identified corresponding to the emission point numbering used in the most recent emissions inventory submitted to the TACB.

CONTESTED CASE PROCEDURE UNDER APTRA

by

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and

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Presented at:

Administrative Law Course

Judge Powers Presiding

September 1991

# CONTESTED CASE PROCEDURE UNDER APTRA

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## CONTESTED CASE PROCEDURE UNDER APTRA

### INTRODUCTION

The topic covered in this paper is the contested case. As defined by the Administrative Procedure and Texas Register Act, TEX.REV.CIV.STAT.ANN. art. 6252-13a (Vernon Supp. 1989) [hereinafter APTRA], in Section 3(2), (3) and (4):

- (2) "Contested Case" means a proceeding, including but not restricted to ratemaking and licensing, in which the legal rights, duties, or privileges of a party are to be determined by an agency after an opportunity for adjudicative hearing.
- (3) "License" includes the whole or part of any agency permit, certificate, approval, registration, or similar form of permission required by law.
- (4) "Licensing" includes the agency process respecting the granting, denial, renewal, revocation, suspension, annulment, withdrawal, or amendment of a license.

With these definitions in mind it is clear to see that the contested case, with its attendant procedures, forms one of the most essential functions modern administrative agencies perform. Indeed the contested case, with its quasi-judicial trappings, is the setting for such important and potentially well-publicized decisions by the agency that, perhaps even more than the equally far-reaching rulemaking function, the contested case forms the barometer by which society judges the merit of an agency. Certainly no agency which fails to provide basic due process or fair and well-reasoned decisions in contested cases can expect to fare well on judicial review by the courts, before the legislature, or in the eyes of the public.

Because the contested case is so basic to a large portion of an agency's function, many topics to be discussed in this seminar could be subsumed by a full-blown discussion of all aspects of the contested case. For example, informal resolution of contested cases, rulemaking, discovery, ex parte contacts, finality of administrative orders, and the motion for rehearing are all topics that potentially spring from the contested case. Fortunately, able presenters will be treating those topics in depth.

While mentioning able presenters, the authors would like to acknowledge the assistance given them by Thomas Anson, who presented the paper on this topic at last year's seminar and generously allowed them to incorporate many of his ideas. The authors also made extensive use of the "Recent Cases Section" of

the Texas Administrative Law Journal and the paper presented by Michael Field on this topic at the 1989 Advanced Administrative Law Course. Finally, the authors utilized several nonpublished documents authored by John Carlton of the Texas Water Commission's Office of Hearings Examiners.

What follows, then, is simply a review of the key aspects of the contested case with emphasis on the pertinent case law. These key aspects are discussed in roughly the chronology they would be encountered by the practitioner participating in an administrative contested case.

## I. The Rules

Of course, the United States and the Texas Constitutions establish the overriding framework for determining due process guidelines for notice and the conduct of contested administrative hearings. APTRA provides the generic statutory guidance for conducting administrative hearings in Texas. Sections 13 through 18 set out the general procedures for the conduct of contested cases. APTRA also specifically requires agencies to adopt rules of practice and procedure. APTRA §3(7) defines a rule as:

. . . any agency statement of general applicability that implements, interprets, or prescribes law or policy, or describes the procedure or practice requirements of an agency. The term includes the amendment or repeal of a prior rule but does not include statements concerning only the internal management or organization of any agency and not affecting private rights or procedures.

APTRA §4(a)(1) and (2) require that each agency, in addition to other rulemaking requirements, shall:

- (1) adopt rules of practice setting forth the nature and requirements of all formal and informal procedures available;
- (2) index and make available for public inspection all rules and all other written statements of policy or interpretations formulated, adopted, or used by the agency in the discharge of its functions. . . .

Agencies differ greatly in the amount of detail contained in the procedural rules adopted to comply with §4(a)(1) of APTRA. Some agencies' procedural rules merely paraphrase the requirements enumerated in APTRA §§13 through 18. Other agencies, like the Public Utility Commission (PUC) and the Texas Water Commission (TWC), have fairly extensive procedural rules which deal with such areas as conduct and decorum, agreements between parties, alignment of parties, settlements and, in the case of the TWC, newly promulgated rules which provide for Alternative Dispute Resolution and Expediting Major Hearings. TWC Permanent Rules, 31 Tex. Admin.

Code §§264.1-264.10 (Alternative Dispute Resolution), §§274.1-274.78 (Expediting the Complex Hearings) (1991); PUC Rules, 16 TEX. ADMIN. CODE §§21.1-21.181 (1989).

In addition to their procedural rules, agencies are required to index and make available for inspection "all statements of policy or interpretations formulated, adopted, or used by the agency in the discharge of its functions. . . ." APTRA §4(a)(2). These interpretations need not be published to be considered legitimate statements of agency policy. In a recent case, the Austin Court of Appeals concluded that unpublished documents which gave certain policy interpretations made by the Comptroller's Office and which formed the basis for a witnesses' testimony were not "secret" by virtue of being unpublished. The court went on to observe that the evidence in the record showed the documents in question, although not published, were "made available to the public in a regular, organized fashion" in compliance with APTRA §4(a). Southwest Airlines Co. v. Bullock, 784 S.W.2d 563, 567 (Tex.App.--Austin 1990, no writ).

In addition to the Federal and State Constitutions, APTRA, and the agencies' own procedural rules, several other sources of legal authority impact the procedures for conducting the contested case. The Texas Rules of Civil Procedure and the Texas Rules of Evidence "as applied in nonjury civil cases in the district courts" of the state are made applicable by APTRA §14A(a) and §14(a). The Texas Open Meetings Act, TEX.REV.CIV.STAT.ANN. art. 6252-17 (Vernon Supp. 1991), requires prior notice and public meeting for most aspects of the contested cases. The Open Records Act, TEX.REV.CIV.STAT.ANN. art. 6252-17a (Vernon Supp. 1991), requirement of public access to certain documents filed with agencies impacts discovery, especially of certain "privilege" or "protected" documents. Of course, the enabling statutes governing the specific agencies may provide procedural requirements. Section 22 of APTRA repeals all laws in conflict with APTRA, except for existing statutory provisions conferring investigatory authority on any agency, including the power to take depositions, administer oaths, examine witnesses, receive evidence, conduct hearings, or issue subpoenas.

## II. Notice

APTRA §13(a)-(c) provides:

- (a) In a contested case, all parties must be afforded an opportunity for hearing after reasonable notice of not less than 10 days.
- (b) The notice must include:
  - (1) a statement of time, place, and nature of the hearing;
  - (2) a statement of the legal authority and jurisdiction under which the hearing is to be held;

- (3) a reference to the particular sections of the statutes and rules involved; and
  - (4) a short and plain statement of the matters asserted.
- (c) If the agency or other party is unable to state the matters in detail at the time the notice is served, the initial notice may be limited to a statement of the issues involved. Thereafter, on timely written application, a more definite and detailed statement must be furnished not less than three days prior to the date set for the hearing.

As the statute mandates, the minimum reasonable notice is 10 days; however, "reasonable" notice and "10-day" notice are independent requirements. First, what constitutes legally sufficient notice may be determined by a complex interplay of state statutes and rules and federal statutory requirements. For instance, in the case of a Texas Water Commission water quality hearing, APTRA requires 10-days' notice at a minimum; the controlling sections of the Texas Water Code, §26.022(b) and (c), require a 20-day mailed and published notice prior to hearing (Tex. Water Code Ann. (Vernon 1988)) [hereinafter Water Code]; however, 31 Tex. Admin. Code §§305.102(c) and 305.103(d), require a 30-day notice prior to a water quality permit hearing because portions of the hearing process function to fulfill the federal requirement for NPDES permits at the federal level, and federal regulations require a 30-day notice.

Second, legally sufficient notice must also be reasonable and, even in the absence of statutory mandates to the contrary, the 10-day notice may not necessarily be reasonable. In Gibraltar Savings Association v. Franklin Savings Association, 617 S.W.2d 322, (Tex. Civ. App.--Austin 1981, writ ref'd n.r.e.), the court observed that APTRA §13(a) always requires reasonable notice, which may never be less than 10 days. The court held that a State of Texas Savings and Loan Department hearings examiner did not abuse his discretion by denying a motion for continuance predicated on the alleged "physical impossibility" of preparing for a complex hearing involving expert testimony with only eleven days actual notice. The court went on to state, however, that the movant was "... entitled as a matter of statutory right and constitutional due process of law, an opportunity to show that in the particular circumstances it required additional time in the interest of fairness." *Id.* at 328.

Such a showing in this instance would have included specific details of how the movant had exercised due diligence and specific details supporting generalized claims of lack of preparation time, threatened injury, and inability to obtain the services of an expert witness. *Id.* at 327. Presumably had the movant made such showings the examiner should have, and the reviewing court certainly would have, found 10-day APTRA notice not to be reasonable notice under those circumstances.

Third, legally sufficient notice must be sufficient to apprise the parties of the controlling issues. In Madden v. Tex. Board. of Chiropractic Examiners, 663 S.W.2d 622 (Tex. App.--Austin 1983, writ ref. n.r.e.), the Board of Chiropractic Examiners defined the key statutory term "bona fide reputable chiropractic school" for the first time in its final order and did so in such a way as to form the sole basis for denying appellant entrance to the licensure examination given by the Board. The court held that in order to be meaningful, notice requires previous notice of the issues of fact and law which will control the results to be reached by the administrative agency at the hearing. The court stated that the opportunity to respond and present evidence and argument on all issues afforded by APTRA §13(d) is "... more than a statutory requirement; it expresses the constitutional guaranty of fundamental fairness implicit in the concepts of 'notice' and 'hearing'." Id. at 627.

Fourth, legally sufficient notice must give notice of more than the conduct complained of in a license revocation proceeding. The agency must give notice of the legal criteria to be applied to that conduct. In doing so, the agency cannot rely on broad, general discriptions of the legal criteria to be applied, such as "unprofessional conduct" or dispensing a prescription drug outside "the usual course of professional practice." In Texas State Board of Pharmacy v. Seely, 764 S.W.2d 806 (Tex.App.--Austin 1988, writ ref'd), a pharmacist was given notice of the 199 instances where he had filled more than one prescription of Preludin for a single person. The notice further recited the broad criteria, such as unprofessional conduct, which could be used in revoking a pharmacist's license. It did not, however, inform the pharmacist of the three-prescription limit criteria or the percentage of total Preludin supplied criteria which the Board used to justify its revocation of the pharmacist's license. The court found Seely indistinguishable in principle from Madden.

The courts have not mandated a mechanistic, form-over-substance approach to APTRA notice requirements, however. In Baytown Cycle Inn v. Texas Motor Vehicle Commission, 586 S.W.2d 949 (Tex. Civ. App.--Beaumont 1979, no writ), competitor dealers protesting licensure of a replacement dealership did not receive ten days' notice of hearing. They appeared at the hearing and were represented by counsel. The court held that the length of notice caused no harm under these facts. Also a controlling factor in the court's decision may have been the fact that only the terminated dealer, not competitor dealers, had a statutory right to protest the replacement dealer. Also, in Sabine Bank v. State Banking Board, 630 S.W.2d 523 (Tex. App.--Austin 1982), writ dism'd as moot, 639 S.W.2d 303 (Tex. 1982), the court stated that reasonable notice does not require a pleading of controlling standards established by case law and that if there is undue surprise as to what that controlling law is, a continuance is the proper remedy. Appellants complained, on the day of hearing, that notice was deficient because it failed to state the standard established by

the Texas Supreme Court in the controlling case. Appellants had notice of the hearing for three months and were neither surprised nor misled as to the issues of fact or law enumerated by the controlling case. Under those facts, the court found notice to be valid. Even notice sent to the wrong address can be cured by actual notice; and the party complaining of faulty notice must present evidence that filing deadlines were missed because notice was sent to the wrong address. Texas Employment Commission v. Lewis, 777 S.W.2d 817 (Tex.App.--Fort Worth 1989, no writ).

An interesting twist to the hearing process has resulted at some agencies because of the wording in APTRA §13(a) which states that ". . . all parties must be afforded an opportunity for hearing after reasonable notice of not less than 10 days." (Emphasis added). In APTRA §3(5) a party is defined as ". . . each person or agency named or admitted as a party." (Emphasis added). Since it is usually not until the initial hearing that a person is named a party, it has been argued that APTRA guarantees such a party an additional 10-day notice before the hearing on the merits can commence. Such an argument gains plausibility in light of the fact that it would be imprudent to engage in costly discovery prior to the assurance one would in fact be named a party. State District Court Judge Harley Clark held that parties are entitled to at least ten days to prepare for a hearing after the date they are officially made parties. Hooks v. Texas Water Commission, et al., No. 270,024 (Dist. Ct. of Travis Co., 250th Judicial Dist. of Texas, July 17, 1978); see also, Bushman v. Texas Water Rights Commission, et al., No. 265,853 (Dist. Ct. of Travis Co., 250th Judicial Dist. of Texas, October 27, 1978) (discussion of the same principles in dicta). The district court seems to acknowledge that these holdings are contrary to the holding of the Austin Court of Civil Appeals in Webster v. Texas Water Rights Commission, 518 S.W.2d 607 (Tex. Civ. App.--Austin, 1975, writ. ref'd. n.r.e.). The district court simply concluded that Webster is "flat wrong." Bushman at p. 7.

While it may appear odd for a district court within the jurisdiction of an appellate court to make a holding in conflict with a published appellate court case that has not been overruled, the holdings are not incongruous. Webster holds that defects in notice are waived by appearance and participation in an administrative hearing. The district court made the sound distinction that the cases relied upon by the Webster court deal with notice in terms of jurisdiction--the power of a court over a party--and not notice in the sense of the length of time a court must allow a party before a hearing or trial. Further, it should be noted that Webster is a pre-APTRA case.

### III. Parties, Intervention, and Assistance of Counsel

Section 13(d) of APTRA states: "Opportunity must be afforded all parties to respond and present evidence and argument on all issues

involved." APTRA does not provide any guidance concerning prerequisites which must be met in order to be named as a party in a contested case before an agency. Section 3(5) simply defines a party as "each person or agency named or admitted as a party." Unfortunately this circular definition has not been fleshed out very well by case law.

Most of the key cases which discuss "standing," "justiciable interest," or "affected person" involve APTRA §19(e) appeals and therefore center on standing in court actions rather than standing at the agency level in a contested case. In City of Houston v. Public Utility Commission, 599 S.W.2d 687 (Tex. Civ. App.--Austin 1980), writ ref'd n.r.e. per curiam, 610 S.W.2d 732 (Tex. 1980), and Hooks v. Texas Dept. of Water Resources, 602 S.W.2d 389 (Tex. Civ. App.--Austin 1980), rev'd on other grounds, 611 S.W.2d 417 (Tex. 1981), the question of "standing" to appeal a final order rendered under APTRA was explored. In both cases the appellants were named parties at the agency level.

In the City of Houston case, the Texas Supreme Court found that Houston did not have standing as a regulatory authority to appeal the final order of the PUC setting rates for outside city customers because the City was not affected by the decision on outside city rates. The court reserved the question of whether or not special injury was a requirement for standing.

Four months later in Hooks, the Texas Supreme Court reversed a court of civil appeals decision that the Hooks had no standing to appeal a water discharge permit, finding that the Hooks were affected or aggrieved by the granting of the permit, and on this basis had the right to appeal. No special injury showing was necessary for standing to appeal. The Hooks merely had to show they would be affected by the order of the Texas Department of Water Resources.

In perhaps the most insightful case to date dealing, in part, with agency standing issues, Justice Powers concluded in Texas Industrial Traffic League v. Railroad Commission of Texas, 628 S.W.2d 187 (Tex. App.--Austin 1982), rev'd on other grounds, 633 S.W.2d 821 (Tex. 1982), on remand, 672 S.W.2d 548 (Tex. App.--Austin 1984), writ ref'd n.r.e. per curiam, 683 S.W.2d 368 (Tex. 1984), that Hooks and City of Houston establish that ". . . one must be adversely affected in fact, or such a result must be threatened . . ." in order to have standing to appeal to the courts. With respect to standing before the agency, Justice Powers points out the difference in policy considerations which underlie standing requirements for agency proceedings and court actions. In the former with the agency's investigative, rulemaking, and quasi-judicial powers, one's right to appear should be liberally recognized because administrative agencies are created to ascertain and uphold the public interest. To this end, the widest presentation of various viewpoints is desirable. In the latter,

the policy to be served is that of avoiding suits where no controversy ripe for court action exists.

While following the reasoning in Industrial Traffic League and advocating liberal standing requirements before an agency, the Austin Court of Appeals, in Railroad Commission of Texas v. Ennis Transportation Co., Inc., 695 S.W.2d 706 (Tex. App.-- Austin 1985, writ ref'd n.r.e.), nonetheless affirmed that "... the allowance or denial of petitions for intervention in administrative proceedings rests in the discretion of the agency. Ordinarily, reviewing courts do not overturn agency orders concerning the propriety of intervention." *Id.* at 710. A party seeking to intervene in a contested administrative case, however, has the right to present evidence showing its entitlement to intervene. Ayotte v. Central Educ. Agency, 729 S.W.2d 385 (Tex. App.--Austin 1987, no writ).

In State v. Thomas, 766 S.W.2d 217 (Tex. 1989), the Texas Supreme Court granted the Attorney General's petition for writ of mandamus to compel the PUC to rescind its order striking the Attorney General's intervention in an electrical utility rate case. The Court reasoned that Article IV, Section 22 of the Texas Constitution, allowing the Attorney General to "... take such action in the courts as may be proper and necessary to prevent any private corporation from exercising any power . . . not authorized by law . . ." (emphasis added) granted the Attorney General the right to "take action in the adjudicative forum of first jurisdiction regardless of whether the label attached to that forum is 'court' or 'agency'." *Id.* at 219. The court pointed out that the Attorney General could not act to prevent unlawfully exorbitant rates unless he could begin by intervening before the agency.

In a strong dissent Justice Hecht argued against granting the petition for writ of mandamus, in part because he believed an adequate remedy at law exists, appeal. While pointing out that Texas courts have not addressed whether an appeal of denial of a petition of intervention is subject to judicial review when that denial is in the form of an interlocutory administrative order, Justice Hecht points out other jurisdictions have consistently held that it is. Citing Public Service Commission of New York v. Federal Power Commission, 284 F.2d 200 (D.C. Cir. 1960); Thermal Ecology Must Be Preserved v. Atomic Energy Commission, 433 F.2d 527 (D.C. Cir. 1970); Pennsylvania Dental Ass'n v. Commonwealth Insurance Dept., 521 Pa. 217, 516 A.2d 647 (1986); and In re Vermont Public Power Supply Authority, 140 Vt. 424, 440 A.2d 140 (1982); Justice Hecht would hold that the state agencies represented by the Attorney General were not required to await the PUC's final orders in the proceedings before seeking judicial review and would, therefore, deny the petition for writ of mandamus.

Finally in an unusual, three-opinion case, Justice Gammage writing for the majority, with Justice Jones concurring and Justice Powers

dissenting, the Austin Appeals Court discusses intervenor rights in an administrative hearing in H. Tebbs, Inc. v. Silver Eagle Distrib., 797 S.W.2d 80 (Tex.App.--Austin 1990, no writ). In Tebbs the Texas Alcoholic Beverage Commission (TABC) allowed Tebbs/Coors, a beer distributor, to intervene in a proceeding on a competitor's, Silver Eagle's, renewal application. Before reaching an adjudicative hearing, the TABC and Silver Eagle informally disposed of the matter. Tebbs/Coors, although a party before the agency, did not participate in the agreed order. Tebbs/Coors' motion for rehearing objecting to the agreed order was granted by TABC. Silver Eagle then sought, successfully, to enjoin TABC from further proceedings alleging that any further action on the agreed order would be in excess of its statutory authority.

The court held that while Tebbs/Coors had no absolute right to a hearing under APTRA, or the TABC enabling statute, that it was a party for all purposes once admitted by the agency as a party, and no settlement was possible without its agreement. Any final action on the matter without its participation was voidable.

Justice Powers, in dissent, stated that Tebbs/Coors lacked standing to invoke the court's jurisdiction. He reasoned one's status as a party in an administrative hearing does not, in and of itself, confer standing to sue in district court.

In light of paucity of cases dealing with standards for intervention in contested cases, the practitioner is well advised to review the agency's enabling act and procedural rules for guidance on standards for intervention.

While seeking to intervene and after being named a party, parties have a statutory right to counsel. Section 14(r) of APTRA provides:

In contested cases, all parties are entitled to the assistance of their counsel before administrative agencies. This right may be expressly waived.

Some agencies permit any person to appear on behalf of a party. At such agencies, engineers and other technical consultants often prepare and file pleadings and conduct direct and cross-examination of witnesses. The only case law dealing with this questionable practice is Carr v. Stringer, 171 S.W.2d 920 (Tex.Civ.App.--Fort Worth 1943, writ ref'd w.o.m.). In this old case, the court found that, according to the definition of "practice of law" as then set out in TEX. ANN. PENAL CODE Art. 430a (1925) (repealed 1949), the procuring of permits from the Railroad Commission of Texas was not an unauthorized practice of law when accomplished by nonlawyers.

While the right to counsel and fair representation at an administrative hearing is one of constitutional dimensions, courts require a showing that the failure to be represented at trial is not due to the party's own fault or negligence. In State v. Crank,

666 S.W.2d 91 (Tex. 1984), cert. denied, 469 U.S. 833 (1984), where a dentist had been given two previous continuances and on the day of a disciplinary hearing before the Board of Dental Examiners he dismissed his attorney over "philosophical differences," the Texas Supreme Court found no denial of due process rights to a fair representation before the Board when his motion for continuance to seek new counsel was denied.

Legislative continuances to allow a party to be represented by a legislator at an administrative hearing have been found to be mandatory. Harris County Bail Bond Board v. Burns, 790 S.W.2d 862 (Tex. App.--Houston [14th Dist] 1990, writ ref'd).

#### IV. Right to Adduce and Oppose Evidence

Section 13(d) of APTRA states:

Opportunity must be afforded all parties to respond and present evidence and argument on all issues involved.

As the court observed in Browning-Ferris, Inc. v. Brazoria County, 742 S.W.2d 43, 51 (Tex.App.--Austin 1987, no writ), apart from this statutory right, circumstances may exist in a particular case which trigger a constitutional or due process right to be heard before an agency makes a final decision. Because of these more overriding concerns, Section 13(d) cases tend to be subsumed in more general discussions of denial of due process, or faulty notice, or improper continuances. For this reason, the Madden and Seely cases previously discussed under the notice section and the Crank case discussed under the right to counsel section of this paper illustrate that §13(d) concerns are central or tantamount to receiving a fair hearing. Asbury v. Texas State Board of Public Accounting, 719 S.W.2d 680 (Tex. App.--Austin 1986, no writ) (also discussed later in this paper under the prehearing settlement section) clearly states that an agreed, informal disposition of a case where only *pro forma* presentations of evidence are made by the agency and which is timely rejected cannot substitute for the opportunity to respond and present evidence and argument on all issues as guaranteed by §13(d) of APTRA.

#### V. Prehearing Conferences

"Although APTRA contains no express provisions relating to prehearing conferences, the power to convene them is . . . implicit in the general control given the agency over its proceedings. Actual notice to the parties . . . is required." J. POWERS, AGENCY ADJUDICATIONS 73 (1990). Most agencies treat the matter of prehearing conferences in some detail in their procedural rules. The TWC for example, devotes an entire chapter, 31 TAC §265, to "Procedures Before Public Hearing." Section 265.6 provides for prehearing conferences, details the notice required, and enumerates issues which may be considered at the prehearing conference:

§265.6 Conference Before Hearing.

- (a) At the discretion of the presiding officer, a conference before hearing may be held at a time and place stated in the notice. If notice of the conference is not given in the notice of public hearing, notice of the conference shall be mailed at least ten days prior to the conference or the conference may be held at the public hearing date, time and place stated in the notice of public hearing. If notice of public hearing is required to be published, notice of a conference to be held prior to the initial public hearing date shall be published at least ten days prior to the conference.
- (b) A conference may be held to consider the following:
- (1) the formulation and simplification of issues;
  - (2) the necessity or desirability of amending pleadings;
  - (3) the possibility of making admissions or stipulations;
  - (4) the procedure at the hearing;
  - (5) the identification of and specification of the number of witnesses;
  - (6) the filing and exchange of prepared testimony and exhibits;
  - (7) the designation of parties;
  - (8) the scheduling of discovery; and
  - (9) any other matters which may expedite the hearing or otherwise facilitate the hearing process.

While not enumerated in §265.6 (b), one initial decision to be made at the prehearing conference is the method of transcription to be used. Section 13(g) of APTRA states:

Proceedings, or any part of them, must be transcribed on written request of any party. The agency may pay the cost of the transcript or assess the cost to one or more parties. This Act does not limit an agency to a stenographic record of proceedings.

Section 13(g) gives an agency flexibility in assessing record costs in multi-party proceedings or in cases in which a party is unable to bear the cost of transcription. It also specifically provides an agency is not limited to stenographic records of proceedings as taped recordings may be made of proceedings. McCalla, *The Administrative Procedure and Texas Register Act*, 28 BAYLOR L. REV. 445, 453 (1976).

In City of Manvel v. Texas Department of Health Resources, 573 S.W.2d 825 (Tex. Civ. App.--Beaumont 1978, writ ref'd n.r.e.), the court found "no legislative pronouncement" that the cost for transcribing the proceedings before the agency "should be paid for

or assessed against any party." It construed §13(g) to apply only when there is no appeal, and thus the court held the cost of the transcript is not an item to be included in and assessed as court costs within the meaning of the Texas Rules of Civil Procedure (TEX. R. CIV. P. 127 and 131). However, the court in City of Bells v. Texas Department of Health, 701 S.W.2d 342 (Tex. App.--Austin 1985, no writ), construed §13(g) to apply to the preparation of transcripts for purposes of appeal and found the legislature intended by this subsection to allow agencies to defray transcription costs by charging them to the party requesting the transcript. The court also pointed out the legislature amended APTRA §19 by adding Subsection (f), which provides that an agency by rule may require a party who appeals a final decision to pay all or a part of the cost of preparation of the record of the agency proceedings. Subsection (f) further provides that a charge imposed under this subsection is considered to be a court cost and may be assessed by the court.

A much more important function of the prehearing conference, also not specifically enumerated in §265.6(b), is that of facilitating settlements. APTRA provides for informal disposition of contested cases in §13(e) which states: "Unless precluded by law, informal disposition may be made of any contested case by stipulation, agreed settlement, consent order, or default."

Interesting problems arise when parties change their minds with respect to informal dispositions of potentially contested case matters. Two cases which deal with APTRA §13(e) and parties attempting to abrogate agreed settlements are Asbury, supra p. 10, and Statewide Convoy Transports v. Railroad Commission of Texas, 753 S.W.2d 800 (Tex. App.--Austin 1988, no writ). In Asbury, the appellant appealed a three-year suspension of her CPA license. Originally appellant had agreed to that suspension, and that agreement was reduced to writing. Subsequently a proposal for decision (PFD) with findings of fact and conclusions of law was prepared. The appellant never signed the PFD as required by the Board's rules for the disposition of an agreed settlement. Instead, she filed motions to withdraw the agreement and requested a hearing before the Board. The Court found that the rule requiring the appellant to sign the PFD implicitly allows a party to retract a settlement agreement at any time before signing the proposal and that such retraction would preclude the Board from resolving the case by informal disposition. Furthermore, the court found that the Board's evidentiary proceedings in the informal disposition were not a contested evidentiary hearing, and remanded the matter for a contested case hearing before the Board.

In the second case, Statewide Convoy Transports, counsel for Statewide agreed on the record in open hearing to a settlement. A letter confirming the agreement was never sent to the Railroad Commission by Statewide's attorney, who had stated his intent to do so on the record. Later Statewide challenged the Railroad

Commission's order claiming the stipulations by its counsel had been the result of mistake. The court found that the Railroad Commission did not abuse its discretion by not granting Statewide's motion for rehearing. First, there was no suggestion that the Railroad Commission's decision rested on any forbidden or irrelevant factor. Second, Statewide did not verify its allegations of mistake or attempt to provide evidence to the Railroad Commission concerning the allegedly mistaken stipulations.

In addition to APTRA, other statutes may provide for informal disposition of cases. For example, Water Code §13.015 provides:

A proceeding involving a water or sewer utility or a retail public utility as defined by Section 13.241 of this code may be an informal proceeding, except that the proceeding is subject to the public notice requirements of this chapter and the rules and orders of the regulatory authority involved.

Lastly, in addition to APTRA and other statutes, agency rules may provide for informal disposition of contested cases. For example, the TWC has promulgated rules which address informal disposition of contested cases and has recently adopted a new Chapter, 31 TAC §§264.1-264.10, which sets out detailed procedures for Alternative Dispute Resolution which attempts to settle cases or limit the issues in dispute.

#### VI. Continuances

APTRA specifically authorizes continuances. Section 13(i) provides:

The agency may continue a hearing from time to time and from place to place. The notice of the hearing must indicate the times and places at which the hearing may be continued. If a hearing is not concluded on the day it commences, the agency shall, to the extent possible, proceed with the conduct of the hearing on each subsequent working day until the hearing is concluded.

The key case dealing with continuances at the agency level is Gibraltar, supra p. F-4. In Gibraltar, a motion for continuance seeking a delay of the hearing on competing applications for savings and loan association branch offices was filed. The motion alleged that expert testimony would be required and stated that it was physically impossible to prepare for hearing in the time allowed by the notice. The court stated that rulings upon motions for continuance are within the discretion of the hearings examiner. In reviewing the circumstances to determine if the examiner had abused his discretion, the court concluded that no such abuse was present because the movant had failed to demonstrate due diligence in preparation for the hearing and had not notified the agency promptly of its inability to prepare. Further, the movant had the

burden of persuasion regarding its motion, and citing TEX. R. CIV. P. 252, the court reasoned the movant could have been expected to make a detailed showing of its diligence. In this case, no evidence of diligence was offered nor was official notice requested of facts pertaining to the continuance.

The only case citing §13(i) since Gibraltar has been Adams v. Texas State Board of Chiropractic Examiners, 744 S.W.2d 648 (Tex. App.--Austin 1988, no writ), and it did so only tangentially. In Adams, the appellant complained the Board's notice of hearing to revoke his license was insufficient because it failed to notify him that he had a right to legal counsel and that he had a right to call witnesses and present evidence in the proceeding. The notice, however, declared specifically that the hearing would be conducted in conformity with APTRA. Citing §13(i), as well as other APTRA sections, the court found that the statutory provisions of APTRA were "more than ample to satisfy any due process concerns." *Id.* at 657.

## VII. Hearings

### A. Hearings Procedures in General

The hearing officer convenes the hearing at the time and place noticed. After making opening remarks (e.g., calling the hearing to order, identifying the case, and discussing the procedure to be followed), the hearing officer will generally, first, accept jurisdiction over the matter after determining that notice was properly provided and, second, name the parties to the proceeding. In the event there are persons present who do not want full party status or who are not able to demonstrate a justiciable interest, the hearing officer may allow oral public comment from any interested person prior to the commencement of the formal adjudicative proceedings. The officer should then dispose of preliminary motions, if any.

Every party has the right to an opportunity to respond and present evidence and argument on all issues involved. APTRA §13(d). The hearing itself begins with the direct case of whoever has the burden of proof, usually the applicant or movant.

The agency must provide interpreters for the deaf. APTRA §13A. Interestingly, there is no similar requirement relating to the provision of interpreters in the event parties do not speak English.

APTRA §13(b) provides special procedures to protect children in cases relating to child abuse.

### B. Ex Parte Communications

Unless otherwise authorized by law, agency heads and employees assigned to render a decision or make findings and conclusions

(i.e., hearing officers) may not communicate, directly or indirectly, on any issue of fact or law with any agency, person, party, or their representatives, except on notice and an opportunity for all parties to participate. APTRA §17. The prohibition applies only to contested cases, not rulemaking type proceedings.

There are several exceptions to the ex parte prohibition. For example, agency heads may communicate with each other. However, this right is subject to limitations imposed by the Open Meetings Act, *supra* p. F-3, which prohibits a quorum of decision makers from deliberating matters without notice and opportunity for public participation. Acker v. Texas Water Commission, 790 S.W.2d 299 (Tex. 1990). Acker's application for a wastewater discharge permit from the TWC was denied. On appeal, he alleged that two of the Commissioners had been overheard in a restroom discussing his application. He alleged that this conversation violated the Open Meetings Act. The trial court granted Acker summary judgment, but the Court of Appeals reversed, holding that §17 of APTRA allows private communications between agency members. The Supreme Court, Justice Doggett writing, held that a discussion between a majority of the Commissioners about contested issues outside a public hearing violates §2 of the Open Meetings Act and that §17 of APTRA can be harmonized with the Open Meetings Act by allowing a state commission's members to confer ex parte, but only when less than a quorum is present.

Another exception to the ex parte rule is that agency heads or hearing officers may communicate ex parte with agency employees who have not participated in any hearing in the case for the purpose of utilizing the special skills or knowledge of the agency and its staff in evaluating the evidence. APTRA §17.

An additional ex parte exception is that agency heads may communicate with the general counsel when he has not participated on issues of law in the case. County of Galveston v. Texas Department of Health, 724 S.W.2d 115 (Tex. App.--Austin, writ ref'd n.r.e.).

Finally, it should be noted that the statutory ex parte prohibition only applies during the pendency of the contested case. Vandygriff v. First Sav. & Loan Ass'n of Borger, 617 S.W.2d 669 (Tex. 1981).

### C. Transcription

Any party is entitled to have the contested case hearing transcribed. In the event the hearing officer anticipates that the hearing will last more than one day or that the final order will be appealed, the hearing officer should make sure, as a preliminary matter, that a court reporter is present to take the transcriptions. APTRA §13(g).

#### D. Evidence

The rules of evidence in nonjury district court civil cases (i.e., the Texas Rules of Civil Evidence) shall be followed. APTRA §14(a). Testimony in contested cases is usually sworn and taken under oath. APTRA §14(b). When necessary to ascertain facts not reasonably susceptible of proof under the Texas Rules of Civil Evidence, evidence not admissible thereunder may be admitted, except where precluded by statute, if it is of a type commonly relied upon by reasonable, prudent men in the conduct of their affairs. APTRA §14(a). Irrelevant, immaterial, or unduly repetitious evidence shall be excluded. *Id.* Agencies shall give effect to the rules of (evidentiary) privilege recognized by law. *Id.* Objections to evidentiary offers may be made and shall be noted in the record. *Id.*

Documentary evidence may be received in the form of copies or excerpts if the original is not readily available; parties on request can compare the copy with the original. APTRA §14(o).

Depositions may be used regardless of whether cross interrogatories were propounded. APTRA §14(k).

Subject to the requirement of APTRA §14(a) concerning evidence, if a hearing will be expedited and the parties' interest not prejudiced substantially, any part of the evidence may be received in written form. APTRA §14(a). Several agencies have adopted the practice of using prepared written direct and rebuttal testimony, filed in advance of the hearing, in lieu of live witness testimony. This reduces (to some extent) the need for pre-hearing discovery of expert opinions, virtually eliminates the hearing time for direct examination, and can help shorten the time for cross-examination of witnesses. The use of prefiled written testimony permits use of prefiled written objections to (or motions to strike) testimony on relevance, hearsay, or other evidentiary grounds, which can again save time.

#### E. Witness Fees

A witness (or deponent) who is not a party and who is subpoenaed or otherwise compelled to attend any hearing or proceeding to give a deposition or to produce books, records, etc., is entitled to receive 10 cents per mile (or a greater amount if the agency rules so provide) for traveling if more than 25 miles, and \$10 per day (or a greater amount if the agency rules so provide) for each day the person is necessarily present as a witness. APTRA §14(l) and (m).

#### F. Cross-Examination

APTRA §14(p): Parties may cross-examine witnesses for a true and full disclosure of facts.

"Friendly cross" by friendly parties is sometimes a problem in multi-party cases. The hearing officer can attempt to control it by aligning parties under one representative, setting the order of the parties' cross-examinations, and sustaining "friendly cross" objections.

#### G. Official Notice

Official notice may be taken of all facts judicially cognizable, and in addition may be taken of generally recognized facts within the area of the agency's specialized knowledge. APTRA §14(q). The parties must be notified before or during the hearing or in preliminary reports or otherwise of the material officially noticed (including staff memoranda or data) and afforded an opportunity to contest the material so noticed. *Id.*

#### H. Continuance of the Hearing

The agency may continue a hearing from time to time and from place to place. APTRA §13(i). The movant has the burden of proof on the motion for continuance, and rulings on motions for continuance are within the discretion of the hearing officer and will only be overturned for abuse of discretion. Gibraltar, *supra* p. F-4.

#### I. Closing Arguments

Every party has the right to respond and present evidence and argument on all issues involved. APTRA §13(d). By rule of practice, and depending on the length and complexity of the case, agencies will either hear oral closing arguments or require written post-hearing briefs.

### VIII. Proposals for Decision

Section 15 of APTRA requires the following:

If in a contested case a majority of the officials of the agency who are to render the final decision have not heard the case or read the record, the decision, if adverse to a party to the proceeding other than the agency itself, may not be made until a proposal for decision is served on the parties. . . . The proposal for decision must contain a statement of the reasons for the proposed decision and of each finding of fact and conclusion of law necessary to the proposed decision prepared by the person who conducted the hearing or by one who has read the record. . . . [Emphasis added] APTRA §15.

#### A. Proposed Findings of Fact and Conclusions of Law

Since the primary purpose of a proposal for decision is to give reasons for the proposed findings and conclusions, it is important

for the hearing officer to understand what must be included in the order. Section 16(b) of APTRA sets out the contents of an agency decision or order, as follows:

A final decision must include findings of fact and conclusions of law, separately stated. Findings of fact, if set forth in statutory language, must be accompanied by a concise and explicit statement of the underlying facts supporting the findings. . . . APTRA §16(b).

The Texas Supreme Court has interpreted §16(b) in Texas Health Facilities Commission v. Charter Medical-Dallas, 665 S.W.2d 446 (Tex. 1984). The court stated that in reviewing an agency's decision, the appellate court(s) must look to the statutory requirements imposed by the legislature on an agency. In addition, the reviewing court should also look to the agency's rules promulgated as a direct result of the legislative directive.

As to the findings in the order, the court suggest that they at a minimum be: (1) clear and specific; (2) nonconclusory; (3) not recitals of evidence; and (4) generally, such that the reviewing courts can ascertain that the underlying findings support the statutorily required criteria.

In the proposal, the hearing officer should set out separately (in descending order of importance) those controversial matters which are essential to disposition of the case. The issues may be matters of fact or law. The hearing officer should state the issue and immediately follow with a recommended finding. The hearing officer then should discuss his or her reasoning, including in the discussion the following elements:

- (1) the positions of the parties--e.g., the applicant, the protestants, the public interest counsel, the staff--introduced either as evidence or argument;
- (2) the legal/regulatory criteria; and
- (3) the basis of the examiner's conclusion, such as:
  - (a) weight of evidence;
  - (b) credibility of witnesses;
  - (c) application of facts to law; and
  - (d) legal or regulatory precedence.

As to the proposed order, which is either incorporated into the proposal or attached as a separate document, the hearing officer must recommend findings of fact and conclusions of law to be contained in the final order. APTRA §15. The findings may be categorized as follows: (1) those that describe the nature of case; (2) jurisdictional facts; (3) background facts (where necessary); (4) ultimate facts supported by underlying basic facts; and (5) other relevant facts.

Facts which are not in some way dispositive of the case need not go in the order. See State Banking Board v. Valley National Bank, 604 S.W.2d 415 (Tex. Civ. App.--Austin 1980, writ ref'd n.r.e.).

The proposed order also contains, of course, conclusions of law (statements that the required statutory criteria have or have not been met) and decretal provisions (statements which implement the agency's intentions with regard to the contested case).

#### B. Exceptions to the Proposal for Decision

Each adversely affected party has an opportunity to file exceptions to the proposal for decision and present briefs to the agency heads; other parties must have an opportunity to file replies thereto. APTRA §15. The filing times for exceptions and replies are set by the agency. The proposal for decision may be amended pursuant to the exceptions and replies without being again served on the parties. *Id.* The agency considers the proposal for decision, the exceptions, and the arguments of the parties in open meeting prior to issuing the final order.

### IX. Final Order

#### A. General Considerations

The final order must be rendered in writing or stated in the record, and must provide supporting findings of fact and conclusions of law. APTRA §16(a) and (b). The findings may not simply repeat the required statutory findings, or merely recite testimony or reference exhibits, but must be accompanied by concise and explicit statements of the underlying material facts supporting the findings. APTRA §16(b); Charter Medical, supra p. F-18.

An excellent discussion of findings of fact and conclusions of law is found in an article by James R. Eissinger, professor of law at Texas Tech University, entitled *Judicial Review of Findings of Fact in Contested Cases Under APTRA*, 42 BAYLOR L. REV. 1 (1990).

If a party submits proposed findings and conclusions, the final order must contain a ruling on each one. APTRA §16(b).

Parties must be notified personally or by mail of the final order. APTRA §16(b).

#### B. Adequacy of Findings of Fact

The degree of specificity needed in the underlying fact has been abrogated somewhat by recent case law. For example, in Goeke v. Houston Lighting and Power Co., 797 S.W.2d 12 (Tex. 1990) [hereinafter HL&P], the Supreme Court addressed the question of the adequacy of the underlying facts. The PUC had denied HL&P's application to amend its certificate of convenience and necessity to build a high-voltage transmission line and substation. The

order denying the application contained two findings of fact which were challenged on appeal. The district court held that the order failed to supply findings of underlying fact as required by APTRA §16(b).

Finding of Fact No. 2 stated that HL&P failed to meet its burden of proof that the need for the proposed transmission line outweighed the detrimental impact of the proposed route. Finding of Fact No. 3 stated that HL&P failed to convince the PUC that it had considered alternative routes using existing rights-of-way.

The court of appeals affirmed the district court's reversal of the order, holding that while Finding of Fact No. 2 was a finding of fact on statutory criteria, Finding of Fact No. 3 was an inadequate finding of fact under APTRA §16(b).

The Supreme Court, Justice Mauzy writing, reversed the court of appeals and held that Finding of Fact No. 2 embraced a valid statutory criterion and that Finding of Fact No. 3 provided a valid articulation of underlying fact for Finding of Fact No. 2. Justice Mauzy reasoned that Finding of Fact No. 3 articulated the PUC's underlying reason as to why HL&P had failed to convince the PUC that the need for its proposed line outweighed the negative effects on other statutory criteria. The findings served the required purpose of informing the parties and the court what the agency was thinking when it made its decision. Justice Gonzalez, in dissenting, characterized the PUC's order as so vague and indefinite that it evades meaningful judicial review. *Id.*; *Cf. State Banking Bd. v. Allied Bank Marble Falls*, 748 S.W.2d 447 (Tex. 1988) in which agency findings of underlying facts in the form of evidence and testimony were held sufficient.

### C. Substantial Evidence

The agency's decision must be based on the evidence and matters officially noticed. APTRA §13(h). Examples of cases which address whether the §13(h) requirement has been met include the following:

In Railroad Commission of Texas v. Moran Utilities Company, 728 S.W.2d 764 (Tex. 1987), the Texas Supreme Court held the Railroad Commission's methodology for calculating a utility's return on equity is supported by substantial evidence when it is (1) supported by evidence introduced at the hearing, (2) officially noticed by the hearing examiner before or during the hearing, or (3) set forth in the agency's substantive rules. The court then cited Subsection (h) as one of the APTRA sections for this holding. Because the method used by the examiner was neither supported by expert testimony nor officially noticed, nor did the Railroad Commission's rules set forth the method used by the examiner, the court remanded the case to the agency for further proceedings.

In Texas State Board of Medical Examiners v. Nacol, 696 S.W.2d 687 (Tex. Civ. App.--Beaumont 1985, writ ref'd n.r.e.), the agency

revoked Nacol's license to practice medicine, and Nacol appealed. The evidence showed that a board member disqualified himself but attended the hearings and repeatedly conferred with the chairman; certain vials were considered by the Board but were never introduced in evidence; and board members conferred with a witness outside the hearing room. Citing §13(h), as well as other sections of APTRA, the court held the Board's decision was based on unlawful procedure and remanded the case to the Board.

Although the following two cases cite Subsection (g), it appears the courts' citations are in error and should be to Subsection (h).

In Dotson v. Texas State Board of Medical Examiners, 612 S.W.2d 921 (Tex. 1981), the Texas Supreme Court concluded there was no substantial evidence in the record to support the Board's orders suspending the medical licenses of the appellants. Citing Subsection (h) (incorrectly cited as Subsection (g)) among other APTRA sections, the court found no expert testimony supporting the Board's factual conclusion that the drugs were nontherapeutic in the manner they were prescribed by the appellant. The court also found the Board made no attempt to comply with Section 14(q) setting forth the procedure for taking official notice. The court consequently reversed and rendered judgment vacating the Board's orders.

Following Dotson and citing Subsection (h) (incorrectly cited as Subsection (g)) among other APTRA sections, the court in Wood v. Texas State Board of Medical Examiners, 615 S.W.2d 942 (Tex. Civ. App.--Ft. Worth 1981, no writ), held there was no substantial evidence in the record to support the Board's order suspending the appellant's license, and thus the court reversed and rendered judgment. As in Dotson, the court found no expert testimony to support the Board's factual conclusion that the drugs were nontherapeutic in the manner they were prescribed by the appellant.

In Railroad Commission of Texas v. Lone Star Gas Company, 618 S.W.2d 121 (Tex. App.--Austin 1981, no writ), the court held that the agency's adoption of the discounted cash flow formula was not supported by substantial evidence. Although the Railroad Commission attempted to use agency expertise as a substitute for evidence, the court, citing Dotson, paraphrased Subsection (h) and pointed out that "a valid exercise of agency expertise, like other agency action, must find ultimate support in evidence taken at the hearing or upon facts officially noticed by the hearing officer in the record of such hearing." *Id.* at 125.

#### D. Finality

An order is considered final if the rights conferred are not made contingent on the occurrence of some future event. For example, in P.A.C.E. v. EnviroSAFE Services of Texas, 797 S.W.2d 138 (Tex. App.--Austin 1990, no writ), the Texas Air Control Board (TACB) entered an order denying EnviroSAFE's requested permit exemption,

as well as the permit sought in the alternative, to operate a hazardous waste management facility. The order provided, however, that the TACB would allow Envirosafe to reopen its evidentiary hearing within 190 days to present evidence addressing the TACB's objections to the application. The court held that the order was nonfinal because it left a matter open for future disposition.

Not all conditional provisions in orders render the order nonfinal, however. The Supreme Court, Justice Doggett writing, recently addressed the question of finality in Texas-New Mexico Power Company v. Texas Industrial Energy Consumers, 806 S.W.2d 230 (Tex. 1991). The PUC had issued an order granting a certificate of convenience and necessity to construct units of an electric power generator "conditioned" upon receipt of certain other permits. On appeal, the Austin Court of Appeals upheld the district court's ruling that the order lacked finality in that "the rights conferred are made contingent upon the occurrence of some future event," Texas-New Mexico Power, 786 S.W.2d 795, 796 (Tex. Civ. App.--Austin 1990) citing Mahon v. Vandygriff, 578 S.W.2d 144, 147 (Tex. Civ. App.--Austin 1979, writ ref'd n.r.e.). In overruling the lower courts, the Supreme Court determined this holding to be overbroad. Texas-New Mexico Power, 806 S.W.2d at 231. Noting that the PUC would have continuing jurisdiction to ensure enforcement of the conditional provision, the court implied that the lower courts' action in rendering the order nonfinal was an exercise in form over substance. *Id.* The court's decision apparently is limited to cases in which the "condition" in the order relates to the acquisition of other state and federal permits, leaving the regulated entity subject to the proverbial "Catch-22." *Id.* at 232.

#### E. Effective Date

Agencies have discretion to set effective dates for their orders, subject to abuse of discretion and any specific statutory or constitutional limits. See, e.g., Young Trucking v. Railroad Comm'n, 781 S.W.2d 719 (Tex.App.--Austin 1989, no writ).

#### X. Post-hearing Proceedings

##### A. Motion for Rehearing

A motion for rehearing is a mandatory prerequisite to the jurisdiction of the courts for judicial review of agency decisions rendered under APTRA, absent an imminent peril finding. APTRA §16(c) and (e). (Other agencies not subject to APTRA may also have motion for rehearing requirements in their enabling acts.) The motion must be filed within 20 days after notice is received of the final decision (presumed to be the date notice is mailed by the agency). APTRA §16(b) and (e). Replies are due 30 days after the presumed notice date. *Id.*

The agency must act on the motions for rehearing within 45 days after the presumed notice date or the motions are overruled by

operation of law, unless either the agency by order extends the date to act to 90 days after the presumed notice date or the parties and agency agree to modify the times. APTRA §16(b), (e) and (f).

The agency must notify the parties personally or by mail of the order on rehearing. APTRA §16(b).

There is a discrepancy between the APTRA §16(b) and (e), effective September 1, 1989, and the text in §16(c). The newly enacted amendments to Section 16(b) intend that the time period for filing a motion for rehearing or an appeal commences on the date of notice of the Commission's final decision or order ruling on a motion for rehearing. The Texas Supreme Court, in a pre-amendment opinion, Commercial Life Insurance Company v. Texas State Board of Insurance, et al., 774 S.W.2d 650 (Tex. 1989), addressed the original statute. Justice Gonzalez established the court's interpretation of the legislature's purpose with regard to the time period for the motion for rehearing. He interprets the statute "to require an agency to notify the parties of its orders or decisions." Therefore, he concluded that "the time period for filing a motion for rehearing does not commence until the agency complies with its statutory duty to notify the parties of the order or decision." He is careful to recognize that the new changes address this problem and restricts his holding to cases decided before the changes were effective. *Id.* at 480.

A problem analogous to the Commercial Life case arises when interpreting §16(c) in light of the amended statutes. The statute states that "a decision . . . is final and appealable on the date of rendition of the order overruling the motion for rehearing." This means that the time period for judicial appeal commences from the date of rendition of the order ruling on the motion for rehearing. The problem lies in the conflict between the legislature's intent as is evident in the amended §16(b) and the language of §16(c). The legislature tries to ensure fair and equitable results in the adjudicative process by tolling the time requirement until the attorney of record or the party is presumed to have been notified of the decision or order. If the court follows its reasoning in Commercial Life when resolving this conflict, then the result is that the time period will be tolled for judicial appeal until the attorney of record or the party is notified as required under §16(b), rather than beginning to run from the date of rendition of the order.

The purpose of the motion for rehearing requirement is to prevent parties from lying behind the log and springing reversible error for the first time on appeal. However, it is very important that care be taken to properly file the motion. For example, appeals have been dismissed because of confusion as to the timing of the motion, failure to request proper relief in the motion, failure to properly specify the grounds of error, or how to deal with agency

actions during or even after the rehearing process. E.g., Ector County Comm'rs Court v. Central Ed. Agency, 786 S.W.2d 449 (Tex. App.--Austin 1990, writ ref'd); Tex. Alcoholic Bev. Comm'n v. Sfair, 786 S.W.2d 26 (Tex. App.--San Antonio 1990, writ ref'd); Ross v. Tex. Catastrophe Prop. Ins. Ass'n, 770 S.W.2d 641 (Tex. App.--Austin, 1989, no writ); Southern Union Gas Co. v. Railroad Comm'n, 690 S.W.2d 946 (Tex. App.--Austin 1985, writ ref'd n.r.e.); Dow Chemical Co. v. Public Utility Comm'n, 601 S.W.2d 506 (Tex. Civ. App.--Beaumont 1980, writ ref'd n.r.e.); United Savings Ass'n v. Vandygriff, 594 S.W.2d 163 (Tex. Civ. App.--Austin 1980, writ ref'd n.r.e.); Mahon v. Vandygriff, supra p. F-22.

But cf., Palacios v. Texas Real Estate Com'n, 797 S.W.2d 167 (Tex. App.--Corpus Christi 1990, writ ref'd). In Palacios, the Texas Real Estate Commission entered an order suspending the real estate license of Gregorio Palacios for 30 days. Palacios timely filed a motion for rehearing. The district court ruled that the motion for rehearing was not sufficiently specific and dismissed the cause. The Court of Appeals reversed and remanded for a trial on the merits. The motion for rehearing stated that the agency's interpretation of its statute was incorrect, and that the statute is vague and indefinite. Applying to the two-pronged test in Burke v. Central Educ. Agency, 725 S.W.2d 393 (Tex. App.--1987, writ ref'd n.r.e.), the court determined that the objections stated in the motion for rehearing were sufficiently specific under the facts of this case.

#### B. Suit for Judicial Review

An order is final and appealable on the expiration of the period for filing a motion for rehearing if none is filed or, if one is filed, on the date the rehearing motion is overruled by order or by operation of law. APTRA §16(c). A petition must be filed within 30 days of the date the order is final and appealable, and in the Travis County district court unless otherwise provided by statute. APTRA §19(a) and (b).

APTRA §13(f) details the components of the administrative record sent to the trial court for review in an appeal from an agency order in a contested case. It states:

The record in a contested case includes:

- (1) all pleadings, motions, and intermediate rulings;
- (2) evidence received or considered;
- (3) a statement of matters officially noticed;
- (4) questions and offers of proof, objections, and rulings of them;
- (5) proposed findings and exceptions;
- (6) any decision, opinion, or report by the officer presiding at the hearing; and

- (7) all staff memoranda or data submitted to or considered by the hearing officer or members of the agency who are involved in making the decision.

Once judicial review is initiated, if the manner of review is other than by trial de novo, the agency must compile the above documents into a hearings record and must transmit a certified copy or the original to the district court. The agency must timely transmit the entire record and make formal answer or obtain an extension of time from the district court. APTRA §19(d)(1). The agency is not relieved of this duty to file the record with the court by virtue of an appealing party's failure to pay for the cost of the transcript as provided for by §13(g) and agency rule. City of Bells, supra p. F-12, at 344. In reviewing an administrative decision of a state agency, the courts are restricted to evidence originally presented to the agency absent a party's meeting the requirements of APTRA §19(d)(2) allowing for additional evidence to be taken before the agency.

It is important to note that Section 13(f) provides that the records include "all evidence received or considered." The record must include questions, offers of proof, objections and rulings with regard to the objections. Therefore, even if an objection is sustained and evidence is excluded, if the evidence is offered in an offer of proof as allowed by APTRA §13(f)(4), it becomes part of the record for judicial review. However, merely attaching an exhibit not tendered or admitted at the hearing level to a motion for rehearing, which was subsequently physically included in the court record, does not make that exhibit part of the record for purposes of judicial review. State Banking Board v. Valley National Bank, 604 S.W.2d 415 (Tex. Civ. App.--Austin 1980, writ ref'd n.r.e.).

For purposes of §13(f) it should be pointed out that the Texas courts have found that a hearing officer's proposal for decision does not offer a proper vehicle for notifying parties of matters officially noticed. Railroad Commission of Tex. v. Lone Star Gas Co., 611 S.W.2d 911, (Tex. Civ. App.--Austin 1981, writ ref'd n.r.e.). Justice Shannon, who authored the opinion in Lone Star, explained the court's reasoning:

In essence, the court held that even though the technical requirements of Section 14(q) were complied with, when the undisclosed facts are highly controversial, critical to the outcome of the adjudication, quite complex in nature, and there is little or no justification by the agency for failing to give advance notice as suggested by Section 14(q), the agency denies due process by revealing the extra-record facts at the proposal for decision stage of the proceeding. Shannon, The Texas Administrative Procedure and Texas Register Act Since 1976--Selected Problems, 33 BAYLOR L. REV. 393, 405 (1981).

The United States Supreme Court has indicated that a complainant has the burden of proof to show that there was no reasonable opportunity to rebut or explain matter officially noticed for the first time in an examiner's PFD before the full agency. If such opportunity exists, then the complainant must prove prejudice by showing the officially noticed matters are incorrect or controverted, critical to the outcome of the adjudication, and that there was inadequate justification for failing to notice the matters during the hearing. American Trucking Ass'n. v. Frisco Transp. Co., 358 U.S. 133, 144 (1958).

Finally, in Texas Railroad Com. v. Graford Oil Corp., 557 S.W.2d 946 (Tex. 1977), the court suggests that papers in agency transcripts be numbered consecutively and that transcripts include an index indicating the nature of the papers in the transcript and the pages where they will be found.

While certain provisions of APTRA can be considered individually, with regard to creating the record, §13(f) must be read in conjunction with §14(a) (stating an administrative agency must use Texas Rules of Evidence as applied in nonjury civil cases), §14(a) (allowing for official notice), and §19(d)(3) (limiting judicial review to the record).

#### CONCLUSION

The contested case is a fundamental aspect of agency practice in Texas. It provides the forum in which constitutionally guaranteed rights may initially be pursued. The fundamental concepts of fairness and due process are protected by the requirements detailed in APTRA and the standing requirements for participation in contested case before the agency. Because such important rights flow from these aspects of the contested case, they merit close scrutiny by the agency, the parties to the contested case, and the courts on judicial review.



**FACILITY START-UP AND EXPANSION:  
HAZARDOUS WASTE PERMITTING**

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## **FACILITY START-UP AND EXPANSION: HAZARDOUS WASTE PERMITTING<sup>1</sup>**

Suppose you represent a corporate client that plans to develop an industrial facility in Texas. Your preliminary analysis is that hazardous waste permitting will be required because the client's plans call for storing hazardous waste on site for longer than 90 days and for operating a landfill on site to receive hazardous waste.

What will your client have to do to permit a facility that has a hazardous-waste component? S.B. 1099, passed during the 72nd Legislature, required significant changes in the permitting of hazardous waste facilities in Texas. See Waste Reduction Policy Act of 1991, ch. 296, 1991 Tex. Sess. Law Serv. 1235 (Vernon). S.B. 1099 also imposed new demands on the Texas Water Commission (TWC) to process permit applications in a more timely fashion. The TWC appointed an advisory committee -- Task Force 21 -- to advise the Commission on the implementation of S.B. 1099 and on waste management issues in general.

Subcommittees of Task Force 21 and work groups at the TWC are in the process of recommending changes in the permitting process. Accordingly, the subject of hazardous-waste permitting is a moving target. The current steps for TWC permitting a facility with a hazardous waste component are outlined in Appendix A. Both the appendix and this paper are offered with the caveat that they may become rapidly dated as the TWC proposes new regulations.

This paper focuses on the additional requirements for hazardous-waste permitting and facility siting imposed by S.B. 1099 and distinguishes between the requirements for commercial and noncommercial hazardous waste management facilities (HWMFs). The paper also discusses some of the more controversial issues in the permitting process, including how the TWC's Needs Assessment for Hazardous Waste Management Capacity in Texas (Needs Assessment) should be used in permitting new HWMFs.

### **I. New Permitting Requirements for All HWMFs**

Evaluation of Waste Stream. Section 361.0971 (a)<sup>2</sup> requires applicants for a permit for a new HWMF or those applying for a permit for capacity expansion to "identify the nature of any known specific and potential sources, types and volumes of waste to be stored, processed or disposed of by the proposed facility." This section also

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<sup>1</sup> The authors would like to express their appreciation to Lisa Anderson, Kari Bourland-Chesnut, Becky Jolin, and Paul Seals for their contributions to this paper.

<sup>2</sup> S.B. 1099 is codified in the Texas Solid Waste Disposal Act, Tex. Health & Safety Code, § 361.001 et seq. (Vernon 1992). Regulations implementing S.B. 1099 are located at 31 Tex. Admin. Code §§ 305.1 et seq. and 335.1 et seq.

contains a broad statement that the applicant shall identify any other related information that the TWC may require. See also 31 Tex. Admin. Code § 305.50 (9).

Compliance History and Other Grounds for Permit Denial. Section 361.089(e); 31 Tex. Admin. Code § 305.66(f) provide that the TWC may deny a permit if the applicant:

- Has a record of environmental violations in the past five years at any site owned, operated, or effectively controlled by the applicant;
- Made a false or misleading statement in connection with its application in any written instrument submitted to the TWC related to the application;
- Is unable to ensure that the management of the HWMF conforms or will conform to the Texas Solid Waste Disposal Act (TSWDA) or TWC rules; or
- Is indebted to the state for fees, penalties, or taxes imposed by Title V of the Texas Health & Safety Code or by TWC rule.

For purposes of this section, "applicant" includes, with respect to a corporation, each officer and the owner or owners of a majority of the corporation's stock, if that owner controls at least twenty percent of the applicant and at least twenty percent of another business that operates a solid waste management facility. § 305.50(2).<sup>3</sup>

Financial Condition of the Applicant. The applicant must demonstrate sufficient resources to construct, operate safely and close the facility in accordance with the permit and all applicable rules. Section 361.085; 31 Tex. Admin. Code § 305.50(4)(B). An applicant may also be required to provide financial assurance to guarantee payment of

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<sup>3</sup> Determining what should constitute "environmental violations" continues to be hotly debated. The TWC anticipates that additional rulemaking will be required to clarify what is to be included in compliance history. 16 Tex. Reg. 6052 (Oct. 25, 1991). See also Tex. Air Control Bd., 17 Tex. Reg. 4729, 4733 (Jul. 3, 1992) (prop. to be codified at 31 Tex. Admin. Code §116.14) (compliance history shall include all "compliance events" and "compliance proceedings." Compliance events include an "agreement entered into settlement of any legal or administrative action" and the order of an administrative agency whether final or not, respecting air contaminants for the facility that is the subject of the permit application. A compliance proceeding includes a notice of violation for which the Texas Air Control Board (TACB) has recommended formal enforcement action and has notified the applicant of such recommendation.). See also letter from TACB Task Force on Compliance History to Chairman Kirk Watson, July 22, 1992 (including Task Force's comments and recommendations).

intervenor funding in a public hearing on the application (\$100,000 for commercial HWMF's; \$20,000 for non-commercial HWMFs). § 361.082(g).<sup>4</sup>

Public Notification and Public Participation. Section 361.0791 provides that the Commission shall hold a public meeting on an application for a new HWMF in the county in which the proposed facility is to be located. This section also proscribes the required form for public notice and provides that a public meeting is not a contested case hearing under the Administrative Procedure and Texas Register Act. § 361.0791 (c)-(f). Under § 361.080, a hearing on a permit application for a HWMF must include one session held in the county where the facility is located. The applicant must meet the notification requirements in § 361.0791, for a hearing session, and in addition, must also mail notice to each residential or business address within one-half mile of the facility. § 361.081(a).

Boiler and Industrial Furnace (BIF) Rules. Before S.B. 1099, burning of hazardous waste-derived fuels required an air quality permit, but not a hazardous waste permit. Recovery of the heat value of hazardous waste-derived fuel was considered beneficial recycling, so companies did not have to seek a hazardous waste permit from the TWC to burn hazardous waste-derived fuels. S.B. 1099 required the companies to get a state permit. Simultaneously, federal BIF rules, mandated by RCRA, became effective on August 21, 1991. See 56 Fed. Reg. 7134 (Feb. 21, 1991). The state BIF regulations became effective on July 29, 1992. See 17 Tex. Reg. 5016 (July 14, 1992).

## II. Additional Requirements for Commercial HWMFs.

Commercial HWMFs are subject to more rigorous permitting requirements and additional siting restrictions. A commercial HWMF is defined as a HWMF that accepts hazardous waste or PCBs for a charge. Facilities that accept waste from other facilities owned or effectively controlled by the same person and "captured facilities" are excluded. A captured facility is one where the hazardous waste is stored, processed, or disposed of within the same contiguous manufacturing complex where it is generated. See Tex. Health & Safety Code § 361.003 (5); 31 Tex. Admin. Code § 335.202.

Burden on Public Roadways. Section 361.109(b) requires the applicant for a new commercial HWMF to bear the costs associated with any roadway improvements

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<sup>4</sup> Section 305.50(4)(B) lists various forms of financial information that the applicant may provide to show sufficient financial resources. The statute and regulations do not, however, set an objective standard of what constitutes "sufficient financial resources." Such standardless regulations provide opponents with additional opportunities to challenge issuance of a permit.

required to minimize or mitigate any burden the TWC determines the facility will impose on public roadways. TWC regulations require the applicant to provide information sufficient to demonstrate whether a burden will be imposed on public roadways, including the average gross weight of vehicles to be used for the transportation of hazardous waste, the average number of such vehicles, and identification of roads to be used by such vehicles, including all road within 2-½ miles of the facility and all major highways. Submission of a letter from the agency with the authority to maintain roads with the unequivocal statement that the roads are adequate for the loads to be placed on them by the proposed facility will be prima facie evidence that the operation of the facility will not create a burden and thus would not require that improvements be made to such roadways. § 305.50 (12)(A), (B). TWC regulations set forth standards by which the TWC will determine whether the applicant is required to bear such costs. The standards identified are all highway, traffic control and pavement design publications. § 335.182. The regulations do not establish whether the applicant or the TWC has the burden of proof on this issue.

Emergency Response; Financial Assurance. Section 361.109(c) prohibits the TWC from processing an application for a commercial HWMF permit unless the applicant (1) has provided sufficient evidence that emergency response capabilities are available or will be available in the area to manage a "reasonable worst-case emergency condition" associated with the operation of the facility before it first receives waste; or (2) has secured bonding of sufficient financial assurance to fund emergency response personnel and equipment the TWC determines to be necessary to manage a "reasonable worst-case emergency condition" associated with the facility.

TWC regulations at § 305.50(12)(C) set forth the information the applicant must submit to demonstrate sufficient emergency response capabilities. This section provides that evidence to demonstrate sufficient emergency response capabilities may include, but is not limited to: the contingency plan required by 40 C.F.R. § 270.14(b)(7); contracts to provide emergency services; weather data; definition of worst-case emergencies; employee training program; identification of first responders and local or regional emergency medical services and hospitals with hazardous materials training; a pre-disaster plan; a mechanism for notifying government agencies of incidents; and coordination of the plan with the Local Emergency Management plan. TWC regulations at § 335.183(d) establish standards the TWC will use to evaluate the sufficiency of emergency response capabilities.<sup>5</sup>

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<sup>5</sup> The TWC has interpreted the term "reasonable worst case emergency" to include "what might be termed a reasonably foreseeable worst case emergency." 16 Tex. Reg. 6056 (Oct. 25, 1991). The examples it provides include hurricanes, tornadoes, multiple tank explosions, fires, and spills. Like the land use criteria, infra, these standards and the determination of what constitutes a "reasonable worst-case emergency condition" provides ammunition with which opponents may challenge the processing and

(continued...)

Section 361.109(d) allows an applicant to provide its own emergency response facilities or contract with an adjoining county, city, or other entity if it does not intend to use the facilities of the county or city where the proposed facility is located. In any event, a new commercial HWMF must meet the financial assurance requirements for emergency response facilities. See § 305.50(12)(C)(ii), (D); § 335.183.

Summary of Experience. Section 361.109(e), 31 Tex. Admin. Code § 305.50(12)(E) and 335.66(k) condition the grant of a permit for a new commercial HWMF on the applicant's providing a summary of its experience in hazardous waste management. An applicant without experience in the particular technology to be employed at the facility must conspicuously state its lack of experience in the application or the TWC will deny the permit. The TWC may not deny a permit solely on the basis of the applicant's lack of experience, but an inexperienced applicant's failure to conspicuously state that fact in the application shall result in permit denial. § 361.109(e); 31 Tex. Admin. Code § 305.66(k).

Additional Monitoring. Section 361.113 directs the TWC to require periodic monitoring of the operation of commercial HWMFs facilities to ensure that they are in compliance with the terms of their permits. The TWC has established a requirement for an annual independent environmental audit. The audit is to be performed by an independent inspector chosen either by the HWMF and affected persons or by the Commission, if the facility and affected persons cannot agree. 31 Tex. Admin. Code § 305.147.

### III. Land Use Restrictions and Siting Prohibitions

S.B. 1099 imposed land use restrictions and various prohibitions on the siting of new HWMFs and the expansion of existing facilities. The land use restrictions apply to all HWMFs and require the TWC to evaluate local conditions on a case by case basis. The land-use provisions will undoubtedly make it more difficult to obtain a permit, but they are distinguishable from the prohibitions, which generally apply only to commercial HWMFs and impose blanket prohibitions on the siting of facilities in certain locations.

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<sup>5</sup>(...continued)  
issuance of any commercial HWMF permit.

### Land Use Restrictions

S.B. 1099 requires the TWC to assess the impact of a proposed HWMF on local land use:

In evaluating a permit for a new hazardous waste management facility, the Commission shall assess the impact of the proposed facility on local land use in the area, including any relevant land use plans in existence before publication of the notice of intent to file a solid waste permit application or, if no notice of intent is filed, at the time the permit application is filed. In determining whether a new hazardous waste management facility is compatible with local land use, the Commission shall consider, at a minimum, the location of industrial and other waste-generating facilities in the area, the amounts of hazardous waste generated by those facilities, and the risks associated with the transportation of hazardous waste to the facility. If the Commission determines that a proposed application is not compatible with local land use, it may deny the permit ....

The TWC's regulations require that the permit application include the following:

- copies of any relevant land use plans adopted pursuant to Chapter 211 of the Texas Local Government Code;
- the names and locations of industrial and other waste-generating facilities within one-half mile of a new "on-site" hazardous waste management facility and within one mile of a new commercial HWMF and the approximate quantity of hazardous waste generated or received annually at those facilities;
- the major routes of travel to be used for transporting hazardous waste to or from the proposed facility;
- a map showing land use patterns covering at least a five-mile radius from the boundaries of the proposed facilities; and
- information and demonstrations concerning faults within 3,000 feet of the facility. See § 305.50(10).

The Commission may consider various factors in determining land use compatibility, including the amounts of hazardous waste generated by other facilities in the area, the risks associated with the transportation of hazardous waste to the facility, compatibility with any land use plan adopted under the under the Local Government Code or with local planning, zoning, or land use laws and ordinances, the risk of fires or

explosions, the distance from the site to existing structures and the location of the facility in relation to high-hazard areas such as 100-year hurricane flood zones. See § 335.180.

Based on its assessment of the application with respect to local land use, the commission may deny an application under § 305.66(i) or impose permit conditions to minimize or mitigate detrimental impacts on local land use, in accordance with § 305.148. See § 335.180.<sup>6</sup>

100-Year Floodplain. An applicant proposing an areal expansion of a landfill or a new commercial hazardous waste land disposal unit in a 100-year floodplain must demonstrate a facility design to prevent physical transport of any hazardous waste. §§ 361.098; 361.102; 31 Tex. Admin. Code § 335.204 (e)(1).

Faults. There is an area of review of 1) 2-½ miles or the "cone of influence" for Class I injection wells, and 2) 3000 feet for other HWMFs. § 361.1011; 31 Tex. Admin. Code §§ 331.121 (a)(2); 335.50(4)(D), 335.205(h).

#### Siting Prohibitions

1000 Feet. No permit may be issued for a new hazardous waste landfill or land treatment facility or the areal expansion of such a facility if the boundary of such facility will be within 1,000 feet of an established residence, church, school, day care center, surface water body used for a public drinking water supply, or dedicated park.<sup>7</sup> § 361.102(a); 31 Tex. Admin. Code § 335.204.

One-Half Mile. No permit may be issued for a new commercial HWMF or the subsequent areal expansion of such a facility if the boundary of the hazardous waste management unit is to be located within one-half mile of an established residence, church, school, day-care center, surface water body used for a public drinking water

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<sup>6</sup> Neither the statute nor the draft proposed regulations establishes standards by which the TWC is to determine whether or not a proposed facility is compatible with local land use. Thus, in addition to requiring that applicants submit this additional information as a part of their application for a HWMF permit, this provision will provide the TWC with a means to deny a permit based on subjective or extra-statutory criteria, such as political pressure.

<sup>7</sup> S.B. 1099 amended this provision to add "day care center and surface water body used for a public drinking water supply" to the list of prohibitions.

supply, or dedicated public park.<sup>8</sup> § 361.102(b), (c); 31 Tex. Admin. Code § 335.205(c) and (d). TWC regulations define "residence" as the structure and surrounding property within the property boundaries not to exceed 100 feet from the structure in all directions. 31 Tex. Admin. Code § 335.202. Measurement of distances is taken from a perimeter of no more than 75 feet from the edge of the proposed hazardous waste management unit. § 335.205(g).

Any Distance. New commercial HWMF applicants must demonstrate that the facility will be operated so as to safeguard public health and welfare and protect physical property and the environment at any distance beyond the facility's property boundaries. § 361.102 (d).<sup>9</sup>

### Recommendations and Legal Challenges

Task Force 21 Recommendations. The Permit Processing Subcommittee recommended that the TWC adopt strong siting rules, in the belief that by addressing siting issues early in the permit process, a summary determination on siting could be made before the staff spends one to one and one-half years making a technical review of an application that could be summarily rejected. Task Force 21 identified a number of siting issues for which rules should be adopted, including: compliance history, emergency response capabilities, faulting, flooding, groundwater recharge, soil conditions, wetlands, active geological processes, surface water contamination, coastal high hazardous areas, shoreline erosion, and critical habitat of endangered species. See Task Force 21, Report of Permit Processing Subcommittee (Oct. 1991).

TWC Work Group on Siting. TWC's internal work group on siting has identified several areas in existing regulations as needing clarification, including: 1) defining "active geologic processes" as used in 31 Tex. Admin. Code § 335.202; 2) consolidating requirements by facility types; 3) deleting references to storage surface impoundments (to

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<sup>8</sup> Section 1.25 of S.B. 1099 states that this section does not apply to an existing facility burning waste-derived fuel under a TWC or TACB permit on the effective date of this article. The TACB recently cited a proposed TWC definition of waste-derived fuel in support of its decision that "waste-derived fuel" only meant "hazardous-waste-derived fuel", thus rejecting an applicant's argument that it was grandfathered from the one-half mile siting prohibition because it had burned waste-derived fuel, including shredded tires, on the effective date of the article. The Motion for Rehearing is pending before the TACB. See Tex. Water Comm'n, 17 Tex. Reg. 5016, 5022 (prop. to be codified at 31 Tex. Admin. Code § 335.205 (j)).

<sup>9</sup> TWC regulations do not clarify how compliance with this requirement is to be accomplished. This provision will surely become one of the primary means to challenge a permit for any new commercial HWMF. See § 335.205 (e).

eliminate the distinction between surface impoundments used for storage and disposal); and 4) clarifying "critical habitats of endangered species" as used in 31 Tex. Admin. Code § 335.202.<sup>10</sup>

Legal Challenges to S.B. 1099. One company has challenged the one-half mile siting prohibition in a civil action brought against William Campbell, in his capacity as Executive Director of the Texas Air Control Board. The suit is pending in the United States District Court, Western District of Texas Austin Division, No. A-92-CA-079. The suit challenges S.B. 1099 on several federal constitutional grounds. The plaintiff argues that the one-half mile siting prohibition is preempted by RCRA and the federal BIF rules because the BIF rules are based on a comprehensive, site-specific risk assessment and the one-half mile prohibition is an arbitrarily chosen perimeter and disregards actual risks from exposure. The plaintiff also argues that the one-half mile siting prohibition violates the Commerce Clause<sup>11</sup> and the Equal Protection Clause by discriminating between commercial and non-commercial HWDFs.

#### IV. Proposed Changes in the Permitting Process

According to TWC Chairman Hall, the TWC is three years behind in processing permits.<sup>12</sup> S.B. 1099 mandated that the TWC review its permit application processing procedures. For hazardous waste permits, the TWC is directed to adopt reasonable permit processing and hearing timetables for permits for the most needed technologies within two years of the date the application is determined to be administratively complete. S.B. 1099 at § 1.26 (a). One controversial issue is the extent to which the TWC Needs Assessment should determine TWC priorities. The debate centers over (1) whether permits should be issued for facilities for which a need does not or no longer exists and (2) whether the TWC should use the needs assessment in setting priorities for issuing permits for non-commercial as well as commercial HWMFs.

Section 361.0871(c) of the Act provides that the TWC must determine the need for the specific technology proposed in evaluating an application for a new commercial HWMF. This section requires the TWC to adopt rules identifying the types of technology for which commercial waste management need exists and to provide for

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<sup>10</sup> Kari Bourland-Chesnut in a presentation to a Task Force 21 meeting, July 7, 1992.

<sup>11</sup> The U.S. Supreme Court recently struck down an Alabama hazardous waste fee and Michigan restrictions on waste imports. See Chemical Waste Management v. Hunt, 112 S.Ct. 2009 (1992); Fort Gratiot Sanitary Landfill v. Michigan Dept. of Natural Resources, 112 S.Ct. 2019 (1992).

<sup>12</sup> John Hall, TWC Chairman, in a speech in Austin on July 23, 1992.

priority consideration in processing the permits for those applications that address the highest priority needed as identified by the TWC. 31 Tex. Admin. Code § 335.181.

Role of the Needs Assessment. The TWC produced its Needs Assessment, as mandated by S.B. 1099, on February 28, 1992. The Needs Assessment has been criticized as systematically underestimating capacity by, among other things, excluding wastes from corrective actions and by excluding wastes from Superfund Emergency Response Actions in Texas.<sup>13</sup> The Needs Assessment is based on 1989 data, so it does not reflect increased amounts of waste considered to be hazardous by the EPA's 1991 adoption of the Toxicity Characteristic Leaching Procedure Rule or the impact of the new Clean Air Act's hazardous air pollutant control regulations. The extent to which the Needs Assessment should be used in permitting decisions continues to be hotly contested among Task Force 21 members.<sup>14</sup>

Draft Needs Assessment Rules. The latest available draft of the TWC's Needs Assessment Rules is dated July 6, 1992 (Draft 4). These draft rules apply only to permit applications pertaining to new capacity at commercial HWMFs. It proposes that applications could be categorized as Priority 1, *infra*, if (1) the technology is listed among the technologies identified as those needed on a statewide basis in the most recent Needs Assessment, (2) if the technology qualifies as an innovative technology, or (3) if the applicant demonstrates a regional need for the technology.<sup>15</sup>

Using the Needs Assessment to Set Priorities for Processing Permit Applications. According to a TWC draft memo of June 4, 1992, the TWC staff recommends processing

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<sup>13</sup> Letter from B. J. Wynne, Regional Administrator, EPA Region VI to John Hall, Chairman, Texas Water Commission, March 18, 1992. See also Chairman Hall's reply, April 13, 1992.

<sup>14</sup> See March 27, 1992 Memorandum provided to Task Force 21 by Jim Blackburn, Blackburn & Carter, Houston, and March 13, 1992 Memorandum provided to Task Force 21 by Lisa Anderson, Brown McCarroll & Oaks Hartline, Austin.

<sup>15</sup> This draft rule raises the question of whether the Needs Assessment is accurate enough to establish the permitting priorities for new commercial HWMFs. For example, the listed technologies only include those for which there is at least a 1,000 ton per year demand in Texas, according to the Needs Assessment. The draft rule would also give priority to technologies that are needed on a statewide basis, based on the most recent Needs Assessment, which raises the possibility that applicants will be faced with a moving target as new Needs Assessments are published. The showing of regional need raises other questions. First, the applicant may define the region, but it may not extend outside of Texas; only hazardous wastes generated in Texas may be included in the regional demand analysis. In addition, in order to be considered Priority 1 the applicant must show that at least 60% of the proposed capacity covered by the application will be generated within the region. These proposals may be vulnerable to a constitutional challenge based on Commerce Clause grounds.

permit applications, for noncommercial, as well as commercial facilities, according to three categories, as follows:

- Priority 1 applications include applications for commercial facilities that propose a technology determined by the Needs Assessment to be most needed and commercial facilities that propose a new and innovative technology not specifically addressed in the Needs Assessment that replaces a technology determined by the Needs Assessment to be most needed. Priority 1 applications would be reviewed for administrative completeness within 30 days of receipt and reviewed for technical completeness within 90 days of being declared administratively complete. The TWC permit process for Priority 1 applications would take from 277 - 387 days.

- Priority 2 applications include all applications that are not Priority 1 or Non-Priority applications. This includes applications for commercial facilities that propose a technology not determined by the needs assessment to be most needed, as well as applications for proposed non-commercial facilities, existing non-permitted facilities determined to be environmentally significant, compliance plans and amendment/modification applications that propose new units, new waste streams, changes in operations, or other changes that cannot be implemented without approval/issuance of the modification. The applications would be reviewed for administrative completeness within 75 days of receipt of the application by the TWC. The TWC permit process for Priority 2 applications would take from 552-727 days.

- Non-Priority applications include applications for 1) interim status units at permitted facilities; 2) newly regulated units at permitted facilities; 3) permit renewals that are not for facilities determined to be environmentally significant; and 4) those that are required to be submitted as a result of new regulations but are not for facilities or units determined to be environmentally significant. Non-priority applications would not be processed until a staff person's workload will accommodate the application or one year from receipt, whichever comes first. At that time, the application would be re-categorized as a Priority 1 or Priority 2 application. The application would be reviewed for administrative completeness within one year and 75 days of receipt. The permit process for non-priority applications would take from one year and 552 days to one year and 727 days.<sup>16</sup>

Other Permitting Issues Identified by the TWC Permit Work Group. The TWC Permit Work Group has identified an additional list of permitting issues. The major

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<sup>16</sup> Members of Task Force 21 have agreed that categorizing an application as non-priority is sending it to Siberia. They have also been concerned that the public interprets long delays in processing to mean that something must be wrong with the permit application. An additional criticism is that the intent of S.B. 1099 was to expedite all permit applications, while the proposal merely expedites those that are categorized as Priority 1.

issues are: 1) permitting by rule (e.g. small domestic wastewater systems); 2) performance-based incentives for industry; 3) changes in the level of approval (e.g., delegation of Commission authorizations to the Executive Director); and 4) automated evaluation of compliance histories. The Work Group is in the process of formulating its recommendations to Task Force 21 with the goal of proposing new regulations in the fall.

## APPENDIX A

### CURRENT TWC PERMITTING PROCESS

The Texas Water Commission (TWC) issues many different types of permits. They include permits for storage and/or processing, incinerator, land disposal, and closure and post-closure care. This discussion is a brief summary of the permitting process for hazardous waste permits.

#### A. PRE-APPLICATION ACTIVITIES

1. Pre-Application Meeting. Although not required by statute or rule, a pre-application meeting with the TWC is recommended as a means to identify any obvious application problems early and to provide a forum for resolution.
2. The Local Review Committee Process. The Local Review Committee Process, also known as the "Keystone Siting Process," allows the applicant to formally interact with people in the area where the facility is proposed to be located so that the technical and nontechnical issues of concern can be raised and possibly resolved. The committee make-up optimally consists of twelve members representing local and regional interests.

The applicant initiates the process by filing a Notice of Intent to file a permit application with the TWC and sending copies to the mayor of the city (including its ETJ) and county judge for the county where the facility would be located, as well as the Regional Council of Governments.

Applicants are not required to go through this process, but if they do not, under TWC rules, they can be assessed up to \$25,000 for costs incurred by affected persons for studies, reports, and expert witnesses needed to introduce significant evidence at the subsequent public hearing that otherwise would not have been provided. Furthermore, SB 1099 has added a new section to the law that would allow up to \$150,000 in reimbursements for costs incurred by affected persons for presenting certain information to the TWC. The pre-application review and permit procedures are described in Title 31 Texas Administrative Code, Chapter 335, Subchapter M.

**B. PERMIT APPLICATION REVIEW SCHEDULE**

1. Notice to Other Parties. Potentially affected landowners and units of local governments are informed by TWC that an application has been received. Copies of the application or of the summary section of the application are sent to other agencies for their review.
2. Public Meeting. SB 1099 requires the TWC to hold a public meeting on applications for new hazardous waste management facilities in the county in which the proposed facility is to be located. Additionally, on request of a person affected, the TWC is required to hold a public meeting on an application for a Class 3 Modification or a major amendment.
3. Initial Review. An initial review of the application to determine administrative completeness must be completed by the TWC permit writer within 15 working days after assignment (for existing facilities) or within 10 working days of receipt of the application (for proposed facilities). This includes time for preparation of a notice-of-deficiency (NOD) letter.

4. Applicant Response and Declaration of Administrative Completeness. The applicant has 30 calendar days to prepare a response. This period may be extended to a maximum of 270 calendar days upon proof from the applicant that a longer period will be required to prepare an adequate response. If an applicant does not submit an administratively complete application, the application shall be considered withdrawn. The permit writer has 8 working days after receipt of the administrative response to determine if it is adequate and to prepare a declaration of administrative completeness.
5. Technical Review. For an existing or proposed facility, the permit writer and reviewers at other agencies have 120 calendar days from the date the application is assigned for technical review to review the application and draft a permit. This period is automatically extended by the response time of the applicant. The applicant is typically allowed 60 calendar days for a response, which generally is extended to a total of up to 90 days, as necessary. If the staff determines that the technical review cannot be completed within this period of time, an extension of the technical review period may be approved by the executive director.
6. Initial Draft Permit. When the technical response is received, the permit writer determines the adequacy of the response and prepares an initial draft permit, and copies of the initial draft permit are sent to the applicant, the U.S. Environmental Protection Agency (EPA), other parts of the TWC, and the TACB for review and comment. Thirty days are allowed for their responses. When comments have been received, the permit writer evaluates the comments and prepares a final draft permit.
7. RCRA Facility Assessments. While the initial review and technical review are in progress, a draft permit may include a requirement for a RCRA

Facility Investigation (RFI). For existing facilities (or new facilities to be located at any site formerly used for industrial solid waste management), a RCRA Facility Assessment (RFA) is prepared for the entire facility. The RFA is performed while the initial and technical review are in progress. This consists of a desk-top review of all documents pertaining to the facility and preparation of a preliminary review (PR), which summarizes all applicable information about all waste management units that have ever existed at the facility. This is followed by a visual site inspection (VSI) of the entire facility. Based on the PR, the VSI report, and sometimes on the results from a sampling visit, the RFA may recommend a RFI to:

- (1) determine the extent of known releases of hazardous waste or hazardous constituents from a unit, or to determine if there have been releases from units showing a potential for undetected releases; or (2) corrective action for known releases. Copies of the RFA are sent to the applicant and to the EPA at least 30 days in advance of the preparation of the initial draft permit.

#### C. PERMIT PROCESSING

1. Draft Permit Package and Public Notices. The final draft permit is part of a package that includes summaries of the permit and the facility's compliance history. The package is sent to the office of the Chief Clerk of the TWC. Summaries are prepared for radio and newspaper publication, and the applicant is allowed 30 days to arrange publication. Copies of the newspaper summary are sent to adjacent landowners, local government and health organizations, and other potentially affected parties. After the notices are published, commenters have 45 days to contact the Office of the Hearings Examiners of the TWC with comments or requests for a public hearing.

2. No Hearing Request. If no hearing is requested, the draft permit is put on the earliest possible agenda for consideration by the Commissioners, typically three weeks in advance.
3. Public Hearing Process. If the Hearings Examiners Office decides that a public hearing is justified, a hearing date and location near the facility of the proposed permit will be arranged and a notice prepared for publication. The notice informs the public when and where a hearing will be held, at least 30 days in advance of the hearing date. Notice is also mailed to certain pre-identified parties. For applications involving new solid waste management facilities, the applicant is required to mail the notice of hearing to each residential or business address located within one-half mile of the new facility and to each owner of real property located within one-half mile. After the Hearings Examiner has established jurisdiction at the hearing, the attendees are allowed to ask questions or make comments without the responses or comments being sworn statements. When this preliminary hearing is concluded, the Hearings Examiner will decide whether to go forward with the hearing on the merits or to continue it to a later date. If the hearing is to continue, the Hearings Examiner will name parties before the preliminary hearing is adjourned. The Executive Director, the Public Interest Counsel, and the applicant are automatically parties. Protestants may be named as parties, or may be aligned into a single party.
4. Location of Evidentiary Hearing. Sessions of the evidentiary hearing may be held in the area of the facility or in Austin, at the Hearings Examiner's discretion. However, for hazardous waste facilities, at least one session must be held in the county in which the facility is located. At the evidentiary hearing, the Hearings Examiner sits as judge. Parties can call witnesses to give sworn testimony and cross-examine witnesses called by

other parties. The applicant has the burden of proof that it can meet the state and federal requirements.

5. Hearing Examiner's Recommendation and Proposed Order. At the end of the hearing, the Examiner has 30 working days to prepare a recommendation and proposed order. The recommendation is mailed to all parties with a cover letter giving a date on which the matter will be considered by the Commissioners. At the meeting of the Commissioners, any party not satisfied with the Hearings Examiner's recommendation may address the Commission.
6. Decisions by the Texas Water Commission. Decisions are rendered by the Commission upon a review of the factual and legal issues presented. The EPA will reach a decision on the Hazardous and Solid Waste Amendments of 1984 (HSWA) provisions of the joint permit for which the TWC is not authorized based on the hearing record and public comment developed by the TWC.

D. PUBLIC PARTICIPATION

The TWC prepares notices for the applicant to publish in a local newspaper and present on radio to inform the public of the opportunity for public comment on the proposed permit and of the possibility of a public hearing. If there is no public comment within the 45-day notice period, the permit (with compliance plan) is placed on the Commissioners' uncontested calendar and is usually issued within weeks. Public protest is usually from landowners who just want to know what is transpiring, and the applicant has the opportunity to convince a protester that the protest should be withdrawn. Typically, a public hearing adds at least an additional six months before the proposed permit goes before the Commissioners for a final decision on whether to issue or deny the permit.

Parties to the hearing, other than the applicant who participated in the pre-application review process, may seek to recover their costs for studies, reports, and expert witness fees associated with the presentation of evidence at the hearing. The evidence presented must be significant and must relate to issues raised by the party during the Keystone Siting Process or Local Review Committee Process. The party seeking recovery of costs shall have the burden of proving the costs are reasonable and consistent with similar services performed in the area. Other types of reimbursements can be made pursuant to subsection 361.0833 of Chapter 361, Health and Safety Code.

E. PERMIT DECISION SCHEDULES AND WORKLOADS

The HSWA mandated a schedule for issuance of hazardous waste permits for interim status facilities by the dates below:

1. for land disposal facilities, November 8, 1988;
2. for incinerator facilities, November 8, 1989; and
3. for all other hazardous waste management facilities, November 8, 1992.

Most of the land disposal permits were issued on schedule. All of the incinerator facilities were issued on schedule. It is still too early to speculate for the other facilities.

The main emphasis of the hazardous waste permitting program in the State of Texas is in (1) making progress toward the November 8, 1992 deadline for permitting remaining interim status facilities, (2) responding appropriately to permit modification requests, (3) processing applications for new facilities and for non-interim status facilities, and (4) processing hazardous waste post-closure care permit applications.

- a. Statutory Deadlines vs. New Applications. While the statutory deadlines are applicable to interim status, rather than new (or non-interim status)

facilities, permits must also be written for new (and non-interim status) facilities. Therefore some resources must be directed from permitting interim status facilities toward permitting new facilities. Without some degree of attention, these applications for new permits would languish, and the potential for a capacity shortfall would increase. The TWC does not consider it proper to allow such a shortfall to occur. Also, if non-interim status on-site incineration facility permitting were to be put aside, then these wastes that could be incinerated on-site would likely be disposed of in a less environmentally acceptable fashion. TWC does not consider it appropriate to promote the use of less desirable disposal options. Therefore, it is important to make provisions in regulatory programs to balance statutory deadlines with legitimate and important capacity considerations and environmental gains.

- b. Timing of Amendments and Modifications. Another major permitting task that must be performed is responding to requests for amendments (i.e., modifications) of existing permits. Due to the large number of permits issued, as well as the on-going changes in hazardous waste regulations, there will be a significant increase in the number of permit modification requests in the future. The TWC considers the processing of modification requests to be high-priority actions that require timely decisions.

Failure to act expeditiously on modification requests will result in the following problems: 1) the inability of industry to effectively respond to routine changes or needs at a given facility; 2) the inability to effectively provide for facility improvements resulting in increased environmental protection; 3) new regulations; and 4) the negative implications that delays in processing modifications would present in providing for alternative capacity to land disposal resulting from the land disposal restriction program. It should be noted that once a facility receives a full RCRA

permit, interim status is terminated. Therefore, permitted facility changes must be addressed via permit amendments or modifications. Permit modifications in general should receive higher priority than the processing of interim status facility applications, since interim status facilities can make necessary changes relatively simply and quickly under interim status. This fact is evidenced in the recent regulations regarding permit modifications.

#### F. EXPEDITED HEARING PROCESS

The Commission has recently adopted rules (31 TAC Chapter 274) that are expected to significantly expedite the hearing process. A key feature is that protestants can attain party status and begin discovery as soon as an application is received by the TWC and notice of receipt is made public. Early parties will have ample time for discovery. Late parties must take discovery as they find it, because additional time for discovery will probably not be allowed after the hearing is scheduled.

Although the Expedited Hearing Process will be very important for hearings expected to last longer than ten days, such as for large commercial facilities, lesser problems may be addressed under the TWC's new rules for ADR (31 TAC Chapter 264). In this process, a TWC staff member, who has no potential conflict of interest, attempts to reach a compromise between the applicant and the protestants so that all issues are resolved, or the scope of the hearing is greatly reduced. ADR methods can also be applied to other conflicts.

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- Public Interest Counsel, Texas Water Commission
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- Legal Writing Lecturer, University of Texas School of Law
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- Regulatory Consultant, Texas Department of Agriculture
- Treasurer, Environmental and Natural Resources Law Section, State Bar of Texas
- Past Chair, Law School Committee, Environmental and Natural Resources Law Section, State Bar of Texas
- Past Co-Editor, Environmental Law Journal, published by the Environmental and Natural Resources Law Section, State Bar of Texas
- Chair, Outreach Committee, Environmental and Natural Resources Law Section, State Bar of Texas
- Advisor to the National Association of Environmental Law Societies
- Co-founder of the Environmental and Natural Resources Law Society at the University of Texas School of Law

##### LAW RELATED CONTINUING EDUCATION ACTIVITIES

- Co-Chair of the 1990 Environmental Law Superconference sponsored by the Environmental and Natural Resources Law Section, State Bar of Texas
- Steering Committee member and panelist for the 1989 Environmental Law Course: Managing the Environmental Horror Story sponsored by the ENRLS
- Steering Committee member for the 1989 Hazardous Substances Conference sponsored by the University of Texas School of Law
- Steering Committee member for the 1986 Local Government and Environmental Law Conference sponsored by the University of Texas School of Law
- Speaker for the 1988, 1989, and 1990 National Association of Environmental Law Societies annual conventions
- Speaker for numerous Law School Committee programs at the University of Houston, St. Mary's Law School, the University of Texas School of Law, Southern Methodist University, and Texas Tech University School of Law

**EXPEDITING COMPLEX HEARINGS**

by

Mary K. Sahs

and

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Presented at:

1992 Texas Environmental Super Conference

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### Expediting Complex Hearings

Due to increased public environmental awareness, the number of hearings held by the Texas Water Commission (Commission) has doubled in the past five years. Traditionally, the hearing process adds months to the time it requires for the agency to issue a permit. The increased number of hearings, therefore, substantially affects the agency's ability to timely process permit applications. All agree that the need exists for an expedited hearings process for complex permit applications. In June 1991, the Commission adopted 31 TAC Chapter 274, rules that will significantly expedite the hearing process.

In October 1991, the permit processing subcommittee of Task Force 21 issued its final report. Task Force 21 is an advisory committee appointed by the Commission to provide public input into the effects of Senate Bill 1099 on permitting of hazardous waste in Texas. The permit processing subcommittee recommended to Task Force 21 at least two specific methods of expediting the hearings process: (1) establish discovery schedules and encourage the use of sanctions for discovery abuses and (2) address siting issues at the beginning of the application process. Permit Processing Subcommittee: Final Report to Task Force 21, October 8, 1991, at p. 7.

This paper gives a brief overview of the new procedures required by Chapter 274 and describes how the agency's Office of Hearings Examiners intends to implement those rules and the suggestions made by Task Force 21. Implementation includes: early designation of parties, joint prehearing orders, use of prefiled testimony, addressing "killer issues" early, stricter discovery rules, placing time limits on the actual hearing, and various new post hearing procedures.

### Chapter 274 - Expediting the Complex Hearings

Chapter 274 provides a method of conducting hearings on specifically designated types of applications. The rules were developed by the agency in order to provide a uniform method of handling applications that traditionally have resulted in long, drawn out, complicated evidentiary hearings. The underlying premises include (1) beginning the hearing process early enough in the application process to allow public participation in development of the draft permit; (2) requiring stringent pre-hearing preparation by all parties; and (3) providing sanction mechanisms for delay tactics.

### Applicability of Chapter 274

The hearing process under Chapter 274 (complex hearing process) is not used for water use and water rights permit applications nor for applications or petitions filed prior to June

6, 1991, the effective date of these rules. §274.1. Also exempt from the complex hearing process are certain applications for renewal of permits for domestic wastewater discharges as described in the definition of "complex hearing" found in §274.2.

The definition of "complex applications" indicates that the complex hearing process is mandatory for applications for permits for certain domestic and industrial wastewater discharges, as described in that rule, and for applications for permits for commercial hazardous waste facilities. The complex hearing process may be used for other applications or petitions when the Chief Hearings Examiner "determines [that it] will potentially have complex issues or numerous parties, or the trial of which lasts at least 10 working days." §274.2.

Currently the Office of Hearings Examiners is not using the complex hearing process on applications for municipal solid waste permits that were formally under the jurisdiction of the Texas Department of Health. Due to the complications caused by the consolidation of that permitting program with the Texas Water Commission and because a majority of those applications were filed prior to the effective date of Chapter 274, the use of the complex hearing process for such applications will be delayed for the time being. Although Chapter 274 does not foreclose the use of the complex hearing process in utility rate cases or enforcement hearings, these are also currently excluded from Chapter 274 by agency practice. See 16 Tex. Reg 2886 (May 24, 1991) where the agency states in its preamble to the final rules that the use of Chapter 274 in enforcement matters is not foreclosed.

The applicant or the general public may request that any particular application (except those specifically excluded by law) be processed under the requirements of Chapter 274. The ultimate decision, however, is an administrative matter decided by the Chief Hearings Examiner in consultation with other agency personnel.

#### Beginning the Hearing Process Early

The agency believes that involving the interested public early in an application process will narrow the issues in dispute and produce a draft permit that will be acceptable to a greater number of interested persons. In turn, the length and complexity of any resulting evidentiary hearing will be lessened. The overall effect, then, is to shorten the time it takes the agency to process a permit application. Based on this premise, Chapter 274 requires the applicant to provide notice to the public as soon as the application is deemed by the agency to be administratively complete. See §§274.3 and 274.4.

If the agency receives protests and requests for hearing in

response to the first notice of application, a hearing will be scheduled. This hearing will be a prehearing conference for the purpose of addressing only preliminary matters such as taking jurisdiction, naming and aligning parties, receiving public comments, developing a discovery schedule, and for initiation of the agency's alternative dispute resolution process, when appropriate. §§274.3 and 274.21. In actual practice, often the applicant knows that protests are likely and combines the notice of application and the notice of this preliminary hearing.

An additional factor that complicates the early stages of permit applications for commercial hazardous waste facilities is the effect of the Senate Bill 1099 requirement of a public meeting. Codified at Texas Health and Safety Code §361.0791(a). Applicants are encouraged to work closely with the Chief Clerk and the Chief Hearings Examiner of the Commission during this early phase of the permit application process to ensure that the appropriate notice is given and the required meeting and hearing are scheduled.

Before addressing the complex hearing process that occurs between the initial preliminary hearing and the hearing on the merits, I would note that regardless of whether or not any protesting individuals seek party status at the initial preliminary hearing, when the draft permit is ultimately issued by the agency, the applicant must provide further notice of application. This may result in requests for hearing and the initiation of an evidentiary hearing. The Hearings Examiner may name additional parties and take additional public comment. Because the public received an opportunity to participate during the development of the draft permit, parties named at the later hearing must take the process as they find it and their time for discovery may be reduced. §§274.3(c)(5) and 274.4(a)(4).

At this time, the agency has limited experience implementing the early notice and hearing provisions of Chapter 274. During the fall of 1992, the agency started processing, under Senate Bill 1099 and the complex hearing process, an application by Rollins Environmental Services for a facility in Harris County. No interested persons responded to the notices and scheduled meeting and hearing. That application will proceed to a draft permit and the applicant will be required to provide notice at a later date.

Chemical Waste Management held a public meeting and its initial preliminary hearing under Senate Bill 1099 and the complex hearing process for its Terrell County proposed facility. Numerous parties were named and are currently participating in discovery. The agency has scheduled public meetings and the initial preliminary hearings under Senate Bill 1099 and the complex hearing process for permit applications by Tricil Environmental Responses and Gibraltar Chemical Resources.

#### Restrictions on Amending or Withdrawing the Application

Once the hearing on the merits begins, the application may be amended only by agreement of all of the parties or to conform to changes in state or federal law. §274.6(a). If the application is amended, the Hearings Examiner may require the applicant to issue a revised first notice of application. §274.6(b).

Once the Hearings Examiner has taken jurisdiction over the application an applicant may withdraw the application without prejudice only if (1) authorized by the Commission, (2) agreed to by all the parties, or (3) the applicant reimburses the other parties to the proceeding for all costs incurred up to that time. §274.7.

If the applicant amends or supplements the application in such a manner and at such a time as to take the other parties by surprise, the Hearings Examiner may allow a continuance. The Examiner may recommend that the Commission require the applicant to reimburse the other parties for reasonable costs and expenses incurred as a result of such a continuance. §274.8.

#### Prehearing Procedures

In any complex hearing, the examiner may require or the parties may request a prehearing conference before the hearing on the merits begins. The Examiner may issue an order based on the decisions made at the prehearing conference. Items that may be considered at the conference and may be included in the prehearing order are dilatory pleas and motions, the necessity of amending the application, discovery issues, statements of the parties' contentions, stipulations regarding issues of law and fact, remaining legal issues, proposed findings of fact and conclusions of law, and other matters that may assist the Examiner to expedite the hearing on the merits. §274.22.

In complex hearings, all testimony must be prefiled and all objections to prefiled testimony must be prefiled. §274.22. In some circumstances, such as when newly discovered evidence is introduced, the Examiner may allow the prefiled testimony to be supplemented. §274.24.

#### Timing of Discovery

As mentioned earlier in this discussion, under Chapter 274 discovery among the parties may begin as soon as the Hearings Examiner takes jurisdiction and designates parties. This may occur at the initial preliminary hearing held shortly after the application is deemed administratively complete. §274.41(a).

Discovery on the executive director of the Commission and on the Texas Air Control Board staff may not begin until the executive director issues the draft permit or determines that a permit should not be drafted. §274.41.

As discussed above, the reason for naming parties early in the application process is to allow all parties the same amount of time as the executive director has to review the application. §274.42(a). Also mentioned above, if parties are designated after the draft permit has been issued (intervenors), those individuals generally must take discovery as they find it. §274.42(b). Indeed, only upon a timely filed showing of exceptional cause may an intervenor depose someone who has already been deposed. §274.42(c).

#### Compellable Discovery and the Imposition of Sanctions

One of the more controversial aspects of the complex hearing process is the rule that all discovery is compellable (§274.44) and the fact that discovery abuses are punishable by severe sanctions. §§274.71 - 274.76. Sections 274.44 through 274.62 describe the scope and methods of compellable discovery, which in most respects, follow the Texas Rules of Civil Procedure relating to discovery. Methods of permissible discovery include oral or written depositions, written interrogatories, requests for admissions, requests for production, and requests for entry upon and examination of real property. §274.44(a).

If a party fails to comply with a proper discovery request or to obey an order to provide or permit discovery, Chapter 274 provides the Commission with wide sanction authority. The Examiner may impose any of the sanctions authorized by 31 TAC §265.20. Additionally, an Examiner may disallow further discovery, charge expenses of discovery or taxable hearing costs against the disobedient party or attorney, take as established designated facts, refuse to allow introduction of evidence on designated issues, bar exhibits, strike pleadings, abate the proceedings, or dismiss the application, among other sanctions. See 31 TAC §274 Subchapter D.

#### Office of Hearings Examiners' Plan to Expedite Hearings and Proposals for Decision

Early this year, Chairman John Hall asked the Office of Hearings Examiners to brief him on the methods used by the agency to expedite hearings and proposals for decision. The Office's response to this request was drafted in a Memorandum to Chairman Hall by Cynthia Hayes, Assistant Chief Hearings Examiner. In her memorandum, Ms. Hayes summarized various ways that her Office would expedite complex hearings and proposals for decision. These

methods are based on Chapter 274, discussed above, on the Task Force 21 recommendations, and on administrative Office policy.

Ms. Hayes' memorandum briefly discusses the following components of expediting the hearing and decision process: (1) early designation of parties, (2) joint prehearing orders, (3) prefiled testimony, (4) addressing "killer issues" early, (5) stricter interpretation of justiciable interest, (6) stricter discovery rules, (7) placing time limits on the actual hearing, (8) the use of two examiners on major cases, (9) filing findings of fact and conclusions of law, and (10) transfer of contested cases after hearing for purposes of writing the proposal for decision.

(1) Under the traditional practice, when the hearing on the merits was convened, only the applicant and the executive director were thoroughly familiar with the application. Therefore, protestants required extensive time for discovery. According to Ms. Hayes, the early designation of witnesses under Chapter 274 in complex hearings, as discussed above, will eliminate 60 - 90 days of discovery time.

(2) Ms. Hayes states that Hearings Examiners will begin to use prehearing orders, not only for complex hearings under Chapter 274, but for any hearings where the Examiner judges them to be appropriate. Prehearing orders force the parties to prepare their cases more thoroughly before the beginning of the evidentiary hearing. She anticipates that the uniform use of such orders will reduce hearing time by several weeks in some hearings. See discussion of §274.22, above.

(3) The agency has used prefiled testimony extensively in its large utility cases. Under the complex hearing process and under Office policy, the use of prefiled testimony is being extended to the environmental program areas. The use of prefiled testimony saves time because it eliminates the need for oral direct examination during the hearing. The use of prefiled testimony is expected to eliminate 1-1/2 to 3 months in difficult environmental cases.

(4) Responding to Senate Bill 1099 and the Task Force 21 recommendations mentioned above, Ms. Hayes indicates that in the municipal and hazardous waste areas, the Office of Hearings Examiners will address siting and other "killer" issues early in the hearing process. Under Chapter 274, in complex hazardous waste hearings, after parties are designated and initial discovery is allowed, parties can file a request for summary determination on siting, distance, or other "killer" issues. Ms. Hayes estimates that the agency will save 1-1 1/2 years and much technical review on applications that are denied on the basis of an early review of "killer" issues.

(5) As Ms. Hayes points out, the Office of Hearings Examiners has traditionally been fairly liberal in granting party status. In an effort to streamline the permitting process, the Office is "adopting a stricter policy regarding the need to show a justiciable interest capable of being resolved in a hearing before the Commission." Requests for hearing will receive stricter scrutiny by the Office before any hearing is scheduled and the Hearings Examiners will apply a stricter standard in their review of individuals seeking party status. Ms. Hayes concludes that for applications that ordinarily would require a hearing, this could result in a saving of four months.

(6) According to Ms. Hayes, another means of expediting complex hearings is by implementing stricter discovery rules. Two ways of cutting time are: shortening the allowable discovery time period and making discovery compellable rather than voluntary. Ms. Hayes proposes to shorten the discovery time period to a maximum of 60 days. Chapter 274 makes discovery compellable and allows onerous sanctions for violations of discovery. This will result in a higher compliance rate, which will help complex hearings move along at a faster rate.

(7) The Office of Hearings Examiners intends to reduce hearing time by limiting the number of witnesses and the time each witness will be on the stand. The Examiner will tell the parties prior to the hearing on the merits how much time will be allowed for direct, cross, and rebuttal testimony. Continuances will be allowed only when absolutely necessary. Ms. Hayes suggests that the goal will be to set definite time limits on many hearings.

(8 - 10) Some proposed post hearing procedures that will expedite the contested case docket are: the use of two examiners for major cases so that they can share in writing the proposal for decision; affording parties the opportunity to file findings of fact and conclusions of law; and transferring a completed hearing to a different Examiner for preparation of the proposal for decision in cases where the Examiner who heard the evidence is too busy to write the proposal for decision.

### Conclusion

The Texas Water Commission Office of Hearings Examiners will be implementing a number of new procedures in order to streamline the permitting and hearing process. These changes are being made in response to enactment of Chapter 274, the suggestions of Task Force 21, and a policy within the Commission that the hearing and decision process needs shortening. See attachment, "Contested Case Procedure Under APTRA," which provides a general overview of contested cases.

# PERMITTING REQUIREMENTS UNDER THE CLEAN WATER ACT

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## PART I:

### SUMMARY OF THE CLEAN WATER ACT PERMITTING PROGRAM

#### INTRODUCTION

Historically, protection of the environment was left to the volunteer efforts of the individual states. This included efforts to protect water quality. Before 1970, each state was responsible for developing water quality standards and for insuring compliance with those standards. By 1971 however, only half of the states had developed the necessary standards and enforcement was sporadic. Among the primary reasons for this failure to develop standards was the lack of adequate information upon which to base them. The states also had very little incentive to regulate water quality, since stricter standards in one state could create a disincentive for economic development in that state.

In 1969, Congress failed to pass proposed legislation that would have created a comprehensive federal water quality program. Still recognizing a national problem, the Nixon administration relied on and began enforcing an old navigation statute, the Refuse Act of 1899. This act prohibited all discharges of refuse into waters of the United States without a permit. President Nixon directed the Corps of Engineers and the newly created United States Environmental Protection Agency (EPA) to implement a discharge permitting program under the Refuse Act. The EPA was to review applications for compliance with state water quality standards and the Corps of Engineers would issue and enforce the permits.

The EPA and the Corps of Engineers continued to use the Refuse Act to regulate industrial dischargers until 1972. The major criticisms were that the program only applied to industrial discharges, ignoring municipal discharges, and that dealing with two different agencies was unwieldy and ineffective. Congress responded to these criticisms in 1972 by passing, over President Nixon's veto, the Federal Water Pollution Control Act.

The Federal Water Pollution Control Act, for the first time, created a national program of water quality protection. The ambitious goal of this statute was to eliminate the discharge of point sources of pollution into waters of the United States by 1985. Each discharger was to be issued a permit that would include specific effluent limitations.

The permit parameters were to be based both on the best technology available to that industry for controlling pollution, and on the quality of the receiving stream. First, the statute directed the EPA to set technology-based effluent limitations for industrial dischargers. These effluent limitations were to be based on available pollution control

technology, and were to be created in two phases. Industry was to meet the first phase, or Best Practicable Treatment (BPT), an interim limitation by 1977. The second phase, or Best Available Technology Economically Achievable (BAT), was to be met by industry by 1983. New sources would also be required to comply with specific, more stringent technical effluent limitations. The EPA identified 34 industrial categories of dischargers and approximately 700 subcategories.

These technology-based standards were to be set for what the statute refers to as the "conventional pollutants" (BOD, TSS, fecal coliform, pH and oil and grease), 126 toxic or priority pollutants (set out in 40 CFR Part 122 Appendix D), and the nonconventional pollutants (such as ammonia).

As the second step, the states were directed to finish the job of developing stream-specific water quality standards. First, the states were to identify the desirable uses of each segment of stream. These desirable uses could include recreation, fishing, drinking water supply or industrial use. For each segment, the state would then establish water quality standards that would protect these uses. The standards would either be numerical or narrative but would be based on the quality of the receiving water and not on any given technology.

Second, after establishing appropriate stream standards, the state must then identify those water quality standards (and segments of the streams) that cannot be met using just the technology-based effluent limitations set by the EPA. The state would then allocate a waste load to each of these segments, and thereby establish the stream-specific water quality standards that would have to be met by industrial dischargers into each segment. These stream standards must be reviewed every three years. The EPA approves the water quality standards and the waste load allocations.

All permits for industrial dischargers, therefore, would include both the categorical technology-based effluents set by the EPA and, if necessary to protect the designated uses of the receiving waters, media-quality based water quality standards set by the states.

Municipal dischargers were also subject to regulation under the new Federal Water Pollution Control Act. These publicly owned treatment works (POTWs) were required to install "secondary treatment", or treatment that would biologically treat the influent, and result in 85% removal of the most basic pollutants. If secondary treatment was not adequate to meet state water quality standards, the POTW was required to install necessary controls to meet those standards.

In 1977, the Federal Water Pollution Control Act was amended by the Clean Water Act in several ways. These amendments did not change the broad program outlined in the 1972 act, but did extend the deadline for imposing BAT standards for toxics until 1984. The deadline for conventional pollutants was also extended to 1984, but dischargers were required to meet a different level of technology, or Best Conventional Pollution Control

Technology (BCT), considered less stringent than BAT. New sources were required to comply with Best Demonstrated Available Technology (BADT), the most stringent level of treatment. Because the statute intended for the controls to be more stringent, the statute was referred to as "technology forcing", since every industry would be required to install the best technology in use at that time. Discharge parameters for those industries that were not included in the categories (noncategorical dischargers) would be set by the agency on a case-by-case basis using the "best practicable judgment" of the agency.

The final area of regulation under the Federal Water Pollution Control Act and its amendments is in the area of pretreatment. Instead of discharging directly into a stream, many industries rely on POTWs as a disposal alternative. In 1972, Congress recognized this and required the EPA to establish pretreatment standards for toxic chemicals that could either pass through a plant untreated or impair a treatment plant's capabilities.

The EPA had not developed pretreatment standards for toxics by 1977. In response, the 1977 amendments directed the EPA to impose pretreatment requirements on the categories and subcategories of industries that would be equal to BAT effluent limitations for direct industrial dischargers. In addition, every POTW was required to adopt an ordinance that would identify levels of pretreatment required for all discharges into the POTW. Some cities have developed a pretreatment permitting system for industrial users of the POTW to assist in insuring compliance with these pretreatment ordinances.

In 1987, the Clean Water Act was amended again to require states to adopt specific numerical water quality standards for toxics or priority pollutants. These numerical standards were to have been in place by February 4, 1990. The EPA has published a technical guidance document, referred to as the "gold book", that sets out the EPA's toxic criteria. (Quality Criteria for Water 1986, EPA 44015-86-001). In the future, states will also be adopting narrative biological criteria, and extending water quality standards to coastal waters and wetlands. The EPA would also like to establish sediment criteria.

By adding specific standards for toxics, the EPA was also required to adopt an adequate testing methodology for the receiving stream. The result was the addition of "whole effluent bioassays" to the range of analyses required by the permit.

## **THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

### **The Permit**

The 1977 amendments established a deadline for the elimination of pollutants into waters of the United States. This program, referred to as the National Pollutant Discharge Elimination System (NPDES), created a permitting system for all "point source" discharges of "pollutants" into "waters of the United States." Each of these key phrases has been the subject of many court challenges, with the general result that the NPDES program covers a very broad range of discharges.

Under the NPDES program, dischargers are required to submit a permit application that identifies the quantity and quality of the discharge. Based on that information, the permitting agency would issue a permit that established specific effluent parameters. For an industrial discharger, this would include the categorical effluent limitations and if necessary, the parameters necessary to meet the stream-specific water quality standards. For a POTW, this would include the secondary treatment requirements as well as those parameters necessary to meet the state water quality standards.

In addition to the discharge parameters, the permit will also include monitoring frequency and record keeping and reporting requirements. Other permit provisions will be included relating to bypasses or upsets, maintenance and renewal.

### The Permitting Agency

The NPDES program is implemented by the EPA until the states develop and adopt a program that is the equivalent and at least as stringent as the federal program. Until a state is authorized to implement the NPDES program, the EPA will issue permits in that state, taking into account state water quality standards. Some nonauthorized states will have a separate permitting program, however, and in those states the applicant will have to obtain both federal and a state permit. In those instances it is possible to have different monitoring parameters in each permit.

In states that are authorized for the program, the state will have full responsibility for reviewing applications and issuing permits. The EPA may only intervene if the EPA believes that the state has issued a permit that is not compliant with the goals of the federal program. The State of Texas is not authorized to implement that NPDES permitting program although it is expected to receive authorization shortly.

### Other NPDES Programs

Since 1972, the EPA has been trying to regulate storm water runoff and has attempted several times to issue regulations to create an NPDES permitting program for these discharges. Most of these proposed regulations were challenged in court and it was not until late 1990 that the EPA finally issued comprehensive runoff permitting regulations. These regulations control storm water runoff from a variety of sources, including discharges associated with industry, landfills, electric generating stations, and other sources.

Because this is a new program, it is not clear what the permit parameters for storm water discharge will be. The application for the storm water permit requires the discharger to analyze the runoff for those priority pollutants of concern that are expected to be in the runoff, and for those pollutants that have already been identified in the discharger's existing NPDES permit.

### TECHNICAL CONSIDERATIONS

The EPA has issued a broad range of guidance documents relating to the sampling and analysis of wastewater discharges. The following is a list of those references, as well as a document order number and price for each reference where available. The documents may be ordered by calling the National Technical Information Service, (NTIS) at 1-800-553-NTIS or (703) 487-4600.

1. Appendix D to 40 CFR Part 122 (Tables I - V). (These are the lists of priority pollutants that will be subject to regulation under the NPDES program.)
2. Methods for Measuring Acute Toxicity of Effluents to Freshwater and Marine Organisms. (March 1985) EPA 600/4-85/013. NTIS # PB 85-205-383. Cost: \$31.00.
3. Short Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Fresh Water Organisms. EPA 600/4-89-001. NTIS # PB 89-207-013. Cost: \$31.00.
4. Appendix A to 40 CFR Part 136.3 (Table 2). (This includes the appropriate methods for certain wastewater analyses.)
5. Methods for Organic Chemical Analyses for Municipal and Industrial Waste Water (July 1982). EPA 600/4-82-057. NTIS # PB 83-201-798. Cost: \$17.00.
6. Methods for Chemical Analysis of Water and Waste. (March 1983). EPA 600/4-79-020. NTIS # PB 84-128-677. Cost: \$45.00
7. Handbook for Analytical Quality Control in Water and Wastewater Laboratories (1979). EPA 600/4-79-019. NTIS # PB 297-451. Cost: \$23.00
8. Quality Criteria for Water 1986. EPA 440/15-86-001 (May 1, 1986). (Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Order #955-002-00000-8. Cost: \$23.00
9. Technical Support Document for Water Quality-based Toxics Control. EPA 440/9-85-032 (Revised 1991). (Available from Office of Water, U.S. Environmental Protection Agency, (202) 475-9527.)

### CONCLUSIONS

Since 1972, water quality has been protected by a complicated combination of technological- and media-quality based controls, under a joint effort by the EPA and the states. This program in theory is much more complicated than in practice, as most discharge permits are issued within six months to one year. The Clean Water Act will be the subject of Congressional attention in the 1993 session, and is likely to be amended again to focus on areas that have not received much attention in the past such as wetlands and coastal zone management.

PART II:  
THE STORM WATER DISCHARGE PERMIT APPLICATION PROCESS

INTRODUCTION

In 1987 the Clean Water Act was amended to require permits for, among others, discharges associated with industrial activity. This was generally defined by Congress to mean discharges "directly related to manufacturing, processing, or raw materials storage areas at an industrial plant." Vol. 132 Cong. Rec. H10932, H10936 (daily ed. October 15, 1986); Vol. 133 Cong. Rec. H176 (daily ed. January 8, 1987). In the final rule issued on November 16, 1990, the EPA has interpreted this to include:

- 1) facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards under 40 Code of Federal Regulations (CFR) subchapter N;
- 2) Standard Industrial Classification (SIC) 24 (except 2434), 26 (except 265 and 267) 28 (except 283), 29, 31, 32 (except 323), 33, 344, 373;
- 3) SIC codes 10 - 14 including active and inactive mining areas;
- 4) oil and gas exploration, production, processing or treatment operations or transmission facilities that discharge storm water contaminated by contact within any overburden, raw material, intermediate product, by-products or waste products located on-site of such operations;
- 5) hazardous wastes treatment storage or disposal sites;
- 6) municipal landfills;
- 7) certain recyclers;
- 8) steam electric power generating facilities;
- 9) SIC 40, 41, 42 (except 4221-25), 43, 44, 45 and 517, which have vehicle maintenance shops, equipment cleaning operations, deicing operations;
- 10) treatment plants with design flow of 1.0 million gallons per day (mgd) or more, or one required to have an approved pretreatment program;
- 11) construction activity disturbing greater than 5 acres;

- 12) SIC 20, 21, 22, 23, 2434, 25, 265, 264, 283, 285, 30, 31 (except 311) 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-4285 where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. **IMPORTANT: The distinction between the "light" and "heavy" industry, and the EPA's decision to separate those activities at light industries that are not impacting storm water was recently challenged by the Ninth Circuit Court of Appeals. A detailed discussion of this case is provided below.**

### DISCHARGES COVERED BY THE STORM WATER PERMIT APPLICATION RULE

"Storm water" is defined in the final rule to mean "...storm water runoff, snow melt runoff, and surface runoff and drainage." 40 CFR 122.26(b)(13). According to the EPA, this definition is not intended to include infiltration to sewers, flows that are channeled to basins and that do not discharge into waters of the United States, sheet flow runoff, runoff from parking lots that is not mixed with discharges from manufacturing areas, or discharges to ground water that are not hydrologically connected to surface water. The rule was intended to cover any "point source" of discharge including:

any discernible, confined, and discrete conveyance including but not limited to, any pipe, ditch, channel tunnel, conduit, well, discrete fissure, container rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flow from irrigated agriculture or agricultural storm water runoff. 40 CFR 122.2

Discharges to municipal or private separate storm sewers will also be considered point sources.

The rule defines discharge associated with industrial activity in terms of the origin of the storm water runoff. Specifically, the rule will apply to runoff from the following areas:

- 1) industrial plant yards;
- 2) immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility (these roads must be exclusively or primarily used by the industrial facility);
- 3) material handling sites;
- 4) refuse sites;

- 5) sites used for the application or disposal of process wastewaters (as defined at 40 CFR Part 401);
- 6) sites used for the storage and maintenance of material handling equipment;
- 7) sites used for residual treatment, storage, or disposal ("residual" means material that is remaining subsequent to completion of an industrial process);
- 8) shipping and receiving areas;
- 9) manufacturing buildings;
- 10) storage areas (including tank farms) for raw materials and intermediate and finished products; and
- 11) areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

According to the EPA, storm water discharge from undeveloped areas or areas that are not described by the above list "should generally not be addressed in the permit application, or a storm water permit, as long as the storm water discharge from those areas is segregated from the storm water discharge associated with the industrial activity at the facility." 55 Fed. Reg. 48,009.

There has been some questions about the scope of applicability from drum storage areas under roofs. According to the EPA, the use of the term "storage area" was intended to include all storage areas, whether covered or not and regardless of the size of those storage areas. 55 Fed. Reg. 48,009-48,010. Therefore, covering exposed storage areas would not eliminate the permitting requirement for facilities that are expressly subject to the regulations.

### PERMIT APPLICATION REQUIREMENTS

Owners and operators that are subject to the storm water permit rules have three permitting options. First, the owner or operator may submit an individual permit application that will include site-specific quantitative sampling. Second, the owner or operator may join a group of similar dischargers and file a group application. Generally, the group application was intended to simplify the process for many applicants since only ten percent of the group will be required to submit quantitative data. Third, the owner or operator can request coverage by a general permit. A general permit is adopted by the EPA in a rule that sets out the criteria for qualification and monitoring requirements. If a facility meets the criteria, the owner or operator would generally not have to file an application but would file a "Notice of Intent" to be covered by the general rule instead of a permit application.

### Individual Permit Applications

The individual permit application is filed by any owner or operator that intends to be individually covered by the storm water permit requirements. These applications must be submitted no later than October 1, 1992. These applications may be filed by any owner or operator and will be filed with the authorized state or with the EPA regional office for those states that are not authorized. The following continental states are not authorized for the NPDES program: Massachusetts, Maine, New Hampshire, Florida, Louisiana, Texas, Oklahoma, New Mexico, South Dakota, Arizona, Alaska, Idaho, and the District of Columbia. The Commonwealth of Puerto Rico also does not have NPDES program authorization (Table 1).

The benefits to filing individual permit applications include:

- 1) The deadline for submission is later than the deadline for group applications;
- 2) The permit that is drafted as a result of the individual application will reflect site-specific conditions.

Some other consideration to consider include:

- 1) Costs of preparing an individual permit application;
- 2) Potential for more stringent requirements for individual facilities.

### Group applications

In an effort to streamline the permitting process, the EPA allows the owners or operators of similar facilities to file a group application for a storm water permit in lieu of an individual application. In this group application process, a group of similar facilities (that may be owned by the same company) must submit an application to the EPA Headquarters where the application will be reviewed and summarized. Part 1 of the application identifies the members of the group and provides information on the similarity of the group. Ten percent of the group, with representation from each of the precipitation zones identified by the EPA, must be identified as the applicants that will submit quantitative data. The other members of the group will be judged based on this data. Upon receipt of Part 1 of the application, the EPA will certify the group members and distribute that information to the authorized states. Members of the group that are not certified will have an additional year from that date to submit an individual application or to take advantage of a general permit.

Once the group is certified, there are several permitting alternatives depending on whether the site is located in an authorized or nonauthorized state. For sites located in nonauthorized states, the EPA intends to issue a group-specific general permit. If a general permit is not determined to be appropriate, individual permits will be issued. All members

of the group located in nonauthorized states may take advantage of the model general permit.

Sites located in authorized states, however, will be issued permits by the state. Authorized states have the option of either adopting the model general permit created by the EPA or issuing an individual permit. Only those authorized states that have general permitting authority may issue general permits. These authorized general permit states are: Arkansas, Alabama, California, Colorado, Connecticut, Georgia, Hawaii, Illinois, Indiana, Kentucky, Maryland, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, North Carolina, North Dakota, Oregon, Pennsylvania, Rhode Island, Tennessee, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming (Table 1). Any authorized state may also request an individual permit application from members of the group located in that state.

The EPA has stated that group applicants will be determined to be sufficiently similar to be considered part of the group if the applicants are involved in the same or similar types of operations, discharge the same types of wastes, and have the same effluent limitation and the same or similar monitoring requirements, where applicable. The EPA will also consider groups that are part of the same effluent limitation guideline subcategories. (40 CFR Parts 405 through 471.)

56 Fed. Reg. 12,098 (March 21, 1991.) The Part 1 must include the following:

- 1) identification of participants in the group by name and location, listed according to representative precipitation zones;
- 2) narrative description of industrial activities of participants of the group and support for group certification;
- 3) list of significant materials stored exposed to precipitation and steps taken to minimize contact by these materials with precipitation and runoff;
- 4) identification of ten percent of the applicants that will file quantitative data with description of why these ten percent are representative of the group.

The EPA has 60 days to review the group application and certify the group.

The Part 2 application will include the quantitative sampling data. Part 2 of the application must be submitted to the EPA headquarters no later than October 1, 1992. 57 Fed. Reg. 11,394 (April 2, 1992).

Some states are taking individual action with regard to permitting actions. For instance, Missouri is an authorized state that has taken the position that it will not accept any group applications. Therefore, in Missouri, all owners and operators subject to storm

water permitting requirements will have to file either an individual permit application or comply with a general permit. California and Indiana have issued a state general permit and many other states intend to follow suit by the October 1, 1992 deadline. Because Texas is not authorized for the NPDES program, all permit options are available in that state.

The benefits of a group application include:

- 1) costs of providing quantitative data are minimized since not every member of the group is required to sample;
- 2) permitting process is simplified by allowing submission of application in two parts;
- 3) members may be added to group application after showing good cause;
- 4) general permit may be drafted broadly to include broader base of members.

The disadvantages of the group application include:

- 1) The EPA has taken the position that at least ten facilities in groups of between 10 and 99 members must submit quantitative data; for smaller groups, this does not provide much of a savings;
- 2) the general permit may be more stringent to take into account specific members of the group;
- 3) some states cannot issue general permits, so members of the group may be issued individual permits;
- 4) facilities with existing NPDES permits that address storm water may not join a group.

### General Permits

The EPA intends to promulgate general permits that would cover industrial activity. Owners and operators that can comply with the terms of a general permit may file a Notice of Intent to be covered by the rule and would not have to file a permit application. This option is only available after a general permit is adopted by the EPA or by nonauthorized states, or by those authorized states that have general permitting authority (Table 1).

According to the EPA, the final federal general permit will be issued by August 1992. The EPA staff has stated that there will be two general permits issued: one for construction activities; and one for other industrial activities. The industrial permit will have three separate categories. The first category will include those facilities subject to reporting under

Section 313 of the Superfund Amendments and Reauthorization Act. Permittees in this category will be required to sample storm-water runoff at least annually and submit that information to the agency. The permittee would also be required to prepare a Best Management Practices (BMP) plan, a plan that will include spill control and employee training. The second category will include meat packers, chemical facilities with waste piles, automobile junkyards, and cement plants among other industries. Facilities in this second category will have to perform but not submit annual sampling, and will have to prepare a BMP plan. All other industries will fall into category three. There will be no monitoring required for the third category, but a BMP plan will be required. The BMP plan for each category must be signed by a registered Professional Engineer and must be kept on-site. The EPA will issue a Notice of Intent form that dischargers must submit to take advantage of the federal general permit.

The benefits of a general permit include:

- 1) minimal paperwork associated with initial compliance (although states and EPA reserve the right to request an individual application);
- 2) compliance with general permit may be less onerous than if site-specific permit drafted.

The disadvantages of the general permit include:

- 1) the general permit may not be issued in time to do long-range planning;
- 2) the language of the general permit may be more strict than that of a negotiated individual permit.

### OTHER ISSUES

#### Dischargers with Existing Storm-Water Permits

Some dischargers have already been issued an NPDES permit that authorizes the discharge of storm water. These permittees must apply for a new storm water permit under the final rules at least 180 days prior to the expiration of the existing permit. Individual dischargers with existing permits that address storm water may not file as part of a group application. Categories of industry that should have permits include cement manufacturing, feedlots, fertilizer, petroleum refining, phosphate manufacturing, steam electric, coal mining, ore mining and dressing, and asphalt.

### Non-Municipal Storm Sewers

Some separate storm sewers will be owned and operated either privately or federally. These owners and operators will be required to file an application for an individual or general permit or file as a co-permittee on a permit issued to the operator of the portion of the system that directly discharges to waters of the United States.

### Permits for Discharges from Oil and Gas and Mining Operations

Only oil and gas facilities that have had a release of a CERCLA reportable quantity of hazardous substances in storm water within the past three years will be required to submit a storm water permit application. The EPA intends for this requirement to apply to exploration, production, processing, treatment, and transmission as they relate to the categories listed in SIC 13.

A permit application will be required when discharges of storm water runoff from mining operations come into contact with any overburden, raw material, intermediate product, finished product, by-product, or waste product located on the site. This includes active as well as inactive mining areas but does not apply to those areas reclaimed under the Surface Mining Control and Reclamation Act (SMCRA).

### Discharges Associated with Construction Activities

Storm water discharges from activities involving construction operations that result in the disturbance of five acres total land will be included in the definition of storm water discharges associated with industrial activity. These applications will not include the submission of quantitative data, but must include information about the nature and location of the activity, the total area of the site, storm water control measures, and an estimate of runoff from the site. **IMPORTANT: The Ninth Circuit recently questioned the EPA's decision to limit construction permits to those activities disturbing more than five acres. This decision is discussed in more detail below.**

## RECENT RULEMAKINGS

On April 2, 1992, the EPA issued a final rule that clarified several aspects of general permit and addressed several other important implementation issues.

### Phase II of the Storm-Water Program

The Clean Water Act states that the EPA may not require permits for any other than certain municipal dischargers and industrial dischargers before October 1, 1992. All other permit requirements would be included in Phase II of the storm water program. This means that although some facilities are currently exempt from storm water permitting requirements, the EPA may include those facilities in future regulations.

### State Enforcement of the Storm-Water Permitting Program

The EPA announced that each authorized state will be required to develop a state Storm Water Permitting Plan by April 3, 1995. This plan will describe the states' strategy for the implementation of the program. The initial plan should also include preliminary planning, assessment, and tracking to assist in the development of the second phase of the storm water program.

### Minimum Monitoring Requirements for Individual and Group Permits

Existing permitting regulations provide that all NPDES permits must establish requirements to report monitoring results with a "frequency dependent on the nature and effect of the discharge, but in no case less than once a year." After considering several options for amending this requirement, the EPA has decided to allow monitoring requirements to be set on a case-by-case basis. At a minimum, the permits must require the discharger to conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity and evaluate whether measures to reduce pollutant loadings identified in the storm water pollution plan prepared by the facility are adequate. The inspection should also identify necessary changes to the plan or additional control measures. Records of these inspections must be maintained for three years. Any qualified professional can make the inspection. Inactive mining operations may be inspected every three years by a Professional Engineer.

This rule will allow the permit writer to establish monitoring requirements that reflect the potential risk of the discharge and that are "appropriately related to the nature of the permit conditions for a discharge." The permit writer may include pollution prevention measures or may include best management practices.

### Application Requirements for General Permits

The NPDES program allows the EPA to draft one general permit to cover any discharge. A discharger in a non-NPDES authorized state may ask to be covered by this general permit by filing a Notice of Intent to be covered. In that case, a discharger does not file a permit application, but merely complies thereafter with the terms of the general permit. Under this final rule, a notice of intent must include the legal name and address of the owner or operator, the facility name and address, type of facility or discharges, and the receiving stream. When issued, the General Permit must specify deadlines for submitting notices of intent, and the date by which the discharger is authorized to discharge. The General Permit must also state whether the discharger has to wait for written approval from the EPA, or whether he or she may discharge after a certain number of days from submission of the NOI. The EPA is currently developing separate general permits for inactive mines, inactive oil and gas operations, and inactive landfills occurring on Federal lands. All other oil and gas activity will not be treated any differently than any other industrial discharger.

### Deadline for Submission of Part 2 of the Group Application

The EPA extended the deadline for submission of the Part 2 of the Group Application until October 1, 1992. The EPA also attempted to clarify the confusion surrounding the identification of group members that must sample:

- 1) For groups with less than 20 members, at least 50 percent of the group must submit quantitative data. e.g., at least nine facilities must submit for a group comprised of 17 members.
- 2) For groups of 21 to 99 members, at least 10 dischargers must submit quantitative data. e.g., at least ten facilities must submit if the group is comprised of 25 members.
- 3) For groups of 100 to 1000 members, at least 10 percent of the group must submit.
- 4) For groups of more than 1000 members, no more than 100 members must submit.

Within the group the EPA clarified that:

- 1) For groups with more than 10 members, either a minimum of two dischargers from each precipitation zone in which ten or more members of the group are located, or one discharger from each precipitation zone in which nine or fewer are located must submit.
- 2) For groups of 4 to 10 members, at least one facility in each precipitation zone in which members of the group are located must submit data.

### Municipalities with Less Than 100,000 Population

On December 18, 1991, President Bush signed the Intermodal Surface Transportation Efficiency Act of 1991 (or Transportation Act) into law. Section 1068 of this act addressed the deadlines for submitting storm water permit applications. Among other things, the statute provided that group applications for industrial facilities that are owned or operated by municipalities with a population of less than 100,00 (i.e., airports, powerplants, uncontrolled sanitary landfills) will have until May 18, 1992 for submission of Part 1 of their group applications. Part 2 of these group applications is due May 17, 1993. Deadlines for submission of applications were not set for these small municipalities with other industrial discharges.

### RECENT LITIGATION

In 1987, Congress amended the Clean Water Act to require the United States Environmental Protection Agency (EPA) to develop a storm water discharge permitting program. The amendments allowed the EPA to develop the program in phases, beginning with discharges associated with industry and medium and large municipalities. According to the statute, the EPA was required to develop the program for those two groups under the following schedule:

<u>ACTIVITY</u>	<u>DEADLINE</u>
Issue permitting regulations	February 4, 1989
Deadline for permit applications	February 4, 1990
Approve/deny permits	February 4, 1991

The statute authorized the EPA to allow up to three years for compliance with a permit.

On November 16, 1990, the EPA issued the first set of regulations for storm water permits. 55 Fed. Reg. 47,990 (November 16, 1990.) Among other things, these regulations set deadlines for submission of permit applications from the two groups, and created eleven categories of discharges associated with industry. Two of the industrial categories were divided by Standard Industrial Classification (SIC) Code. If the industry fell into the first, or "heavy" category of industry, the facility was automatically required to obtain a permit. If the industry fell in to the second, or "light" SIC Code category, the facility was only subject to permitting requirements if the storm water runoff from that property was impacted by facility operations. The regulations also provided that only construction sites that disturbed more than five acres would be subject to permitting requirements.

The Natural Resources Defense Council (NRDC) challenged the EPA rulemaking in the Ninth Circuit Court of Appeals. There were a wide assortment of challenges, and the court recently ruled in favor of the NRDC on several of those. NRDC v. EPA, Nos. 90-70671, 91-70200 (9th Cir. Ct. App. June 4, 1992)

The following is a brief summary of the issues resolved in favor of the NRDC. Other issues, relating to the EPA's ability to continue to extend deadlines, and the EPA's distinction between municipal dischargers were also considered and resolved in favor of the EPA.

### The Issues

As noted above, the statute required the EPA to issue regulations that established certain deadlines for application submission and permit issuance. The EPA did not issue regulations until after these statutory deadlines and structured those regulations so that some industrial dischargers, but not all, would be required to submit permit applications. The regulations were silent on the issue of when permits would be issued. Among other issues, the NRDC raised the following challenges:

- 1) The EPA acted illegally when it failed to issue regulations by the statutory deadline, and for extending the deadlines for application submission set out in the statute.
- 2) The EPA acted illegally when it failed to set deadlines for permit issuance and permit effective dates as required by the statute.
- 3) The EPA acted illegally when it allowed certain "light" industries to be exempt from permitting requirements under certain conditions.
- 4) The EPA acted illegally when it exempted all construction activity that disturbed less than five acres from permitting requirements.

### The Scope of the Decision

The Ninth Circuit agreed with the NRDC on each of these issues. First, the court found that the "EPA does not have the authority to ignore unambiguous deadlines set by Congress...The deadlines are not aspirational - Congress set them and expected compliance...EPA's failure to abide by the statutory deadlines is unlawful." The implication of this decision is that dischargers may be held to the deadlines set out in the statute, notwithstanding the EPA's failure to issue timely regulations. A more detailed analysis of the overall implications of the case is provided below.

Second, the court found that the EPA had also acted improperly by not including final approval deadlines and compliance deadlines in the final rules. "By failing to regulated final approval and compliance, EPA has omitted a key component of the statutory scheme...Given the extraordinary delays already encountered, EPA must avoid further delay. The regulations should inform the regulated community of the statute's outside dates for compliance." The court also directed the EPA to include site-specific compliance deadlines in each permit.

Third, when considering the issue of "light" versus "heavy" industry, the EPA argued that "most of the activity at these types of manufacturers takes place indoors, and that emissions from stacks, use of unhoused manufacturing equipment, outside material storage or disposal, and generation of large amounts of dust and particles will all be minimal."

Facilities in the "light" category have SIC codes 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37, (except 373), 38, 39, 4221-25. The SIC codes of "heavy" industry are 24, (except 265 and 267), 28 (except 283 and 285), 29, 311, 321 (except 323), 33, 2441, and 373. The court held, however, that the distinction is "impermissible." According to the court, "...the language 'discharges associated with industrial activity' is very broad. The operative word is 'associated'. It is not necessary that storm water be contaminated or come into direct contact with pollutants; only association with any type of industrial activity is necessary." The court held that the EPA's distinction is arbitrary and capricious and remanded the rules back to the EPA for rulemaking consistent with the opinion.

Fourth, the court found that the EPA had originally proposed to include construction sites that were more than one acre in size. In the final rule, in response to comments, the EPA raised this to five acres. The court "found the EPA's rationale for increasing the limit from one to five acres inadequate and therefore arbitrary and capricious. EPA cites no information to support its perception that construction activities on less than five acres are non-industrial in nature."

#### The Significance of the Decision

The Ninth Circuit's decision will have far-reaching implications for industrial dischargers attempting to comply with the storm water discharge permitting requirements. It is possible that the ruling will open the way for citizens' suits against dischargers for failure to comply with the statutory deadlines, although it is not clear that a court would find a discharger guilty since the EPA had not issued regulations by the deadline. Another major implication of the ruling is that dischargers previously determined to be outside the scope of the rule may be brought back into the program. This includes "light" category industry and owners and operators with construction sites disturbing less than five acres.

According to the EPA, the agency has asked the court for clarification of certain issues. Upon receipt of clarification from the court, the EPA will place a notice in the Federal Register to explain the agency's position and to provide guidance to dischargers in the "light industry category" and to dischargers with construction activities.

### PART III:

#### TECHNICAL APPROACH

At its simplest, the storm-water permitting process can be divided into three basic components or phases:

- Phase 1 - Field verification of discharge outfall locations and sources.
- Phase 2 - Data collection, including the preparation of a sampling protocol and training of sampling personnel.
- Phase 3 - Completion of permit application.

##### Phase 1

The first step in the permitting process is to inventory storm-water outfalls and to verify that each outfall contains only regulated storm-water runoff associated with industrial activity. For facilities where site plan maps or drawings are available, this can be accomplished by simply reviewing these maps and verifying the location of each outfall with a field inspection. For facilities where site plan maps are not available, a facility-wide field inspection is conducted to determine the locations of outfalls. Interviews of facility personnel are conducted to determine the outfall sources identified during the field inspection. If the source is not known, more complex testing, including intrusive photography examination and dye or smoke tests, may be warranted. Generally, the verification of discharges to most outfalls can be accomplished without conducting these intrusive testing procedures.

##### Phase 2

The second phase of the permitting process is data collection. This may include retrofitting storm-water outfalls for installation of sampling equipment at discharge locations representative of storm water from the facility and measurement of precipitation, storm-water quality, and quantity during a precipitation or snow melt event. This is often the most problematic and challenging phase of work and often requires assistance from on-site personnel. For many small sites with a limited number of storm-water outfalls, grab sampling may be appropriate and properly trained facilities personnel can conduct the sampling. This is the most cost effective method of sampling. For larger sites with multiple outfalls, automatic sampling equipment is often desirable. The applicant can minimize the number of samples to be collected by selecting a limited number of sites that are representative of the storm-water discharge from the facility and prepare an appropriate sampling plan.

According to the regulations, storm-water sampling requirements include the collection of a grab sample during the initial 30 minutes of runoff and a flow-weighted composite sample for the remainder of the event or the following three hours. The regulations are very specific about the nature of the runoff event, including the amount of precipitation (0.1 inches) and the amount of time that must transpire between events (72 hours). In addition, specific constituents that are specific in the regulation, included in a NPDES permit or effluent guideline, and representative of the site-specific conditions at the facility must be analyzed from the samples.

### Phase 3

The third phase is to complete a storm-water permit application. A facility can select from one of the three application options. These three options are individual, group or general. The type of storm-water permit application that is appropriate varies and is dependent on the type of industry, the type of facility, and the activities conducted at the facility. In all cases, the operations at the facility must be associated with industrial activity for the storm-water discharge permit application requirements to apply.

The facility information and data requirements for individual, group, and general permit application differ substantially. The individual permit application is the most costly to complete and include specific facility information, including the identification of product and waste handling and storage areas, spill history, drainage basin characteristics, and runoff characteristics.

The approach of dividing projects into these basic components gives the discharger the maximum flexibility to design an acceptable program. Project costs can be estimated for any phase of the study for an individual facility or a group of facilities. In this way, the client can determine the level of input provided by the consultant and the level of involvement by the client. For instance, it is anticipated that the client will provide sampling support during the sampling phase of the project and can provide appropriate drawings and site information required from the permitting process.

Table 1

## UNITED STATES - NPDES STATUS AS OF JUNE 1992

STATE	NPDES AUTHORIZATION	GENERAL PERMIT STATE	PERMITTING OPTIONS	PROGRAM STATUS
Alabama	Yes	Yes	I, GP, GN	Issued several industry-specific general permits for landfills, petroleum storage facilities, noncontact cooling water, food and kindred products, and construction. Plan to issue others. \$200 filing fee and 15 days public notice required.
Alaska	No	N/A	I, GP	
Arizona	No	N/A	I, GP, GN +	Final general permit predicted August 1992 or submit individual application to EPA Region 9.
Arkansas	Yes	Yes	I, GP, GN	Waiting for federal general permit. Will issue state general permit in July.
California	Yes	Yes	I, GP, GN	Issued general permit. Notice of Intent due March 30, 1992. Will accept late notices. Does not intend to accept or process individual applications.
Colorado	Yes	Yes	I, GP, GN	
Connecticut	Yes	Yes	I, GP, GN	Proposed general permit by mid-July. Plan to have general permit available by October deadline. Do not want to issue individual permits. Not sure whether state law will allow them to impose general permit but wants to do this since State is too busy to issue individual permits.
Delaware	Yes	No	I, GP	
District of Columbia	No	N/A	I, GP, GN	
Florida	No	No	I, GP	
Georgia	Yes	Yes	I, GP, GN	Will issue state-wide general permits some time in next few years. Notice of Intent to be covered by general permit considered compliance. Group applicants will be covered by state general permit when issued.
Hawaii	Yes	Yes	I, GP, GN	
Idaho	No	N/A	I, GP, GN +	Final general permit predicted June 1992 or submit individual application to EPA Region 10.

I GP Individual permit  
GN General permit  
+ In nonauthorized states, all options are available from the EPA Region.

STATE	NPDES AUTHORIZATION	GENERAL PERMIT STATE	PERMITTING OPTIONS	PROGRAM STATUS
Illinois	Yes	Yes	I, GP, GN	No general permits expected by October 1, 1992. Must file individual or group application.
Indiana	Yes	Yes	I, GP, GN	Issued final general permit July 1992.
Iowa	Yes	No	I, GP	
Kansas	Yes	No	I, GP	
Kentucky	Yes	Yes	I, GP, GN	Will propose seven general permits by July with intent to go final by October 1, 1992.
Louisiana	No	N/A	I, GP, GN +	Final general permit predicted August 1992 or submit individual application to EPA Region 6.
Maine	No	N/A	I, GP, GN +	
Maryland	Yes	Yes	I, GP, GN	General permit expected August 1992 for industrial sites.
Massachusetts	No	N/A	I, GP, GN +	
Michigan	Yes	No	I, GP	
Minnesota	Yes	Yes	I, GP, GN	
Mississippi	Yes	Yes	I, GP, GN	
Missouri	Yes	Yes	I, GN	Plan to issue industry-specific general permit by October 1, 1992. If general permits not issued, dischargers can file state forms E and F to apply for coverage by general permit when issued. Groups may petition for development of group-specific general permit.
Montana	Yes	Yes	I, GP, GN	Plan to issue general permits for industry, mining and construction by October 1, 1992. Use Montana application form for general permits instead of Notice of Intent.

I Individual permit  
 GP Group application  
 GN General permit  
 + In nonauthorized states, all options are available from the EPA Region.

STATE	NPDES AUTHORIZATION	GENERAL PERMIT STATE	PERMITTING OPTIONS	PROGRAM STATUS
Nebraska	Yes	Yes	I, GP, GN	
Nevada	Yes	No	I, GP	
New Hampshire	No	N/A	I, GP, GN	
New Jersey	Yes	Yes	I, GP, GN	Issued draft general permit.
New Mexico	No	N/A	I, GP, GN +	
New York	Yes	No	I, GP	Plan to issue general permit authority and have general permit issued by October 1, 1992. Will issue several different categories of general permits.
North Carolina	Yes	Yes	I, GP, GN	Proposed state general permit issued Spring 1992. Hope to go final by October 1, 1992.
North Dakota	Yes	Yes	I, GP, GN	
Ohio	Yes	No	I, GP	
Oklahoma	No	N/A	I, GP, GN +	
Oregon	Yes	Yes	I, GP, GN	Deadline for submission of registration/applications for general storm water permit was January 1, 1992. State plans to issue general permits this summer. Permits will require two samples per year.
Pennsylvania	Yes	Yes	I, GP, GN	Proposed general permit due July 1992.
Rhode Island	Yes	Yes	I, GP, GN	
South Carolina	Yes	No	I, GP	Hope to get general permit authority by June 1992. Will attempt to issue general permit before October 1, 1992.
South Dakota	No	N/A	I, GP, GN +	

I Individual permit  
 GP Group application  
 GN General permit  
 + In nonauthorized states, all options are available from the EPA Region.

STATE	NPDES AUTHORIZATION	GENERAL PERMIT STATE	PERMITTING OPTIONS	PROGRAM STATUS
Tennessee	Yes	Yes	I, GP, GN	General permit expected June 1992.
Texas	No	N/A	I, GP, GN +	Final general permit expected August 1992 or submit individual application to EPA Region 6.
Utah	Yes	Yes	I, GP, GN	Plan to issue proposed general permit by mid-July. Will go final within 30 days. Will be similar to most recent draft federal general permit. Use federal forms if submit individual application.
Vermont	Yes	No	I, GP	
Virginia	Yes	Yes	I, GP, GN	Plan to issue proposed general permit after compare to federal general permit. Will propose draft general permit no later than July. May use federal forms if file individual application.
Washington	Yes	Yes	I, GP, GN	Plan to issue general permit by August 1992. Will cover all industrial dischargers. No monitoring required. Will require pollution prevention or baseline monitoring plans.
West Virginia	Yes	Yes	I, GP, GN	Final state general permit to be issued in June 1992. Dischargers file site registration form for general permit, or West Virginia NPDES permit application form for individual permit. State general permit based on draft federal permit.
Wisconsin	Yes	Yes	I, GP, GN	Individual applications (no sampling) due November 10, 1991. Will issue general permits October 1992 based on applications. Will require Preventative Action Plan. No monitoring for 1-2 years from submission of plan or adoption of permit.
Wyoming	Yes	Yes	I, GP, GN	Plan to issue industrial general permit by August 1992.

I Individual permit

GP Group application

GN General permit

+ In nonauthorized

states, all options are available from the EPA Region.

## **II. ONGOING OPERATIONS/COMPLIANCE AND RISK REDUCTION --** *"I Walk the Line"*

### *Cleanup Standards for Contaminated Sites: A General Survey of State and Federal Requirements*

*Allen Beinke  
Tom McClure  
Jenkins & Gilchrist  
Austin, Texas*

### *Environmental Compliance Programs*

*J. A. Curtis  
Director of Environmental Regulatory Affairs  
Baker Hughes, Inc.  
Houston, Texas*

### *Citizen Participation in Enforcement*

*Mary E. Kelly  
Texas Center for Policy Studies  
Austin, Texas*

### *Pollution Prevention: When Less Is More*

*Nancy Worst  
Director, Office of Pollution Prevention & Conservation  
Texas Water Commission*

### *Oil Spill Prevention & Response*

*Kelly O'Shieles Byars  
Lichliter\Jameson & Associates, Inc.  
Houston, Texas*

**CLEANUP STANDARDS FOR  
CONTAMINATED SITES:**

**A GENERAL SURVEY OF  
STATE AND FEDERAL REQUIREMENTS**

Allen Beinke  
and  
Tom McClure  
Jenkins & Gilchrist

August 5, 1992

## Introduction

The large body of environmental regulation that has been developed over the past twenty years can really be divided into two major categories. One set of regulations is designed to regulate or manage materials and wastes so that human health and the environment are protected. This regulatory system is geared toward the development and implementation of regulations that require the safe and proper handling, transporting, storing and disposing of dangerous materials and wastes. The other half of the regulatory equation has been created to deal with problems that occurred before proper management practices were in place or in situations where those management practices were not followed or sufficient to protect the public health and environment. This group of regulations is designed to cleanup or conduct remedial activities at sites where contamination that threatens human health, safety or the environment has already occurred. While remediation of contaminated sites involves many complex and difficult issues, one issue that is fundamental to the remediation is the cleanup standard to be applied to a particular site or the extent to which the site must be remediated. In determining the cleanup standards, many factors come into play - the nature of the substance or waste that is responsible for the contamination, the willingness and financial capability of the person responsible for the contamination to proceed with the cleanup, the state or federal regulatory program that will direct and control the remedial activity, site-specific geology and hydrology, the extent of the contamination, the use of the resource affected and the remedy that is selected to address the problem. Almost without exception, cleanup standards are applied on a site-specific basis and are mandated by a state or federal agency that has assumed the supervision of the cleanup. The goal of this paper is to survey the various state and federal programs that generally control the determination of the cleanup standard for a contaminated site. Included in this general survey will be discussions of the jurisdictional elements that will put a particular site into certain program, the basic standard that a program will typically apply and the circumstances under which a deviation from the usual policy might occur. The programs that will be covered in this discussion include the following:

1. Response actions to protect water quality under Chapter 26 of the Texas Water Code;
2. Releases from underground storage tanks;
3. Releases from RCRA solid waste management units;
4. Remediation at State Superfund sites; and
5. Remediation at Federal Superfund sites.

### **Response actions to protect water quality under Chapter 26 of the Texas Water Code**

Texas regulates the notification and cleanup of hazardous substances principally through one statute, the Texas Hazardous Substances Spill Prevention and Control Act (the "Act"). By

virtue of the interpretation used by the Texas Water Commission ("TWC"), remediation back to background levels of contamination is required.

Texas has primarily three statutory expressions of its policies in connection with spills of hazardous substances. Pursuant to those statutory authorities, TWC has issued a guidance document designed to assist in a coordinated and efficient response to discharges or spills of oil and hazardous substances or a release or threatened release of any solid waste or hazardous waste by discussing the notification requirements, recommended initial response actions and other practical implications of responding to a discharge and spill.

The *Oil and Hazardous Substances Spill Contingency Plan* (the "Spill Contingency Plan") was issued by TWC in October 1988, under various legal authorities including, among others, a) TEX. WATER CODE ANN. § 26.127 (Vernon 1988) declaring the general authority of the agency to be the "principal authority in the state on matters relating to the quality of the water" in Texas, b) the Act which charges responsible parties with the duty to "immediately undertake all reasonable actions to abate and remove" discharges or spills (See TEX. WATER CODE ANN. §§ 26.261 through 26.268) and c) the Texas Solid Waste Disposal Act (See TEX. HEALTH & SAFETY CODE ANN. §§ 361.001 through 361.510 (Vernon 1992).

Perhaps the best expression of the State's purpose in enacting these statutes is the policy statement of the Act which declares that it is the policy of the state "to prevent the spill or discharge of hazardous substances into the waters in the state and to cause the removal of such spills and discharges without undue delay." TEX. WATER CODE ANN. § 26.262 (Vernon 1992).

The Act requires any owner, operator, demise charterer or person in charge of a vessel or of any on-shore facility or off-shore facility to immediately undertake all reasonable actions to abate and remove the discharge or spill. A "discharge or spill" means an act or omission by which "hazardous substances" in "harmful quantities" are released in to the waters in this state or by which those substances are deposited where, unless controlled or removed, they may drain into water in this state. "Hazardous substances" are those which are a) so designated by the administrator of the U.S. Environmental Protection Agency pursuant to the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), b) regulated pursuant to Section 311 of the Federal Water Pollution Control Act or c) designated by TWC. TEX. WATER CODE ANN. § 26.263 (Vernon 1992).

A "harmful quantity" is defined in the statute to mean that quantity of hazardous substance "the discharge or spill of which is determined to be harmful to the environment or public health or welfare or may reasonably be anticipated to present an imminent and substantial danger to the public health or welfare" by the administrator of the EPA pursuant to federal law and by the executive director of TWC. TEX. WATER CODE ANN. § 26.263 (3) (Vernon 1988). Interestingly, the statute appears to require that both the EPA administrator and TWC executive director must have reached the same conclusion about what quantities are harmful, instead of allowing the TWC discretion to define such quantities independent of the EPA.

TWC has construed the requirement to "abate and remove" the discharge or spill as a mandate to remove any and all of the spilled or discharged hazardous material including any residual contamination. The effect of this construction is that cleanup under the Act is required to be performed until the soil and groundwater analysis indicate that concentrations of those constituents reflect background levels.

### **Releases from underground storage tanks**

TWC has developed a unique, risk-based remediation decision model the application of which generates different cleanup standards based on a variety of factors collectively relating to controlling the threat of contaminant exposure to the public. While the limited number of contaminants present in a leaking PST situation may be the critical factor allowing for such a decision model, it nonetheless serves as an interesting challenge to regulators dealing with the remediation of other constituents to develop similar risk-based cleanup standards.

TWC has set forth certain permitting, notification, release reporting, corrective action, financial responsibility and other administrative requirements, rules and procedures in the Texas Administrative Code in Sections 334.1 through 334.482 pursuant to its rulemaking authority under TEX. WATER CODE ANN. § 26.351 (Vernon 1992), among others. Of course, the key item in these regulations of interest in this article is the agency's approach to corrective action in response to a release from a PST. The mechanical and technical requirements of the agency are discussed in administrative regulations cited above, but the most instructive on cleanup policies is the agency's guidance manual entitled *Guidance Manual for LPST Cleanups in Texas* (TWC, January 1990) (the "Guidance Manual").

In its discussion of cleanup requirements, the Guidance Manual quickly segregates its remediation strategies into four different decision models, the use of which depends on the extent of groundwater contamination and whether only soil contamination is involved. Although not expressly a risk-based model, a short study of the Guidance Manual reveals that at least some important cleanup mandates are dependent and proportionate to the actual or projected threat of contaminant exposure to the public.

Four separate cleanup strategies are detailed in the Guidance Manual and the selection of the one which would apply to a particular release situation depends on a) if groundwater is impacted, whether the Total Dissolved Solids ("TDS") content of the groundwater is i) less than or equal to 3,000 parts per million ("ppm") ("Group 1"), ii) greater than 3,000 ppm and less than or equal to 10,000 ppm ("Group 2") or iii) more than 10,000 ppm ("Group 3"); and b) whether soils are contaminated, but where groundwater is neither impacted nor threatened by the release ("Group 4"). Soils are often impacted where groundwater contamination is present or threatened and the first three decision models also address the soil remediation requirements as well as groundwater. A brief overview of the decision model used to reach the correct one of the four possible cleanup models is attached hereto as Exhibit "A."

Fresh water is typically defined as having less than 1,000 ppm TDS, whereas slightly saline water is considered to range from 1,000 to 3,000 ppm TDS. Water from most of the proficient drinking water aquifers in Texas usually falls in this second group. So, the initial threshold question of the TDS level is appears to serve as a good overall barometer of the level of contamination. Once the TDS level is verified, then the Guidance Manual guides the owner/operator of the leaking PST to one decision models which evaluates specific contaminants and prescribes cleanup standards for each. The cleanup standards for each of the specific components may vary from each of the decision models depending on the threats to the public health and safety. A discussion of those possible threats follows.

Naturally, the greatest public health, safety and welfare concern in groundwater contamination involving a release from a PST is usually the threat to the public drinking water supply. Accordingly, where an impact on groundwater has either occurred or been threatened by the release, TWC has used a select combination of the maximum contaminant levels ("MCLs"), proposed MCLs ("PMCLs") and secondary MCLs ("SMCLs") established by the EPA as the *National Primary Drinking Water Standards*. Another significant concern is whether there has been any evidence of petroleum product vapors in neighboring buildings. Frequently, one of the signs of a release which first triggers a report of a release to the agency is the notification by a neighboring landowner of a presence of gasoline fumes in the basement or ground floor of the home or other building.

Whenever drinking water has been impacted, such impact is threatened or documented reports of vapors in buildings are on record, the agency mandates cleanup standards for benzene to MCL concentration, for toluene, ethylbenzene and xylenes to SMCL concentrations. The SMCLs are used on the latter group because they are more stringent and take into account the odor and taste concerns. In these circumstances, total petroleum hydrocarbons (TPH) must be remediated to industry's effective detection limit for TPH measurements or below such limit. In other words, remediation of TPH in groundwater must continue until analysis using the industry's most effective methods reveals that if TPH is present, it is below detectable levels.

Another major concern is whether the release is likely to migrate off-site. Buried utility cables in the area of the release often serve as conduits for the migration of the contamination away from the site and possibly impacting water wells some distance away from the release source. If off-site migration is suspected, then an assessment of that risk is conducted. If off-site migration has occurred or is possible, remediation goals in the Guidance Manual for Group 1-type releases, for example, cleanup of benzene is required to 50 parts per billion ("ppb"), 500 ppb total benzene, toluene, ethylbenzene and xylenes ("BTEX") and 1 ppm TPH. If off-site migration has not been documented and is not expected, the cleanup standards require remediation of BTEX to 1 ppm and TPH to 5 ppm. Obviously, the cleanup standards vary between the different groups depending on TDS levels. The differing cleanup decision models for Groups 1 through 4 are attached hereto as Exhibits "A," "B," "C" and "D," respectively.

TWC quantifies the risks posed to drinking water by making various cleanup standards control depending on the following: a) first, the level of TDS which controls the use of Group 1, 2 or 3; b) whether the site is located in a geologically sensitive area such as an aquifer

recharge zone; c) whether vapor incidents have been documented (thus, indicating possible migration which could involve more remote water supplies); d) whether underground utility conduits exist promoting the possibility of off-site migration; and e) whether water wells within one-half mile radius are impacted.

In describing its rationale for these differing standards based on the actual or anticipated health and safety risk to the public, TWC states in the Guidance Manual that it "has used these cleanup standards from the inception of the underground storage tank program" and that it is their experience that the above-described levels "do not pose a threat to the public or the environment when no off-site migration has occurred." See Guidance Manual at p. 7-3.

Soil contamination in connection with releases which are considered to fall into Groups 1, 2 or 3 are remediated along with groundwater "to levels that will enable the remediation plan to achieve the target cleanup goal for the impacted groundwater." See Guidance Manual at p. 7-5. This usually requires a cleanup of the soil to less than 30 ppm BTEX and less than 100 ppm TPH. *Id.* For Group 4, where only soil contamination is present and no evidence or threat of impact to groundwater is present, a complex assessment and remediation is involved. As with Groups 1, 2 and 3, risk-based cleanup standards are applied. For a detailed review of the decision models employed in Group 4-type releases, please refer to Exhibits "E" and "F" attached hereto.

#### **Releases from RCRA solid waste management units**

In 1976, Congress passed the Resource Conservation and Recovery Act ("RCRA") to establish a regulatory program for the handling and disposal of solid waste. The most significant portion of this Act is the creation of a "cradle to grave" system for managing hazardous waste. This system requires that all persons that generate, transport, treat, store or dispose of hazardous waste to manage the waste pursuant to strict operational standards. In addition, RCRA prohibited the treatment, storage or disposal without a TSD permit. To obtain a TSD permit, the applicant must demonstrate that all treatment, storage or disposal activities will be conducted in compliance with numerous standards. One of these standards is the requirement to conduct corrective action to address all releases of hazardous wastes or hazardous waste constituents from solid waste management units at the facility. Regulation of non-hazardous waste under RCRA has been relegated to the states. Guidelines for state programs establish location restrictions, design and operating criteria, groundwater monitoring and corrective requirements, closure and post-closure requirements and financial assurance requirements.

For a contaminated site to be remediated under RCRA, the contaminant must be a solid waste or a constituent of a waste and must have been released from a solid waste management unit. A "solid waste" under RCRA is essentially "any discarded material" including any material that is abandoned by being disposed of, burned or incinerated. Material that is accumulated, stored or treated prior to disposal is also included in the definition. 40 C.F.R. § 261.2 (1991). "Hazardous wastes" are a subset of the "solid waste" definition. They are solid wastes that demonstrate characteristics of ignitability, corrosivity, reactivity or

toxicity. In addition, EPA has established three lists of wastes that are considered hazardous: hazardous wastes from specific sources, hazardous wastes from non-specific sources and discarded commercial chemical products. 40 C.F.R. § 261 (1991). Once it has been determined that the contamination is the result of a hazardous waste or a solid waste from a solid waste management unit, then the cleanup standard for the remediation or corrective action is controlled by RCRA unless the agency supervising the cleanup has made a determination to handle the cleanup under one of the Superfund programs.

When the release from a solid waste management unit is a hazardous waste or a hazardous waste constituent, the cleanup standard is guided by federal regulation 40 C.F.R. 264.94 (1991). If the release has had an impact on the uppermost aquifer underlying the facility, the owner/operator must implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits. These limits for a specific regulated unit are established by the regulating entity according to the following guidelines. The concentration of hazardous constituents:

1. Must not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit; or
2. Must not exceed any one of the expressly listed MCLs; or
3. Must not exceed an alternate limit set by the regulating agency.

The alternate concentration limit for a hazardous constituent may be set if the regulating agency finds that the alternate limit will not pose a substantial present or potential hazard to human health or the environment. In making this determination, the agency will consider potential adverse effects on the groundwater quality, including among other things, hydrogeological characteristics, existing ground water quality, existing and future uses, and potential health risks. In addition, the agency must consider potential adverse effects on hydraulically-connected surface water quality, including the current and future uses of the surface water, the ground water flow direction, rainfall patterns in the area, existing quality of the surface water and potential health risks. 40 C.F.R. § 264.94(b) (1991).

When a release from a solid waste management unit that is regulated as a municipal solid waste landfill and the release is detected in the uppermost aquifer below the unit, corrective action must take place to remediate the contamination. In conducting the remediation, the owner must meet groundwater standards established for each constituent that was detected and is listed in Appendix II of 40 C.F.R. 258 (1991). These standards shall be:

1. The MCL for the constituent; or
2. the background concentration for that constituent if no MCL has been promulgated;  
or

3. the background concentration for that constituent if the background concentration is higher than the MCL or the health based levels set by the agency as alternative groundwater protection standards. 40 C.F.R. § 258.55(h) (1991).

The agency may set alternative groundwater protection standards for constituents for which MCLs have not been established. These alternate ground-water protection standards must be health-based levels that meet the following criteria:

1. The level is consistent with EPA guidelines for assessing the health risks of environmental pollutants;
2. The level is based on scientifically valid studies;
3. For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level within the  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  range; and
4. For systemic toxicants, the level represents a level to which the human population could be exposed to on a daily basis that is likely to be without deleterious effects during a lifetime. 40 C.F.R. § 258.55(i) (1991).

### **Remediation at State Superfund Sites**

Although the phrase may mistakenly give some the impression of a very sizeable State remediation fund similar to the federal Superfund under CERCLA, the State Superfund program offers the availability of a more modest fund and a regulatory mechanism for the cleanup of inactive or abandoned facilities which are the location of releases or threatened releases of hazardous substances but which are not considered significant enough to warrant inclusion on the National Priorities Listing ("NPL"). In sharp contrast to the relatively bright lines of the PST cleanup decision models, the cleanup standards for State Superfund sites are determined on a site-specific basis and allow for exceptions where attaining the standards are technically infeasible.

The program was initially created by the enactment of the Texas Solid Waste Disposal Act (the "SWDA"), codified at TEX. HEALTH & SAFETY CODE ANN. §§ 361.001 through 361.510 (Vernon 1989). The SWDA was significantly amended during the 71st Legislature during 1989. Administrative regulations promulgated in connection with the SWDA can generally be found at 25 T.A.C. § 325.5 *et seq.*

The objective of the State Superfund program is to provide a vehicle for supervising potentially responsible persons ("PRPs") in the determination of the extent of contamination and the implementation of such remediation at sites which are of significance to the health and safety of Texas, but for which are not considered by EPA to warrant such scrutiny under Superfund. In addition to supervising PRPs, the SWDA also provides a mechanism for seeking enforcement, restitution and penalties from such PRPs.

Eligible sites which may be listed on the State Registry and, thus, eligible for funding under the State Superfund program are those sites which a) the TWC Executive Director determines pose a potential endangerment to the public health and safety; b) the contamination cannot be resolved under RCRA permitting or enforcement authority; c) the PRPs cannot or are unwilling to voluntarily enter into an Agreed Order with the TWC outlining the cleanup responsibilities; and d) the site is not ranked on the NPL. Once a site is approved and is listed on the State Registry, it is the policy of TWC to encourage the voluntary remediation of the sites under its close supervision. However, if the remediation must be financed through the use of federal or state funds, the expenses incurred may create liabilities of the PRPs to the federal and state governments.

The goal of any remedial action under the SWDA is the elimination of the imminent and substantial endangerment to the public health, safety or the environment posed by a release or threatened release of the hazardous substance or substances at the facility. The extent to which this cleanup objective is to be followed is defined as being that extent which represents the lowest cost alternative that is a) technically feasible and reliable and; b) which effectively mitigates and minimizes damages to and provides protection of the public health, safety and the environment.

Despite this relatively clear standard, TWC may approve a remediation action plan which does not attain this standard if a) compliance with such a standard is technically infeasible; b) the standard of overall performance will otherwise be equivalent to legally applicable or relevant and appropriate standards; or c) the remedial action is a part of a larger remedial plan that will attain such standard on a total-site basis when remediation is complete.

TWC requires the PRPs to complete several rigorous stages before reaching the actual remediation stage. First the risk assessment phase must be completed, generating an analysis of the nature and extent of the contamination and the risks to health, safety and the environment. The feasibility study next reviews those various remediation strategies the use of any one of which would be expected to result in the attainment of the cleanup standards. The next stage is the remediation selection stage where the TWC, after obtaining public comment on the remediation of each individual site, select the remedy to be employed. The next stage is the remedial action stage where the remediation is initiated to cleanup the site.

During the risk assessment stage, TWC employs a baseline public health evaluation which is performed as a part of the remedial investigation. This evaluation is used to identify and characterize the nature of the contamination. Current and future land uses assumption are factored into the risk assessment methodology. Usually, the site itself is used as the exposure point for modeling or measuring concentrations for various constituents and determining cleanup standards which are appropriate for that specific site.

## **Remediation at Federal Superfund sites**

In 1980, Congress adopted CERCLA, commonly referred to as Superfund. This Act establishes a program to identify sites that may have had releases into the environment and to undertake cleanup of contaminated sites through cooperative agreements with responsible parties, enforcement actions or fund financed initiatives. Cleanup standards under CERCLA are guided by Section 121 of the Act. Under this section, cleanup standards must assure protection of human health and the environment, be cost-effective and be in accordance with the National Contingency Oil and Hazardous Substance Contingency Plan (NCP). Also, any cleanup standards must attain legally applicable or relevant and appropriate federal and state standards, requirements, criteria or limitations (typically referred to as the "ARAR Requirement"), unless the ARAR Requirement can be waived.

In delineating the ARAR Requirement, Congress listed several statutes whose standards must be attained if they are applicable or relevant and appropriate. Remedial actions must attain: (1) Maximum Contaminant Level Goals (MCLGs) established under the Safe Drinking Water Act, and (2) water quality criteria established under the Federal Water Pollution Control Act where these goals are relevant and appropriate under the specific circumstances at the site.

A remedial action not attaining the ARAR may be selected when any one of the following six factual situations exist:

1. the remedial action constitutes only part of a total remedial action that will comply with the ARAR when completed;
2. compliance would result in a greater risk to human health and the environment than other options;
3. compliance is technically impracticable from an engineering perspective;
4. an alternative remedial action will attain a standard of performance equivalent to that of an ARAR;
5. with respect to the state requirements, the state has not consistently applied the requirement in similar circumstances; or
6. for actions using the Fund, compliance with the ARAR will not provide a balance between the need for protection of public health and the environment at the facility with the availability of Fund resources for threats at other sites.

42 U.S.C. § 9621 (d)(4) (1991).

In 1990, EPA adopted revisions to the NCP that provides further clarification regarding the appropriated cleanup standards. 40 C.F.R. § 300.430 (1991). It establishes nine criteria that are to be considered in selecting a remedy at a Superfund site:

1. overall protection of human health and the environment;
2. attainment of the applicable or relevant and appropriate requirements of federal and state law, unless subject to a statutory waiver;
3. the long-term effectiveness and permanence of the remedy;
4. the remedy's reduction of toxicity, mobility, or volume;
5. the remedy's short-term effectiveness;
6. the remedy's implementability;
7. the remedy's cost-effectiveness;
8. the state's acceptance of the remedy;
9. the community's acceptance of the remedy.

Under these criteria, the first two - the protection of health and the environment and compliance with the ARARs - are primary criteria and must be met unless EPA determines that a variance from an ARAR is appropriate. The criteria three through seven are to be balanced to determine which remedy would be appropriate. The final two criteria are modifying criteria and need only be considered in selecting the remedy.

Because criteria one and two are "threshold criteria," an understanding of their meaning is critical. The first criteria to be considered is the criteria that established the goals of protecting human health and the environment. This criteria comes into play in large part where no ARARs exist. EPA's preamble to the NCP indicates that where ARARs do exist, they are the goals that will satisfy the first criteria. 55 Fed. Reg. 8.713 (1990). However, where ARARs do not exist, EPA will develop alternative remediation goals. In establishing these alternative goals, the following considerations will govern:

1. For non-carcinogens, levels that would cause no appreciable risk of significant adverse effect during a lifetime;
2. For known or suspected carcinogens, concentrations levels that represent an increased lifetime cancer risk of  $10^{-4}$  to  $10^{-6}$ .

Threshold criteria two - applicable or relevant and appropriate federal and state requirements - is really the heart of the process to determine cleanup standards at most Superfund sites. Under this criteria, "applicable requirements" means those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations that are promulgated under federal environmental or state environmental or facility siting law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or

other circumstance at a CERCLA site. "Applicable requirements" are those that would be legally applicable but for CERCLA's implied repeal of other laws regarding CERCLA sites. "Relevant and appropriate requirement" means those cleanup standards, standards of control, and other substantive requirements, or limitations promulgated under federal environmental or state environmental or facility siting law, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address the problems or situations sufficiently similar to those encountered at the CERCLA site so that their use is well-suited to the particular site. "Relevant and appropriate requirements" are those that would be 'applicable' but for jurisdictional restrictions associated with the requirement.

In the 1990 NCP, EPA provides further guidance regarding what constitutes "relevant and appropriate." 40 C.F.R. § 300.400(g)(2) (1991). It lists eight factors to be considered in making a determination of whether a rule is "relevant and appropriate."

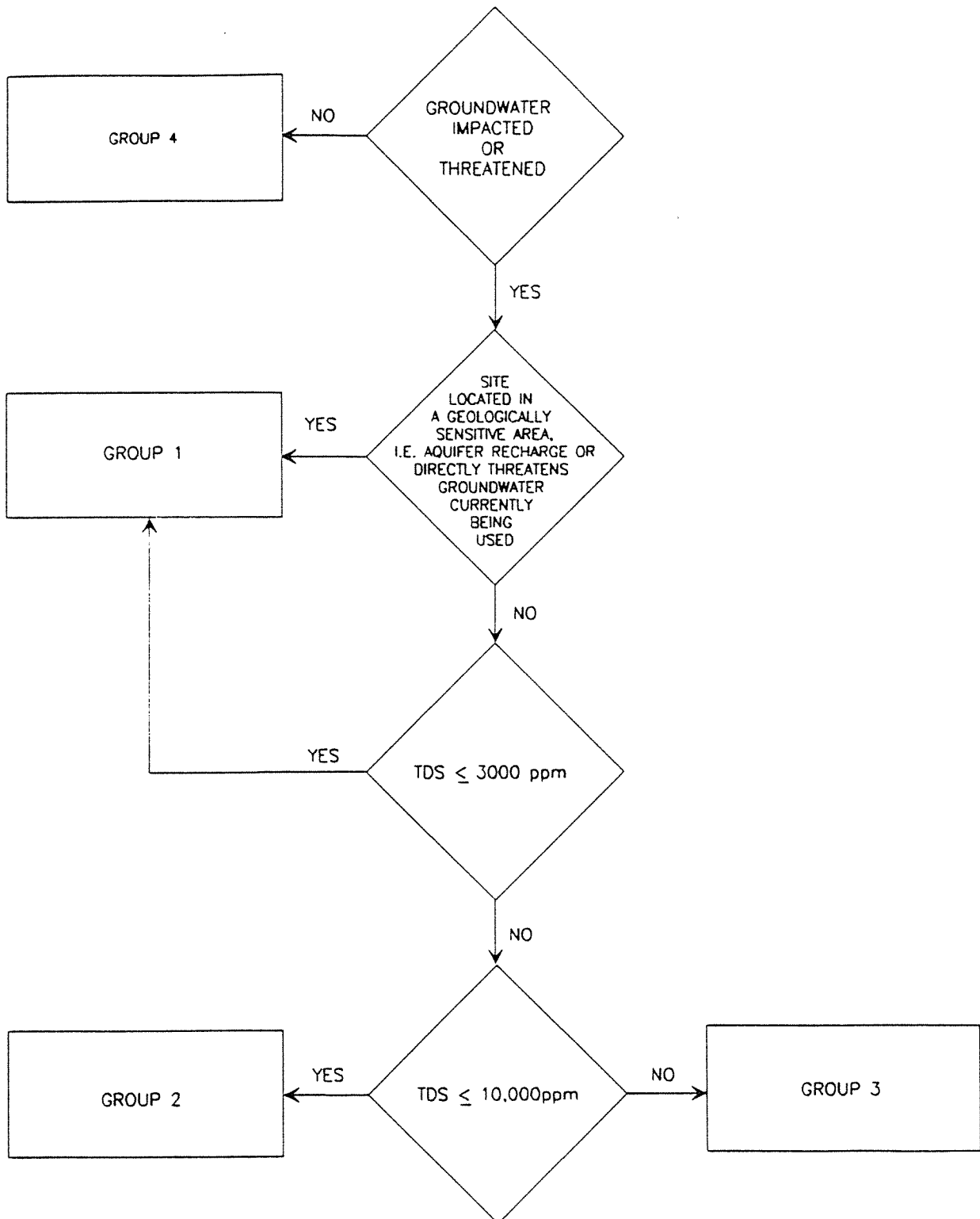
1. The purpose of the requirement and the purpose of the CERCLA action;
2. The medium regulated or affected by the requirement and the media contaminated at the CERCLA site;
3. The substances regulated by the requirement and the substance found at the CERCLA site;
4. The actions or activities regulated by the requirement and the remedial action contemplated at the CERCLA site;
5. Any variances, waivers or exemptions of the requirement are available for the circumstances of the CERCLA site;
6. The type of place regulated and the type of place affected by the release or CERCLA action;
7. The type or size of structure or facility regulated and the type or size of structure or facility affected by the release or contemplated by the CERCLA action;
8. Any consideration of use or potential use of the affected resources in the requirement and the use or potential use of the affected resource at the CERCLA site.

### **Conclusion**

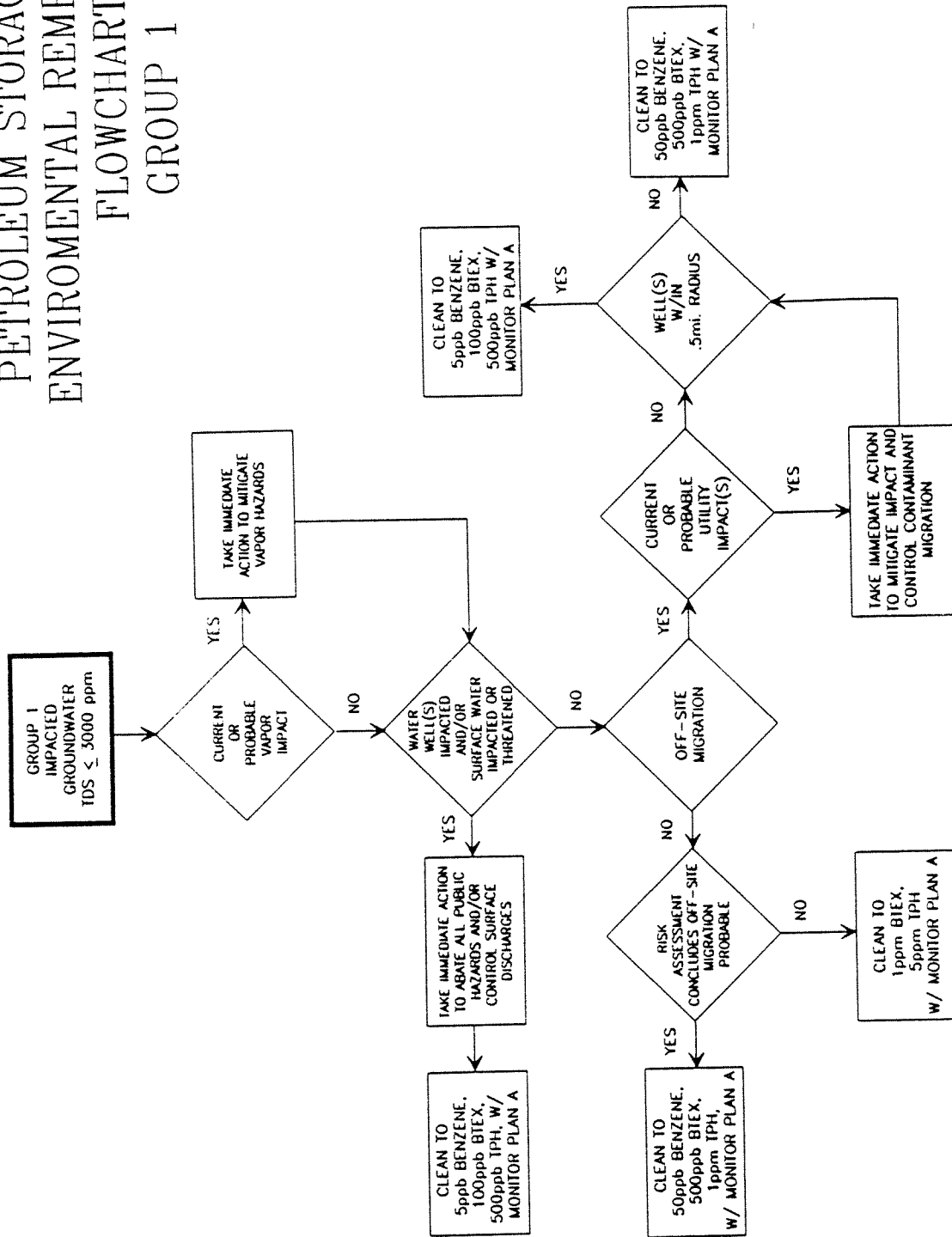
From this discussion, it is easy to recognize that specific cleanup standard for a particular site can vary widely and depend on a variety of factors. The two most significant factors that contribute to the final determination are the regulatory program that is selected to control the cleanup and the site specific situations and characteristics. Unfortunately, the company or owner

of the contaminated property has little control of either one of these factors. However, an understanding of the process and the criteria used by the regulatory agencies to determine a cleanup standard for a particular site will allow the property owner to work with the supervising agency to develop the most reasonable and appropriate cleanup standard possible.

# PETROLEUM STORAGE TANK ENVIROMENTAL REMEDIATION FLOWCHART



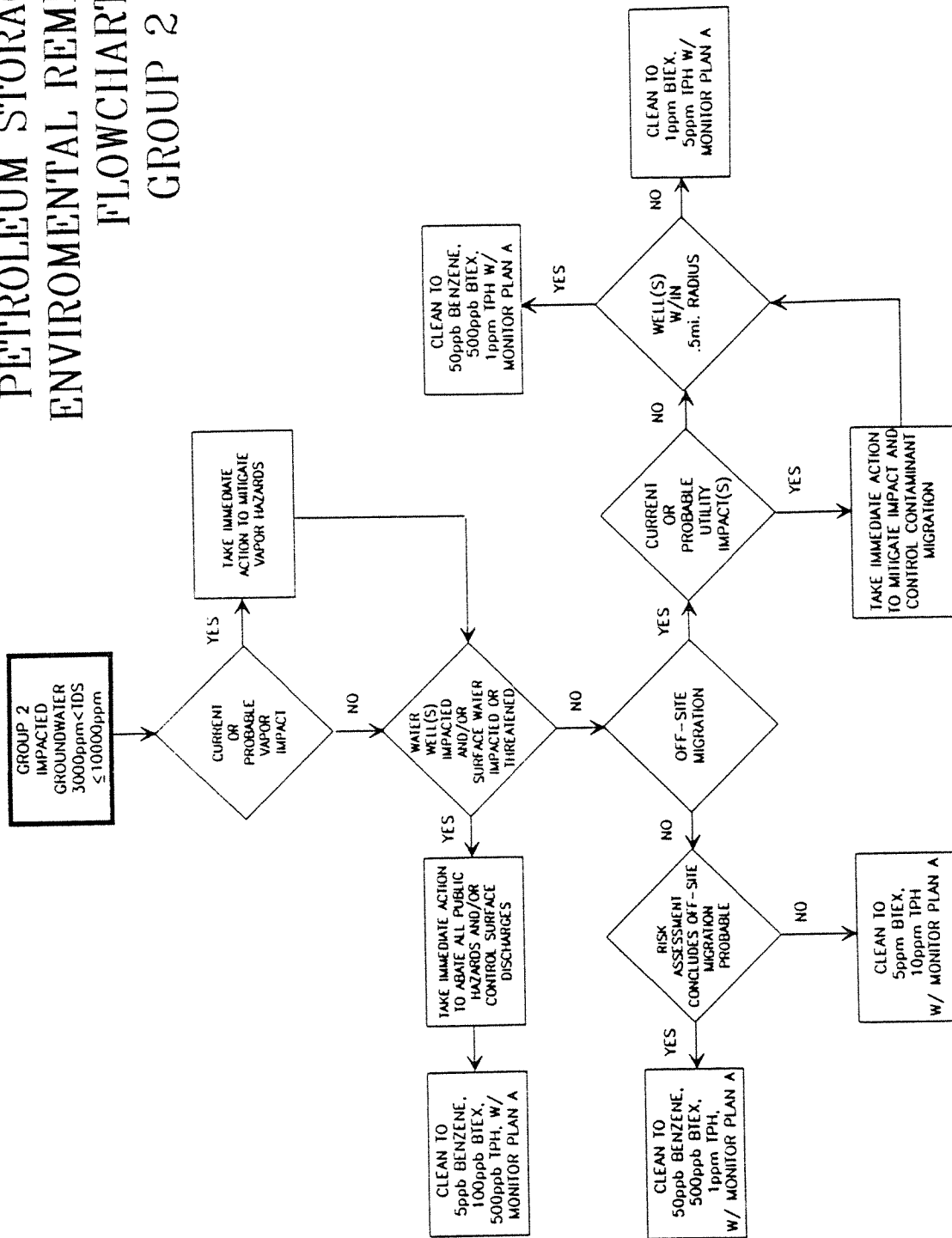
# PETROLEUM STORAGE TANK ENVIRONMENTAL REMEDIATION FLOWCHART GROUP 1



MONITOR PLAN A

At least 1 downgradient nonimpacted monitor well. Quarterly sampling of all monitor wells for BTEX and TPH. Quarterly water level measurements from all monitor wells.

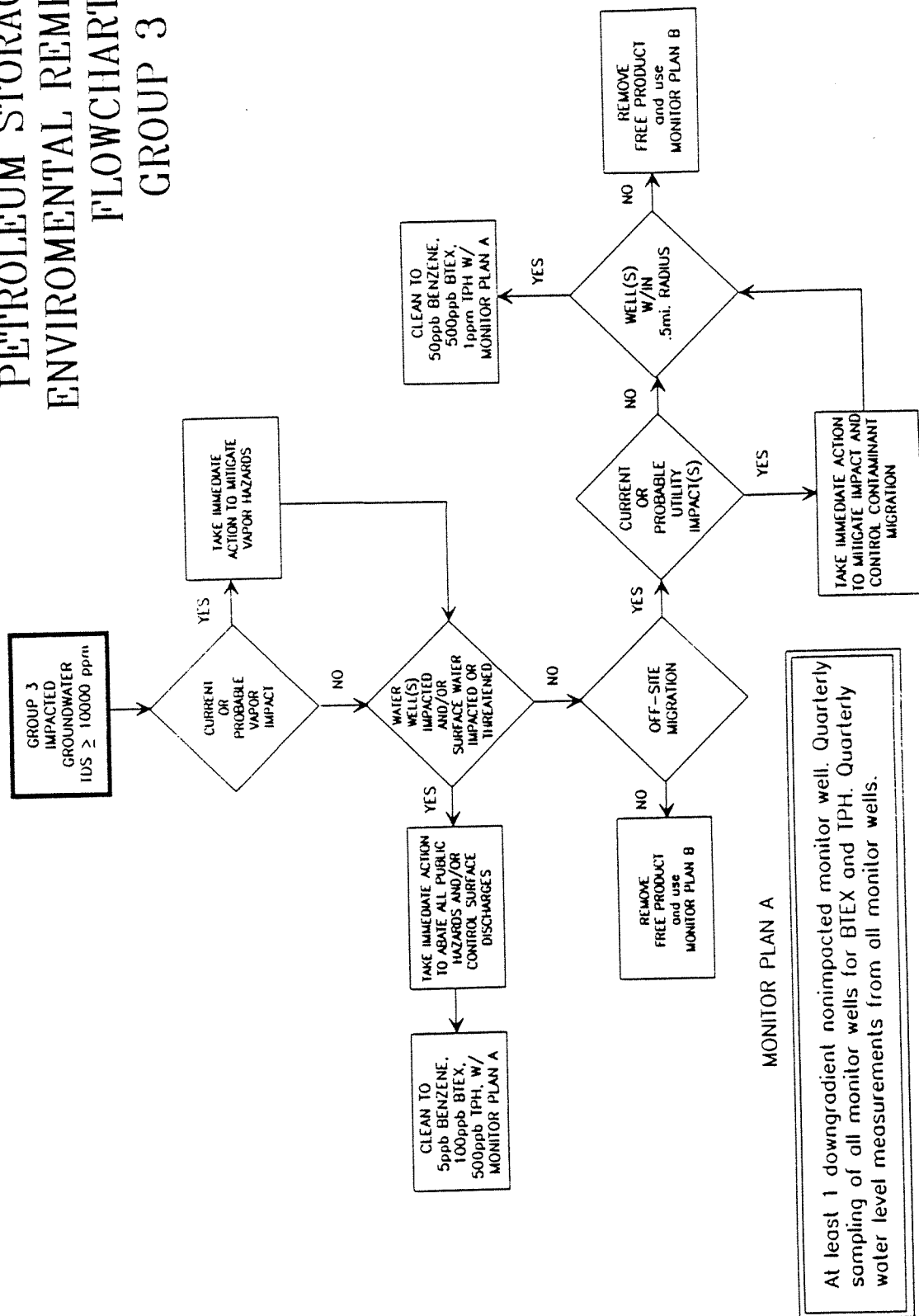
# PETROLEUM STORAGE TANK ENVIRONMENTAL REMEDIATION FLOWCHART GROUP 2



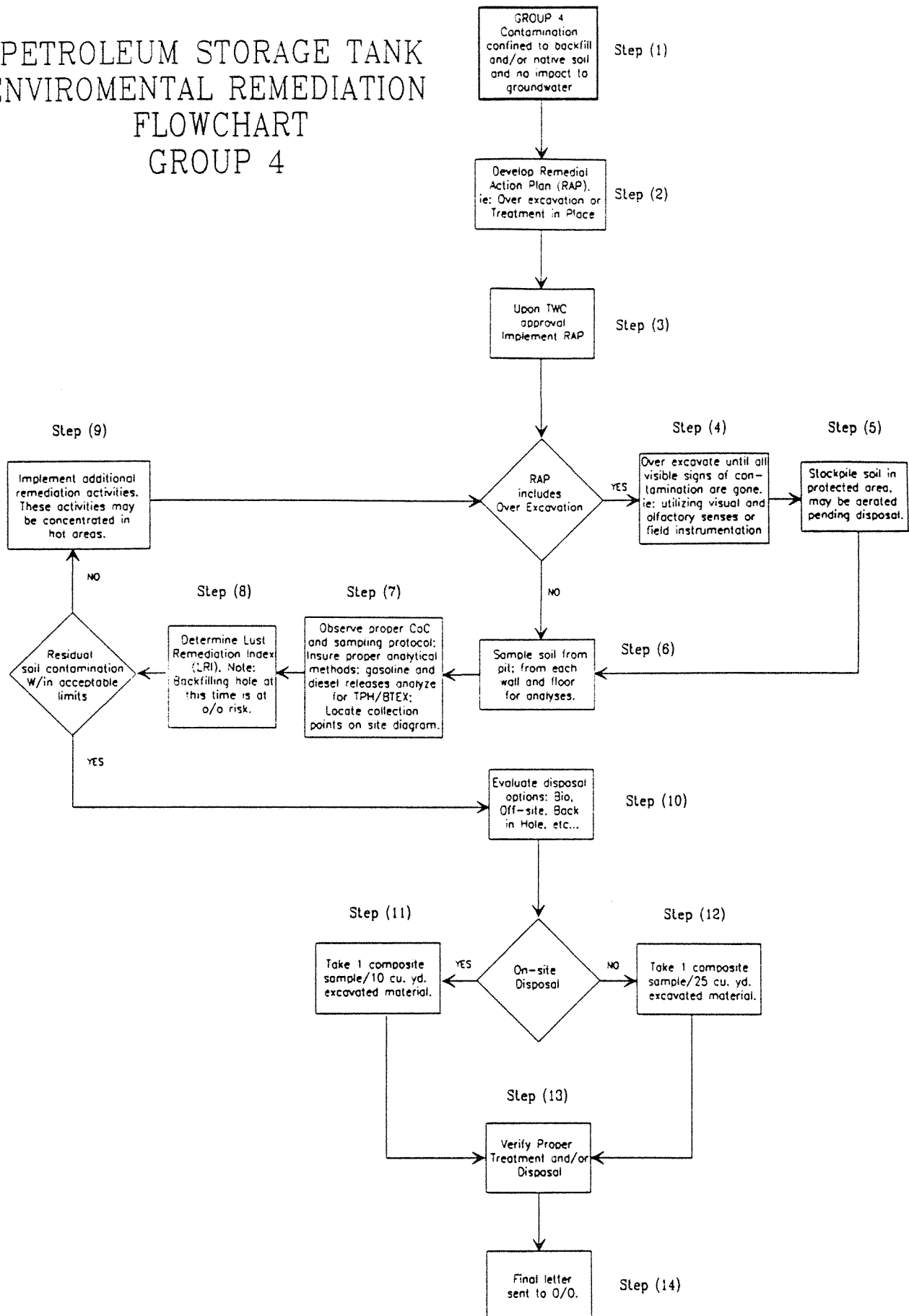
MONITOR PLAN A

At least 1 downgradient nonimpacted monitor well. Quarterly sampling of all monitor wells for BTEX and TPH. Quarterly water level measurements from all monitor wells.

# PETROLEUM STORAGE TANK ENVIRONMENTAL REMEDIATION FLOWCHART GROUP 3



# PETROLEUM STORAGE TANK ENVIROMENTAL REMEDIATION FLOWCHART GROUP 4



**LUST REMEDIATION INDEX (LRI)**  
(Applies to petroleum products only)

SITE FEATURE	S C O R E	SCORE 10 PTS IF CON- DITION IS MET	S C O R E	SCORE 9 PTS IF CON- DITION IS MET	S C O R E	SCORE 5 PTS IF CON- DITION IS MET
Minimum Depth to Groundwater from the Soil Sample (feet)		>100		51-100		25-50 (1)
Average Annual Precipitation (in.)		<20		20-40		40-60 (2)
Natural Subsurface Pathways		None		Unknown		Present
Man-Made Subsurface Pathways		None		Unknown		Present
Unique Site Features (Recharge Area, Coarse Soil, Nearby Wells, Etc.)		None		At Least One		More Than One
DRASTIC INDEX		<79		80-109		110-139 (3)
COLUMN TOTALS - TOTAL PTS	+		+		=	
RANGE OF TOTAL POINTS	58 pts or more Category III		49-57 pts Category II		48pts or less Category I	
MAXIMUM BTEX (PPM)	30 (4)		30		BDL (4)	
MAXIMUM TPH (PPM)	100 (4)		100		10 (4)	

- (1) If depth is greater than 5 ft. and less than 25 ft., score 0 points. If depth is 5 ft. or less, this LRI need not be calculated and soil cleanup should proceed to Category I criteria.
- (2) If precipitation is over 60 inches, score 0 points.
- (3) If DRASTIC INDEX is greater than 139, score 0 points.
- (4) Site risk evaluation may justify exceedence of maximum levels.

ATTACHMENT 2

**EXHIBIT F**



ENVIRONMENTAL COMPLIANCE PROGRAMS

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AUSTIN, TEXAS  
AUGUST 6, 1992

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ENVIRONMENTAL COMPLIANCE PROGRAMS  
THE ROAD TO  
OPERATIONS QUALITY IMPROVEMENT AND POLLUTION PREVENTION

by J. A. Curtis

As we enter the increasingly litigious climate of the 1990's environmental audit and compliance programs are increasingly becoming the standard not only in domestic business concerns but also foreign companies. In the U. S., the threat of prosecution of companies and their executives is indeed a growing problem in light of the 74.5 million dollars in criminal fines and penalties having been assessed since 1983. In fact, remarkably, although understandably, over 60 million dollars of this figure has been assessed since October of 1988. Moreover, Department of Justice figures indicate that more than 173 years of imprisonment have been imposed since 1983 with 110 of those being imposed since October 1988. There is indeed a plethora of punitively based motivational elements to encourage companies to develop seemingly systematic environmental management systems however this approach is short sighted and in so many cases doomed to failure in the long term.

It is the premise of this paper that a properly administrated environmental compliance program being a subset of a company's environmental management system must derive its inspiration, energy, and vigor from within the organization and should eventually be integrated into the respective company's total quality management system. This philosophy stems from the fact that all the elements of good fundamental environmental controls are derived from equally good fundamental operational controls. The same control of capital equipment, raw materials and people is imperative not only to accomplish an effective and efficient manufacture of product, but also to manage the environmental consequences of that operation. It is the job responsibility of the staff environmental manager to cultivate the relationship between good environmental management practice and efficient manufacturing operations.

Management Commitment

The commitment to environmental quality in terms of philosophy, personnel and economic resources is by far the most important and sometimes the most difficult element of an effective compliance program. Most executives would say unequivocally that they want to comply with many and varied rules and regulations.

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<sup>1</sup>Internal document, United States Department of Justice, October 1991.

However in some organizations this is an isolated commitment. That is it may exist only in one segment of the operation i. e. manufacturing divisions, or be made by executives who are not fully apprised of the pervasiveness of the commitment. This issue becomes more a consideration the larger the organization. Nevertheless, an effective means to ensure environmental commitment is to develop and publish an environmental policy statement early on. This policy should function as the foundation for the development of the organization's environmental management program. At the very least, the policy should contain elements and provisions for:

- the company's compliance with all environmental laws and regulations
- the company's recognition of community awareness of environmental issues and its willingness to respond to community concerns should they become at issue, and
- hazardous substance and material stewardship

The development of the organization's environmental policy should be led by the organization's environmental officer; however the policy should be considered and commented upon by all of the company's executive management team. To do anything less risks ineffective implementation. Participation of the company's executive management team in the formation of the policy insures organizational follow through and understanding with regard to what is required.

Consistent with the organization's environmental policy and to assist the operations personnel in carrying out their responsibilities under the policy, many companies develop a program of thorough and systematic reviews of their facilities. Some organizations call these reviews environmental audits, compliance reviews, environmental quality assessments and the like, but all have a common thread in that they are all "systematic, documented, periodic and objective reviews performed by regulated entities of facility operations and practices related to meeting environmental requirements".<sup>2</sup> The company's compliance review system should be fully discussed and planned with all affected operations similar to the same discourse undertaken with respect to the environmental policy formation. The general scope, objectives and the operating charter of the organization implementing the reviews should be fully understood and well thought out. The remaining portion of the paper shall discuss some of these considerations.

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<sup>2</sup>Federal Register, pg. 25006 (July 9, 1986).

## LEGAL CONSIDERATIONS- TO PROTECT OR NOT

A primary consideration that must be resolved with before the compliance program is initiated is the question of protection of the information developed during the review. The conclusions and recommendations of the reviewer or auditor can be protected from the normal course of discovery in a legal sense through the imposition of the attorney-client privilege. This privilege presupposes the active involvement of a legal advisor who in this regard receives communication from a client for the purpose of rendering legal advice. This communication, whether written or oral, is permanently protected from disclosure by the client or the legal advisor except if the protection is waived.

A considerable debate is ongoing in the environmental community as to the degree this review information should be protected. Some feel that the fact that without some degree of protection of the documents there is a disincentative for companies to perform environmental audits. This concern, in other professional sectors, has given rise to an emerging privilege to protect certain institutional self-analyses from discovery: the so called self-critical analysis privilege. This privilege does not necessarily require the participation of a legal advisor. However, to protect such an analysis, three criteria must be satisfied:

1. The information must be derived from a self-critical analysis.
2. The public must have a strong interest in preserving the free flow of the type of information sought.
3. The information must be of the type whose flow would be curtailed if discovery were allowed.

The thought is that the discovery of such an analysis will not only have a chilling effect on the institution that initiates the analysis, but also the individuals who conduct the analysis. The privilege has been recognized in the medical community<sup>4</sup> as well as internal investigations regarding securities matters<sup>3</sup> but to date it has not been tested in the environmental arena.

Another point of view prevalent in some major corporations is that an environmental compliance review program should be touted as a vigorous and proactive effort; an action program if you will. To

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<sup>3</sup>The Privilege of Self-Critical Analysis, 96 Harvard Law Review, 1083, 1086 (1983).

<sup>4</sup>Bredice v. Doctors Hospital, Inc, 50 F. R. D. 249 (D. D. C. 1970), aff'd 479 F.2d 920 (D. C. Cir. 1973).

<sup>5</sup>In re LTV Securities Litigation, 89 F. R. D. 595 (N. D. Tex. 1981)

obligate another layer of management i.e. the legal staff, to review the reports and conclusions, is counterproductive. That is, the empirical and other factual data developed during the review should be digested by the organization, conclusions reached and an action plan developed and initiated as soon as practically possible.

In the practicum, however, a middle of the road approach is probably the best. If a seasoned environmental professional performing the review observes a serious environmental consequence, legal counsel should be involved in the development of the action plan. For this reason it is equally important to have the aid of legal counsel in planning the scope and timing of the reviews. Amid all the controversy concerning the attorney-client privilege, environmental professionals and their respective organizations should not forget the prime objective of their endeavor, that is, to prevent or mitigate the impact of hazardous materials and substances on the air, water and land thus assuring harmony between the community and industry.

#### THE REVIEW PROCESS

The process of an environmental compliance review or audit begins long before the reviewer steps onto the site in question. As with many endeavors, preplanning is the foundation for success. Certainly this is the case with environmental reviews.

The preaudit process should include a review of documents associated with the site to be audited and should be available to the reviewer no later than 10 days before the site visit. At a minimum these documents should include:

1. a site layout and associated process drawings.
2. organizational charts
3. all existing environmental permits i.e. air, water, solid and hazardous waste, etc., including the applications for those permits.
4. all agency correspondence with special emphasis on notice(s) of violation(s) (NOVs) and compliance orders.
5. general description of the operations/processes at undertaken at the site.
6. and any emergency response and/or training plans e. g. contingency and spill response plan, site evacuation plan, hazard communication program, hazardous waste training, etc.

7. an explanation of environmental projects that have been completed in the recent past, on-going projects or projects that are planned in the near future.

The methodology utilized on site to perform the review deserves some comment. A popular concept is to utilize a checklist and review the checklist items while on a tour and later on during the interview process. This methodology results, in many cases, in a rather shallow and naive reflection of the true environmental state at the site. Secondly, it misses the potential value of a site review with respect to quality improvement and pollution prevention.

A more effective protocol involves a detailed process/operations review of the raw material conversion process. That is, with respect to all manufacturing or processing operations, the equipment, raw material as well as the employee's activity during the process, should be evaluated. As the processes are qualified, evaluations of air, water, land and employee impacts should be noted and put into perspective. It should be evident that all manufacturing processes have material impacts to the environment. The process of an environmental review merely qualifies these impacts in terms of the detrimental environmental effect and public health consequence as judged by the regulatory jurisdiction involved. The specialized body of knowledge that an environmental review possesses involves the ability to categorize process and operations information in terms of their respective regulatory implications.

Only after the process/operations analysis is performed should checklists be employed. The purpose of the checklist is, as implied above, to assist in the regulatory categorization of the process/operation information. Below is a brief guide to important regulatory issues that should be dealt with in an environmental compliance review. It should be noted that the regulatory references are made to Federal regulations and not necessarily State issues. As the Federal regulatory program is basis for most State programs, the Federal reference should be the minimum "floor" for checklist development with the State features integrated. Many State regulatory agencies will provide interested parties with checklists their inspectors utilize. These can be an invaluable aid to assist the reviewer to become familiar with individual State peculiarities.

Beyond the process/operation analysis, the order in which the review proceeds is of some importance. Due to the nature of the SARA, Title III regulatory program, it is a logical step into the checklist phase of the review. Since the SARA program is intended to provide the public a broad base of knowledge regarding the hazardous material handling and emissions, reports required under this regulation can do the same for the reviewer.

### COMMUNITY RIGHT-TO-KNOW (SARA, TITLE III)

The following are reports and details that should be reviewed under the SARA program:

1. Extremely hazardous substances used and, if used, processed or stored over the published threshold planning quantity (TPQ) review the letter notification to the State and Local Emergency Planning Committee should be reviewed.
2. OSHA hazardous chemicals used; all MSDS' for the OSHA chemicals should be reviewed.
3. Tier Reports should be reviewed if OSHA chemicals are stored over the State threshold or TPQ.
4. Toxic chemicals processed, manufactured or otherwise used should be noted. Material balance should be documented to assure accuracy of release report (Form R) or to verify nonapplicability of this regulation to the facility. Form R should be reviewed, if applicable.
5. Spill release reports should be reviewed.

### HAZARDOUS WASTE MANAGEMENT (RCRA)

The Federal hazardous waste regulatory program in its entirety is very complicated, encompassing technical details of hazardous waste site permitting, corrective action, hazardous waste disposal site operation, hazardous waste site closure requirements, etc. For the sake of brevity and recognizing that the majority of the regulatory community is captured in the hazardous waste generator regulations, the following items are key:

1. Notification of Hazardous Waste Activity form review with supporting waste characterization and laboratory analysis documentation for each waste stream.
2. Review of on-site storage areas including satellite accumulation areas with particular emphasis on tidiness, labeling of containers, diking, construction/condition (integrity) of base (i. e. concrete slab), drains from the base, and warning signs.
3. Review of internal inspection records of the storage area.
4. Contingency plan
5. Training plan and documentation of employee hazardous waste training
6. Hazardous waste transportation manifest review

## 7. Annual and/or biennial summary report review

### NON-HAZARDOUS SOLID WASTE

In most States, although not all, landfilling (or other forms of waste disposal) waste on owned property requires notification and permitting by the State and in some cases the local jurisdiction. Also landfilling of materials containing hazardous substances or constituents, albeit not in a quantity or form to classify the waste as hazardous, can become mobile and thus considered a release under CERCLA (Superfund). Therefore a review and line of questioning directed at the final "resting place" for non hazardous waste is important. In manufacturing and operating locations that are remote it is important that, if the waste is disposed off-site, it be taken to a properly authorized facility. It should be noted that proposed RCRA subtitle D regulations require that municipalities provide certain monitoring requirements aimed at controlling the migration of hazardous substances that were placed there before 1978, illicitly placed in the fill, or otherwise escaped regulation i. e. household waste.

Finally in some States i. e. Texas, nonhazardous waste that contain hazardous constituents are regulated under a special category i. e. Texas' Class I non hazardous waste. Research into waste classification utilized in the particular State must be done before the site is visited and a checklist specific to the respective State waste classifications and reporting requirements should be developed.

### AIR POLLUTION (CLEAN AIR ACT)

With the passage of the Clean Air Act in November 1990 most of the Federal requirements will become more strict. With this significant change at the Federal level, authorized States are just now in the process of developing their implementation plans (SIP). Nevertheless, even with the regulations in flux, an understanding from the operations/process analysis of the point source as well as fugitive air emissions is essential for a complete environmental review. Some issues to be addressed include:

1. Current permit compliance status.
2. Air toxics point source and fugitive emissions
3. Particulate point source and fugitive emissions
4. Classification of the location of the site in terms of nonattainment
5. Organic point source and fugitive emissions

6. Chloroflourocarbon use at the facility and emission sources.

#### WASTEWATER ISSUES (CLEAN WATER ACT)

Wastewater handling and water quality issues are among the most difficult challenges ahead for most industries. It is most important that the reviewer not only deal with the local ordinances in the case of POTW discharges, but also the State and Federal regulations i. e. federal pretreatment guidelines. In addition, although implementation of the stormwater discharge regulations have been delayed time and time again, an environmental review is an excellent vehicle to begin to evaluate point sources of water pollution on and emanating from the site i.e. material storage areas, and effluent points discharging off the property. Some important details that should be included in the checklist include:

1. Standard Industrial Classification (SIC) Code of the facility.
2. Point sources or generating sites producing industrial wastewater.
3. Review of NPDES permits, if any.
4. Review of local POTW permit, if any.
5. Review of all sampling data including Baseline Monitoring Report (BMR).
6. Pretreatment system review.
7. Floor drain and other drainage system routing review.
8. Cooling and condensate water routing.
9. Stormwater notification to the POTW documentation
10. Stormwater regulatory position with respect to SIC code
11. If discharging to a river or stream, water quality of said body of water upstream from site.

#### WATER SUPPLY (SAFE DRINKING WATER ACT)

Many facilities located in remote areas utilize private wells for drinking as well as processes. Although each State has particular requirements for assuring quality of the water, some generalizations are applicable.

1. Most States require permitting if the water service is provided to a minimum number of people. The permit should

be reviewed.

2. All sampling requirements and should be met. Sampling data should be reviewed against the standard established in the permit.
3. The operator of the system in most States must be certified.
4. If primary water contaminants as designated under the Safe Water Drinking Act are present on the site, consideration should be given to sampling the on site wells for such contaminants.

#### STORAGE TANK ISSUES (RCRA, CLEAN WATER ACT)

Both underground storage tanks (USTs) and above ground storage tanks (ASTs) have regulatory implications on the Federal level (Petroleum Storage Tank Regulations under RCRA and the SPCC requirements under the Clean Water Act) and the State level. With respect to the UST issues checklists should address at a minimum the following:

1. Tank age and construction
2. Material the the UST contained or presently contains
3. Leak detection device, if any
4. Spill and overfill control
5. Vapor recovery, if any
6. Registration status
7. Tightness testing results
8. Financial responsibility under RCRA and corresponding State regulations
9. A review of records of any tank excavations.

With respect to ASTs:

1. State registration requirements should be reviewed.
2. Spill Prevention Control and Countermeasure Plan (SPCC) requirements should be met for tanks storing hydrocarbons. The plan should be certified by a P.E.
3. Containment volume (bermed area) should be assessed
4. If the tanks are used for dispensing liquids, the area

around the fill area should be noted for excessive spills. The degree to which a response is needed, of course, is based on the material being dispensed and the base which the liquid is spilled on e. g. concrete lined bermed area.

5. Distance of the tanks from the property line; buildings; etc.
6. Permeability of bermed area.
7. Accessibility of spill control equipment.

#### TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA prime regulatory function is to regulate the manufacture, processing and importation of toxic substances. However, for the majority of the regulated community, the interface with TSCA comes with the EPA's PCB regulatory program. For the most part, PCB contamination emanates from incidents involving electrical equipment, in particular transformers. Another source of PCB contamination in some older operations is hydraulic oil i. e. hydraulic lift equipment, vehicle maintenance, etc.

Some essential issues that should be covered in a checklist include:

1. Transformer location/ownership
2. Labeling of transformer as to PCB status
3. Inspection and recordkeeping of PCB containing transformers
4. Documentation of non-PCB status

As indicated above, the TSCA regulatory program covers much more than the PCB issue. There are issues of toxic chemical registration, safety and health studies relating to TSCA regulated compounds, import/export issues just to name a few, that must be confronted. These issues are beyond the scope of this paper and it is recommended that if the reader is concerned, advice from a competent environmental professional and/or attorney that specializes in TSCA matters is recommended.

## SUMMARY

The field of environmetal auditing is dynamic and demands of maintaining an up to date environmental compliance program are great. Although not exhaustive in nature, this paper has attempted to present a view of compliance auditing from an operations standpoint. The same items involved in good manufacturing process controls as well as quality improvement are also involved in environmental management techniques.

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FOURTH ANNUAL TEXAS ENVIRONMENTAL SUPERCONFERENCE  
ONGOING OPERATIONS/COMPLIANCE RISK AND REDUCTION  
ROUNDTABLE DISCUSSION

Spill and Release Reporting

by

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- I. General Factors to Be Considered in Making a Reporting Decision
- II. Federal Release Reporting Requirements
  - a. Comprehensive, Environmental Response Compensation and Liability Act ("CERCLA")
    - i. Requires the reporting of any release of a hazardous substance from a vessel or a facility to the environment in excess of the reportable quantity. 42 U.S.C.A. §§ 9603(a), 9602 (West 1992).
    - ii. Hazardous substances include any substance defined in referenced in 42 U.S.C.A. § 9601(14) and any substance listed at 40 C.F.R. § 302.4 (1991). Excluded from the definition of hazardous substances are petroleum, natural gas, natural gas liquids, and synthetic gas usable for fuel.
    - iii. The reportable quantity for a hazardous substance is listed at 40 C.F.R. § 302.4. If not listed the reportable quantity is one pound.
  - b. Superfund Amendments and Reauthorization Act of 1986 ("SARA")
    - i. Requires the reporting of a release of a reportable quantity of either a hazardous substance or an extremely hazardous substance from any facility where a hazardous chemical is produced, used or stored. 40 C.F.R. § 355.40 (defining release); 40 C.F.R. § 355.20 (defining hazardous chemical).
    - ii. Hazardous substances are defined the same in SARA as in CERCLA. Extremely hazardous substances are listed at 40 C.F.R. pt. 355, app. A.

- iii. The reportable quantity for hazardous substances is the same in SARA as in CERCLA. The reportable quantity for extremely hazardous substances is one pound.
- c. The Clean Air Act ("CAA")  
Requires the reporting of any violation of any National Ambient Air Quality Standards ("NAAQS").
- d. The Clean Water Act ("CWA")
  - i. Requires the reporting of any discharge of oil or hazardous substances in such quantities as may be harmful either (1) into the navigable waters of the United States, adjoining shorelines, or the contiguous zone, or (2) in connection with certain activities. 33 U.S.C.A. § 1321(b)(5) (West 1992).
  - ii. Oil includes oil of any kind or form. 33 U.S.C.A. § 1321(a)(1). Hazardous substances include any substance listed at 40 C.F.R. § 116.4.
  - iii. A quantity of oil is harmful if (1) it violates applicable water quality standards, (2) it causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or (3) it causes a sludge or emulsion to be deposited beneath the surface of the water or shoreline. 40 C.F.R. § 110.3.
  - iv. A quantity of hazardous substance is harmful if it equals or exceeds the reportable quantity established for such substance by EPA by regulation. 40 C.F.R. pt. 117.
- e. Hazardous Materials Transportation Act
  - i. Requires the reporting of any incident in which as a direct result of hazardous material transportation (1) a person is killed or receives injuries requiring hospitalization, (2) property damage exceeds \$50,000, (3) fire, breakage, spillage, or contamination occurs involving radioactive materials or etiologic agents, or (4) a situation exists that, in the judgment of the carrier, should be reported. 49 C.F.R. § 171.15(a).
  - ii. Hazardous materials include any substance that the Secretary of Transportation has determined to be capable of posing an unreasonable risk to health,

safety, and property when transported in commerce. 49 C.F.R. § 171.8. The Secretary has designated the substances listed at 49 C.F.R. § 172.101 as hazardous substances.

iii. An etiologic agent is any viable microorganism, or its toxin, which may cause human disease. 56 Fed. Reg. 200 (1991) (to be codified at 40 C.F.R. § 173.386). The Department of Health and Human Services has promulgated a list of etiologic agents at 42 C.F.R. § 72.3.

e. Toxic Substances Control Act ("TSCA")

Requires the reporting of any spill of PCBs at concentrations of 50 ppm or greater if (1) such spill results in the contamination of surface waters, sewers or sewage treatment systems, or any drinking water sources or distribution systems, (2) such spill contaminates animal grazing lands or vegetable gardens, or (3) such spill exceeds 10 pounds of PCB containing material (approximately one gallon of dielectric fluid). 40 C.F.R. § 761.125(a)(1).

f. Resource Conservation and Recovery Act ("RCRA")

- i. Requires the reporting of (1) any fire, explosion or other release of hazardous waste that the emergency coordinator determines could threaten human health or the environment outside the facility, 40 C.F.R. § 264.56(d), and (2) if a small quantity generator, any spill of hazardous waste that reaches surface water, 40 C.F.R. § 262.34.
- ii. Hazardous waste includes both "characteristic" hazardous waste, 40 C.F.R. § 261.20(a), and "listed" hazardous waste, 40 C.F.R. pt 261, subpt. D.
- iii. The exact reporting requirement regulations applicable to generators are listed at 40 C.F.R. § 262.34(a)(4). The regulations applicable to small quantity generators are listed at 40 C.F.R. § 262.34(d)(5)(iv). The regulations for interim status and permitted facilities are at 40 C.F.R. §§ 264.56 and 265.56, respectively.
- iv. RCRA also requires certain reports about specific types of releases of hazardous waste. For example, any suspected or confirmed release of a regulated substance from an underground storage

tank must be reported. 40 C.F.R. pt. 280, subpt. E.

### III. Texas Release Reporting Requirements

#### a. Texas Water Commission ("TWC")

- i. The TWC has primary jurisdiction over the quality of the State's waters and the regulation of solid and hazardous waste. The TWC implements the broad notification provisions of the Texas Water Code. Section 26.039 of the Texas Water Code requires an individual operating, in charge of, or "responsible for" an activity or facility to notify the TWC whenever an "accidental discharge" or spill occurs at or from any activity or facility that causes or may cause pollution. TEX. WATER CODE ANN. § 26.039 (Vernon 1988).
  - A. An "accidental discharge" is defined as "an act or omission through which waste or other substances are inadvertently discharged into water in the state. TEX. WATER CODE ANN. § 26.039(a)(2).
  - B. "Water in the state" is broadly defined to include groundwater (percolating or otherwise) and surface water (navigable or nonnavigable, in natural or artificial bodies of water). See TEX. WATER CODE ANN. § 26.001(5).
  - C. Texas does not designate specific reportable quantities for discharges or spills of hazardous or other substances. Rather, Texas requires that a discharge or spill of "any harmful quantity of a hazardous substance be reported. A "harmful quantity" is "that quantity of hazardous substance the discharge or spill of which is determined to be harmful to the environment or public health or welfare or may reasonably be anticipated to present an imminent and substantial danger to the public health or welfare." TEX. WATER CODE ANN. § 26.263(3).
  - D. A "hazardous substance" is defined to include CERCLA hazardous substances, oil as defined in § 311 of the CWA, and any substance designated by the TWC. TEX. WATER CODE ANN. § 26.263(4).

- ii. The TWC has struggled with defining the appropriate scope of the notification requirement. For guidance on the agency's interpretation of the statute, consult the following:
  - A. *State of Texas Oil and Hazardous Substances Spill Contingency Plan*, October, 1988 (available from the TWC)
  - B. February 1992 Spill Notification Policy  
May 1992 Spill Notification Policy  
(attached)
  - C. Draft Proposed Spill Prevention and Control Regulations
- b. The Texas Air Control Board ("TACB")
  - i. The TACB has promulgated a rule that requires the reporting of any major upset condition that may cause an excessive emission that contravenes the intent of the Texas Clean Air Act ("TCAA") or the regulations of the TACB. 31 TEX. ADMIN. CODE § 101.6.
  - ii. A major upset is defined as an unscheduled occurrence or excursion of a process or operation that results in an emission of air contaminants that contravenes the TCAA and is beyond immediate control, or a release that is initiated to protect life in the immediate or adjacent areas. 31 TEX. ADMIN. CODE § 101.1.
- c. General Land Office ("GLO")
  - i. The Oil Spill Prevention and Response Act of 1991 ("OSPRE") designated the GLO as the lead state agency for preventing and responding to oil spills in coastal areas. TEX. NAT. RES. CODE ANN. ch. 40 (Vernon Supp. 1992). The GLO has adopted rules implementing OSPRA. The GLO plans to revisit these rules after federal agencies have promulgated rules implementing the federal Oil Pollution Act of 1990.
  - ii. Under the rules, an unauthorized discharges of oil, either actual or threatened, into coastal waters, or on any water or land adjacent to coastal waters, must be reported to the GLO within one hour of discovery. 17 Tex. Reg. 1109, 1120 (Feb. 7, 1992) (codified at 31 TEX. ADMIN. CODE § 19.32).

d. Railroad Commission of Texas ("RRC")

The RRC has primary jurisdiction over activities associated with the exploration, development and production of oil, gas or geothermal resources. TEX. WATER CODE ANN. § 26.131. The RRC has promulgated regulations that require operators to give immediate notice of any fire, leak, spill or break in any oil well, gas well, geothermal well, pipeline, or storage tank. 16 TEX. ADMIN. CODE § 3.20(a). Additionally, a written report must be submitted if the amount of oil spilled exceeds five barrels. 16 TEX. ADMIN. CODE § 3.20(b).

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Spill Notification Guidance

**DRAFT**  
**SUBJECT TO REVISION**

The following is guidance regarding notification to the Texas Water Commission of spills and releases.

Notification is required by the Texas Water Code Chapter 26.039:

26.039 Accidental Discharges and Spills

(a) As used in this section:

(1) "Accidental discharge" means an act or omission through which waste or other substances are inadvertently discharged into water in the state.

(2) "Spill" means an act or omission through which waste or other substances are deposited where, unless controlled or removed, they will drain, seep, run, or otherwise enter water in the state.

(3) "Other substances" means substances which may be useful or valuable and are therefore are not ordinarily considered to be waste, but which will cause pollution if discharged into water in the state.

(b) Whenever an accidental discharge or spill occurs at or from any activity or facility which causes or may cause pollution, the individual operating in charge of or responsible for the activity or facility shall notify the commission as soon as possible and not later than 24 hours after the occurrence.

Under the current statute the spiller has the ultimate responsibility to determine when to notify TWC regarding spills. The following guidelines may prove helpful in making that decision.

Is the substance spilled a harmful substance in a harmful quantity?

No ----- don't report to TWC

Yes -----next step

Is the spill or release directly to any environmental media, air(if the release is a reportable quantity under SARA title III) soil or water?

No-----don't report to TWC.

Yes -----report to TWC.

Is the spill of a harmful quantity of a hazardous substance in a containment area that will not allow a release to any environmental media before it can be cleaned up or removed?

Yes-----Do not report to TWC.

No-----Do report to TWC

Is the spill defined under 40CFR 264.196

Yes-----Do report to TWC

No -----Do not report to TWC

Penalties for not reporting a spill promptly to the Texas Water Commission are found in Texas Water Code 26.122 and 26.268. Civil penalties of \$50 to \$10,000 for each act of violation and each day of violation are referenced.



## TEXAS WATER COMMISSION

*PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION*

### NOTIFICATION POLICY FOR SPILLS

February 1992

Report spills/accidental releases to the Texas Water Commission by notifying the appropriate district office during regular business hours (8:00 a.m. to 5:00 p.m.) or at 512/463-7727 after hours (5:00 p.m. to 8:00 a.m.).

1. Spills/Releases On Facility Sites

- A. Any spill except oil (See 2.C. below) that will generate waste as a result of the cleanup. (e.g. spill to soil, spill on concrete where sorbents are used).
- B. Spills that are inside non-earth secondary containment, but are of a magnitude that could potentially adversely affect a wastewater treatment plant, either hydraulically or organically. Report spills or leaks within secondary containment as defined in 40 CFR 264.196.
- C. Spills of hazardous waste, CERCLA hazardous substances RQs, and Extremely Hazardous Substances.

NOTE: TWC would expect to be notified of a spill or release inside of a building if:

- 1) The spill is of such a size that it significantly disrupts normal plant operations (neither the operator nor the internal site spill response team can safely clean up the spill).
- 2) The spill waste would create a waste stream not currently listed on the site's notice of registration to TWC.
- 3) If there is an expectation that the plant might have to call on the Commission for later assistance in the spill response or subsequent remediation due to contamination.

2. Off-Site Spills/Releases

Note: The responsible party must notify TWC in the following situations. Parties who are not responsible for spills or cleanup are encouraged to report observed spills to TWC.

- A. Report any spill which if not removed could have the potential to adversely affect human health or the environment.
- B. Any amount of any substance spilled to water which has the potential to alter water quality, due to toxicity, biochemical oxygen demand or another cause must be reported to TWC. Any amount of any substance spilled to land which has the potential to impact ground water or surface water must be reported to TWC. Regardless of notification, the responsible party must ensure that the site is returned to "prespill" conditions.
- C. The reportable quantity for oil is five barrels (210 gallons) to land and any quantity which produces a sheen to water.



Citizen Participation in Enforcement  
Outline of Remarks for 1992 Texas Environmental Super Conference

August 1992

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## Citizen Participation in Enforcement

### I. Major options for citizen participation

#### A. Citizen suits under federal environmental law (See Attachment A).

1. These types of suits are often the citizen's most powerful, direct option to force facilities to comply with environmental laws.

2. Limitations:

a. Facility must be subject to federal environmental laws.

b. If citizens cannot afford attorney fees upfront, must convince lawyer to take case on a contingency basis. Provisions for recovery of attorneys fees and expert costs if citizens substantially prevail are helpful in this regard.

c. Federal environmental regulations often very technical and can be difficult to determine "non-compliance". If no self-reporting data is available, citizens may need experts to evaluate facility operations against regulatory requirements.

d. Citizens must demonstrate a pattern or practice of violations if violations not on-going at time suit is filed. Still much litigation over this requirement, and a mistake can result in dismissal of suit.

#### B. Citizen suits under Texas state law.

1. Very limited in Texas--only Ch. 401 (§ 401.392), TEX. HEALTH & SAFETY CODE (radioactive materials) and Art. 5920-11, § 31 (surface mining).

2. Running dispute about whether Texas must have citizen suit provisions for delegation of federal programs under RCRA and federal Clean Water Act. Environmental community has argued that state law citizen suit provisions are required for delegation if citizens cannot fully participate in administrative enforcement proceedings. See 33 U.S.C. § 1251(e) (federal Clean Water Act):

Public participation in the development, revisions and enforcement of any regulations, plan or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States.

EPA Clean Water Act regulations allow states two options: (1) providing for intervention as of right in state enforcement proceedings or (2) investigating citizen complaints, not opposing citizen intervention whether otherwise authorized under state law and giving public advance notice of any proposed settlement agreements. 40 C.F.R. § 123.27(d). See Natural Resources Defense Council v. EPA, 859 F.2d 156, 178 (D.C. Cir. 1988) (noting that states must allow permissive intervention in state enforcement actions to rely on option 2). See also Axline, M., Environmental Citizen Suits (Butterworth 1990), Chapter 4.

3. Common law negligence, nuisance and trespass remedies still available under state law, but case likely to be more difficult. Without sufficient possible recovery of damages, unlikely to find lawyers willing to take cases on contingency basis. Thus, many good common law-based cases never get to court because citizens cannot afford attorneys and experts.

#### **C. Informal action to prod state agency enforcement**

1. This is the "squeaky wheel" approach--the affected citizens that yell the loudest often get the agency's attention. Given limitations on agency's enforcement resources, citizens can help document violations and make the case for enforcement action.

2. Requires an understanding of agency enforcement structure, relevant laws and regulations and, often, expert assistance to citizens to prepare strong case for agency action.

#### **3. Limitations:**

(a) possible need for paying experts or attorneys to help develop case and bring argument to key agency personnel.

(b) difficulty of accessing relevant information without a legal proceeding which gives one the right to discovery of documents or access to the facility for testing, etc.

(c) competition with other "squeaky wheels" for agency attention.

#### **D. Getting other government agencies with enforcement powers involved.**

1. Local governments have some enforcement powers under Texas Water Code, Texas Clean Air Act and Texas Solid Waste Disposal Act. See e.g., TEX. HEALTH & SAFETY CODE §§ 361.225-.226 (solid and hazardous waste); TEX. HEALTH & SAFETY CODE §§ 382.111-.115 (air quality) and TEX. WATER CODE §§ 26.171-.177 (water quality).

2. Citizens often have more direct access to local governments and, when elected officials involved, local

governments feel pressure to take action.

3. Limitations:

(a) Few local governments have strong environmental enforcement expertise. Often unaware of their actual statutory powers.

(b) Resources limitations at local level.

(c) Potential conflicts with state or federal enforcement actions.

**II. Other forms of citizen participation with regard to on-going facility operations.**

**A. Use of Toxic Release Inventory Data**

Powerful tool to publicize level of emissions from on-going facility operations. Used to pressure companies to adopt pollution prevention measures to reduce emissions or amounts of hazardous waste generated.

**B. Negotiation of "Good Neighbor Agreements"**

Citizens negotiate agreement with company to either improve compliance, engage in particular pollution prevention projects or otherwise improve on-going facility operations. Focus to date has been in the Houston area, primarily with large petrochemical operations. Limitations: requires continuing oversight by community to assure compliance with agreement; companies reluctant to set "precedent" of involving neighborhood too deeply in plant operations.

**C. Advocating Stronger Statutory or Regulatory Requirements.**

**D. Corrective Action Plan as Part of Hazardous Waste Facility Permit Renewal, Modification or for Interim Status Facility**

## Attachment A

### CITIZEN SUITS

#### OUTLINE

#### I. GENERAL

A. "Citizen suit" is the term used to refer to provisions of federal environmental laws which allow citizens to:

(1) sue polluters to bring about compliance with environmental laws, regulations or permits issued pursuant to those laws/regulations and obtain penalties (for the government)

(2) sue governmental environmental agencies to force them to carry out mandatory duties under the environmental laws.

B. Citizen suit provisions are contained in most federal environmental laws.

C. Citizen suit provisions allow citizens that are successful in litigation to recover reasonable fees for attorneys and experts and court costs. (Can also lose and be assessed fees/costs for prevailing party)

D. Cumulative, not a substitute for, common law rights of action such as nuisance, negligence, trespass.

#### II. PURPOSES

A. Allows citizens to act as "private attorney generals" in seeking to force compliance with environmental laws and regulations when the responsible agency either can not or will not proceed against the violator. Augments meager enforcement resources of government agencies.

B. Allows citizens to act as a check on the regulatory agencies with respect to fulfillment of Congressional directives.

#### III. BASIC MECHANISM

##### Against Violators

A. Citizens, individually or in group, identify problem source. Use "Self-Monitoring Report Data" to identify violations--history, seriousness, corrective actions.

B. Citizens formulate "60-day notice letter", detailing violations and asking for specific actions to remedy violations within 60 days, or litigation will be filed. Notice letter must

be copied to relevant federal and state environmental agencies and to the U.S. Department of Justice. (This gives the agencies time to take enforcement action on their own which may, in some cases, preclude citizen litigation.)

C. If no remedy within 60 days, citizens may bring litigation in federal district court.

#### Against Government

A. Citizens identify instance where governmental agency has failed to follow "mandatory non-discretionary" duties laid out in federal statute. May be difficulties in deciding when duty is "discretionary" versus "non-discretionary". Federal Administrative Procedure Act (5 U.S.C. § 552 et seq.) review available, in many cases, regarding discretionary duties.

B. Citizens formulate "60-day notice letter", detailing the duties and the grounds for alleging these duties have not been fulfilled. The letter should also ask for specific remedies within the 60-day time frame. Copies to relevant agencies, U.S. Dept. of Justice.

C. If no remedy within 60 days, litigation may be filed in federal district court.

#### IV. PRECLUSION OF CITIZEN SUITS

A. Citizen suits against violators can be precluded if the government is diligently prosecuting a civil or criminal enforcement action against the violator. However, citizens have right to intervene in those actions.

B. Supreme Court case held that no citizen suit can be maintained for solely past violations. Gwaltney of Smithfield v. Chesapeake Bay Foundation, 484 U.S. 49 (1987). Must show a pattern of continuing, repeated violation. Law still being formulated in this area, but 1990 Clean Air Act contains amendment intended to address Gwaltney problem.

#### V. PRACTICAL EFFECTS

Citizen suits against polluters are effective tools for groups--get quick action by company to clean up, in some cases, because of publicity. Relatively easy in some cases because the Self-Reporting Data can be used in summary judgment motion. Often, will prod a reluctant regulatory agency to begin enforcement action.

Citizen suits do supplement the agencies' enforcement efforts and can be used to take on those violators for which the political will does not exist in the agency for strong action.

Many times, if the case gets to court, it will settle. In

recent years, settlements have included an agreement by the violator to set up an environmental "trust fund" to restore waters damaged by pollution or address other environmental issues. The U.S. Dept. of Justice has objected to this in a few cases if this trust fund is set up in lieu of penalties to the government.

Citizen suits against the government for failure to fulfill non-discretionary duties are extremely important in citizen "oversight" of federal agency functions. Usually more difficult because statutory language sometimes ambiguous with regard to the discretion available to the agency.

#### General References

1. Axline, Michael, Environmental Citizen Suits (Butterworth 1990) (best guide to all aspects of environmental citizen suits).
2. Miller, Private Enforcement of Federal Pollution Control Laws, 13 Env't. L. Rep. (ELI) 10,309 (1983).
3. L. Jorgenson & J. Kimmel, Environmental Citizen Suits: Confronting the Corporation ( BNA Special Report) (1988).



**The Texas Oil Spill Prevention  
and  
Response Program**

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## I. INTRODUCTION

### A. Legislative Origin

The Texas legislature enacted the Oil Spill Prevention and Response Act of 1991 (OSPRA), Tex. Nat. Res. Code §§ 40.001-40.303, aiming to coordinate the State's oil spill response efforts under the direction of the General Land Office (GLO). The Texas legislature, responding to major offshore oil spills, declared that protection of the State's coastal waters and adjacent shorelines is a matter of the highest urgency and priority and conferred on the Commissioner of the GLO the power to:

- (1) prevent spills and discharges of oil by requiring and monitoring preventative measures and response planning;
- (2) provide for prompt response to abate and contain oil spills and discharges of oil and ensure the removal and cleanup of pollution from such spills and discharges;
- (3) provide for development of a state coastal contingency plan through planning and coordination with the Texas Water Commission (TWC) to protect coastal waters from all types of spills and discharges; and
- (4) administer a fund to provide for funding these activities and to guarantee the prompt payment of certain reasonable claims resulting from spills and discharges of oil, OSPRA § 40.002(b).

The Texas legislature also declared its intention that OSPRA support and complement the federal Oil Pollution Act of 1990 (OPA), 33 U.S.C. §§ 2701-2719.

OSPRA provides a legislative framework for regulatory oversight by the GLO to prevent and respond to oil spills, define liability for oil spill response costs and damages, create a Coastal Protection Fund, and provide for enforcement.

### B. Application of OSPRA

OSPRA's coverage is broad, covering vessels of "every description, including watercraft or other contrivance used and capable of being used as a means of transportation on water, whether self-propelled or otherwise, including barges", OSPRA § 40.003(26). Regulated vessels are defined in OSPRA as vessels with a capacity to carry 10,000 gallons

or more of oil as fuel or cargo and that operate in coastal waters or waters adjoining and accessible from coastal waters, OSPRA § 40.114. Also covered are facilities, which are defined as any waterfront or offshore pipeline, structure, equipment, or device used for the purposes of drilling for, pumping, storing, handling, or transferring oil and operating where a discharge of oil from the facility could threaten coastal waters, including but not limited to any such facility owned or operated by a public utility or a governmental or quasi-governmental body, OSPRA § 40.003(22). Coastal facilities which handle in excess of 42 gallons (a barrel) of oil are covered by OSPRA. The statute defines oil to include "oil of any kind or in any form, including but not limited to crude oil, petroleum, fuel oil, sludge, oil refuse, and oil mixed with waste other than dredged spoil, but does not include petroleum, including crude oil or any fraction thereof, which is specifically listed or designated as a hazardous substance", OSPRA § 40.003(16), and listed in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9673.

## II. REGULATORY REQUIREMENTS

### A. Overview

In a series publications, the GLO implemented the OSPRA legislation by adopting new sections which are codified in Title 31, Texas Administrative Code, Chapter 19. The final adopted version became effective February 21, 1992, 17 Tex. Reg. 1109. Of note are proposed sections creating new categories of coastal facilities and simplifying the proposed facilities' application procedure for OSPRA certification which were published on June 5, 1992, 17 Tex. Reg. 4601. These sections are not finalized, but GLO sources state that they are very likely to remain essentially the same as proposed and be adopted soon, with the probable addition of proposed sections clarifying the financial responsibility requirements. Subchapter A of Chapter 19 sets out general provisions applicable to the oil spill prevention and response rules. These include definitions, provisions for access to property by personnel or agents of the GLO and carrying out response actions and other activities under OSPRA and provisions on filing various forms and information with the GLO. Subchapter B deals with oil spill prevention and preparedness regulations. It centers mainly on the OSPRA requirement that coastal facilities handling oil obtain a discharge prevention and response certificate from the GLO. It also addresses the OSPRA requirement that vessels and facilities have spill response plans and proof of financial responsibility for liability from oil spills. Subchapter B also contains provisions setting the parameters for vessel and facility audits, drills, and inspections by the GLO to determine oil spill prevention and response capability, as well as denial of port entry for vessels violating OSPRA. Finally, Subchapter

B specifies the GLO requirements for discharge cleanup organizations, which are those entities formed for the specific purpose of engaging in oil spill response and cleanup.

Subchapter C establishes practices and reporting requirements that the GLO and persons responsible for coastal oil spills must follow in responding to oil spills under the GLO's jurisdiction. Subchapter C also outlines the respective roles of the TWC, the Texas Railroad Commission and the GLO in coastal spill response. Subchapter D describes the procedures for compensation and reimbursement to state agencies and others for costs incurred in responding to coastal oil spills and for property and other monetary damages from such spills.

#### B. Subchapter A - General Provisions

Much of the language in Subchapter A including the purpose and the definitions are set forth in OSPRA and have been previously addressed in this paper, including the definitions of regulated vessels, coastal facilities and oil. Other definitions of significance include the GLO's definitions of coastal waters, which is defined by the GLO as all tidally influenced waters extending from the head of tide in the arms of the Gulf of Mexico seaward to the three marine league limit of Texas' jurisdiction, and nontidally influenced waters extending from the head of tide in the arms of the Gulf of Mexico inland to the point at which navigation by regulated vessels is naturally or artificially obstructed. The GLO goes on to further define the term by describing bodies of water from the Louisiana State line to the Texas - Mexico border and defines the limits into those bodies of water by latitude and longitude call number. The GLO has further identified coastal facilities in its rulemaking via a coastal facility designation line, where all areas east and south of the line are considered areas in which spills threaten coastal waters and are therefore subject to certification under OSPRA. This GLO coastal facility line follows specified roads and highways and a map showing the GLO coastal facility designated area is included on the last page of this paper. Another definition of note is the definition of worst case unauthorized discharge, defined by the GLO as the largest foreseeable unauthorized discharge under adverse weather conditions, which is information required in facility applications for GLO certification.

Also included in this subchapter is the provision for inspections and access by the GLO (including officers, employees, or authorized agents), of any land, building, facility, vessel, device, equipment or other property to respond to an unauthorized discharge to determine compliance or noncompliance with OSPRA or any rule, order or certificate issued under OSPRA, to ascertain discharge prevention and response capability, and to assess natural resources damages. The GLO rules provide that drills, audits and inspections may

be announced or unannounced. The rule also states that if unannounced, the GLO will make a reasonable effort to obtain consent of the owner of the vessel or facility prior to entry, and the rule states that this effort should be consistent with the need for post abatement and containment actions for the protection of health, safety, and natural resources.

Additionally, the rule provides that the GLO's officers, employees, and agents will present credentials and explain the purpose and scope for the requested entry onto private property. Also, upon gaining access to the property, the rule states the GLO's representative may:

- (1) sample and test any substance or environmental media;
- (2) observe the performance of equipment;
- (3) take photographs and videotapes and other recordings;
- (4) review and copy documents;
- (5) inspect discharge prevention and response equipment and supplies;
- (6) inspect containment in drainage areas in any other portion of the facility or vessel where oil is handled.

C. Subchapter B - Spill Prevention and Preparedness

This section sets forth the facility certification requirements and lists the specific data which must be included in applications for certification.

The application for certification process differs, depending upon the type and/or size of the facility or vessel. The GLO has categorized coastal facilities as exempt, small, and major, and has proposed the addition of two other types of coastal facilities, to wit, small commercial and underground storage facilities in the proposed sections. These facilities are defined as follows:

- (1) Exempt facilities are farm or residential facilities that have tanks with an oil storage capacity of 1,100 gallons or less;

- (2) Small commercial facilities (proposed) are facilities that have an oil storage or transfer capacity of 1,100 gallons or less and are used for any commercial or industrial purpose;
- (3) Underground storage facilities (proposed) are waterfront facilities which store any quantity of oil only in underground storage tanks. These are waterfront facilities that do not store oil in any other tank or container;
- (4) Small facilities are facilities other than the previously listed facilities that have storage or daily transfer capacity not exceeding 10,000 gallons of oil;
- (5) Major facilities are facilities that have an oil storage or daily oil transfer capacity of more than 10,000 gallons of oil.

As stated previously, the owner of a regulated facility must apply to the GLO for discharge prevention and response certificate by August 21, 1992. No facility may commence or continue operations after January 1, 1993, without a discharge and response certificate issued by the GLO. These regulations state that in the case of a facility whose owner is a different person or entity than its operator, the GLO may require both the owner and operator to file an application for certification.

Most applicants for a discharge prevention and response certificate must pay an application fee when the application is filed with the GLO. The amount of the fee is determined by the type of regulated facility, as follows:

- (1) \$100.00 for small facilities that have a storage or daily transfer capacity not exceeding 10,000 gallons;
- (2) \$1,000.00 for major facilities that have a storage or daily transfer capacity not exceeding 250,000 gallons;
- (3) \$2,500.00 for all other major facilities; and
- (4) (proposed) small commercial facilities and underground storage facilities are not required to pay an application fee.

The applications required to be submitted vary from a 1 page form proposed for the small commercial facilities and the underground storage facilities to a 15 page form along with a detailed oil discharge prevention and response plan for the small and large facilities.

The following is a list of specific information facility applications must include:

- (1) (Proposed) all applicants for certification as small commercial facilities and/or as underground storage facilities must submit the following:
  - (a) Name and address of the facility including street address, the name and address of the owners and operators of the facility, and the person or persons in charge of the facility;
  - (b) A description of the facility including:
    - primary business activity;
    - maximum quantity of oil stored or handled;
    - uses or purposes for which oil is handled or stored;
    - types of containers in which oil is handled or stored, whether such a container is exposed to elements, and whether any containment structures or devices are provided;
    - a description of the facility's plan for responding to an unauthorized discharge of oil; and
    - the TWC petroleum storage tank facility identification number (i.e., PST ID number, facility registration number).
- (2) All applicants for certification as small facilities must submit the following information:
  - (a) Names and addresses of the facility, owners and operators of the facility, and person or persons in charge;
  - (b) A description of the facility including the date the facility began operations under the current owner or operator whichever is earlier, and:
    - types of oil handled;
    - MSDS sheets for all the types of oil handled; and
    - the oil storage and transfer capacity;

- (c) The location of the facility by latitude and longitude, or by state plane coordinates indicating zone or by Universal Transverse Mercator coordinates indicating zones, and all environmentally sensitive areas that would be affected by worse case discharge from the facility;
  - (d) Proof of financial responsibility required by regulations either adopted or continued in effect under the OPA, 33 U.S.C. § 2716, if applicable to the facility;
  - (e) A copy of the applicant's current discharge prevention and response plan required by Federal Water Pollution Act, 33 U.S.C. § 1321, including the facility's spill prevention containment and countermeasure plan, if applicable;
  - (f) Either a discharge response contract or a basic ordering agreement with a discharge cleanup organization certified by the GLO, or proof that the applicant can independently respond to a worse case discharge at the facility;
  - (g) An estimate of the worse case discharge for the facility; including the rationale used to establish the estimate;
  - (h) A list of both oil and hazardous substances discharges at the facility within the previous year; and
  - (i) A list of the environmental permits and registration identification numbers that have been applied for or obtained for the facility, including those for wastewater discharges, air emissions, handling of solid or hazardous waste, injection wells, and underground or above storage tanks.
- (3) Major facility applications must contain the above listed information required for small facilities, as well as the following information:
- (a) The dimensions and oil capacity of the largest vessel docking or providing service at the facility, if applicable;
  - (b) Site plan of the facility certified by a registered professional engineer or registered public land surveyor;

- (c) Most recent available aerial photographs;
- (d) Number and qualifications of personnel employed at the facility with discharge prevention and response duties;
- (e) Current discharge prevention and response training programs and requirements for the facility's personnel and for outside contractors working at the facility;
- (f) A description of the facility's preventative measures, including:
  - leak detection and discharge prevention safety system;
  - schedules, methods, and procedures for testing, maintaining and inspecting storage tanks, pipelines, and other structures that contain or handle oil; and
  - schedules, methods, and procedures for conducting discharge response drills;
- (g) A description of the facility's response plan, including:
  - plan response actions, chain of command, lines of communication and procedure for notifying the GLO in the event of an unauthorized discharge;
  - response equipment and supplies available to respond to an unauthorized discharge at the facility;
  - plans for sampling, testing, and measuring the volume of substances discharged;
  - plans for the recovery, storage, separation, transportation and disposal of waste from an unauthorized discharge;
  - the probable direction and rate of the flow for unauthorized discharges at the facility;

- plans for protection of environmentally sensitive areas in the event of an unauthorized discharge; and
- plans for providing emergency medical treatment, sight safety and security, and fire prevention in the event of an unauthorized discharge.

Prior to the issuance or denial of the certificate, the GLO may require an applicant to submit additional information to resolve any substantial question concerning the applicant's discharge prevention and response capability. The GLO may also require an applicant to develop and implement additional discharge prevention and response measures.

Regulated vessels operating in coastal waters must have response plans as required by the Federal Water Pollution Control Act, 33 U.S.C. § 1321, and proof of financial responsibility is required by the OPA, 33 U.S.C. § 2716.

This subchapter also specifies that all regulated vessels operating in coastal waters must have a response plan as required by the Federal Water Pollution Act, 33 U.S.C. § 1321, and proof of financial responsibility as required by the OPA 33 U.S.C. § 2716. Those vessels covered by OSPRA but not by OPA will be required to meet the financial responsibility requirements of OSPRA, § 40.202(a) (1) and (2) and to meet the vessel contingency plan requirements of OSPRA § 40.114 when the GLO adopts rules under each of those sections.

In addition to the GLO inspection provisions under Subchapter A, this subchapter provides for audits, drills, and inspections of facilities or vessels to determine prevention and response capability. The rule states each of these procedures will be commenced only between the hours of 7 a.m. and 6 p.m., and may be announced or unannounced. The owner or operator of the facility or vessel must bear its own costs of the audit, drill, or inspection. The rule does limit the number of audits and/or drills to no more than two in one 12-month period, but only for those facilities or vessels that have not violated OSPRA or the GLO regulations adopted thereunder.

Discharge cleanup organizations (DCOs) seeking the GLO's certification were to submit applications detailing qualifications for certification before a June 15, 1992 deadline. The GLO is currently reviewing those applications. The GLO has not released its list of certified DCOs, but the general approach the GLO will follow is to divide the DCOs into two categories: industry or volunteer. The industry organizations are those capable of containing, abating, removing and disposing of oil and waste from an unauthorized discharge. They are to have personnel trained pursuant to 29 C.F.R. § 1910.120, and have

sufficient equipment to perform response actions. Industry DCOs must be certified by the GLO in order to be listed on a vessel or facility discharge response plan. Volunteer organizations are those whose primary purpose is to protect, rescue, or rehabilitate wildlife and natural resources injured or damaged by an unauthorized discharge. These organizations are to be permitted by the Texas Parks and Wildlife Department or certified by an organization with equivalent standards. The volunteer organizations will not be compensated for their efforts in assisting with response activities.

D. Subchapter C - Spill Response

This subchapter establishes reporting and response duties and procedures for the GLO and persons responsible for oil spills. This portion of the regulations sets forth procedures to follow upon discovering an actual or threatened oil spill. OSPRA and these regulations create a duty on the part of persons in charge of the facility or vessel from which an unauthorized discharge emanates or threatens to emanate and the person directly responsible for the discharge to immediately report the discharge to the GLO. The GLO has a 24-hour, 7-day, toll free telephone line for reporters of spills to call (1-800-832-8224). For the purposes of the regulations, a person in charge of a facility or vessel is defined as the individual who has the independent authority to deploy response equipment and personnel and to expend funds for response action; immediately means within one hour of the time the discharge is discovered.

The notification, in order to be deemed complete by the GLO, should accurately describe the following:

- (1) a description of the type of substance and quantity actually discharged or potentially dischargeable and the rate of discharge;
- (2) the time and location of the spill by longitude and latitude, and the apparent cause of the actual or potential discharge;
- (3) the size of the area actually impacted by the discharge and the area potentially impacted and whether or not any environmentally sensitive areas will be affected;
- (4) the nature of any response actions undertaken and the identity of the person or discharge cleanup organization engaged or engaging in response activities;

- (5) the name and title of the responsible person, the person in charge, and the person reporting the discharge; and
- (6) the manner in which the responsible person of the facility or vessel involved in the actual or threatened discharge may be contacted.

The rule also states that if an unauthorized discharge threatens to damage or pollute property other than that of the owner or operator or responsible person, the person in charge must make reasonable efforts to notify the owners of property threatened by the discharge. If the discharge immediately threatens public health, safety, or welfare, then one of the parties responsible for the discharge or the facility or vessel must notify the appropriate local health, fire, and law enforcement authorities.

Upon receiving notice of an actual or threatened unauthorized discharge, the GLO will determine whether state response action is required. The GLO commissioner may designate an on-scene coordinator to, in cooperation with the federal on-scene coordinator, access in detail all aspects of the actual or threatened unauthorized discharge, evaluate and direct the responsible person's response activities, initiate and direct other response activities, and report to and carry out orders of the GLO commissioner. The on-scene coordinator has an ongoing duty to insure compliance with applicable contingency plans, discharge response plans, and to minimize to the greatest extent possible property damage and damages to natural resources.

If assessments of the discharge reveal that the discharge predominantly involves a hazardous substance, the GLO shall coordinate all response efforts until the TWC can assume responsibility over hazardous discharge response operations. A substance is predominantly a hazardous substance when analytical testing indicates the presence of more than 50% of a substance that is not oil as defined by OSPRA, and that is a hazardous substance as defined by the TWC or its successor agency. In the event a discharge emanates from an oil and gas exploration or production facility or from an oil or gas pipeline, a Railroad Commission designee shall act as the state on-scene coordinator for spills of 240 barrels or less; for spills exceeding 240 barrels, it is the responsibility of the GLO to provide the state on-scene coordinator.

Additional duties of the responsible person include immediately initiating response action in the event of an actual or threatened spill and informing the GLO of the strategy for responding to the unauthorized discharge on a continuing basis.

Should the GLO determine that the responsible person is unknown or appears unwilling or unable to respond adequately to the discharge, the state on-scene coordinator may initiate response actions by the state or order the responsible person to take certain response actions.

The provisions for assistance with cleanup operations allow only persons employed by the responsible person or certified discharge cleanup organizations under contract with the responsible person to conduct cleanup operations without the approval of the on-scene coordinator. Any other person or discharge cleanup organization participating in response operations without the on-scene coordinator's approval shall not receive or be eligible to receive compensation from the coastal protection fund created by the legislature in OSPRA § 40.151. A person or discharge cleanup organization participating in response operations is entitled to a qualified immunity from liability only if acting pursuant to a request of the on-scene coordinator, the responsible person, or in accord with the applicable contingency plan or response plan.

The rule also addresses details for the disposal of waste from unauthorized discharges, including the provision that waste must only be disposed of at sites that have all necessary permits to accept the type of waste discharged, and the on-scene coordinator shall be apprised in writing of the name and location the site where the waste will be disposed. The rule encourages using reusable sorbent pads, recycling recovered oil, recovering boom, and using other best available technologies.

In addition to verbally reporting an unauthorized discharge at the time it occurs, the responsible person must file a written report with the GLO within 30 days of the GLO declaring the response actions complete. The report must state the details required in the initial report of the discharge to GLO, and must state the known extent of the damages to real and personal property. The report must also contain a listing of known damages to natural resources. The GLO has standard forms for these reports.

If the GLO, in conjunction with the TWC and the Texas Parks and Wildlife Department, determines that an unauthorized discharge has damaged natural resources, the three agencies, as OSPRA-designated natural resource trustees, may require the responsible person or persons to remediate the damage. Notification will be in writing to responsible persons that a remediation plan must be submitted. The remediation plan must be submitted to the natural resource trustees for review and approval within a reasonable time, which is to be determined by the trustees.

The remediation plan must include the following:

- (1) a map showing the area affected by the unauthorized discharge and a survey of the natural resources damaged by the discharge;
- (2) a plan showing locations, times, and methods for sampling, testing, and monitoring to determine the extent of contamination and natural resources injury and loss;
- (3) a schedule of remediation activities and increments of time within which remediation goals are to be achieved;
- (4) a description of performance measures to evaluate the effectiveness of remediation; and
- (5) any other matter reasonably required by the trustees.

The GLO and the other natural resource trustees may enter into negotiations with the responsible persons for remediation agreements.

E. Subchapter D - Compensation and Liability

This subchapter describes the process of compensation determination by the GLO for unauthorized discharges of oil. If the GLO determines that an unauthorized discharge has caused any damages compensable under OSPRA, the GLO will identify the person or persons who appear responsible for the discharge. The GLO will make its determination of responsibility based on the actual conditions observed at the site of the discharge or threatened discharge and on the following factors:

- (1) the quantity of oil discharged or potentially dischargeable;
- (2) the location and probable path of the discharge;
- (3) the proximity to real or personal property owned by a person other than the responsible party;
- (4) the natural resources likely to be affected; and
- (5) any other circumstance or factor relevant to an assessment of the impact of the discharge.

The GLO is to give notice in writing to the responsible person, persons or entities immediately upon a determination that damages have resulted. The GLO designation may be challenged within five days of the written notice. The designation will be made by reviewing and assessing the following factors:

- (1) the owner, operator or charterer of the vessel or facility from which the discharge emanates;
- (2) the person responsible for the discharge;
- (3) the apparent cause of the discharge;
- (4) whether or not any defense to liability is obviously applicable to the discharge;
- (5) any other relevant factors which come to the attention of GLO.

The rule states that failure to challenge a proposed designation is not considered an admission of liability for the unauthorized discharge. However, if the proposed designation is not challenged within five days, the designated responsible person must inform the GLO of its intended advertising, claims, and payment procedures, including the name of any agent handling claims on the responsible person's behalf and the name of any underwriter for liability for the discharge. As a part of all claims procedures, the designated person must inform all claimants of the availability of the state fund and the federal fund to pay claims.

Claims advertisements by the GLO or the designated responsible persons must be printed each day for one week, beginning no later than 14 days after completion of the designation process, in the newspaper of largest general circulation in the county and contiguous counties where real or personal property affected by the discharge is located. The GLO commissioner may also order advertisements to be placed in other newspapers and on radio and television in areas where the discharge impacts natural resources or persons economically reliant on the use or acquisition of the natural resources.

The coastal protection fund created by OSPRA is a non-lapsing revolving fund which will provide immediately available funds for response to all unauthorized discharges, for cleanup of pollution from unauthorized discharges of oil, and for payment of damages from unauthorized discharges of oil, OSPRA § 40.151.

The fund will consist of fees, penalties, judgements, reimbursements, and charges provided for in OSPRA. The GLO commissioner shall recover all sums owed to or expended from the fund, either from persons responsible for the unauthorized discharge or otherwise liable or from the federal fund, jointly and severally, OSPRA § 40.153.

Claims procedures specify all claims must be presented to the designated responsible person first, if one has been designated; the responsible person has 30 days in which to reasonably respond following the presentation of a claim for \$50,000 or less, and 90 days for claims over \$50,000. If claims \$50,000 and under are not reasonably responded to within 30 days of presentation to the designated responsible person, the claimant may present the claim to the GLO. If claims over \$50,000 are not responded to within 90 days, the claimant must present the claim to the federal fund and only if the claim is not settled within 60 days can the claimant present the claim to GLO. When there is no designated person, claims will then be made to the GLO or the federal fund, depending on the amount.

Claims must be in writing, signed and verified by the claimant, and must include the following information:

- (1) whether the claim is for damages or response costs or both;
- (2) the cause, nature, and dollar amount of the claim;
- (3) whether the claim is covered by insurance or other benefits for which claimant is eligible;
- (4) the amount and nature of any compensation or earnings the claimant received as a consequence of the unauthorized discharge; and
- (5) an oath or affirmation that the same claim is not being pursued through any other claim, suit, settlement, or proceeding.

The GLO will then review the evidence and any settlement offers the claimant may have received from the responsible person or the federal fund. If the GLO determines that a settlement offer was reasonable, and the claimant did not make reasonable settlement, the GLO will deny the claim. Then, if a claimant attempts reasonable attempts to settle and the person responsible or the federal fund does not tender a reasonable settlement offer, the GLO may allow the claim to be reinstated.

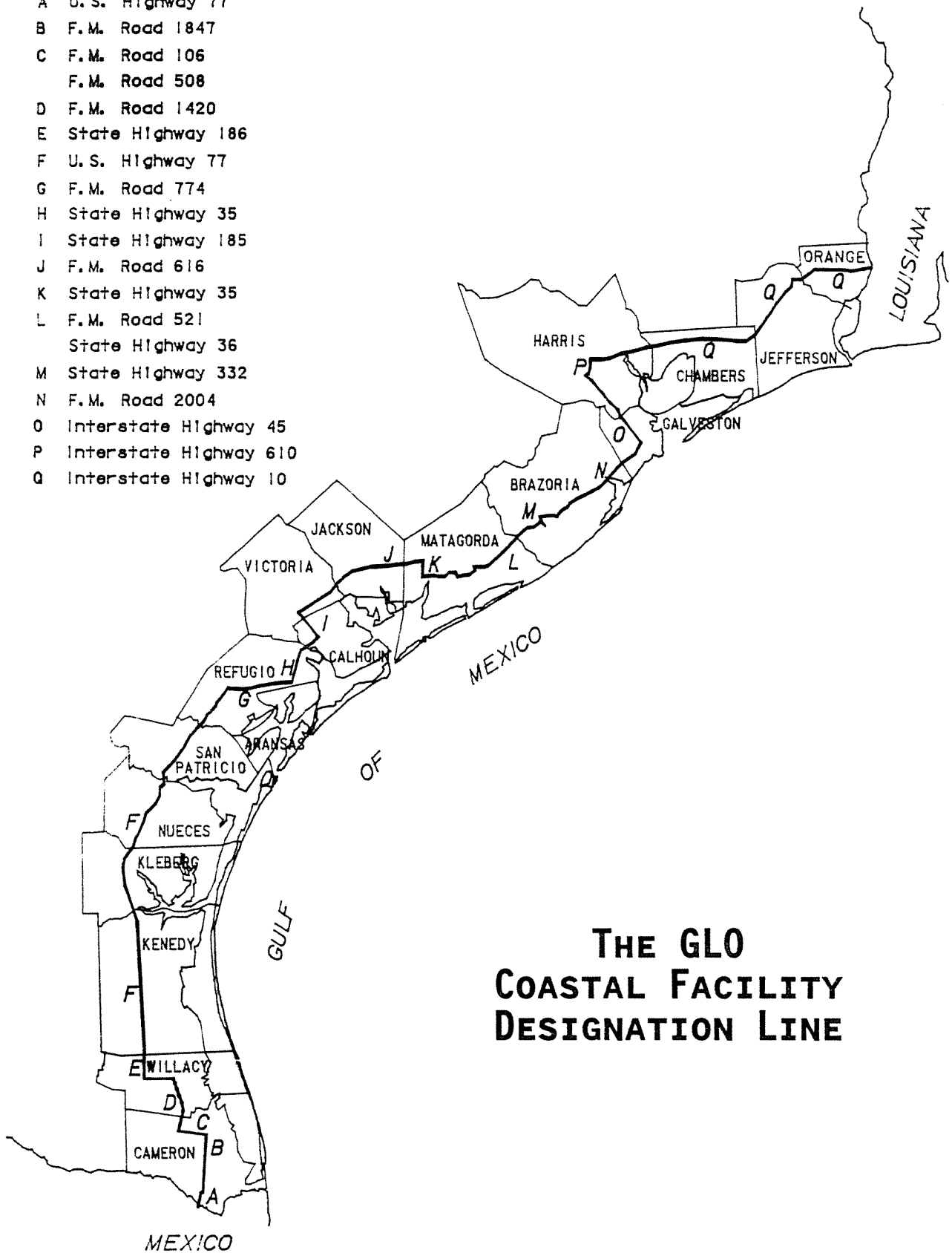
If the GLO determines a settlement offer is not reasonable, or if a settlement offer is not a prerequisite to a claim, the GLO will propose an award amount, and an amount and notify the claimant and the responsible person of the proposal in writing. The GLO will hold hearings if either a claimant or a responsible person files a written request for a hearing within 20 days of assurance of the GLO proposal. Accepting of an award is final settlement as to the claimant and constitutes a full release as to the claimant.

### III. CONCLUSION

Significant details involving the amounts of financial responsibility facilities and vessels must carry remain unclear, due in part to the lack of federal rulemaking under OPA addressing that issue and the GLO's legislative mandate to follow the federal guidelines. Also uncertain is the exact coverage of OSPRA, particularly as to facilities, and how the GLO will respond to arguments against OSPRA coverage by those facilities.

The August 21, 1992 deadline for submission of applications will provide a measure of compliance to GLO, because of the GLO's previous identification and mailout of applications and materials to facilities that handle oil. The challenge for the GLO will then be enforcement in a rather large area of regulatory oversight.

- A U.S. Highway 77
- B F.M. Road 1847
- C F.M. Road 106  
F.M. Road 508
- D F.M. Road 1420
- E State Highway 186
- F U.S. Highway 77
- G F.M. Road 774
- H State Highway 35
- I State Highway 185
- J F.M. Road 616
- K State Highway 35
- L F.M. Road 521  
State Highway 36
- M State Highway 332
- N F.M. Road 2004
- O Interstate Highway 45
- P Interstate Highway 610
- Q Interstate Highway 10



**III. TEXAS NATURAL RESOURCES CONSERVATION COMMISSION --**  
*"Happy Together"*

*Jesus Garza*  
*Executive Director*  
*Texas Water Commission*

REMARKS AT THE TEXAS ENVIRONMENTAL SUPER CONFERENCE  
Jesús Garza  
August 7, 1991

I appreciate the opportunity to speak at this conference. As you may know, I have been with the Texas Water Commission for only five months now, but I am pleased to be associated with the Commission at this exciting time when the general public's understanding of the importance of protecting the environment is growing. That change in public sentiment has been reflected in changes in the structure and the nature of our agency.

I will begin today by describing the on-going reorganization of the Texas Water Commission. Then I will outline the priorities of the Commission and offer some comments on the history and nature of environmental regulation in Texas.

At present the Commission is undergoing two types of reorganizations. One is the result of a legislative mandate; the other began with a management review of the agency.

Senate Bill 2 mandated a consolidation of the state's environmental regulatory programs under one agency. On March 1, 1992, the Water Commission took responsibility for the regulation of solid waste, water hygiene, on-site sewers, and radioactive substances. On September 1 of this year, the Commission will add the Texas Water Well Drillers Board and the Texas Board of Irrigators to its present divisions. The consolidation will be complete on September 1, 1993, when the Texas Air Control Board joins the other offices of the Water Commission to form the Texas Natural Resources Conservation Commission.

This reorganization of state regulatory agencies requires a great deal of coordination. Governor Richards has appointed an Environmental Agencies Transition Committee, chaired by Chairman John Hall of the Water Commission and Chairman Kirk Watson of the Air Control Board. The committee, which is set to meet later this month, has subcommittees on budget and legislation, permitting and enforcement, and customer service. We believe that the consolidation of environmental regulatory agencies will help us become more efficient and more responsive to our customers.

The second type of reorganization results from a management review of the agency conducted last fall under the leadership of Chairman Hall. We developed a mission statement in a process that involved not only Water Commission staff, but also agricultural interests, hazardous waste generators, environmentalists, government and business organizations, and commercial hazardous waste facility operators. Our mission is "to ensure clean water for Texas' future and facilitate economic growth while protecting public health and safety by effectively managing various forms of pollutants, including waste prevention and reduction where appropriate."

The management review has helped us set nine priorities for the Commission. Those priorities are: (1) enhancing enforcement, (2) improving customer service, (3) establishing partnerships, (4) shifting resources to program areas, (5) focusing like functions together and increasing communication across functional areas, (6) providing dual career tracks for management and technical positions

at the Commission and improving career ladders for employees, (7) narrowing management's span of control, (8) broadening interaction with the public and providing greater emphasis on the role of public education and individual action in creating a cleaner environment, and (9) preparing the agency to accept the additional functions resulting from consolidation.

As part of our reorganization we have increased the number of women and minorities in the Commission's management. The commissioners, managers, and staff of the Commission are a much more diverse group than they were only a few years ago.

We have created four offices: Waste Management and Pollution Cleanup, Water Resource Management, Administration, and Legal Services and Compliance. Previously, we had only one deputy director. We now have a deputy director for each of the four offices. The intent of this arrangement is to speed up decision making and improve the overall quality of management. Next year, the Air Control Board will become the fifth office.

We have increased the number of divisions and established new programs, which include Agriculture, Water Policy, and Pollution Prevention. We have expanded our Technical Assistance program.

We have set up a Border Affairs office in El Paso to coordinate our activities along the U.S.-Mexico border, an area that has been of increasing concern to policy makers and the public in recent years as the maquiladora industry has grown and free trade negotiations have taken place. The Border Affairs office will support the work of the EPA and its newly reorganized Mexican

counterpart, SEDESOL, in carrying out the Integrated Border Environmental Plan along the Rio Grande. For example, the Commission is helping put in place a system for notifying Mexican environmental officials of waste disposal permits pending in the border area of Texas. SEDESOL officials have agreed to notify us of proposed disposal sites in the border region of Mexico.

We have created an office of the Ombudsman to give the public a contact point for airing concerns about the Commission. The Ombudsman is helping citizens cut through the bureaucracy of our agency in order to resolve their concerns.

Other elements of our management reorganization have resulted from the inclusion of functions previously performed by the Texas Department of Health. We have in operation a recycling information center with a 1-800 number and are focusing on composting as a means of reducing municipal solid waste. We are consolidating drinking water programs and will focus on customer service and business assistance in our dealings with water utilities.

A Commission task force is reexamining our permitting process in order to streamline and expedite permitting without jeopardizing the integrity of the process. At present, some permits take years to complete. We want to be more responsive to permit applicants. But we will not make changes in the permitting process that in any way compromise our primary goal of "ensuring clean water for Texas' future."

We are determined to create a different environment within our agency. We want to emphasize service and make the Texas Water

Commission a problem-solving organization, rather than just a regulator. We intend to acknowledge our shortcomings. Having spent most of my career in city government, I recognize some of the problems that the regulated community has encountered in dealing with the Commission. We will focus on results rather than processes. We will improve customer service, simplify reviews, and listen, inform, and act decisively. We recognize that regulating and providing outstanding customer service are not mutually exclusive undertakings.

Our programs will take new directions. Our water quality programs will focus on enforcement and swift action. Solid waste staff members will demand strict adherence to regulations and will provide resources to cities. Commission employees will be leaders in providing compliance information and technical assistance. Staff members working on hazardous waste matters will reduce permitting time. Our enforcement people will remove uncertainty from the enforcement process by clearly identifying rules and enforcing them, and they will focus on the most difficult challenges.

It is our intention to involve all Texans in our efforts. We will involve them by creating citizen programs, providing technical assistance, and encouraging voluntary compliance.

In April, we launched the Clean Texas 2000 program, a statewide environmental partnership campaign aimed at dramatically reducing the sources of pollution in our state. Through this program we are encouraging business, industry, communities, state

agencies, citizens' groups, and individuals to form working partnerships to reduce the discharge of hazardous wastes into our water and land by 50 percent by the year 2000. The program includes household hazardous waste collections, recycling projects, citizens' water quality monitoring, and groundwater protection efforts.

The Clean Texas 2000 program will involve all Texans in cleaning up the state. In April, we began the campaign with a newspaper insert directed to newspaper subscribers in 32 cities. Last month we began a radio and billboard campaign urging Texans to compost. The "Don't Bag It" program encourages citizens to leave clippings on their lawn to enrich the soil.

We also are establishing the Clean Texas Partners program to recognize industry efforts to reduce hazardous waste discharges. These are a few examples of the attempt we at the Commission are making to look to the future and prevent pollution, rather than just clean it up after it occurs.

Our mission is to "ensure clean water . . . and facilitate economic growth." For the greater part of this state's history, policy makers have given economic growth priority over the management of pollutants. Policy makers now recognize that we must control pollution not only because we have a moral responsibility to the planet and to future generations to do so, but also because long-term, sustained economic growth will be impossible if we neglect our environment.

Because so many policies of the past gave little or no consideration to the environment, we now face the challenge of both cleaning up decades' worth of pollution and ensuring that decisions made at this time minimize the amount of pollution we leave for future generations. These twin tasks require the commitment of personnel and financial resources that could otherwise be dedicated to any number of projects. Let me illustrate with two examples.

The Commission now has an entire division committed to solving environmental problems associated with petroleum storage tanks. There are over 161,000 registered tanks in Texas. Some 12,000 sites with leaking tanks have been reported, with about 12 to 14 new sites reported each day. The EPA estimates that there are between 11,000 and 15,000 additional unreported sites with leaking tanks.

It costs about \$80,000 to clean up the typical 2.5-tank site. In fiscal year 1992 alone the Commission will pay more than \$133 million in petroleum storage tank claims. It will cost almost \$1 billion to clean up the known leaks. The total estimated cost of cleaning up the known and unreported, suspected leaks is in the neighborhood of \$2 billion.

Some petroleum storage tanks that are now threatening our soil and water have been in the ground since the 1940's. We are committing a tremendous amount of resources to cleaning up those sites, and we will continue to do so for years to come. With the current fees, it will take 16 years to clean up the known leaks,

and 30 to 35 years to generate the funds to clean up all known and suspected leaks.

Texas could have avoided these problems and the expenses associated with correcting them by providing for on-line leak detection at those tank locations or by requiring facilities to use better storage tanks. Policy makers just did not have the knowledge or foresight to apply the old adage that an ounce of prevention is worth a pound of cure.

The Superfund program provides another example of our efforts to remedy mistakes of the past. There are 29 Federal Superfund sites in Texas. Remedial actions are being designed, performed, or completed for the majority of those sites. The Texas Water Commission has participated actively in the Federal Superfund program since its inception twelve years ago and is the lead agency for 14 Federal Superfund sites. The Commission, through construction contracts, has completed portions of the remedial actions at eight Federal Superfund sites. Our staff is presently managing remedial actions at four Federal Superfund sites and plans to begin remedial actions at an additional four locations this calendar year.

By the end of fiscal year 1990, the Commission had spent approximately \$55 million in federal funds for work at Federal Superfund sites in Texas. We expect to spend in excess of \$172 million in federal funds for work at Federal Superfund sites in fiscal year 1992 through fiscal year 1995.

That \$172 million is destined for the cleanup of only a handful of the most serious contamination sites. Our staff conservatively estimates that there are more than 300 additional sites that will eventually require some kind of cleanup.

In these days of billion-dollar federal budget deficits, \$172 million may not strike you as a significant figure. But consider some of the things that we could now do with that money if the wastes found at those Superfund sites had been dealt with appropriately from the beginning.

The basic cost to the State of Texas of educating one pupil in 1991-92 was \$2,200. At that rate, \$172 million dollars could have provided twelve years of public education for over 6,500 students. The average payment made by the Texas Department of Human Services for one day of nursing home care for one patient in fiscal year 1991 was \$39.80. \$172 million dollars could have provided ten years of nursing home care for almost 1,200 patients. The amount we will spend on Federal Superfund sites over the next four years is more than five times the amount spent on the Texas bilingual education program each year and more than twice the amount spent in Texas by the state and federal governments on child care services in fiscal year 1991.

With the \$2 billion that we will spend on storage tank cleanup, we could pay the annual health care bills for over 220,000 families. With that amount of money we could provide ten years of intermediate care for nearly 4,000 mentally retarded citizens of Texas.

Of course, I am not arguing that we should not clean up these Superfund sites and petroleum storage tank locations. I simply regret that they exist and that we now have to devote energy and resources to them at a time when we have a tremendous need to educate the young people of the state, provide care for the children and the elderly residents of Texas, and invest in the future.

So while we work to take care of these Superfund sites and petroleum storage tanks, we must also take every necessary step to ensure that the people of Texas are not creating similar problems for future generations. If we do not act responsibly, these environmental ulcers will proliferate endlessly, and there will be no way to keep them under control.

It is not too late. We can remedy past mistakes and at the same time look to the future. We have to. We can have a clean environment and maintain a growing economy. There is no other way to progress.

We at the Texas Water Commission recognize that we are not alone in our desire to create a cleaner environment. We realize that accomplishing our goals will require the efforts of virtually every resident of the state. However, we acknowledge our responsibility to provide leadership with respect to the environment of Texas. We are making changes in our organization so that we can better fulfill our leadership obligations. We encourage you to continue to do your part to help us make our state a safer and healthier place to live. Thank you.

#### IV. AIR QUALITY

***Title V Permitting -- "Easier Said Than Done"***

Steve Spaw  
Law Environmental, Inc.  
Austin, Texas

***Air Toxics -- "Take My Breath Away"***

Eli Bell  
Benckenstein, Oxford & Johnson  
Austin, Texas

# **TITLE V PERMITTING**

**By**

**Steve Spaw, P.E.  
Southwest Regional Manager  
Law Environmental, Inc.**



August 1992

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- **INTRODUCTION**

- **FEDERAL PERMITS**

Title V of the Federal Clean Air Act (FCAA) Amendments of 1990 established a national operating permit program for sources of air pollution. Title V is the centerpiece of the federal amendments. The new operating permit program will function in addition to the long established construction permit programs for new or modified emissions sources. Under the operating permit program, each site containing facilities subject to any rules or regulations developed under the FCAA must obtain a permit. The purpose of the operating permit is to identify all sources of air pollution at a site and in one enforceable document to list all applicable rules and regulations. Presently, a site may have many different permitted sources, as well as grandfathered sources, a situation which considerably complicates enforcement efforts.

It is estimated that from 3,000 to 5,000 sources in Texas will require operating permits. The Act requires state agencies to issue operating permits to all eligible sites within three years of receiving federal delegation of the operating permit program and further states that 1/3 of the eligible sites will be permitted within each year of the three-year period. Permits must be renewed every five years. This initial surge of operating permit activity will most likely hit in fiscal years 1994-1996. The Texas Air Control Board (TACB) estimates that up to 400 people will eventually be needed to review operating permit applications and enforce the permits. Since the types of technical personnel involved are difficult to recruit and require considerable training, the agency will begin to build up the staff infrastructure for this program in the 1992-93 biennium. A pattern of failing to comply with federal deadlines for the issuance of operating permits could result in the federal government administering the program, collecting the related fees, and sanctioning the state.

- **EMISSION FEES**

The fees established by the FCAA in relation to the operating permit program are annual emission fees to be assessed based on emissions volume for individual pollutants. In order to receive federal approval of their operating permit programs, the FCAA requires states to collect these fees at a rate of at least \$25 per ton unless the U.S. Environmental Protection Agency (EPA) can be persuaded that a lower rate would generate sufficient revenue. The TACB estimates a potential revenue stream in Texas of \$33 million per year at \$25 per ton. The FCAA requires that these fees be used only for air pollution programs and primarily the operating permit program.

· **SMALL BUSINESS ASSISTANCE PROGRAM**

Another aspect of Title V, which has significant workload impacts, are provisions requiring states to establish small business compliance assistance programs. Such programs would provide help in understanding and complying with air pollution regulations to businesses meeting certain eligibility criteria.

● **REQUIREMENTS OF THE FCAA AMENDMENTS OF 1990**

· **FEDERAL OPERATING PERMITS - TITLE V**

The permit program makes it unlawful to operate an affected source (i.e., subject to acid rain provisions), a major source (10-100 tons per year), sources subject to Sections 111 and 112, or sources required to obtain a permit under Parts C or D without a permit. The Administrator may exempt certain source categories from these requirements if compliance is considered "impracticable, infeasible or unnecessarily burdensome..." However, the Administrator may not exempt any major source.

EPA is required, within 12 months, to identify the minimum elements to be included in a permit program to be administered by an air pollution control agency. Such programs must include among other things, requirements for permit applications, monitoring and reporting requirements, permit fee authority, requirements for adequate personnel and funding, and authority for issuing and processing permits.

The state permit fee program must result in the collection, in the aggregate, of not less than \$25 per ton of each regulated pollutant from all sources subject to the program. The amount of the minimum fee will increase each year consistent with the Consumer Price Index. The Administrator may set a different amount that "adequately reflects the reasonable costs" of the program. In addition, the permitting agency may collect an amount less than \$25 per ton provided that all requirements are met. Permitting authorities are not required to impose fees on regulated pollutants emitted by any source in excess of 4,000 tons per year of the regulated pollutant.

States are required within three years of enactment to submit to EPA a permit program, including a legal opinion that the state has adequate authority to implement the program. The Administrator is required to approve or disapprove the program not later than one year after receiving it. The Act allows for partial permit programs as well as for interim approval for up to two years. In addition, sanctions will be imposed if any agency fails to submit an acceptable plan or adequately implement and enforce the program.

**FEDERAL OPERATING PERMITS - TITLE V (continued)**

Sources are required to obtain a permit by the effective date of the permit program. Sources subject to the permit program must submit with their applications a compliance plan, including a schedule of compliance and a schedule for the permittee to submit progress reports. Permitting authorities must approve or disapprove a completed application and issue or deny the permit within 18 months after receiving it. Sources must certify, at least annually, that they are in compliance with the requirements for their permits.

Permits must include enforceable emission limits and standards, a compliance schedule and requirements for the source to submit semiannual reports on the results of required monitoring (continuous emissions monitoring [CEM] is not required - except for the acid rain program and wherever else specifically required by the Act - if sufficiently reliable alternatives are available). In addition, permits must specify inspection, compliance certification and reporting requirements.

Compliance with the permit shall be considered compliance with other provisions of the Act if the permit includes the applicable requirements of the provisions or the permitting agency determines that "such other provisions (which shall be referred to in such determinations) are not applicable and the permit includes the determination or a concise summary thereof."

All states whose air quality may be affected and all states contiguous to or within 50 miles of the state in which a source applying for a permit is located must be notified by the permitting authority that a permit application has been filed. Such states will have an opportunity to submit comments on the issuance of the permit.

The permitting authority must submit copies of all permit applications to EPA for review. The agency is provided with the authority to waive its right to such review for any category of sources, excluding major sources.

No permit to which EPA has objected may be issued unless it has been revised and resubmitted to EPA. If the permitting authority fails to submit a revised permit to EPA within 90 days, the agency will issue or deny the permit based upon the requirements of the Act.

If EPA does not reject a permit application, citizens have 60 days in which to file a petition requesting that the agency take such action. EPA must grant or deny citizen petitions within 60 days of filing.

FEDERAL OPERATING PERMITS - TITLE V (continued)

EPA is also required to conduct an audit at least every two years of each permitting program and is provided with the authority to terminate, modify or revoke and reissue permits.

Any permitting authority may establish additional more stringent permitting requirements, as long as such requirements are not inconsistent with the Act.

The Act requires each state to adopt, within 24 months of enactment, a small business stationary source technical and environmental compliance assistance program. Such programs must include mechanisms for collecting and coordinating information, assisting sources with pollution prevention and accidental release detection, ensuring that sources are notified of their rights, and informing sources of their obligations under the Act. In addition, the program must designate a state office to serve as an Ombudsman for small business stationary sources, include a compliance assistance program to help small business stationary sources determine those requirements with which they must comply and receive permits in a "timely and efficient manner", contain procedures for considering requests of small business stationary sources to modify work practices, technological methods of compliance or the schedule of milestones for such practices and compliance methods.

EPA is required within nine months of enactment, to establish a small business stationary source technical and environmental compliance assistance program to assist states in developing their programs, issue guidance for use by the states and provide for implementation of a program in any state that fails to submit a program to EPA.

Sources eligible for inclusion in the small business technical and environmental compliance assistance program include those: 1) owned or operated by a person employing fewer than 100 employees; 2) defined as a small business by the Small Business Act; 3) not considered a major stationary source; 4) emitting less than 50 tons per year of any regulated pollutant; or 5) emitting less than 75 tons per year (total) of all regulated pollutants. In addition, a state may petition to include in its program source emitting up to 100 tons (total) of all regulated pollutants. Further, both EPA and states, in consultation with one another and the Administrator of the Small Business Administration, may exclude from eligibility sources determined to have sufficient technical and financial capabilities to comply with requirements of the Act without special assistance.

- **FEDERAL OPERATING PERMITS - TITLE V (continued)**

The Act also includes a provision for an EPA Small Business Ombudsman to monitor the program and requires that a seven-member Compliance Advisory Panel be established, to include a representative of the state agency responsible for the air pollution permit program.

Finally, in developing control technology guidelines and requiring CEM, EPA is required to consider the necessity and appropriateness of such requirements for small sources. (This provision does not affect CEM requirements under the acid rain program.)

- **TEXAS IMPLEMENTATION**

Texas faces a formidable task in developing an operating permit program. Initially, it was determined that statutory changes were needed to provide authority to develop a Title V program. Since the Texas Legislature meets for only 120 days every odd-numbered year beginning in January, statutory changes needed to be developed for a session commencing less than 60 days after enactment of the 1990 Amendments. Failure to pass the needed changes in the 1991 session would mean waiting until 1993 for another chance, making it extremely difficult to put together a program to meet the November 15, 1993 submittal deadline. The TACB advised legislators and interest groups of the requirements of the 1990 Amendments and the need for legislative action to provide the authority and resources for Texas to accomplish the tasks set before it. After an initial bill failed to pass the regular session after it was attached to an environmental agency consolidation bill, Senate Bill 2 was passed in the First Called Session. It provided the necessary amendments to the Texas Clean Air Act including the permit fee system needed to fund the program.

Senate Bill 2 attempted to preserve much of the current permitting system employed in Texas and modified other portions to accommodate Title V requirements. The existing preconstruction permit requirement will be maintained, but the old state operating permit program has been abolished in favor of a five-year renewable, one permit system. A notice and comment hearing will be used instead of a contested case hearing for the initial decision on the Title V permit not involving preconstruction review requirements. A contested case hearing appeal of an Executive Director's decision on a Title V permit is available. The small business technical assistance program required under Section 507 of the FCAA has been provided as have expanded criminal penalties; both are required for EPA approval of a Title V program.

- **TEXAS IMPLEMENTATION (continued)**

Now that the final EPA rules are promulgated the TACB can pass its own rules to create the operating permit program. The decisions made by EPA in its promulgation will have a significant impact. For example, EPA rules on permit revisions and general permits will have direct impact on the future of the TACB's Standard Exemption List. In other words, the Texas permitting program must be modified to fit within the Federal operating permit program.

- **TITLE V -vs- TEXAS NEW SOURCE REVIEW PROGRAM (NSR)**

- **BACKGROUND**

Title V is solely for the purpose of codification of already existing federally enforceable requirements into one permit document. There are no substantive requirements of this program except the fee, monitoring and recordkeeping requirements. This program only applies to major sources as defined in Title V.

Texas NSR program on the other hand is for the purpose of safeguarding the state's air resources for protection of public health and welfare. The main substantive requirements of this program are Best Available Control Technology and ambient air impact review. This program applies to both minor and major sources.

Texas also has responsibility to implement the Federal NSR programs authorized under Title I of the FCAA. These are Prevention of Significant Deterioration reviews and Non-attainment permits. The substantive requirements of these program are essentially the same as the Texas NSR program. However, these Federal NSR requirements only apply, by Federal rule, to major sources or major modifications.

- **MODIFICATION AS DEFINED BY TITLE V AND NSR PROGRAMS**

There is a very important distinction to be made between the Title V and NSR programs concerning the term "modification". When the term modification is used in reference to the Title V program, it refers to the "modification" of a Title V permit. Modification of a Title V permit does **not** constitute any construction approval for new and modified facilities, this approval must be obtained through the applicable state and/or federal NSR program.

MODIFICATION AS DEFINED BY TITLE V AND NSR PROGRAMS (continued)

When the term modification is used in reference to the Texas NSR program and the Federal NSR program, it refers to the "modification" of a facility or sources of air contaminants.

It is true the Title V Rules allow administrative amendments and what is termed "minor modifications" to the permit without a public participation requirement provided that they do not constitute Title I (Federal NSR) modifications (to the facility). According to federal rules, to be a Title I modification the emission increase from the project has to be greater than prescribed emission rates. This is consistent with the way the Federal NSR programs are implemented.

In an effort to streamline the process of review and disposition, the state took the position that for insignificant projects it is not appropriate to have rigorous public notice and participation. This position is documented in letters dated January 1991 and March 1991 to the EPA.

Finally, it continues to be the intention of the TACB staff to retain the Texas NSR program for minor and major facilities while implementing the Title V rules. Therefore, regardless of what Title V allows, under the Texas NSR program changes would not be allowed to be made without technical review and approval by the TACB (which under current procedures may or may not require public notice). Since the final Title V rules have only recently been promulgated and the rules are very complicated, I have not completed a thorough review and analysis of all the issues and potential areas where Texas NSR and Title V may conflict. There is concern that depending on how certain sections of the Title V rules are interpreted that there may be conflicts between the Texas program and the Title V rules. One of the tasks ahead of Texas, before the required November 15, 1993 submittal, is to determine how the Title V program and the Texas NSR program will interface so they can design a system that will be streamlined, provide efficient use of resources and accomplish the intent of the Texas Clean Air Act.

- **MINOR MODIFICATIONS AND ADMINISTRATIVE AMENDMENTS**

- **OPERATIONAL FLEXIBILITY**

A major debate over the EPA rules that were just recently promulgated concerned the handling of minor changes in industrial processes that have small increases in emissions. The industrial community in Texas lobbied heavily to have the State's system incorporated into the Title V rules. There were people in Washington who work within the beltway, that lobbied hard against that position. I supported the Texas position, and have worked to preserve the way Texas handles changes to permits, because it gave us the best chance of giving industry flexibility without allowing major changes to take place absent review and approval by the regulators. We won with the help of the "Dreaded Presidents Competitiveness Council". The cries of foul are from those that lost. However, in my opinion, the claims being made of the White House giving away environmental protection to accommodate industry, and that thousands of tons of air pollution will go uncontrolled without public participation is a red herring. If a state has a good NSR program, then significant changes would undergo a permit amendment or modification review and approval. Then the Title V permit would be amended administratively. The question of public participation would be accommodated during the NSR as it is now for significant changes. I do not believe industry received all that it wanted, but the advantage is not having another system layered on top of an existing system. That could become a very cumbersome/time consuming and inefficient system with minimal additional environmental benefit.

- **STATES RESPONSIBILITIES**

It is incumbent upon the states to strengthen their NSR programs. In my opinion this is where the responsibility should reside. Texas is left with the responsibility of redesigning its exemption program and conforming it to a general permit system as well as insuring that other parts of NSR conform to the Title V program in order to have a streamlined and efficient system of permitting.

● **SUMMARY - KEY ELEMENTS OF TITLE V**

- Within 3 years of enactment, States must develop operating permit programs. EPA reviews for approval based on regulatory guidelines EPA issues within one year of enactment.
- Permits will apply to major sources covered under Title I, as well as sources covered by other titles of the Act.
- All sources subject to the program must submit permit applications to the state within 1 year of the effective date (i.e., date of EPA approval) of the state program. The state must establish a schedule for acting on initial permit applications which assures that at least a third of these submitted applications will be acted upon annually for 3 years.
- The state must permit for a term of up to 5 years. Permits must include all Clean Air Act requirements applicable to the source. They must also include a schedule of compliance and applicable monitoring and reporting requirements.
- Sources must pay permit fees to cover the costs of the permitting program.
- EPA must veto a permit if it does not comply with any applicable Clean Air Act requirements.
- The public may sue to compel EPA to perform nondiscretionary duty if EPA fails to veto a permit that does not comply with the Act. Such cases are reviewable in the Federal Court of Appeals.
- Once issued, the permit replaces the otherwise applicable requirements specifically identified in the permit, but EPA may require that the permit be reopened for cause. A permit with a term of 3 or more years must be reopened if new requirements applicable to the source are promulgated.
- EPA may impose sanctions if a state fails to resubmit an approvable permit program after EPA has determined the initial submittal is deficient.

• **CONCLUSION**

Title V permitting represent significant initiatives in air pollution regulation. The programs will be massive and of critical importance to the state. In view of the significant penalties that EPA will be required to place upon states that do not meet their responsibilities, Texas must ensure that its programs will meet with EPA approval. Fortunately, Senate Bill 2 provided the necessary authority for Texas implementation and Legislative appropriations has enabled the TACB to begin to add the people necessary to run the programs.

There is little doubt that Texas will be the most heavily impacted state as a result of Title V. Texas has been the leader in determining the direction of Title V permitting to date and it will be looked to in the future as an example for the nation. It is important for the State to design a system that works efficiently. This will be no small challenge, but I have every confidence that they will succeed.



**4TH ANNUAL TEXAS ENVIRONMENTAL SUPERCONFERENCE**

**"IN THE GROOVE"**

**AUGUST 6-7, 1992  
AUSTIN, TEXAS**

**ALLEN ELI BELL  
BENCKENSTEIN, OXFORD & JOHNSON  
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AUSTIN, TEXAS 78701**

## LIMITATIONS ON EMISSIONS OF TOXIC AIR CONTAMINANTS

As regulatory programs designed to improve air quality in this country have matured, more attention has been directed to the control of emissions of air contaminants known or suspected to be toxic to humans. Increased knowledge about the potential health effects of certain materials, improved measurement and control techniques and heightened public awareness have resulted in increased emphasis on control of toxic emissions at both the state and federal levels.

Due to the historically low profile federal role in the area of hazardous air pollutants and increased public pressure, many individual states initiated prior to 1990 efforts to reduce actual or perceived risks to the public as a result of emissions of hazardous materials. Signed into law on November 15, 1990, the Clean Air Act Amendments of 1990 expanded many existing features of the federal air quality control program and added others. The Amendments also brought about a major structural shift in the program aimed at hazardous air pollutants. The following discussion addresses Title III of the 1990 Federal Clean Air Act Amendments and the ongoing efforts in Texas to reduce toxic emissions.

1. Federal Clean Air Act [Clean Air Act Amendments, P.L. 101-549, 104 Stat. 2399 (1990) 42 U.S.C. §§7401-7642]

### Background

As originally passed in 1963, and as amended in 1965, 1966, and 1967, the Clean Air Act did little more than prescribe requirements for newly manufactured motor vehicles and provide incentives for states to implement independent control programs. That remained the case until enactment of the Clean Air Act Amendments of 1970, P.L. 91-604 (December 31, 1970) which established a basic regulatory framework which remains largely in effect even with the Clean Air Act Amendments of 1990.

The first part of this program involves the promulgation of National Ambient Air Quality Standards (NAAQS) by the Environmental Protection Agency (EPA). The promulgation of these standards triggered the second major program under the statute, the submittal by the states to EPA of plans demonstrating how the NAAQS would be attained. EPA was responsible for, among other things, developing and promulgating requirements for the control of hazardous emissions (NESHAPS) using a statutory risk-based approach which provided "an ample margin of safety." The Clean Air Act Amendments of 1977 built on the statutory framework

established in the Amendments of 1970. However, the 1977 Amendments did not make substantial changes in the program for hazardous air pollutants. At that point, there were indications that the risk-based approach was not working, and the case for changing the basic philosophy of the program was developing.

#### The 1990 Amendments

As indicated above, uncertainty as to the level of exposure to hazardous emissions needed to produce "an ample margin of safety" has been blamed for keeping the NESHAPS program from being effective. From the date of the original enactment of §112 of the Federal Clean Air Act which established the so-called NESHAPS program, only eight standards were promulgated by EPA affecting only a small portion of the sources and emissions of toxics nationwide. [See 40 CFR Part 61 (1990).] As a result, the 1990 Amendments implement a major philosophical shift from risk-based to technology-based regulation of these emissions.

Title III of the Amendments revises §112 of the Act. The cornerstone of the Title III program is a statutory list of 189 chemicals initially scheduled for regulation. [See Appendix A.] The program will apply to any source emitting as much as ten tons per year of any listed compound, or a total of 25 tons per year of two or more compounds included in the list. Regulated sources will be required to apply "maximum available control technology" or MACT to their operations. For new sources, this standard represents the level of control achieved by the best controlled similar source in operation. For existing sources, the standard represents the level of control achieved by the best performing 12 percent of the sources of that type.

EPA is to begin implementation of the program by identifying the source categories for which MACT requirements will be promulgated. The statute required that a list of source categories for which control requirements will be developed be promulgated by November 15, 1991. However, that promulgation did not occur until July 16, 1992. (A copy of the notice is attached as Appendix B.)

By November 15, 1992, EPA is required to promulgate MACT standards for the most critical 40 source categories, and to promulgate a schedule for the publication of standards for the remaining categories. By November 15, 1994, control requirements for 25 percent of the remaining categories are to be published. Control requirements for 50 percent of the source categories are required by November 15, 1997, and MACT for all source categories is required to be published by November 15, 2000. Also, by November 15, 1992, EPA is to

publish a schedule for promulgating MACT standards for all source categories.

As a practical matter, standards issued under §112 will be implemented through the operating permit program established pursuant to Title V of the 1990 Federal Clean Air Act Amendments. This program requires that all major sources obtain a permit to operate which incorporates all applicable air pollution control requirements. Of course, preconstruction review of all facilities constructed after the effective date of an applicable MACT standard must insure that the proposed new source will meet that standard.

The new provisions of §112 include a program whereby sources can obtain a six year exemption from MACT requirements. In order to secure this exemption, the source must accomplish a voluntary reduction of 90 percent of the toxic emissions based on actual yearly emissions for 1987 or later. Absent such a qualifying voluntary reduction, sources will be allowed three years to comply with MACT standards after they are published. The techniques for compliance will include emissions prevention, work design or equipment standards and direct controls.

The program will also include promulgation of control requirements for area sources such as dry cleaners, gasoline stations and medical hospitals and clinics. A potential burden on the oil and gas industry was avoided by the elimination of most oil and gas production wells from consideration as area sources. Under the Amendments, production wells are exempted from that program except for those wells located in a metropolitan area with a population over one million where the Administrator of EPA determines that emissions present more than a negligible risk of adverse effects to public health. For area sources, the Administrator is authorized to set a level of control which reflects "generally available control technology" or GACT.

A second phase of standard setting under Title III is required to address any risks to public health or the environment which remain after the application of MACT and GACT. These "residual risk" standards are to be established eight years after promulgation of MACT and GACT standards and can therefore be of little immediate concern.

Title III's comprehensive revision of the regulation of hazardous emissions also deals with the issue of accidental releases. The Amendments provide for the appointment of a chemical safety board which will be responsible for investigating any accidental emissions that cause a fatality or substantial property damage. The board is to report regularly to Congress and make recommendations to both EPA

and the Department of Labor regarding the preparation for and the prevention of accidental releases. By November 15, 1992, EPA is to promulgate a list of at least 100 chemicals, the accidental release of which could seriously damage human health or the environment. These regulations are to establish threshold quantities for listed pollutants taking into consideration toxicity, reactivity, volatility, dispersion, combustibility and flammability. By November 15, 1993, EPA is to finalize regulations under which facilities with greater than threshold quantities of the listed materials are required to prepare and implement a risk-management plan.

Section 301 provides that oil and gas production wells are not to be combined for purposes of applying the "major source" definition which triggers application of Title III requirements. In a development of major interest, corrective legislation was passed, and signed by the President on December 4, 1991, removing hydrogen sulfide from the list of chemicals regulated under Title III. Its presence on the list signed into law last November was apparently the result of an error, and would have brought a large number of oil and gas sources under the stringent Title III program.

2. Texas Clean Air Act (V.T.C.A. Health and Safety Code §382.001 et seq.)

#### Existing Facilities

Section 382.003(3) of the Texas Clean Air Act defines air pollution as:

(3). . . the presence in the atmosphere of one or more air contaminants or combination of air contaminants in such concentration and of such duration that:

(A) Are or may tend to be injurious to or adversely affect human health or welfare, animal life, vegetation or property; or

(B) Interfere with the normal use and enjoyment of animal life, vegetation or property.

In turn, §382.085 of the Texas Clean Air Act prohibits any person from causing or contributing to air pollution.

The members of the legislature who in 1971 first made the foregoing the law in Texas probably were not thinking about

the control of toxic emissions as we do today. However, this language has been subsequently reenacted by the legislature several times and used effectively by the Texas Air Control Board (TACB) to prevent and abate conditions caused by ambient concentrations of so-called toxic air contaminants independent of federal law.

In response to complaints or concern generated in other ways such as field investigations, emission inventories or engineering reviews, the agency can calculate or measure the levels of contaminants in the air around a particular emitting facility or group of facilities and take appropriate action. A timely example of this approach involves a petroleum storage tank complex located in Austin. Based on citizen concerns, the TACB has monitored concentrations of benzene and other materials near the complex for some time. If levels of any contaminant which exceed standards developed internally by the agency (see discussion below regarding new facilities) are measured and voluntary reductions are not forthcoming, the agency will in all likelihood use §382.085 to bring enforcement action.

This approach has not been tested in court, but if actually measured ambient levels of contaminants which exceed a reasonable threshold are involved in a case, the state would not be reluctant to use it. However, a significant question regarding the use of §382.085 will arise when the government has not actually measured levels of concern but determines to bring enforcement action based on the results of air quality dispersion modeling, i.e. predicting excessive ambient levels by computer using worst case assumptions regarding operating conditions and meteorology. In any event, it is important to know that the TACB has state-of-the-art monitoring equipment for detection and the statutory basis for taking action on what it considers excessive levels of toxic air contaminants around any type of facility in the state.

#### New Facilities

The new source review program currently being implemented by the TACB includes a preconstruction determination that any new facility will not cause or contribute to "air pollution" as defined by §382.003 and prohibited by §382.005. [See Rule 116.3(a)(1).] This determination is made by comparing computer predicted ambient levels of materials to be emitted from the proposed facility to preestablished "effects screening levels" or ESL's. (See Appendix C.) In this exercise, proposed emissions from a new facility are not considered in isolation but are combined with other known emissions in the area for modeling and comparison to the appropriate ESL. These ESL's are based on the professional

staff's judgment considering available information and literature. They have not been through rulemaking and are presumably used as guidelines only and a predicted exceedance of an ESL does not automatically preclude issuance of a permit. However, as a practical matter, a predicted exceedance of an ESL will complicate the permitting process considerably and will probably result in the staff's seeking reductions in proposed emissions prior to recommending issuance of a permit.

### 3. Private Causes of Action

Increased public awareness of environmental issues coupled with the successes of plaintiffs in various areas of toxic tort litigation are likely to lead to more litigation involving emissions of toxic air contaminants. Such things as the ESL's of the TACB and the new MACT/GACT standards will provide potential plaintiffs unprecedented benchmarks for developing new arguments regarding negligence per se. It is therefore critical that owners and operators of facilities that emit materials that might be considered hazardous realize that government rules are not their only concern. In fact, a recent case filed in southeast Texas by multiple plaintiffs seeks damages from several industries because they have allegedly historically emitted butadiene and caused ambient concentrations of the material which have resulted in the plaintiffs having serious illnesses. That case is styled Paula Jean Boudreaux, et al. vs. Texaco Chemical Company, et al. and was filed in State District Court in Jefferson County. There are six plaintiffs and approximately 46 industrial defendants. Companies should consider evaluating the potential off-property impacts of their current emissions and determine whether these presumably legal emissions could reasonably be determined to be harming the public. Such evaluations can, of course, be sensitive matters and should be conducted in phases by competent people with great care and careful planning.

## Air Toxics List

CAS NUMBER	CHEMICAL NAME	CAS NUMBER	CHEMICAL NAME
75070	Acetaldehyde	111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)
60355	Acetamide	542756	1,3-Dichloropropene
75058	Acetonitrile	62737	Dichlorvos
98862	Acetophenone	111422	Diethanolamine
53963	2-Acetylaminofluorine	121697	N,N-Diethyl aniline (N,N-Dimethylaniline)
107028	Acrolein	64675	Diethyl sulfate
79061	Acrylamide	119904	3,3'-Dimethoxybenzidine
79107	Acrylic acid	60117	Dimethyl aminoazobenzene
107131	Acrylonitrile	119937	3,3'-Dimethyl benzidine
107051	Allyl chloride	79447	Dimethyl carbamoyl chloride
92671	4-Aminobiphenyl	68122	Dimethyl formamide
62533	Aniline	57147	1,1-Dimethyl hydrazine
90040	o-Anisidine	131113	Dimethyl phthalate
1332214	Asbestos	77781	Dimethyl sulfate
71432	Benzene (including benzene from gasoline)	534521	4,6-Dinitro-o-cresol, and salts
92875	Benzidine	51285	2,4-Dinitrophenol
98077	Benzotrichloride	121142	2,4-Dinitrotoluene
100447	Benzyl chloride	123911	1,4-Dioxane (1,4-Diethyleneoxide)
92524	Biphenyl	122667	1,2-Diphenylhydrazine
117817	Bis(2-ethylhexyl)phthalate (DEHP)	106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
542881	Bis(chloromethyl)ether	106887	1,2-Epoxybutane
75252	Bromoform	140885	Ethyl acrylate
106990	1,3-Butadiene	100414	Ethyl benzene
156627	Calcium cyanamide	51796	Ethyl carbamate (Urethane)
105602	Caprolactam	75003	Ethyl chloride (Chloroethane)
133062	Captan	106934	Ethylene dibromide (Dibromoethane)
63252	Carbaryl	107062	Ethylene dichloride (1,2-Dichloroethane)
75150	Carbon disulfide	107211	Ethylene glycol
56235	Carbon tetrachloride	151564	Ethylene imine (Aziridine)
463581	Carbonyl sulfide	75218	Ethylene oxide
120809	Catechol	96457	Ethylene thiourea
133904	Chloramben	75343	Ethylidene dichloride (1,1-Dichloroethane)
57749	Chlordane	50000	Formaldehyde
7782505	Chlorine	76448	Heptachlor
79118	Chloroacetic acid	118741	Hexachlorobenzene
532274	2-Chloroacetophenone	87683	Hexachlorobutadiene
108907	Chlorobenzene	77474	Hexachlorocyclopentadiene
510156	Chlorobenzilate	67721	Hexachloroethane
67663	Chloroform	822060	Hexamethylene-1,6-diisocyanate
107302	Chloromethyl methyl ether	680319	Hexamethylphosphoramide
126998	Chloroprene	110543	Hexane
1319773	Cresols/Cresylic acid (isomers and mixture)	302012	Hydrazine
95487	Cresols/Cresylic acid (isomers and mixture)	7647010	Hydrochloric acid
108394	Cresols/Cresylic acid (isomers and mixture)	7664393	Hydrogen fluoride (Hydrofluoric acid)
106445	Cresols/Cresylic acid (isomers and mixture)	123319	Hydroquinone
98828	Cumene	78591	Isophorone
94757	2,4-D, salts and esters	58899	Lindane (all isomers)
3547044	DDE	108316	Maleic anhydride
334883	Diazomethane	67561	Methanol
132649	Dibenzofurans	72435	Methoxychlor
96128	1,2-Dibromo-3-chloropropane		
84742	Dibutylphthalate		
106467	1,4-Dichlorobenzene(p)		
91941	3,3-Dichlorobenzidine		

CAS NUMBER	CHEMICAL NAME	CAS NUMBER	CHEMICAL NAME
74839	Methyl bromide (Bromomethane)	96093	Styrene oxide
74873	Methyl chloride (Chloromethane)	1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin
71556	Methyl chloroform (1,1,1-Trichloroethane)	79345	1,1,2,2-Tetrachloroethane
78933	Methyl ethyl ketone (2-Butanone)	127184	Tetrachloroethylene (Perchloroethylene)
60344	Methyl hydrazine	7550450	Titanium tetrachloride
74884	Methyl iodide (Iodomethane)	108883	Toluene
108101	Methyl isobutyl ketone (Hexone)	95807	2,4-Toluene diamine
624839	Methyl isocyanate	584849	2,4-Toluene diisocyanate
80626	Methyl methacrylate	95534	o-Toluidine
1634044	Methyl tert butyl ether	8001352	Toxaphene (chlorinated camphene)
101144	4,4-Methylene bis(2-chloroaniline)	120821	1,2,4-Trichlorobenzene
75092	Methylene chloride (Dichloromethane)	79005	1,1,2-Trichloroethane
101688	Methylene diphenyl diisocyanate (MDI)	79016	Trichloroethylene
101779	4,4'-Methylenedianiline	95954	2,4,5-Trichlorophenol
91203	Naphthalene	88062	2,4,6-Trichlorophenol
98953	Nitrobenzene	121448	Triethylamine
92933	4-Nitrobiphenyl	1582098	Trifluralin
100027	4-Nitrophenol	540841	2,2,4-Trimethylpentane
79469	2-Nitropropane	108054	Vinyl acetate
684935	N-Nitroso-N-methylurea	593602	Vinyl bromide
62759	N-Nitrosodimethylamine	75014	Vinyl chloride
59892	N-Nitrosomorpholine	75354	Vinylidene chloride (1,1-Dichloroethylene)
56382	Parathion	1330207	Xylenes (isomers and mixture)
82688	Pentachloronitrobenzene (Quintobenzene)	95476	Xylenes (isomers and mixture)
87865	Pentachlorophenol	108383	Xylenes (isomers and mixture)
108952	Phenol	106423	Xylenes (isomers and mixture)
106503	p-Phenylenediamine		Antimony Compounds
75445	Phosgene		Arsenic Compounds (inorganic including arsine)
7803512	Phosphine		Beryllium Compounds
7723140	Phosphorus		Cadmium Compounds
85449	Phthalic anhydride		Chromium Compounds
1336363	Polychlorinated biphenyls (Aroclors)		Cobalt Compounds
1120714	1,3-Propane sultone		Coke Oven Emissions
57578	beta-Propiolactone		Cyanide Compounds <sup>1</sup>
123386	Propionaldehyde		Glycol ethers <sup>2</sup>
114261	Propoxur (Baygon)		Lead Compounds
78875	Propylene dichloride (1,2-Dichloropropane)		Manganese Compounds
75569	Propylene oxide		Mercury Compounds
75558	1,2-Propylenimine (2-Methylaziridine)		Mineral fibers <sup>3</sup>
91255	Quinoline		Nickel Compounds
106514	Quinone		Polycyclic Organic Matter <sup>4</sup>
100425	Styrene		Radionuclides (including radon) <sup>5</sup>
			Selenium Compounds

NOTE: For all listings above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

<sup>1</sup>X† CN where X = H† or any other group where a formal dissociation may occur. For example KCN or Ca(CN)<sub>2</sub>

<sup>2</sup>Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR' where

n = 1, 2, or 3

R = alkyl or aryl groups

R' = R, H, or groups which, when removed, yield glycol ethers with the structure:  $R-(OCH_2CH)_n-OH$

Polymers are excluded from the glycol category

<sup>3</sup>Includes glass microfibers, glass wool fibers, rock wool fibers, and slag wool fibers, each characterized as "respirable" (fiber diameter less than 3.5 micrometers) and possessing an aspect ratio (fiber length divided by fiber diameter) greater than 3.

<sup>4</sup>Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C

<sup>6</sup>A type of atom which spontaneously undergoes radioactive decay

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Thursday  
July 16, 1992

# Environmental Protection Agency

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## Part IV

## Environmental Protection Agency

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Initial List of Categories of Sources  
Under Section 112(c)(1) of the Clean Air  
Act Amendments of 1990; Notice

**ENVIRONMENTAL PROTECTION AGENCY****[FRL-4152-7]****Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Notice of initial list of categories of major and area sources.

**SUMMARY:** This notice publishes an initial list of categories of major and area sources of hazardous air pollutants (HAP's), as required under section 112(c)(1) of the Clean Air Act (CAA) as amended in 1990. The statute requires the Agency to promulgate regulations, over the 10 years following amendment of the CAA, establishing emission standards for each listed category of major sources and area sources.

Today's list does not constitute completion of the listing requirements under section 112(c)(3), pursuant to the area source program under section 112(k)(3)(B), or the listing requirements under section 112(c)(6), relating to sources of specific pollutants. Today's notice does not contain guidance or procedures for filing petitions to delete listed categories of sources, as allowed under section 112(c)(9)(B). Moreover, because of uncertainties in the available data bases concerning sources and emissions of HAP's, all categories of major and area sources meeting the listing criteria in section 112(c)(1) may not be included on today's list. In addition, all categories of sources may not be disaggregated to the extent necessary eventually for the establishment of emission standards. Descriptions of the categories on today's list are included in the docket, to identify industry sectors, processes and equipment that may constitute each listed category.

The Agency considers the listing of categories of sources under section 112(c)(1) to be an ongoing process. Under section 112(c)(1), the Agency is obligated to revise the list if appropriate, in response to public comment or new information, from "time to time, but no less often than every 8 years." The Agency intends to maintain the list as part of the regulatory development process of establishing emission standards and may revise the list on the basis of deletion determinations as part of the source category deletion process to be defined in a later Federal Register notice.

**EFFECTIVE DATE:** July 16, 1992.

**ADDRESSES:** Docket. Docket No. A-90-49, containing supporting information used in developing the notice, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at the Agency's Air Docket, room M1500, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:**

For information concerning categories of sources involving the production, handling, refining or use of chemicals or petroleum, or products thereof, contact Mr. David Svendsgaard, Chemicals and Petroleum Branch, Emission Standards Division (MD-13), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone number (919) 541-2380.

For information concerning categories of sources involving fuel combustion, incineration, metals and minerals processing, contact Mr. William Maxwell, telephone number (919) 541-5430, Industrial Studies Branch, at the above address.

For general information concerning this notice, contact Mr. Thomas Lahre, Pollutant Assessment Branch, telephone number (919) 541-5668, at the above address.

**SUPPLEMENTARY INFORMATION:** The information presented in this notice is organized as follows:

- I. Legislative Background Relating to the Initial Source Category List
- II. Identification of Categories and Subcategories on June 21, 1991 Preliminary Draft List
- III. Discussion of Major Issues and Responses to Comments
  - A. Delineation of Categories and Subcategories
  - B. Listing of Categories of Area Sources
  - C. Data Base Quality
  - D. Consistency With Section 112 and Section 129 Provisions Relating to Specific Categories of Sources
  - E. Listing of Regulated Categories
  - F. Judicial Review of List
- IV. Finding of Threat of Adverse Effects for Categories of Area Sources
  - A. Finding of Threat of Adverse Effects for Category of Commercial Sterilizers Using Ethylene Oxide
  - B. Finding of Threat of Adverse Effects for Categories of Chromium Electroplaters and Anodizers
  - C. Finding of Threat of Adverse Effects for Category of Commercial Perchloroethylene Dry Cleaners
  - D. Finding of Threat of Adverse Effects for Category of Cleaners Using Halogenated Solvents
  - E. Finding of Threat of Adverse Effects for Category of Asbestos Processing
- V. Descriptions of Listed Categories

VI. Relationship of List to Definition of Source for Early Reduction

VII. Administrative Requirements

- A. Docket
- B. Executive Order 12291 Review
- C. Paperwork Reduction Act
- D. Regulatory Flexibility Act Compliance

**Table 1.—Initial List of Categories of Major and Area Sources of Hazardous Air Pollutants**

**Acronym List**

CAA=Clean Air Act  
 CFC-113=trichlorotrifluoroethane  
 CFR=Code of Federal Regulations  
 CTG=Control Technology Guidelines  
 CNS=central nervous system  
 Cr(+3)=trivalent chromium  
 Cr(+6)=hexavalent chromium  
 CWA=Clean Water Act  
 DOE=Department of Energy  
 FR=Federal Register  
 GACT=generally available control technology  
 HAP=hazardous air pollutants  
 kg/yr=kilograms per year  
 MACT=maximum achievable control technology  
 lb/yr=pounds per year  
 MC=methylene chloride  
 Mg/yr=megagrams per year  
 MSHA=Mine Safety and Health Administration  
 NEDS=National Emissions Data System  
 NESHAP=national emission standards for hazardous air pollutants  
 NRC=Nuclear Regulatory Commission  
 NSPS=new source performance standards  
 OMB=Office of Management and Budget  
 OSHA=Occupational Safety and Health Administration  
 OTVC=open top vapor cleaners  
 PCE=perchloroethylene  
 ppm=parts per million  
 PM=particulate matter  
 POTW=publicly owned treatment works  
 PSD=prevention of significant deterioration  
 RACT=reasonably available control technology  
 RCRA=Resource Conservation and Recovery Act  
 SCC=source classification codes  
 SIC=Standard Industrial Classification  
 SOCM=synthetic organic chemical manufacturing industry  
 TCA=1,1,1-trichloroethane  
 TCE=trichloroethylene  
 tm=trademark  
 TRIS=Toxic Release Inventory System  
 tpy=tons per year  
 VOC=volatile organic compounds  
 U.S.=United States

**I. Legislative Background Relating to the Initial Source Category List**

The Clean Air Act Amendments of 1990 (Pub. L. 101-549) require, under the revisions to section 112, that the Agency evaluate and promulgate regulations requiring control of emissions of HAP's from categories of major and area sources. The term "major source" is defined in paragraph 112(a)(1) to mean any stationary source or group of

stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year (tpy) or more of any hazardous air pollutant or 25 tpy or more of any combination of hazardous air pollutants.

The term "stationary source," from section 111, means any building, structure, facility, or installation which emits or may emit any air pollutant. The Agency may establish a lesser quantity of pollutant emissions for the definition of a major source than that specified in the previous sentence, based on various characteristics of the pollutants being emitted (including potency, persistence, potential for bioaccumulation, or other relevant factors). The Agency may establish different criteria for the definition of a major source in the case of radionuclides. The term "area source," as defined in section 112(a)(2), means any stationary source of HAP's that is not a major source. Section 112(c) requires the Agency to list categories of major sources and area sources. Because most groupings of sources are based on process or product-oriented criteria, they may include a mix of both major and area sources. The distinction between categories of major and area sources is discussed in more detail later in this notice.

Section 112(b) includes a list of chemicals, compounds, or groups of chemicals deemed by Congress to be hazardous air pollutants. Section 112(c)(1) requires the Agency to publish, within 1 year of enactment of the CAA Amendments of 1990, a list of categories of major and area sources emitting one or more listed HAP. Categories of area sources may be listed subject to the additional requirements of section 112(c)(3), which require the Agency to find a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate) warranting regulation under (Section 112).

There are additional requirements for listing source categories under section 112(c)(3) and section 112(c)(6). Section 112(c)(3) refers to the area source strategy required under section 112(k). This strategy requires that the Agency list in 5 years, and subject to regulation in 10 years, sufficient categories of area sources to account for 90 percent of the aggregate emissions of each of 30 or more HAP's. These 30 or more HAP's shall be those determined to present the greatest threat to public health in the largest number of urban areas. Section 112(c)(6) requires the listing within 5 years of categories of sources assuring

that at least 90 percent of the aggregate emissions of each of seven specific pollutants are subject to emission standards under section 112(d) within 10 years of enactment of the CAA Amendments. Although some of the categories that will be identified under these sections are probably already included on today's list, there are likely to be others which have not yet been identified. The publication of today's list does not constitute completion of the requirements of section 112(c)(3) or section 112(c)(6).

Other requirements in section 112(c) affect the listing of specific categories of sources. Section 112(c)(4) gives the Agency the discretion to list any category of sources previously regulated under section 112 before enactment of the CAA Amendments of 1990. Section 112(c)(7) requires the Agency to establish a separate category for research facilities as necessary to assure equitable treatment of such facilities. Section 112(c)(8) requires the Agency to list boat manufacturing as a separate subcategory when establishing emissions standards for styrene. In addition, there are provisions elsewhere in section 112 and section 129 that impose listing requirements on the Agency, both directly and indirectly. These provisions, and the Agency's resulting actions, are discussed in detail in sections III.D and III.E in today's notice.

Revisions to today's list may also result from deletion determinations under section 112(c)(9)(B). Under section 112(c)(9)(B), the Agency may delete a category from the list, based on petition of any person or on the Administrator's own motion, upon a determination that: (1) In the case of sources that emit HAP's that may result in cancer, no source in the category (or group of sources in the case of area sources) emits HAP's in quantities that may cause lifetime cancer risk greater than 1-in-1 million to the most exposed individual; or, (2) in the case of sources that emit HAP's that may result in non-cancer adverse health effects or adverse environmental effects, emissions from no source in the category (or group of sources in the case of area sources) exceed a level adequate to protect public health with an ample margin of safety and no adverse environmental effects will result. The Agency shall grant or deny a petition to delete a category within 1 year after the petition is filed. Procedures for such petitions will be addressed in a separate **Federal Register** notice. Under section 112(c)(9)(A), the Agency shall delete a source category if all pollutants emitted

by that category have been deleted from the HAP list under section 112(b)(3)(C) or section 112(b)(3)(D).

Revisions to today's list may also arise from the establishment of lesser quantities for the definition of major sources, under section 112(a), resulting in additional categories of major sources. Special studies required under various provisions of section 112, or information gathered by the Agency during the regulatory development process, may also result in changes to the list.

Section 112(c)(2) requires the establishment of emission standards under section 112(d) for every category of sources included on the initial list published pursuant to section 112(c)(1). Emission standards established for categories listed under section 112(c) shall be promulgated according to the schedule for standards set forth in section 112(e). In determining where source categories should be placed on this schedule under section 112(e), the Agency shall consider the known or anticipated adverse effects of the emitted pollutants on health and the environment; the quantity and location of emissions; and the efficiency of grouping categories according to the pollutants emitted or the processes or technologies used. The schedule for promulgation of emission standards for each category of HAP sources is to be published, after an opportunity for comment, within 24 months of enactment.

## **II. Identification of Categories and Subcategories on June 21, 1991 Preliminary Draft List**

That list of categories of sources was made available for public comment on June 21, 1991 (56 FR 28548). The preliminary draft list was compiled from a number of data bases, described below, each having certain strengths and weaknesses.

1. The National Emissions Data System (NEDS) is an Agency data base of reported emissions from sources emitting more than 90.7 megagrams per year (Mg/yr) [100 tons per year (tpy)] of criteria air pollutants, including volatile organic compounds (VOC) and particulate matter (PM). The sources included in NEDS are classified by unique identifiers, termed source classification codes (SCC's). Speciation profiles have been assigned to each of the SCC's. These speciation profiles are an estimate of the chemical species comprising the total VOC or PM emissions for a category. In many cases, the chemical species constituents are HAP's. A category was included on the

preliminary draft list if HAP emissions were associated with a source classification code in NEDS, but only for species profiles having a data quality ranking of "A," "B," "C," or "D." Species profiles having an "E" ranking were not used, because of insufficient quality. (See Docket No. A-90-49, Items No. II-A-45 and 46 for published species profiles.)

2. Categories of the synthetic organic chemical manufacturing industry (SOCMI) were identified from literature describing SOCMI reactants and products. A SOCMI category was listed if it either manufactured a chemical on the list of HAP's or if it used one or more of the listed HAP's to produce another chemical.

3. Published production and consumption data for organic chemicals were used to identify organic chemical end-user processes emitting HAP's. There are a total of five general category groupings for which such data were used: Foam blowing processes, process solvent use, polymerization processes, pesticide production, and pharmaceutical production. Production and consumption data were obtained for each chemical from readily available literature. Each end use of a chemical was identified as a category.

4. The Agency's Toxic Release Inventory System (TRIS) was a fourth source of data that was used to identify HAP emitters. The TRIS data base contains emissions data reported by individual industrial facilities as required under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986. Emissions data in TRIS are reported on a plant wide basis. Standard Industrial Classification (SIC) Codes are reported in TRIS but the entries are usually not specific enough to identify categories of sources. For this reason, it is difficult to use the TRIS data base for identifying categories, or to determine where there is overlap between the TRIS data base and the methods described above. The TRIS data base did, however, identify plants emitting listed pollutants not identified through the methods described above.

5. The list of categories developed by using the several data sources described above was augmented by reviewing existing studies by the Agency's Office of Air Quality Planning and Standards. A major portion of this effort consisted of reviewing data developed in support of previous Federal Register notices describing previous Section 112 regulatory decisions. For the most part, the methods described above had already identified most of the categories. However, in some cases

additional categories were identified from these references and were added to the list.

Today's initial list in Table 1 is based on these same sources of data in addition to information supplied in response to the publication of the preliminary draft list.

### III. Discussion of Major Issues and Responses to Comments

In the preamble to the June 21, 1991, preliminary draft list (56 FR 28548), comments were requested on a number of issues. Over 140 comments were received from industry representatives, environmental groups, State and local air agencies, universities, other Federal Agencies, and various other public and private interests. In general, comments were received relating to: (1) The quality and inclusiveness of the data base, (2) the definition and disaggregation of various categories of sources, (3) the need for a finding of threat of adverse health or environmental effects before listing categories of area sources, and (4) alternatives for listing categories of steam electric generators and incinerators. Following is a summary of the major comments received along with responses to these comments. The selection of particular comment responses for discussion in today's notice is intended to indicate the Agency's position on the major issues raised by the commenters. (All comments and responses are contained in Docket No. A-90-49.)

#### A. Delineation of Categories and Subcategories

Section 112(c)(1) states that the Administrator shall publish a list of all categories and subcategories of major sources and area sources. The terms "category" and "subcategory" are not defined in section 112, nor is the relation of either of these terms defined with respect to the term "source."

In the June 21, 1991, notice, comment was requested on the appropriate distinctions the Agency should make between categories and subcategories. In addition, information was requested for the division, or disaggregation, of listed groups of sources into categories and subcategories, along with accompanying documentation.

#### Relationship Between Source and Category of Source

Because of the undefined relationship between source and category of sources in the CAA, this relationship needs to be defined in the context of today's initial list of categories. Section 112(a)(3) provides that "stationary source" shall have the same meaning for purposes of

this section as it has under section 111(a), which is any building, structure, facility, or installation which emits or may emit any air pollutant. As section 112 applies to all stationary sources emitting HAP's, any entity covered by this section must be a building, structure, facility or installation that emits HAP's. Whether such source is considered "major" will depend upon its size and configuration, or upon the size and configuration of the larger source of which it is a part.

A "category" of sources is a group of sources having some common features suggesting that they should be regulated in the same way and on the same schedule. Thus, for example, industrial process cooling towers would be considered a source category. Each tower emitting more than the amount of HAP's provided in section 112(a) as qualifying a source as a major source, or each tower located within a larger source emitting that amount of HAP's, would be subject to maximum achievable control technology (MACT) for major sources.

As a result, a large plant or facility, such as a refinery or chemical manufacturing plant, would clearly be a "major source," but would also comprise multiple source categories. For example, a large plant would likely contain stationary sources included within the industrial cooling tower source category, as well as sources within the process heater category, industrial boiler category, etc.

Categories having sources whose HAP emissions exceed the major source threshold in section 112(a), or having sources that are commonly located on the premises of major sources, are categories of major sources. Conversely, categories having sources which neither exceed the major source HAP emission threshold under Section 112(a), nor are commonly located on the premises of major sources, are categories of area sources.

#### Use of the Term "Category" or "Subcategory"

Several commenters suggested using only the term "category" rather than both "category" and "subcategory," for various reasons. Although the language in section 112 generally uses these terms together, seemingly interchangeably, the comments stated that there are several instances where only the term "category" is used. Sections 112(c)(9)(A) and 112(c)(9)(B)(i) provide for deleting of categories of sources only. Similarly, section 112(f)(2)(A) obligates the Administrator to promulgate standards to mitigate residual risk only for

categories of sources. In response to these comments, the Agency has decided to use the term "category" to designate all of the groupings of HAP-emitting sources in today's list. The exclusive use of the term "category" will clarify the applicable requirements of section 112. This decision does not affect the degree of disaggregation of industry groups in today's list of categories or the authority of the Agency to distinguish among classes, types, and sizes of sources in establishing emission standards. During the standard-setting process, the Agency may in some cases find it appropriate to combine several listed categories into one, or further divide a category. This decision does not affect the Agency's authority to define subcategories of sources at a later date.

An exception to the exclusive use of the term "category" has been made in the proposed rule establishing emission standards for perchloroethylene dry cleaning facilities (56 FR 64382), wherein subcategories were defined for each category to differentiate between the two major types of machines used in dry cleaning, i.e., "dry-to-dry" and "transfer." This is consistent with the Agency's strategy (discussed later in this Section) of identifying and listing disaggregated categories and/or appropriate subcategories as part of the rulemaking process, after gathering sufficient information to identify appropriate aggregations for standard-setting purposes.

#### Suggested Additions of Categories

Some commenters suggested adding specific categories to the list. In response, where the comments included reasonable documentation, the Agency has added the suggested categories.

#### Suggested Deletions of Categories

Many commenters suggested deleting categories that were on the draft preliminary list, for reasons summarized below.

Some commenters contended that all sources in certain categories are area sources, thereby requiring the Administrator to make a finding of threat of adverse health or environmental effect before listing those categories. The Agency agrees that such a finding or threat should precede listing categories of area sources (see section III.B for more discussion). Where commenters demonstrated the existence of no major sources of HAP emissions within categories, those categories were deleted from the preliminary draft list, as long as no finding of threat of adverse effects was made. The Agency may list such categories as area source

categories later if a finding of threat of adverse effects can be made, per section 112(c)(3), or may list them under the area source strategy required under section 112(k).

Some commenters contended that no sources in certain categories emitted any HAP's, and therefore should not be listed. The Agency, in response, deleted categories if a commenter provided reasonable evidence of no HAP emissions and if the Agency's own data, upon review, could not support the existence of HAP emissions.

Some commenters contended that other provisions in amended section 112, or section 129, either preclude the listing of specific categories, or give the Agency the discretion not to list specific categories at this time. In response, the Agency acknowledges that its discretion to list or omit some categories of sources is limited by other provisions. Therefore, the Agency has attempted to make today's list consistent with these other provisions. These various other provisions are discussed in detail in section III.D of today's notice.

Some commenters contended that regulations exist or are being developed under other titles of the CAA or other statutes, either by EPA or other agencies, for many categories of sources on the preliminary draft list. These commenters further argued that categories subject to these other statutes should not be listed under section 112(c)(1) and thus be subject to "dual regulation." In response, the Agency does not believe that the existence of another applicable regulation, or the imminent prospect of a regulation, either under the CAA or under another statute, gives the Agency general discretion to omit from today's list any category of sources under section 112(c)(1). (There are specific exceptions to this position, however, as is discussed in more detail in sections III.D and E of today's notice.) Moreover, listing does not necessarily lead to duplicate regulation because air emission regulations issued under another statute may become the basis for the "MACT floor," which is the minimum degree of emissions reduction prescribed for new and existing sources subject to emission standards under section 112(d).

Some commenters suggested deleting poorly defined and broadly overlapping categories of sources to avoid confusion when identifying sources subject to regulation in each category. Commenters most frequently criticized the following categories and groupings: "(product or chemical) use," "chemical intermediate," "primary and secondary metals, miscellaneous," "surface coating operations, general solvent uses," "in

situ fuel use," and "TRIS production and use," the latter involving the production or use of HAP's as reported to the Agency's TRIS data base. In response, the Agency has removed a number of previously listed categories that were poorly defined and/or broadly inclusive. For example, most of the general "(product or chemical) use" categories have been deleted. As another example, the generic "waste treatment and disposal" category has been removed. As still another example, the broad category of "TRIS production and use" has likewise been deleted. Many of the operations covered under these deleted categories are still covered in today's list, but are included in the logical parent grouping instead of in a separate category. For instance, rather than listing wastewater treatment operations as part of a generic, stand-alone wastewater treatment grouping, these operations are now included under the listing of their respective production operations. Hence, even though many broad categories still remain on today's list, the Agency has eliminated many categories that were poorly defined and overlapping. (General descriptions of all categories of sources are located in Docket No. A-90-49, Item No. IV-A-55. See section V of today's notice for more discussion of these descriptions.)

Some commenters suggested not listing categories of sources where insufficient evidence existed to demonstrate that there were any major sources in those categories. In other words, the commenters suggesting only listing categories of sources that either exceeded the quantity of HAP's required to define a major source, pursuant to section 112(a), or which are commonly located on the premises of a major source. Upon review of all comments and the original data bases, the Agency has responded by only including categories of major sources where there was reasonable certainty that at least one stationary source in the category is a major source or where sources in the category are commonly located on the premises of major sources. In cases where sources in the category typically emit less than this threshold, the Agency may nevertheless list any such category as a category of major sources if sources in that category are commonly associated with major sources. For example, industrial process cooling towers, which individually emit chromium emissions in amounts less than 0.907 Mg/yr (1 typ), are listed as a category of major sources since such towers are commonly found on the premises of petroleum refineries, chemical manufacturing plants, and

other major sources. Thus, MACT standards set for the cooling tower major source category will be applicable to cooling towers that are a component of a larger major source, such as a refinery, even though no individual source in this category is itself a major source. This position is supported by the legislative history of the 1990 amendments. Senator Durenberger, one of the managers of the Senate Bill, stated that "[t]he managers' intent is . . . that where the entire plant is a major source, any portion thereof to which a MACT standard applies is subject to that standard regardless of the total emissions from that portion." 136 Cong. Rec. S. 16927 (October 27, 1990).

Note that any such category may also be listed as a category of area sources on today's list, if accompanied by a finding of threat of adverse effect, if the Agency elects to establish standards for sources in the same category that are not major sources. For example, chrome platers and anodizers are also listed as categories of area sources on today's list because many are not located on the premises of major sources. (The listing of categories of area sources is discussed later in section III.B.)

#### Appropriate Disaggregation of Categories

Many comments were received on the extent to which the Agency identified appropriate subdivisions of industry groups. Many commenters contended that insufficient or inappropriate categories were included on the draft preliminary list and that many categories on the draft list did not sufficiently differentiate among dissimilar processes based on variations in size, operations, raw materials, emissions, controllability, etc. The major rationale for further disaggregation, per the comments, are:

1. Disaggregation of broad categories affords the Agency with scheduling flexibility in promulgating standards under section 112(d). The Agency cannot, per language in section 112(d)(1), distinguish among classes, types, and sizes of sources within a category or subcategory in establishing standards for the purpose of delaying compliance with standards. Hence, the commenters argue that the Agency must list disaggregated categories in order to avoid having to establish standards for all categories within a broad group at the same time.

2. Disaggregation of broad categories reduces the likelihood that dissimilar categories will be considered together for the purposes of defining emission standards under section 112(d), or when

determining the need for subsequent standards to address residual risk under section 112(f). The commenters argue that the definition of narrowly applicable categories of sources will promote more cost-effective, technically appropriate, and, in some cases, safer controls because any such controls would be based on a consideration of similar sources.

3. Disaggregation of broad categories into relatively narrow categories makes the source category deletion petition process more viable since the deletion criteria imposed under section 112(c)(9)(B) would have to be demonstrated for fewer sources in narrower industry groupings. Trade associations, in turn, would be better able to gather the necessary information for preparing deletion petitions if narrower industry groupings were made.

4. Disaggregation of broad categories into better resolved categories affords both industry and air agencies with a better indication of which sources may be affected by various regulatory provisions of section 112.

In contrast to the above comments, several commenters opposed excessive disaggregation of source categories. These commenters expressed concern that some categories might be disaggregated so finely as to result in the inclusion of only a few sources, which might result in MACT floors that would not result in effective emission standards.

In response to the many comments concerning appropriate disaggregation of source categories, the Agency acknowledges potential advantages and disadvantages of defining categories either very broadly or very narrowly. Ultimately, in accordance with section 112(d), the Agency will need to identify the "best controlled similar sources" when establishing emission standards for new sources in a category and "the best performing 12 percent" of sources when establishing emission standards for existing sources in a category. Hence, the Agency recognizes that further disaggregation of many listed categories of sources may be necessary prior to promulgation of emission standards. The Agency has the discretion to distinguish among classes, types, and sizes of sources within a category in establishing standards.

In general, the Agency has decided, at this time, in most cases, to list broad categories of major and area sources rather than very narrowly defined categories. The main reason for this decision is that, even considering the many comments received, the Agency has too little information to anticipate specific groupings of similar sources that

are appropriate for defining MACT floors for the purpose of establishing standards. Criteria that may need to be considered in defining categories of similar sources include similarities in: Process operations (including differences between batch and continuous operations), emissions characteristics, control device applicability and costs, safety, and opportunities for pollution prevention. The Agency anticipates that all of the above criteria, and perhaps others, can be accounted for appropriately by the Agency only after gathering significant information for each listed category of sources during the course of establishing emission standards.

The Agency is aware of the potential disadvantages of listing broad categories of sources. The Agency believes that many of these disadvantages can be adequately overcome in several ways. First, a general description of each listed category is contained in the docket accompanying today's notice (Docket No. A-90-49, Item No. IV-A-55). This description assists in defining what industry sectors, operations, and/or equipment may be included in each listed category. Second, section 112(c) allows revisions to be made to the list, including additions and deletions, in response to public comment, new information, or through petition. In this regard, since the Agency initiates the development of standards years before expected promulgation, industry and the public have opportunities for considerable input to the process and can learn of the Agency's intentions for standards early in the process. Third, because of anticipated revisions to the list, the broad categories on today's initial list will not necessarily represent the pool of sources that will be considered for the purposes of identifying MACT floors for establishing emission standards under section 112(d) or for purposes of determining the need for residual risk standards under section 112(f). In this latter regard, MACT floors may be based on smaller pools of sources in instances where categories on today's list are disaggregated later during standard setting.

The Agency acknowledges that, by listing broad categories, it loses some flexibility in scheduling standards for different operations, or subcategories, within broad categories. The reason for this, as pointed out by several commenters, is that section 112(d) does not allow the Agency to distinguish among classes, types, and sizes of sources within a category where such action would lead to a delay of the

compliance date for any source within the broad category. Hence, once a broad category is initially defined, the Agency is obligated to establish standards for the entire category according to the schedule developed under section 112(e), regardless of how many classes, types, and sizes of sources are subsequently defined under that broad category.

While the Agency may not define subcategories within a category if such subcategories would result in a delay in compliance with standards, the Agency may, at its discretion, establish standards for listed categories or subcategories within a listed category sooner than scheduled under section 112(e). This option gives the Agency scheduling flexibility in a manner consistent with section 112(d)(1) and enables the Agency to consider broader categories for establishing standards and determining compliance. In this regard, the Agency may aggregate, into a single category on any revised list, categories or subcategories which have been disaggregated on the initial list. This may be done for the purpose of setting a single emission standard for the aggregated category. This would not result in the delay of the compliance date of any listed category.

The Agency also has the authority, under section 112(i), to establish compliance dates for existing sources up to 3 years following the effective date of any emission standards. This authority also provides some scheduling flexibility if the Agency decides to disaggregate a category of sources into subcategories.

The Agency acknowledges the existence of overlap in some categories on today's list. For example, synthetic organic chemical manufacturing is listed as a category, but so are process heaters and industrial process cooling towers, which can also be found on the premises of chemical manufacturing facilities. To avoid confusion in the regulatory schedule (required under section 112(e)) due to any such overlap in coverage, and to avoid confusion when establishing standards, a footnote has been added to today's list stating that "all listed categories are exclusive of any specific operations or processes included under other categories that are listed separately." This strategy allows the Agency to schedule the establishment of standards for overlapping categories at different times, at the Agency's discretion, based on the criteria for scheduling in section 112(e). Hence, in the above example, the Agency would have the discretion to schedule the promulgation of standards for process heaters and industrial

process cooling towers separately from all other operations covered under the category of synthetic organic chemical manufacturing.

#### Consistency With Section 111 and Part C

Several commenters noted that section 112(c)(3) requires that to the extent possible, the categories and subcategories listed under (section 112(c)) shall be consistent with the list of source categories established pursuant to section 111 and Part C of the CAA. One commenter mentioned that both major and area sources, per the language in section 112(a), are stationary sources that have the same meaning as such term has under section 111, i.e. any building, structure, facility or installation which emits or may emit any air pollutant. The latter commenter contended that this definition of stationary source excludes some operations (e.g., certain applications of architectural paints and coatings) which do not conform to this definition. One commenter noted that categories defined under section 111 and part C represent a "high order of aggregation," and therefore, in order to be consistent with these other parts of the CAA, today's list should not identify overly "fine-grained" categories of sources. Conversely, another commenter contended that the listing under section 111 has no relevance since there is no differentiation between major and area sources.

In response to these comments, the Agency reviewed the categories of sources established pursuant to section 111 and part C, along with many other data bases (see section II), when developing the initial list in today's notice. Many of the categories of sources in section 111 and part C are included on today's list. Some categories in section 111 and part C are not on today's list because the Agency did not have reasonable evidence that they: (1) Are categories of major sources, or (2) are categories of area sources which present a threat of adverse health or environmental effects warranting regulation under section 112. In general, the level of aggregation of categories on today's list is consistent with that level inherent in section 111 and part C.

The categories of sources on today's list are generally consistent with the definition of stationary sources in section 111. The Agency interprets this definition to include a wide variety of operations and activities that emit HAP's, including categories of stationary sources that emit fugitive emissions. No categories of mobile sources are included on today's list.

#### Consistency With Categorization Under Existing Clean Air Act (CAA) Standards

Several commenters contended that the Agency, in listing categories of sources under section 112(c), needs to consider adopting categories consistent with those already established under existing CAA regulations. Specifically, these commenters contended that today's list should conform to existing categories subject to the Agency's new source performance standards (NSPS), (40 CFR part 60), or in the Agency's control techniques guidelines (CTG's) for establishing reasonably available control technology (RACT). The rationale given was that this consistency would avoid confusion, unnecessary costs, and dislocation within the affected industries, and provide uniformity with the applications of the rules for the prevention of significant deterioration (PSD), NSPS, and nonattainment regulations. The commenters argued that the categories defined in setting NSPS and CTG's demonstrate reasonable subdivisions of categories already identified by the Agency as necessary for establishing appropriate controls for dissimilar processes. Hence, the commenters contend that this same level of categorization should be preserved on today's list and considered as a basis for promulgating standards under section 112(d).

In response, the Agency agrees that it is appropriate, when establishing standards for categories of sources on today's list, to consider categories of sources already defined under existing statutes, particularly categories regulated under the CAA. The Agency intends to consider consistency with categories subject to existing standards as one of many criteria to be considered when revising today's list prior to the establishment of emission standards under section 112(d).

#### Consistency With Clean Water Act Categorization Process

Several commenters suggested that the Agency should use, as a starting point, categories of sources identified for effluent limitation guidelines under the Clean Water Act (CWA). The commenters contended that the lessons learned in the source categorization process under the CWA underscore the importance of identifying appropriate categories of sources for which specific emissions standards may need to be developed.

When compiling today's initial list, the Agency did not adopt the categories of sources identified under the effluent

limitation guidelines under the CWA. This decision was made for two reasons. First, the Agency made the decision not to define overly narrow categories in this initial list (see earlier discussion in section III). Second, the Agency is not certain, at this time, whether categories, identified for purposes relating to water effluent standards, would be appropriate for establishing air standards. Nevertheless, the Agency intends to consider the category definitions use in setting effluent guidelines when subsequently revising today's initial list and when developing emission standards.

#### B. Listing of Categories of Area Sources

Section 112(c)(1) of the CAA Amendments of 1990 requires the Agency to publish a list of all categories of major sources and area sources. This requirement for listing categories of area sources is modified in section 112(c)(3) with language stating: the Administrator shall list each category or subcategory of area sources which the Administrator finds presents a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate) warranting regulation under this section.

Section 112(c)(3) also requires that the Agency shall, not later than 5 years after the date of enactment of the CAA Amendments of 1990 and pursuant to section 112(k)(3)(B), list categories of specific HAP's presenting a health threat in urban areas. Section 112(c)(3) further requires that, within 10 years after enactment of the CAA Amendments, the Agency must ensure that categories of certain area sources are subject to regulation, according to emission and risk reduction criteria prescribed in sections 112 (c) and (k). The categories of area sources on today's initial list of categories of area sources do not constitute completion of this requirement.

There are other requirements in Section 112 that may directly or indirectly result in the listing and promulgation of standards for categories of area sources. Section 112(c)(6) requires, by 1995, the listing of categories of sources of specific pollutants (alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, polychlorinated biphenyls, 2,3,7,8-tetrachlorodi-benzofurans, and 2,3,7,8-tetrachlorodibenzo-p-dioxin), assuring that sources accounting for 90 percent or more of the aggregate emissions of each pollutant are subject to standards within 10 years of enactment of the CAA Amendments. Section 112(k) requires the listing of categories of area sources

as part of a national strategy to reduce emissions of not less than 30 HAP's and to achieve a reduction in cancer incidence of not less than 75 percent. Studies or analyses performed as part of the Great Lakes and Coastal Waters program under section 112(m), or as part of other studies under section 112 involving mercury emissions, oil and gas wells and pipeline facilities, hydrogen sulfide, and hydrofluoric acid, may all potentially result in the listing of additional categories of area sources at some later date.

#### Alternative Approaches for Listing Categories of Area Sources

In the draft preliminary list (56 FR 28548), many categories of area sources were listed and no distinction was made between categories of major and area sources. The Agency solicited comments on three approaches under consideration for addressing categories of area sources on today's list:

1. Constrain the list to include only categories of major sources and categories of area sources that are sufficiently well characterized to permit a finding of threat of adverse effects. Additional categories of area sources would be subsequently added at some later date when sufficient data were gathered to make a finding of threat of adverse effect.

2. Make an interim finding that all categories of area sources should be listed by virtue of any emissions of HAP's, but later delete any categories determined to be inappropriately listed, using the source category deletion process in section 112(c)(9)(B).

3. Develop a finding of threat of adverse effects that is based on limited available data that could be applied to all identified categories of area sources on the preliminary draft list. This finding would be less rigorous than the first approach due to data limitations and available time. This approach would result in a more comprehensive list than envisioned in the first approach.

Many comments were received on the approach that should be taken for including categories of area sources on today's list. The overwhelming majority of commenters, particularly industry representatives, favored the first approach cited above requiring a detailed finding of threat of adverse effects before listing a category of area sources. Many commenters contended that the language of section 112(c) clearly requires such a finding. Many of these same commenters further contended that Congress clearly did not intend a listing approach similar to the second or third options listed above. These commenters cited as evidence the

requirement, both under sections 112(c) and 112(k), for an area source program and for specific reductions in area source emissions and associated cancer incidence only after considerable study. Furthermore, if no finding or a less rigorous finding were utilized for listing categories of area sources, these commenters asserted that the Agency and potentially regulated sources would be overwhelmed with rigid regulatory obligations bearing little relation to HAP emissions, exposures, or risks. Moreover, these commenters asserted that this course of action might result in the development and evaluation of many unneeded and onerous petitions to delete categories of sources.

Several commenters supported the second approach cited above wherein all categories of area sources are listed based on any level of HAP emissions. The rationale given by the commenters was that this approach would ensure that all categories of area sources would ultimately be examined before deletion from the list.

Several commenters suggested considering a *de minimis* emission cutoff so that very small sources within a category would not be subject to standards. Such a *de minimis* level could be defined specifically for each category of area sources or defined generically for all categories of area sources. The purpose of this, per the commenters, would be to assure that industry and Agency resources are not expended on sources that pose negligible risk to human health or the environment.

In response to these comments, the Agency agrees that the language of section 112(c)(3) clearly requires that a finding be made of threat of adverse effects to human health or the environment warranting regulation under section 112 in order for a category of area sources to be listed. Hence, the Agency has removed all categories from today's list for which: (1) The available information indicates that the category contains only area sources, and (2) the Agency has insufficient information at this time to make a finding of threat of adverse effects warranting regulation. The Agency has listed today a number of categories of area sources for which the Agency has adequate information to make a finding of threat of adverse effects warranting regulation under section 112. A finding of threat of adverse effects for these listed area source categories is presented in Section IV in today's notice.

Regarding the commenter's recommendation that the Agency consider *de minimis* levels, the Agency

has the discretion, when establishing standards, to distinguish among classes, types, and sizes of sources within categories in setting standards under section 112(d)(2). The Agency shall consider costs and non-air quality health and environmental impacts and energy requirements. In addition, the Agency may set generally available control technology (GACT) standards for area sources under section 112(d)(5). The Agency considers this discretion sufficient to avoid establishing unwarranted and inappropriate emission standards for very small emitters.

#### Applicability of Emission Standards to Categories of Major and Area Sources

The Agency identifies a category of major sources as one characterized either by the presence of at least one major source in the category, based on the HAP emission threshold defined in section 112(a), or by the common association of sources in the category with major sources. Because of this, all sources in many listed categories of major sources may not be major sources, and some will be area sources. It is the Agency's intent that if no finding of threat of adverse effects warranting regulation is made, then only major sources in a listed category are subject to regulation under section 112. A footnote accompanies the list of categories of major sources in today's list indicating that only major sources within any category shall be subject to emission standards under Section 112 unless a finding is made, for the area sources in a category, of threat of adverse effects to human health or the environment warranting regulation under Section 112.

In certain cases the Agency has determined, or may determine during the standards development process, that the area sources in a listed category of sources warrant regulation under section 112. In such cases, the Agency may make a finding of threat of adverse effects and add these categories of area sources to the list. As an alternative, the Agency may establish a lesser quantity emission rate for some or all HAP's, under section 112(a), which could have the effect of enabling the Agency to list certain categories as major sources that only contained area sources before the establishment of lesser quantity emission rates.

#### Alternatives for Making a Finding of Threat of Adverse Effects

Most commenters contended that a finding of threat of adverse health or environmental effects is necessary under the language of Section 112(c)(3);

however, few comments were received on the specific nature of the finding. One commenter suggested using the deletion criteria in section 112(c)(9)(B) as the basis for this finding. The rationale for this comment is that, because those same criteria must be used by a petitioner to demonstrate that a category of sources should be deleted, they should be used to add categories of area sources. For example, since a petitioner would have to demonstrate that no source in a category caused a cancer risk exceeding one in a million to the maximally exposed individual in order to have a category of sources deleted from the list, the commenter argued that the Agency should have to show, conversely, that at least one source in a category exceeded this same risk level in order to demonstrate a threat of adverse health effects and list a category of area sources. In response to this comment, the Agency interprets the broad language of section 112 as allowing risk and other factors to be assessed in determining if a threat of adverse effects exists warranting regulation under section 112.

The Agency's criteria for area source findings, and the findings for each area source category included on today's list, are presented in section IV later in this notice.

#### C. Data Base Quality

Many comments were received on the quality of the data base used in developing the preliminary draft list published on June 21, 1991 (56 FR 28548). Most commonly, the commenters identified particular aspects of the data base that they felt were inadequate for listing many categories of sources.

Many commenters indicated that the Agency had inadequate data to demonstrate that at least one source in many categories was, in fact, a major source. In this regard, many commenters argued that the Agency needs to demonstrate the existence of at least one major source in a category before that category could be listed as a category of major sources.

In response, the Agency agrees that, in order to be listed as a category of major sources: (1) There must be at least one major source in that category, (2) or, as discussed in section III.A of today's notice, sources in the category of concern must commonly be located on the premises (i.e., within the contiguous area under common control) of a major source, as defined in section 112(a). Hence, when reviewing the data base used to develop the preliminary draft list, in light of comments received in this regard, the Agency considered the adequacy of the data showing the

existence of at least one major source in each category or the common association of a category with major sources. Where reasonable evidence was available suggesting that these criteria are met, that category was included as a category of major sources on today's list. In many instances, the Agency sought out additional data from the Agency's TRIS and other internal Agency sources to confirm the existence of a major source in each listed category of major sources or the common location of a category on the premises of major sources.

As discussed in section II in today's notice, species profiles were used as an indicator of HAP emissions when compiling the preliminary draft list. These profiles have quality rankings ranging from "A" to "E," with "A" reflecting the best profile quality and "E" reflecting the poorest profile quality. Many comments were received concerning the use of species profiles with lesser quality for estimating HAP emissions. At the outset, profiles having "E" quality rankings were not used at all by the Agency because of insufficient quality. Some commenters suggested not using "D" ranked profiles, which were based on measured emissions from a single source or engineering calculations from more than one source. Some commenters suggested only using the highest quality species profiles that are ranked "A." Some commenters pointed out that particular species profiles, no matter the quality ranking, were inapplicable to the category to which they were applied.

In response to comments relating to species profiles, the Agency continues to believe that species profiles are an appropriate tool for identifying sources of HAP emissions and for estimating HAP emissions, when applied to particulate and volatile organic matter emissions. Hence, profiles having quality rankings of "A" through "D" were still considered in preparing today's list, with several qualifications. First, the Agency agrees that some species profiles were inappropriately applied to some categories on the preliminary draft list. Any categories that were included on the preliminary draft list, based solely on inappropriate profiles, were not included on today's list. Second, all categories on the preliminary draft list, regardless of profile quality ranking, were reviewed before being retained on today's list. Some of these categories are not included on today's list because the Agency could not verify the existence of at least one major source within the categories or the common location of the

categories on the premises of major sources.

*D. Consistency With Section 112 and Section 129 Provisions Relating to Specific Categories of Sources*

**Listing of Electric Utility Steam Generating Units**

Many commenters contended that electric utility steam generating units should not be listed because of provisions under section 112(n)(1) requiring the Agency to perform a study of the hazards to public health from these units. Section 112(n)(1) further states that the Agency shall regulate these units under section 112 only if the Agency finds such regulation appropriate and necessary after considering the results of the study.

Some commenters suggested various reasons for listing electric utility steam generating units on today's initial list. These commenters stated that section 112(n)(1) does not preclude listing utilities. Only regulation of electric utility steam generating units is precluded before the Agency reviews the results of the requisite electric utility study. Other commenters also raised a fairness issue. These commenters contended that electric utility steam generating units should certainly be listed if smaller combustion units had to be listed and subject to standards. Some of these same commenters suggested, as an alternative, that non-utility combustion units should be included in the utility study, and not listed until the results of utility study were available.

In response to these comments, the Agency agrees that a study of hazards from electric utility steam generating units is required before regulating these units. Given this requirement, the Agency sees little benefit in listing these units unless this study demonstrates significant public health hazards, warranting regulation. Hence, electric utility steam generating units, as defined in section 112(a)(8), are not included on today's initial list of categories of major and area sources. The Agency has initiated the study of these units, as required under section 112(n)(1).

In response to comments suggesting that the Agency delete non-utility boilers from today's list, the Agency does not have the authority under section 112 to exclude other combustion units (except for certain solid waste incineration units, as described in the following subsection). The provisions of section 112(n)(1) only apply to electric utility steam generating units, as defined in section 112(a)(8). Moreover, the Agency has determined that several categories of non-utility boilers and

units not meeting the definition of an electric utility steam generating unit are categories of major sources and are thus required to be included on today's list.

**Listing of Solid Waste Incinerator Units**

The term solid waste incineration unit, under section 129(g)(1), means a distinct operating unit of any facility which combusts any solid waste material from commercial or industrial establishments or the general public (including single and multiple residences, hotels, and motels). Section 129(h)(2) states that no solid waste incineration unit subject to performance standards under (section 129) and section 111 shall be subject to standards under section 112(d) of this Act. The Agency interprets section 129(h)(2) to preclude the inclusion on today's list (or any revision of this list) of solid waste incineration units combusting municipal waste, hospital waste, medical waste, infectious waste, commercial or industrial waste. The rationale for this is that section 129(a) specifically requires the Agency to promulgate standards for units combusting these particular wastes under section 111 and section 129. The Agency interprets section 129 as not requiring standards to be promulgated for sewage sludge incineration units under section 129, so these units are included on today's list.

Section 129(g)(5) states that an incineration unit shall not be considered to be combusting municipal waste for purposes of section 111 or (section 129) if it combusts a fuel feed stream, 30 percent or less of the weight of which is comprised, in aggregate, of municipal waste. The Agency interprets this as allowing standards to be established for fuel combustion categories on today's list that combust up to 30 percent municipal waste. Today's list does not identify specific fuels or fuel mixtures associated with categories of fuel combustion.

Provisions in section 129(g)(1) exclude certain other categories of combustion from inclusion as solid waste incineration units. Excluded are metal recovery facilities (including primary or secondary smelters), qualifying cogeneration facilities burning homogeneous waste (such as tires, used oil, but not including refuse-derived fuel), certain air curtain incinerators, and incinerators permitted under section 3005 of the Solid Waste Disposal Act (Pub. L. 94-580). Any such combustion units are subject to listing under Section 112(c) if all other listing criteria in Section 112 are met. Of these categories, today's list includes several categories of smelters and hazardous waste incinerators.

No solid waste incineration units are included on today's list as categories of area sources.

A number of commenters agreed with the Agency's earlier position that various types of solid waste incinerators should not be included on today's list of categories because of the exclusion in section 129. As stated above, the Agency has not changed this position for most types of incineration in this notice.

Several commenters argued that sewage sludge incinerators should not be listed because they are already regulated under the CWA and by NSPS and NESHAP's. In response, the Agency does not consider sewage sludge incineration units to be covered under Section 129, so it has the authority to list and set standards for these units under Section 112. The Agency does not have the discretion to omit this category because of existing regulations under the CWA or existing NSPS. Moreover, section 112(c)(4) gives the Agency the authority to list any category of sources previously regulated by NESHAP's before the CAA Amendments of 1990.

**Listing of Research Facilities**

The Agency received two comments regarding the listing of research facilities under section 112(c)(7). Both commenters urged the Agency to recognize the unique qualities of research laboratories as expressed in section 112. Specifically, section 112(c)(7) requires the Agency to establish a separate category covering research or laboratory facilities, as necessary in order to assure the equitable treatment of such facilities.

The preliminary draft list of categories of sources did not include a category for research facilities or laboratories. At the time of publication of the draft list, the Agency had insufficient information to list research facilities as a category of major sources. The Agency did not receive, through public comment, any specific emissions data that support the addition of a category for research facilities. Due to this lack of evidence, the Agency did not add research facilities or laboratories to today's initial list of categories of sources.

**Listing of Boat Manufacturing**

The Agency has identified major sources of HAP emissions in the category of boat manufacturing, and has added boat manufacturing as a category of major sources on today's list.

Section 112(c)(8) of the CAA requires the Agency to list boat manufacturing as a separate subcategory, when establishing standards for styrene. However, as explained earlier in today's

notice, the Agency has interpreted the terms "subcategory" and "category" to be interchangeable in the context of today's initial list. Hence, boat manufacturing has been listed as a category of major sources. This meets the intent of the CAA that boat manufacturing be considered separately from any other category when establishing standards.

#### Listing of Radionuclide Emitters

The Agency received several comments on the listing of radionuclide emitters. The commenters noted that the Agency had omitted all categories of radionuclide emitters from the preliminary draft list and suggested the addition of underground and surface uranium mines, Department of Energy (DOE) facilities, as well as facilities already licensed by the Nuclear Regulatory Commission (NRC).

Categories of radionuclide emitters are not included on today's initial list because of several provisions in Section 112. At the outset, the Agency notes that no source of radionuclide emissions meets the major source threshold for HAP's. Section 112(a)(1) allows the Agency to define criteria for differentiating between major and area sources of radionuclide emitters that are different from the weight-based thresholds established for other HAP's. At this time, the Agency has not decided how to define these different criteria. Hence, because categories of major and area sources of radionuclide emissions are not differentiated at this time, and cannot be differentiated based on the 9.07/22.7 Mg/yr (10/25 tpy) threshold in section 112(a) or any existing lesser quantity emission rates, the Agency considers their inclusion on today's list inappropriate. Categories of radionuclide emitters may be added to the list at a later date.

Section 112(d)(9) authorizes the Agency not to regulate, under section 112, emissions from facilities licensed by the NRC if the Agency first determines by rule that the regulatory program implemented by the NRC provides an ample margin of safety to protect public health. At this time, the Agency is engaged in a variety of information gathering and rulemaking activities to determine whether the NRC programs are sufficient to provide an ample margin of safety. For instance, the Agency has proposed to rescind regulatory NESHAPS for nuclear power reactors and non-operational uranium mill tailing disposal sites licensed by NRC and is gathering information as to whether NESHAPS are necessary for the remaining NRC licensees. Hence, no categories of sources regulated by the

NRC are listed on today's list because of radionuclide emissions. The Agency will decide whether or not to add any NRC-licensed categories once sufficient information has been gathered.

Section 112(q)(2) states that no standard shall be established under section 112, as amended, for radionuclide emissions from elemental phosphorous plants, grate calcination elemental phosphorous plants, phosphogypsum stacks, or any subcategory of the foregoing. Under section 112(q)(2), these source categories continue to be governed by the previous version of section 112. None of these categories has been listed due to emissions of radionuclides.

Section 112(q)(3) gives the Agency the discretion to regulate radionuclide emissions from: (1) Non-DOE facilities which are not licensed by the NRC, (2) coal-fired utility and industrial boilers, (3) underground and surface uranium mines, and (4) disposal of uranium mill tailings piles. These source categories are subject to NESHAPS and general rulemakings under the previous version of the CAA. The Agency has not listed any of these categories of sources due to their radionuclide emissions on today's list.

#### Listing of Coke Ovens

The Agency received few comments regarding the listing of coke ovens. The CAA Amendments, under section 112(d)(8), instruct the Agency to promulgate regulations establishing emission standards for coke oven batteries. In response, the Agency listed several categories of coke oven operations in the preliminary draft list under the industry group "ferrous metals processing."

#### Listing of Publicly Owned Treatment Works

In the preliminary draft list, the Agency included a category for "wastewater treatment systems" under the industry group "waste treatment and disposal." This category included both publicly owned treatment works (POTW's) and industrial waste water treatment plants.

Many commenters argued that the category "wastewater treatment systems" was too broad to address realistically the wide variation in existing facilities and, at a minimum, should be divided into two categories: POTW's and industrial waste water treatment plants. In addition, many commenters argued that this broad category overlapped with industry categories listed elsewhere. For example, the broad categories listed in the industry group "production of

synthetic organic chemicals" already encompass wastewater treatment systems as well as many other operations such as process vents and equipment leaks.

In response to these comments, the Agency has eliminated the category "wastewater treatment systems." The Agency agrees that industrial wastewater treatment plants are logically covered under the respective industry groups on today's list, and do not need to be listed separately.

Two provisions in Section 112 affect the listing of POTW's. Section 112(e)(5) requires the Agency to promulgate standards for POTW's, pursuant to section 112(d), not later than 5 years after the date of enactment of the CAA. Section 112(n)(3) states that the Agency may provide for control measures that include: (1) Pretreatment of discharges causing HAP emissions or (2) process or product substitutions or limitations that may be effective in reducing such emissions.

The Agency has included a category of "POTW emissions" on today's list. The Agency has the discretion, under section 112(n)(3), to conduct studies to characterize POTW emissions and to demonstrate control measures, considering alternatives involving pretreatment of discharges and process or product substitutions or limitations. The Agency intends to conduct studies to characterize HAP emissions from industries discharging to POTW's and to identify industrial, commercial and residential discharges that contribute to such emissions. The Agency has the authority, under section 112(n)(3), to consider the efficacy of regulations involving pretreatment of discharges. When such information is obtained, the Agency will add to the source category list, if necessary, to insure regulation of POTW emissions.

#### Listing of Oil and Gas Wells and Pipeline Facilities

The Agency received numerous comments regarding the category "oil and gas production" in the preliminary draft list. The commenters stated that based upon section 112(n)(4), the Agency had erroneously included oil and gas production wells in the oil and gas production category. Commenters generally urged the Agency to delete production wells as either a category of area or major sources.

The Agency agrees with the commenters that the CAA Amendments mandate certain limitations regarding the listing of oil and gas production wells. Section 112(n)(4) limits the Agency's ability to list oil and gas wells

(and associated equipment) as categories of major or area sources.

Section 112(n)(4)(A) specifically requires that each oil and gas well (and associated equipment), pipeline compressor, and pump station at a source must be considered individually, rather than in aggregate across a common area under contiguous control, to determine whether such units or stations are major sources. The Agency has evidence that certain individual units can exceed the major source threshold. Such units would not be excluded from being a major source under section 112(n)(4)(A).

Section 112(n)(4)(B) requires the Agency to determine that HAP emissions from oil and gas production wells (with its associated equipment), present more than a negligible risk of adverse effects to public health before these categories can be listed as categories of area sources. Section 112(n)(4)(B) further limits any such category to only include sources located in any metropolitan statistical area with a population exceeding 1 million. The Agency has not made such a determination at this time. Hence, oil and gas wells (with its associated equipment), pipeline compressors, and pump stations are not listed as categories of area sources on today's list.

#### *E. Listing of Regulated Categories*

Several commenters questioned the listing of some categories of sources currently regulated under the CAA or another statute. In some cases, various commenters pointed out that certain categories of sources on the draft list are (or will be) controlled by NSPS under section 111, by previously defined NESHAP's under Section 112 before the CAA Amendments of 1990, by CTG's under the CWA, under the Resources Conservation and Recovery Act (RCRA), or under the Federal Insecticide, Fungicide and Rodenticide Act. The commenters contended that "dual regulation" would cause confusion and hardship to the regulated community.

In response to these comments, the Agency has no general discretion, under section 112, to exclude categories of sources from today's list if they are subject to other statutes. Moreover, with a few exceptions, discussed below, the Agency has no discretion to exclude categories that are subject to other CAA standards.

Section 112(c)(4) states that the Agency may, at the Administrator's discretion, list any category previously regulated under this section as in effect before the date of enactment of the CAA

Amendments of 1990. This gives the Agency the discretion to list categories of sources if the Administrator decides that existing NESHAP's are inadequate. However, the "savings provision" under section 112(q)(1) obligates the Agency to review and, if appropriate, revise existing NESHAP's to comply with the requirements of section 112(d) within 10 years.

Section 112(n)(7) obligates the Agency to take into account and be consistent with any regulations under RCRA, also known as the Solid Waste Disposal Act.

The Agency has declined to list categories of radionuclide emitters in light of the CAA statutory provisions, discussed in section III.D of this notice, and because the Agency is still developing the criteria for differentiating between major and area sources of radionuclide emitters. Likewise, as described in section III.D of this notice, the language in section 129(h)(2) precludes the listing of many categories of solid waste incineration units that are subject to standards under sections 111 and 129 of the CAA.

Marine vessel loading and unloading facilities are not listed on today's list because the Agency intends to regulate HAP's as well as emissions of VOC's and other pollutants under authority of section 183(f) of the CAA. Section 183(f) requires that the Agency, in conjunction with the Coast Guard, establish emissions standards for emissions of VOC's and any other air pollutant from loading and unloading tank vessels. Given the Congressional mandate to consult with the Coast Guard and consider safety impacts in developing tank vessel standards, the Agency believes it advisable to address all tank vessel emissions in a comprehensive, multi-faceted manner under section 183(f).

In response to comments regarding "dual regulation," the Agency notes that the establishment of standards under section 112 does not necessarily lead to duplicate regulation. This is because air emission regulations issued under another statute would likely become the basis for MACT floors under section 112, which are defined by evaluating best performing existing sources within any category or best controlled similar sources for new sources.

#### *F. Judicial Review of List*

Section 112(e)(4) states notwithstanding Section 307 of this Act (dealing with administrative proceedings and judicial review), no action of the Administrator listing a source category or subcategory under subsection (c) shall be a final Agency action subject to judicial review, except

that any such action may be reviewed under section 307 when the Administrator issues emission standards for such pollutant or category.

Therefore, today's list is not a final Agency action and is not subject to judicial review.

#### *IV. Finding of Threat of Adverse Effects for Categories of Area Sources*

As discussed earlier in section III.B of this notice, in order to list categories of area sources the Agency must find a threat of adverse health or environmental effects warranting regulation under section 112. The Agency hereby lists the following categories of area sources for which a finding of threat of adverse effects warranting regulation under section 112 has been made: Commercial sterilizers using ethylene oxide, chromium electroplaters and anodizers, perchloroethylene dry cleaners, halogenated solvent cleaners, and asbestos processing. Additional area source categories may be listed from time to time as sufficient data become available to support a finding of threat of adverse effects warranting regulation under section 112.

Today's list includes some source categories which are listed twice, once for the major sources within the category and once for the area sources. This is necessary because some categories are comprised of both area and major sources. Where categories of area sources are listed, a finding is required of threat of adverse effects warranting regulation under section 112.

The language of section 112 provides limited guidance on the nature of the finding of threat of adverse effects to human health or the environment warranting regulation under (section 112). The term "adverse environmental effect" is defined in section 112(a) as any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.

Section 112(a) contains no concomitant definition of adverse health effect. The area source provisions of section 112(k), however, are closely linked to section 112(c) and state that health effects considered under this program shall include, but not be limited to, carcinogenicity, mutagenicity, teratogenicity, neurotoxicity, reproductive dysfunction and other acute and chronic effects including the

role of such pollutants as precursors of ozone or acid aerosol formation.

Moreover, the finding is one of a threat of adverse effect, not a demonstration of the adverse effect, per se.

In the findings accompanying the area source listings in today's notice, quantitative assessments of risk are an important consideration in assessing significant threats of adverse health effects. Quantitative risk assessment, in this context, means the estimation of a mathematical probability of an individual or population being subject to some adverse health effect, such as cancer. The Agency has historically developed assessments of cancer risks, both to maximally exposed individuals and populations, as part of its regulatory actions under section 112. Population risks are expressed in terms of the total number of cancer cases (i.e., cancer incidence) that could be expected to occur in a given time within a prescribed area, considering the exposure of the population within the area to ambient concentrations of toxic air pollutants. Most typically, in these findings, nationwide cancer incidence is expressed on an annual basis (i.e., cases per year). In contrast, a maximum individual "lifetime" risk is expressed as the risk of contracting cancer associated with an exposure for 70 years (an assumed life span) to the maximum, modeled, long-term concentration of the listed HAP's in the proximity of emitting sources. (The findings in today's notice do not demonstrate any threat of adverse environmental effects, only human health effects; future findings may be based on environmental effects as the appropriate information becomes available.)

Section 112(c) of the CAA Amendments of 1990 does not offer a "bright line" test for the Agency to use in making an area source finding. Instead, considering the language cited above, the Agency believes it has discretion to consider a range of health effects endpoints and exposure criteria in making a finding of a threat of adverse effects. In the findings for the listed categories of area sources given later in today's notice, the Agency considers factors such as the number of sources in a category, the quantity of emissions from sources individually or in aggregate, the toxicity of the HAP emissions, the potential for individual and population exposures and risks, and the geographical distribution of sources.

In determining what constitutes a significant threat of adverse effects, the Agency considers the risk criteria developed in the establishment of the benzene NESHAP in light of the DC

Circuit Court's decision on the Agency's vinyl chloride emission standards to be an important precedent (*Natural Resources Defense Council, Inc. v. EPA*, 824 F.2d at 1146 [1987]) (the "Vinyl Chloride" decision). In the September 14, 1989 Federal Register implementing the *Vinyl Chloride* decision (54 FR 38044), the Agency presents an approach for providing for the protection of public health with an ample margin of safety under section 112 in protecting public health with an ample margin of safety under section 112. EPA strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level of no higher than approximately 1 in 1 million and (2) limiting to no higher than approximately 1 in 10 thousand the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years.

In the September 14, 1989 Federal Register, the Agency indicates that, as a first step in this process, it considers incidence (i.e., the numbers of persons estimated to suffer cancer or other serious health effects as a result of exposure to a pollutant) to be an important measure of the health risk the EPA believes that even if the MIR (maximum individual risk) is low, the overall risk may be unacceptable if significant numbers of persons are exposed to a hazardous air pollutant, resulting in a significant estimated incidence. Consideration of this factor would not be reduced to a specific limit or range but estimated incidence would be weighed along with other health risk information in judging acceptability.

In the September 14, 1989 Federal Register, the Agency indicates that attention will also be accorded to the weight of evidence of the potential human carcinogenicity or other health effects of a pollutant. The uncertainties, gaps in data, and science policy assumptions associated with any risk measures must also be weighed. As a second step in determining the appropriate level of control, the Agency will examine both these factors above and other relevant factors such as the extent of exposure, the incidence of adverse effect, and the cost of control. The Agency will use these factors in determining whether a regulation provides an ample margin of safety. The Agency believes that consideration of these additional factors is also appropriate in determining whether a category of area sources poses a significant threat of adverse health effects warranting regulation under

section 112. This interpretation, however, does not supersede the statutory requirements of the area source program under section 112(k).

In summary, the Agency will not examine a single parameter or measure for making a finding of threat of adverse effects for the purpose of listing any category of area sources. Instead, in determining that a significant threat of adverse effects exists warranting regulation under section 112, the Agency will look to a collection of parameters and measures involving emissions, toxicities, numbers of facilities, the reasonableness of control measures, population exposures to HAP emissions, individual risks and population incidence. In determining what constitutes a significant threat, the Agency will consider the criteria for determining acceptable risks and an ample margin of safety arising from the establishment of benzene NESHAP's in light of the Vinyl Chloride decision. An important criterion in determining a significant threat is evidence that a category of area sources may pose a cancer risk to the maximally exposed individual(s) in excess of one in 10,000. Another important criterion is evidence that significant cancer incidence may result due to many persons exposed to HAP emissions from a category of area sources, even if the maximum individual risk to any individual is low. In addition, the Agency may consider a number of additional factors as appropriate.

As reflected in its interpretation of the Vinyl Chloride decision (54 FR 38044), the Agency recognizes uncertainties in current estimates of risk based on maximum, modeled concentrations and the use of conservative, upperbound risk assumptions (such as continuous exposures for 24 hours per day for 70 years). The Agency acknowledges that current cancer risk estimates do not necessarily reflect the true risk, but often represent a conservative risk level which is an upperbound that is unlikely to be exceeded. The Agency intends to improve its risk assessment procedures in accordance with guidance from its own Risk Assessment Council and through the risk assessment studies required under sections 112(f), 112(o), and 303 of title III of the CAAA.

Each finding detailed below is based on qualitative and quantitative information demonstrating a significant threat of adverse effects to health or the environment for such categories of sources individually or in the aggregate, as required under section 112(c)(3). Most data used in the area source findings were gathered from published reports. Summary information only is presented

in each finding in today's notice. Information from references supporting today's findings is available in the docket (Docket No. A-90-49, Item No. IV-B-44).

*A. Finding of Threat of Adverse Effects for Category of Commercial Sterilizers Using Ethylene Oxide*

Ethylene oxide is widely used as a sterilant/fumigant in the production of medical equipment and in sterilization and fumigation operations. Current estimates indicate that there are about 190 facilities in the U.S. performing ethylene oxide commercial sterilization. Commercial sterilization is performed by medical equipment suppliers, pharmaceutical manufacturers, spice manufacturers, contract sterilizers, libraries, museums and archives, and laboratories. Emissions of ethylene oxide are estimated at 1.1 million kg/yr (2.4 million lb/yr) from commercial facilities.

The adverse health effects from ethylene oxide are well documented. Numerous studies exist which attest to the health effects from both acute and chronic exposures to ethylene oxide. Headaches, nausea, vomiting, and/or respiratory irritation are common symptoms resulting from acute inhalation exposure to ethylene oxide. Studies of subchronic and chronic exposures indicate that ethylene oxide has serious long-term effects. Plant workers exposed to high levels of ethylene oxide over a 1-week to 3-month periods reported the development of neurological abnormalities and cataracts.

Animal experiments and human epidemiological studies indicate that ethylene oxide is a probable human carcinogen. Animals exposed to ethylene oxide over long periods of time exhibit increased incidence of tumors, including brain neoplasms, and leukemia. Studies of persons occupationally exposed to ethylene oxide indicate the possibility of a significant association between exposure and cancer incidence, for both stomach cancer and leukemia.

The reproductive and teratogenic effects of ethylene oxide inhalation have been examined in laboratory animals. Studies indicate that exposure to ethylene oxide produces maternal toxicity, depression of fetal weight gain, fetal death, and fetal malformation in females and reduced sperm numbers and motility in males. Recent studies on ethylene oxide have also examined the mutagenicity associated with ethylene oxide and the ability of ethylene oxide-induced genetic damage to cause adverse reproductive impacts. Ethylene

oxide has been shown to cause mutations in mammalian cells, both somatic and germ.

Due to the adverse effects associated with ethylene oxide observed in both animals and humans, the Agency is concerned about ethylene oxide emissions as well as the presence of ethylene oxide in the ambient air. Studies have confirmed the presence of ethylene oxide above background concentrations in many areas of the nation, including areas of high population. Many ethylene oxide sterilizers are located near population centers and may pose a threat to the surrounding public.

The Agency has conducted nationwide analyses of emissions, exposures, and cancer risks associated with commercial sterilizers using ethylene oxide. The Agency estimates that as many as three increased cancer cases arise in the U.S. annually from exposure to commercial sterilizers using ethylene oxide. The Agency estimates that the maximum individual lifetime cancer risk associated with any commercial sterilizer is as high as one in 100 ( $1 \times 10^{-2}$ ). Furthermore, about 120,000 persons living in the proximity of commercial sterilizers are estimated to be subject to upper-bound lifetime individual risks possibly in excess of one in 10,000 ( $1 \times 10^{-4}$ ); about 2,300,000 persons are subject to lifetime individual risks possibly in excess of one in 100,000 ( $1 \times 10^{-5}$ ); and about 35,000,000 persons—or about one sixth the entire U.S. population—are subject to lifetime individual risks exceeding one in 1,000,000 ( $1 \times 10^{-6}$ ).

Currently, there are no Federal regulations covering ethylene oxide sterilizer emissions, except Occupational Safety and Health Administration (OSHA) requirements for workplace exposure levels. Sixteen States and Puerto Rico have developed regulations; however, no national regulations currently exist that address all ethylene oxide emissions from commercial sterilizers.

Since there are few commercial sterilizers that exceed 9.07 Mg/yr (10 tpy) of ethylene oxide emissions, they must be listed as categories of area sources in order to be regulated under section 112(d). The Agency hereby finds that the high emission levels, documented exposures, and known and suspected adverse health effects associated with ethylene oxide emissions from commercial sterilizers present a threat of adverse effects to human health. The Agency thus includes this category on the list of categories of area sources on today's list.

*B. Finding of Threat of Adverse Effectives for Categories of Chromium Electroplaters and Anodizers*

The chromium electroplating industry consists of hard chromium electroplaters, decorative chromium electroplaters, and anodizers. Hard chromium electroplating involves coating a base metal, such as steel, with a relatively thick layer of chromium, in order to provide a wear resistant surface. Hard plating is most often used on items such as hydraulic cylinders and rods, zinc die castings, plastic molds engine components, and marine hardware. Decorative plating, on the other hand, usually plates the base metal (i.e., brass, steel, aluminum, or plastic) with a layer of nickel and then a thin layer of chromium in order to produce a bright, wear- and tarnish-resistant surface. Decorative plating is most often used on automotive trim, bicycles, hand tools, and plumbing fixtures. A third type of chromium electroplater, anodizers, uses chromic acid to form an oxide layer on aluminum to provide corrosion resistance. Chromium anodizing is primarily used on aircraft parts and architectural structures that are subject to high stress and corrosive conditions. Although chromium may be used in other operations at metal finishing plants, today's notice only includes those processes that use chromic acid in an electrolytic cell to deposit chromium metal or to form an oxide film on a product.

The chromium electroplating industry is comprised of an estimated 1,540 hard electroplaters, 2,800 decorative electroplaters, and 680 chromic acid anodizers, or approximately 5,000 operations nationwide. These operations vary in size from small shops with only one or two small tanks to large shops with several tanks that are operated almost continuously. Some plating operations are done in stand-alone "job shops," whereas others are done on the premises of larger sources, and are called "captive shops." Although no single electroplating operation emits more than 9.07 Mg/yr (10 tpy) of chromium, electroplaters are estimated to emit 159 Mg/yr (175 tpy) of chromium per year nationwide.

Chromium electroplaters can present an adverse health threat to populations living near the source of emissions. Chromium electroplaters mostly emit the hexavalent form of chromium, Cr (+6), as chromic acid mist, and lesser amounts of trivalent chromium, Cr (+3). Current health effects data suggest that the hexavalent form of chromium is the

most toxic of all chromium compounds. Both human case studies and epidemiological studies attest to the adverse health effects from inhalation of hexavalent chromium. Acute exposure to hexavalent chromium has been shown to cause nasal irritation in workers and other individuals. Intermediate and chronic inhalation exposure to chromium has been reported to cause adverse respiratory tract effects, including irritation and perforation of the nasal mucosa, decreases in lung function, and renal proteinuria. Animal studies of acute organ toxicity also suggest that chromium compounds may produce kidney and liver damage.

The carcinogenic health effects from chromium are also well documented. Hexavalent chromium is considered a Group A carcinogen because there is adequate evidence for its carcinogenicity in humans. Specifically, chronic occupational exposure to chromium has been associated with increased incidence of respiratory cancer in workers. The association of exposure to chromium and the induction of lung cancer is strengthened by the high lung cancer mortality ratios found in various epidemiological studies, the consistency of results across several studies, the increased tumors found in association with increasing doses, and the specificity of the tumor site. The role of trivalent chromium in carcinogenesis is presently unclear.

Reproductive studies on animals also suggest that chromium compounds may have some fetal and maternal toxicity effects. Although conclusive results can not be drawn from the available data, studies suggest that chromium compounds can adversely affect fetal development and male reproduction in experimental animals.

The Agency has developed nationwide emission and population exposure estimates associated with chrome platers and anodizers. Based on this analysis, the Agency estimates that chrome platers and anodizers contribute significantly to the total increased cancer incidence in the U.S. from airborne toxics. Hard chrome platers, decorative chrome platers, and acid anodizers may cause as many as 110 increased cancer cases per year in the U.S. In addition to significant population risks, chrome platers and anodizers contribute significantly to maximum individual cancer risks in the proximity of particular facilities. The Agency estimates that maximum, upper-bound individual risks range from two chances in 100,000 ( $2 \times 10^{-6}$ ) for small acid anodizing plants to five chances in 1,000

( $5 \times 10^{-5}$ ) for large hard plating operations. All estimates of risk in this analysis are based on hexavalent chromium only, and not on trivalent chromium.

An Agency study of Southeast Chicago estimates that chrome platers contribute about one sixth of the total cancer incidence due to all sources of airborne toxics in the study area, including steel mills, road vehicles, and other industrial sources.

An Agency analysis of cancer incidence from air toxic emissions in five large U.S. cities shows that chrome platers contribute about one tenth of the total increased cancer incidence due to all sources of airborne toxics. Extrapolating the cancer rate in the five cities to the U.S. yields an estimate of as high as 90 increased cases per year.

Currently, the only Federal emission regulations for electroplaters are limited to OSHA workplace emission standards, designed specifically to limit worker exposures. Fourteen States have adopted or proposed regulations for controlling chromium emission from electroplaters.

The Agency hereby finds that the overall emissions, exposures, and known and suspected health impacts associated with chromium electroplaters and anodizers present a threat of adverse effects to human health. Based on the finding above, the Agency has included chromium electroplaters and anodizers on today's initial list as categories of area sources.

#### *C. Finding of Threat of Adverse Effects for Category of Commercial Perchloroethylene Dry Cleaners*

A finding of threat of adverse effects for commercial perchloroethylene dry cleaners is presented in a proposed rule to establish emission standards for perchloroethylene dry cleaners (56 FR 64382).

#### *D. Finding of Threat of Adverse Effects for Category of Cleaners Using Halogenated Solvents*

Halogenated solvents are widely used throughout industry to clean the surface of metal parts, electronic components, and other nonporous substrates. The cleaning machines that use halogenated solvents are categorized as one of three types: Cold cleaners, open top vapor cleaners (OTVC's), and in-line or conveyorized cleaners. Machines, including maintenance cleaners, that use petroleum distillate type solvents are not included in this category of area sources at this time. The five largest industry users of halogenated solvents for cleaning, by Standard Industries Classification (SIC) Code, are SIC 25

(furniture and fixtures), SIC 34 (fabricated metal products), SIC 36 (electric and electronic equipment), SIC 37 (transportation equipment), and SIC 39 (miscellaneous manufacturing industries). In addition to these industry groups, many non-manufacturing industries (such as railroad, bus, aircraft, and truck maintenance facilities; automotive and electric tool repair shops; automobile dealers; and service stations) also use these solvents for cleaning.

In all of these industries, the most commonly used halogenated solvents are methylene chloride (MC), trichloroethylene (TCE), perchloroethylene (PCE), trichlorotrifluoroethane (CFC-113), and 1,1,1-trichloroethane (TCA). Use of these chemicals is found throughout many industries because they can dissolve many common residues from manufacturing processes, have little or no flammability, and can achieve a high degree of cleanliness on even small parts.

The Agency estimates that there are approximately 100,000 small cold cleaners, 25,000 to 35,000 OTVC's, and 2,500 to 4,000 in-line (cold and vapor) cleaners. Specific emission levels from each type of machine may vary; however, the Agency has estimated that emissions range from 2,500 to 6,000 kg/yr (5,520 to 13,250 lb/yr), depending on the schedule of operation. Most of the solvent losses from halogenated cleaners are to the air.

Due to the high usage and emissions of these cleaners throughout industry, as well as the large number of cleaners, there is a great potential for exposure to the HAP's used as solvents. Two degreasing solvents, CFC-113 and TCA, have also been implicated as causing stratospheric ozone depletion. The TCA has also been shown to be photochemically reactive and contribute to increases in tropospheric ozone levels. Both of these two chemicals, CFC-113 and TCA, will be phased out with other Agency regulations under title VI of the CAA.

The health effects associated with halogenated solvent cleaners are most well documented for MC, TCE, and PCE. Both MC and TCE are considered probable human carcinogens and are classified in Group B2, while PCE is still under review.

Evidence indicating the carcinogenicity of MC is available through animal studies. Animal inhalation studies on MC have shown significant increases in liver and lung adenomas and carcinomas in both males and females. Other animal studies have

indicated that exposure to elevated levels of MC can cause benign mammary tumors. Based upon this available animal evidence, the Agency has determined that MC is a probable human carcinogen. In addition to these adverse effects, short-term exposure to MC has been known to cause impairments in central nervous system (CNS) functioning. Case reports of exposure to MC have shown that humans exposed to MC exhibited narcosis, irritability, analgesia, and fatigue.

Both PCE and TCE are moderately toxic substances that appear to target the CNS, causing dizziness, headaches and slowing of mental activity. Over longer periods of exposure, these adverse effects may also be seen in the liver and kidneys as well as the eyes and upper respiratory tract. The carcinogenic effects from both these chemicals has also been investigated, mostly through animal experiments. Results of TCE tests indicate that inhalation may result in the formation of renal tumors. Other TCE studies suggest that inhalation is fetotoxic and may cause litter resorption and reduced fetal body weight.

An Agency analysis has been conducted of nationwide exposures, individual lifetime risks, and population incidence from halogenated solvent cleaners emissions. This analysis estimates that as many as six increased cancer cases are attributable to halogenated solvent cleaners, annually, in the U.S. This study also suggests that upper-bound maximum individual lifetime risks in the proximity of these cleaners range from as high as one in 1,000,000 ( $1 \times 10^{-6}$ ) to one in 10,000 ( $1 \times 10^{-4}$ ). Nationally, the maximum individual risk near a large facility with multiple conveyorized cleaners is as high as five in 10,000 ( $5 \times 10^{-4}$ ).

Based upon the evidence presented, the Agency finds that cleaners using halogenated solvents present a threat of adverse impact to human health or the environment. The Agency therefore adds them to the categories of area sources on today's initial list.

#### *E. Finding of Threat of Adverse Effects for Category of Asbestos Processing*

The Agency is hereby listing one category of asbestos-related sources: Asbestos processing. Asbestos processing includes asbestos milling, manufacturing, and fabrication. Products that are manufactured or fabricated using asbestos include, but are not limited to, textiles, papers and felts, friction materials, cements, vinyl-asbestos floor tiles, gaskets and packings, shotgun shell wads, asphalt

concrete, fireproofing and insulating materials, and chlorine.

Information on asbestos emissions, has been limited by the lack of an appropriate measuring method. Therefore, engineering estimates of emission have been made from other available information, when appropriate, including process data and worker concentration data. Under the current NESHAP, emissions from asbestos processing are estimated at 1,020 kg/yr (2,240 lb/yr) given full compliance with the current NESHAP. This includes all emissions from milling, manufacturing, and fabricating. Due to the potency of asbestos and the well documented health hazards (described below), the Agency is concerned about these emissions even though exact amounts have not been quantified.

The health effects associated with exposure to asbestos are well documented. Numerous occupational exposure studies, supported by animal studies, clearly indicate that asbestos is a human (Group A) carcinogen. The major impacts associated with asbestos inhalation are lung cancer and mesothelioma. Studies have confirmed that death from lung cancer and mesothelioma is proportional to the cumulative exposure (duration times the intensity). Studies also indicate that asbestos is linked to gastrointestinal cancers, although these occur at a lower rate than that seen for lung cancer.

The Agency has completed analyses of cancer incidence and maximum individual cancer risks associated with asbestos emissions from the category of asbestos processing. Available Agency estimates of maximum lifetime cancer risks in the vicinity of processing operations are based on early emission estimates that have since been revised to reflect more recent and improved information. However, estimates of maximum risk derived using these earlier estimates of emissions were evaluated and, for asbestos processing, appear to still be applicable. These available data suggest that upper-bound maximum individual lifetime risks are about two in 1,000 ( $2 \times 10^{-3}$ ) for production in the manufacturing sector.

Regulations to control workplace exposures and/or emissions from asbestos have been established by OSHA, the Mine Safety and Health Administration (MSHA), EPA, and States. The most recent Agency NESHAP, promulgated November 20, 1990, amended the earlier NESHAP to enhance enforcement and promote compliance with the current standards without altering the stringency of existing controls. Since the initial

promulgation in 1973, many States have adopted more stringent requirements than the Agency; therefore, no uniform standard now exists. The Agency intends to consult and coordinate with OSHA and other regulatory agencies to establish regulations that are more compatible and consistent than current regulations, as well as easier to understand. This should improve compliance with all regulations.

Based on emission and risk information discussed previously, and the known health effects of asbestos, the Agency has determined that asbestos processing presents a threat of adverse effects to human health. Emissions data from this category indicate that no sources emit greater than 9.07 Mg/yr (10 tpy) of asbestos. Based on the finding above, the Agency hereby includes the category of asbestos processing on today's list.

In addition to the finding of threat of adverse effects given above, the Agency has additional authority to list and establish standards for the category of asbestos processing under sections 112(c)(4) and 112(q)(1). Section 112(c)(4) gives the Agency the authority to list any category or subcategory of sources previously regulated under Section 112 as in effect before enactment of the CAA Amendments of 1990. Section 112(q)(1) obligates the Agency to review and, if appropriate, revise each standard previously promulgated under Section 112 before enactment, to comply with the requirements of section 112(d), within 10 years after the date of enactment of the CAA Amendments of 1990. Since the category of asbestos processing has a promulgated NESHAP, the Agency exercises its discretion to list this category under the authority of section 112(c)(4) and 112(q)(1).

#### **V. Descriptions of Listed Categories**

Because some of the categories on today's list encompass several industry sectors, operations, and/or types of equipment, the Agency recognizes the importance of describing what is included under each listed category. Hence, descriptions are included in the accompanying docket (Docket No. A-90-49, Item No. IV-A-55) for the purpose of delineating, to the extent currently possible with available data, the potential coverage of each category. The Agency recognizes that these descriptions, like the list itself, may be revised from time to time as better information becomes available. The Agency intends to revise these descriptions as part of the process of establishing standards for each category. Ultimately, a definition of each

listed category, or subsequently listed subcategories, will be incorporated in each rule establishing a NESHAP for a category. It is not the Agency's intent that the descriptions, in the docket accompanying today's notice, limit what may be included under each category for the purposes of establishing emission standards either under section 112(d) or, on a case-by-case basis under section 112(j), or for purposes relating to other parts of section 112 involving the definition of source or category of sources.

#### VI. Relationship of List to Definition of Source for Early Reduction

The identification of categories and subcategories of major sources in today's initial list has no bearing whether any particular facility or grouping is a "source" for purpose of the early reduction program under section 112(i)(5) or a major source for purposes of section 112(a)(1). The term "major source" is defined in section 112(a)(1) in such a way that it refers to the emissions occurring from a contiguous area under common control. By contrast, the Agency must identify "categories and subcategories" of major and area sources generically for the purposes of today's initial list and for establishing standards under section 112(d). In most cases, this identification will be made as product or process oriented groupings which will not affect the definition of "source" for purposes of either the early reduction under section 112(i)(5) or the definition of a "major source" under section 112(a)(1). The definition of source in the early reduction program is described in section ILB of the Proposed Regulations Governing Compliance Extensions for Early Reduction of Hazardous Air Pollutants (June 13, 1991, 56 FR 27338).

#### VII. Administrative Requirements

##### A. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by the Agency in the development of this initial list of categories of sources. The principal purpose of this docket is to allow interested parties to identify and locate documents that serve as a record of the process engaged in by the Agency to publish today's initial list.

##### B. Executive Order 12291 Review

Executive Order 12291 requires the Agency to determine whether this action is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This action is not major because it imposes no additional

regulatory requirements. This notice was submitted to the Office of Management and Budget (OMB) for review. Any written comments from OMB and written EPA responses are available in the docket.

##### C. Paperwork Reduction Act

This action does not contain any information collection requirements subject to OMB review under the Paperwork Reduction Act, 55 U.S.C. 3501 et seq.

##### D. Regulatory Flexibility Act Compliance

Pursuant to 5 U.S.C. 605(6), I hereby certify that this action will not have a significant economic impact on a substantial number of small entities because it imposes no new requirements.

Dated: July 2, 1992.

Michael Shapiro,

Acting Assistant Administrator for Air and Radiation.

TABLE 1.—INITIAL LIST OF CATEGORIES OF MAJOR AND AREA SOURCES OF HAZARDOUS AIR POLLUTANTS \*

FUEL COMBUSTION			
Category Name			
Engine Test Facilities			
Industrial Boilers *			
Institutional/Commercial Boilers *			
Process Heaters			
Stationary Internal Combustion Engines *			
Stationary Turbines *			
NON-FERROUS METALS PROCESSING			
Category Name			
Primary Aluminum Production			
Secondary Aluminum Production			
Primary Copper Smelting			
Primary Lead Smelting			
Secondary Lead Smelting			
Lead Acid Battery Manufacturing			
Primary Magnesium Refining			

FERROUS METALS PROCESSING			
Category Name			
Coke By-Product Plants			
Coke Ovens: Charging, Top Side, and Door Leaks			
Coke Ovens: Pushing, Quenching, and Battery Stacks			
Ferroalloys Production			
Integrated Iron and Steel Manufacturing			
Non-Stainless Steel Manufacturing—Electric Arc Furnace (EAF) Operation			
Stainless Steel Manufacturing—Electric Arc Furnace (EAF) Operation			
Iron Foundries			
Steel Foundries			
Steel Pickling—HCl Process			

MINERAL PRODUCTS PROCESSING			
Category Name			
Alumina Processing			

TABLE 1.—INITIAL LIST OF CATEGORIES OF MAJOR AND AREA SOURCES OF HAZARDOUS AIR POLLUTANTS \*—Continued

Asphalt/Coal Tar Application—Metal Pipes			
Asphalt Concrete Manufacturing			
Asphalt Processing			
Asphalt Roofing Manufacturing			
Chromium Refractories Production			
Clay Products Manufacturing			
Lime Manufacturing			
Mineral Wool Production			
Portland Cement Manufacturing			
Taconite Iron Ore Processing			
Wool Fiberglass Manufacturing			

#### PETROLEUM AND NATURAL GAS PRODUCTION AND REFINING

Category Name			
Oil and Natural Gas Production			
Petroleum Refineries—Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units			
Petroleum Refineries—Other Sources Not Distinctly Listed			

#### LIQUIDS DISTRIBUTION

Category Name			
Gasoline Distribution (Stage 1)			
Organic Liquids Distribution (Non-Gasoline)			

#### SURFACE COATING PROCESSES

Category Name			
Aerospace Industries			
Auto and Light Duty Truck (Surface Coating)			
Flat Wood Paneling (Surface Coating)			
Large Appliance (Surface Coating)			
Magnetic Tapes (Surface Coating)			
Manufacture of Paints, Coatings, and Adhesives			
Metal Can (Surface Coating)			
Metal Coil (Surface Coating)			
Metal Furniture (Surface Coating)			
Miscellaneous Metal Parts and Products (Surface Coating)			
Paper and Other Webs (Surface Coating)			
Plastic Parts and Products (Surface Coating)			
Printing, Coating, and Dyeing of Fabrics			
Printing/Publishing (Surface Coating)			
Shipbuilding and Ship Repair (Surface Coating)			
Wood Furniture (Surface Coating)			

#### WASTE TREATMENT AND DISPOSAL

Category Name			
Hazardous Waste Incineration			
Municipal Landfills			
Sewage Sludge Incineration			
Site Remediation			
Solid Waste Treatment, Storage and Disposal Facilities (TSDF)			
Publicly Owned Treatment Works (POTW) Emissions			

#### AGRICULTURAL CHEMICALS PRODUCTION

Category Name			
2,4-D Salts and Esters Production			
4-Chloro-2-Methylphenoxyacetic Acid Production			
4,6-Dinitro-o-Cresol Production			
Captafol Production			

TABLE 1.—INITIAL LIST OF CATEGORIES OF MAJOR AND AREA SOURCES OF HAZARDOUS AIR POLLUTANTS \*—Continued

Captan Production  
Chloroneb Production  
Chlorothalonil Production  
Dacthal (tm) Production  
Sodium Pentachlorophenate Production  
Tordon (tm) Acid Production

**FIBERS PRODUCTION PROCESSES**

## Category Name

Acrylic Fibers/Modacrylic Fibers Production  
Rayon Production  
Spandex Production

**FOOD AND AGRICULTURE PROCESSES**

## Category Name

Baker's Yeast Manufacturing  
Cellulose Food Casing Manufacturing  
Vegetable Oil Production

**PHARMACEUTICAL PRODUCTION PROCESSES**

## Category Name

Pharmaceuticals Production

**POLYMERS AND RESINS PRODUCTION**

## Category Name

Acetal Resins Production  
Acrylonitrile-Butadiene-Styrene Production  
Alkyd Resins Production  
Amino Resins Production  
Boat Manufacturing  
Butadiene-Furfural Cotrimer (R-11)  
Butyl Rubber Production  
Carboxymethylcellulose Production  
Cellophane Production  
Cellulose Ethers Production  
Epichlorohydrin Elastomers Production  
Epoxy Resins Production  
Ethylene-Propylene Elastomers Production  
Flexible Polyurethane Foam Production  
Hypalon (tm) Production  
Maleic Anhydride Copolymers Production  
Methylcellulose Production  
Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production  
Methyl Methacrylate-Butadiene-Styrene Terpolymers Production  
Neoprene Production  
Nitrile Butadiene Rubber Production  
Non-Nylon Polyamides Production  
Nylon 6 Production  
Phenolic Resins Production  
Polybutadiene Rubber Production  
Polycarbonates Production  
Polyester Resins Production

TABLE 1.—INITIAL LIST OF CATEGORIES OF MAJOR AND AREA SOURCES OF HAZARDOUS AIR POLLUTANTS \*—Continued

Polyethylene Teraphthalate Production  
Polymerized Vinylidene Chloride Production  
Polymethyl Methacrylate Resins Production  
Polystyrene Production  
Polysulfide Rubber Production  
Polyvinyl Acetate Emulsions Production  
Polyvinyl Alcohol Production  
Polyvinyl Butyral Production  
Polyvinyl Chloride and Copolymers Production  
Reinforced Plastic Composites Production  
Styrene-Acrylonitrile Production  
Styrene-Butadiene Rubber and Latex Production

**PRODUCTION OF INORGANIC CHEMICALS**

## Category Name

Ammonium Sulfate Production—Caprolactam By-Product Plants  
Antimony Oxides Manufacturing  
Chlorine Production  
Chromium Chemicals Manufacturing  
Cyanuric Chloride Production  
Fume Silica Production  
Hydrochloric Acid Production  
Hydrogen Cyanide Production  
Hydrogen Fluoride Production  
Phosphate Fertilizers Production  
Phosphoric Acid Manufacturing  
Quaternary Ammonium Compounds Production  
Sodium Cyanide Production  
Uranium Hexafluoride Production

**PRODUCTION OF ORGANIC CHEMICALS**

## Category Name

Synthetic Organic Chemical Manufacturing

**MISCELLANEOUS PROCESSES**

## Category Name

Aerosol Can-Filling Facilities  
Benzyltrimethylammonium Chloride Production  
Butadiene Dimers Production  
Carbonyl Sulfide Production  
Chelating Agents Production  
Chlorinated Paraffins Production  
Chromic Acid Anodizing  
Commercial Dry Cleaning (Perchloroethylene)—Transfer Machines  
Commercial Sterilization Facilities  
Decorative Chromium Electroplating  
Dodocanedioic Acid Production

TABLE 1.—INITIAL LIST OF CATEGORIES OF MAJOR AND AREA SOURCES OF HAZARDOUS AIR POLLUTANTS \*—Continued

Dry Cleaning (Petroleum Solvent)  
Ethylidene Norbornene Production  
Explosives Production  
Halogenated Solvent Cleaners  
Hard Chromium Electroplating  
Hydrazine Production  
Industrial Dry Cleaning (Perchloroethylene)—Transfer Machines  
Industrial Dry Cleaning (Perchloroethylene)—Dry-to-Dry Machines  
Industrial Process Cooling Towers  
OBPA/1,3-Diisocyanate Production  
Paint Stripper Users  
Photographic Chemicals Production  
Phthalate Plasticizers Production  
Plywood/Particle Board Manufacturing  
Polyether Polyols Production  
Pulp and Paper Production  
Rocket Engine Test Firing  
Rubber Chemicals Manufacturing  
Semiconductor Manufacturing  
Symmetrical Tetrachloropyridine Production  
Tire Production  
Wood Treatment

**CATEGORIES OF AREA SOURCES \***

Asbestos Processing  
Chromic Acid Anodizing  
Commercial Dry Cleaning (Perchloroethylene)—Transfer Machines  
Commercial Dry Cleaning (Perchloroethylene)—Dry-to-Dry Machines  
Commercial Sterilization Facilities  
Decorative Chromium Electroplating  
Halogenated Solvent Cleaners  
Hard Chromium Electroplating

\* All categories in Table 1 are categories of major sources unless specifically identified as categories of area sources. Only major sources within any category shall be subject to emission standards under section 112 unless a finding is made, for the area sources in the category, of a threat of adverse effects to human health or the environment warranting regulation under section 112. All listed categories are exclusive of any specific operations or processes included under other categories that are listed separately.

\* Sources defined as electric utility steam generating units under section 112(a)(8) shall not be subject to emission standards pending the findings of the study required under section 112(n)(1) and subsequent listing and regulation thereof.

\* A finding of threat of adverse effects to human health or the environment warranting regulation under section 112 has been made for each category of area sources listed in Table 1.

[FR Doc. 92-16260 Filed 7-15-92; 8:45 am]

BILLING CODE 6560-50-M

AUSTIN TEXAS AIR CONTROL BOARD TEXAS  
MEMORANDUM

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TO: Interested parties

FROM: Effects Evaluation staff

DATE: June 22, 1992 (Replace the August 1, 1991 List)

SUBJECT: List of Effects Screening Levels (ESLs)

Attached is the latest update of the list of ESLs currently used by the TACB Effects Evaluation staff in its evaluation of the impacts of various air contaminants. These screening levels are based on data concerning health effects, odor nuisance potential, vegetation effects, or corrosion effects. The ESLs on the list are based on health effects unless followed by "(o)", "(v)", or "(c)" (for odor nuisance, vegetation damage, or corrosion of materials, respectively). If the ESL of an air contaminant is based on odor threshold and is less than the annual average ESL based on health (denoted by an asterisk in the annual average column), it is not necessary to evaluate the annual average impacts of such chemical.

Remember that these screening levels are just "tools" the Health Effects Section uses to evaluate the impacts of air pollutant emissions. They are not ambient air standards. If predicted or measured airborne levels of a certain chemical do not exceed its screening level, we do not expect any adverse health or welfare effects. If ambient levels of air contaminants exceed the screening levels this does not necessarily mean there is a problem. It is just an indication that further review will be required.

This list incorporates some effects screening levels which have been derived by the Effects Evaluation staff. These are compounds for which there are no currently published occupational exposure standards or guidelines and are followed by a "D". Please note that some compounds' ESL have been changed or newly derived since the August 1, 1991 ESLs List. These compounds and the relative ESLs are printed in **boldface**. The 30-minute ESLs also can be used for the 1-hour ESLs. The 24-hour average ESLs can be obtained by multiplying a ratio of 0.4 to the relative 30-minute ESLs. If you cannot find a listing for a particular chemical, this does not mean that no health effects evaluation is required. Also note that these screening levels are subject to change without notice. To find out if a screening level has been established for a chemical or to be sure of the most current screening level, please check with the Effects Evaluation staff. Before you call us, please check synonyms & Chemical Abstract Service Registry numbers (CAS No.) to make sure the chemical you are interested in is not listed.

cc: Manuel Agiurre, JAW, MW, LCS, NG, LCH, RJT, JSL, File, Board.

# FOOTNOTES

- \* 30-minute or 1-hour average ESL less than annual average ESL
- \*\* Disaster potential chemical
- D Health ESLs derived by Effects Evaluation staff
- E ESLs based on Effects Evaluation staff's justification
- M Health ESLs based on the 1989 Maximum Concentration Values in the Workplace (MAKs) from the Deutsche Forschungsgemeinschaft (DFG), Federal Republic of Germany
- N Health ESLs based on the 1989 Recommended Exposure Limits (RELs) from the U.S. National Institute for Occupational Safety and Health (NIOSH)
- O Health ESLs based on the 1989 amended Permissible Exposure Limits (PELs) from the U.S. Occupational Safety and Health Administration (OSHA)
- T Health ESLs based on the 1991-92 Chemical Substances Threshold Limit Values (TLVs) from the American Conference of Governmental Industrial Hygienists (ACGIH)
- (PM) denotes particulate matter form, the respirable fraction of PM consists of those particles with particle sizes that are equal to or below the median cut point of 4.0  $\mu\text{m}$ .
- (c) denotes that annual ESL is set to protect against corrosion damage
- (o) denotes that 30-minute or 1-hour ESL is based on odor threshold
- (v) denotes that 30-minute or 1-hour ESL is based on effects on vegetation

EFFECTS SCREENING LEVELS FOR VARIOUS CHEMICALS  
(June 22, 1992)

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
AA				
75-07-0	acetaldehyde	90 (50)	*	(o)
60-35-5	acetamide	320 (132)	32 (13)	D
64-19-7	acetic acid	250 (100)	25 (10)	N,T,O
108-24-7	acetic anhydride	200 (50)	20 (5)	T,O
21287-97-3	acetoacetoxyethyl methacrylate	2000 (230)	200 (23)	D
67-64-1	acetone	5900 (2500)	590 (250)	N
75-86-5	acetone cyanohydrin	40 (10)	4 (1)	N
75-05-8	acetonitrile	340 (200)	34 (20)	N
74-86-2	acetylene	26620 (25000)	2660 (2500)	N
540-59-0	acetylene dichloride (1,2-dichloroethylene)	7930 (2000)	790(200)	N,T,O,M
79-27-6	acetylene tetrabromide	140 (10)	14 (1)	T,O
50-78-2	acetylsalicylic acid (aspirin)	50 (PM)	5	N,T,O
260-94-6	acridine (dibenzo[b,e]pyridine) [also see coal tar pitch volatiles]	0.5	.05	E
107-02-8	acrolein**	2.3 (1)	.23 (.1)	T
79-06-1	acrylamide	.3	.03	N,T,O
79-10-7	acrylic acid	60 (20)	6 (2)	N,T
141-32-2	acrylic acid, n-butyl ester	550 (100)	55 (10)	M
140-88-5	acrylic acid, ethyl ester	200 (50)	20 (5)	M
96-33-3	acrylic acid, methyl ester	180 (50)	18 (5)	M
107-13-1	acrylonitrile	43 (20)	4 (2)	T,O
281-23-2	adamantane (sym-tricyclodecane)	3850 (692)	385 (69)	D
107-13-1	adiponitrile	180 (40)	18 (4)	N
309-00-2	Aldrin	2.5 (PM)	.25	N,T,O,M
68239-06-5	aliphatic diisocyanate (see dimeryl diisocyanate)	.25	.025	D
-----	alkanes not otherwise specified	1000 ppb	100 pbb	D
-----	alkyl phenol, C-12	860	86	D
-----	alkyl phenol, C-20	1150	115	D
-----	alkyl phenol ethoxylate (see nonylphenyl ethoxylate)	1000	100	D
107-18-6	allyl alcohol	48 (20)	5 (2)	N,T,O,M
107-11-9	allylamine	12 (5)	1 (.5)	D
107-05-1	allyl chloride**	30 (10)	3 (1)	N,T,O
106-92-3	allyl glycidyl ether (AGE)	225 (50)	23 (5)	N,T,O
2179-59-1	allyl propyl disulfide	120 (20)	12 (2)	N,T,O,M
7539-12-0	allyl succinic anhydride	6 (1)	.6 (.1)	D

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)	30-minute or 1-hour	annual
1344-28-1	alumina	see aluminum oxide		
7429-90-5	aluminum, metal and oxide	50	5	N,O
	pyro powders, welding fumes	50	5	N,T,O
	alkyls and soluble salts	20	2	N,T,O
-----	amino-3-aminomethyl-3,3,5-trimethylcyclohexane	375 (50)	38 (5)	D
141-43-5	aminoethanol (ethanolamine)	75 (30)	7.5 (3)	N,T,O,M
111-41-1	aminoethylethanolamine (hydroxyethyl ethylenediamine)	640 (150)	64 (15)	D
123-00-2	aminopropyl morpholine, 4-	1650 (280)	165 (28)	D
504-29-0	aminopyridine, 2-	20 (5)	2 (.5)	N,T,O,M
462-08-8	aminopyridine, 3-	15 (3.8)	1.5 (.38)	D
504-24-5	aminopyridine, 4-	2.5 (.7)	.25 (.07)	D
61-82-5	amino-1,2,4-triazole, 3- (Amitrole)	2	.2	N,T,O,M
7664-41-7	ammonia**	170 (250)	17 (25)	N,T
12125-02-9	ammonium chloride fume	100	10	N,T,O
3825-26-1	ammonium perfluorooctanate	1	.1	T
7773-06-0	ammonium sulfamate (Ammate)	50 (resp)	5	N,O
7783-20-2	ammonium sulfate	50 (PM)	5	D
628-63-7	amyl acetate, n-	27 (5) (o)	*	
628-38-0	amyl acetate, sec-	11 (2) (o)	*	
110-53-2	amyl bromide	250 (40)	25 (4)	D
109-67-1	amylene, 1- (1-pentene)	90 (30)	*	
110-66-7	amyl mercaptan	0.1 (.02)	*	(o)
628-80-8	amyl methyl ether, n-	670 (160) (o)	270 (65)	D
994-05-8	amyl methyl ether, tert- (TAME)	670 (160) (o)	270 (65)	D
80-46-6	amylphenol, p-tert-, vapor	700 (100)	70 (10)	D
		35 (PM)	3.5	D
872-10-6	amyl sulfide	.2 (.3)	*	(o)
62-53-3	aniline	76 (20)	7.6 (2)	N,T,O
29191-52-4	anisidine, o-, p- isomers	5 (1)	.5 (.1)	N,T,O,M
20-12-7	anthracene	0.5	0.05	E
7440-36-0	antimony, as Sb	5 (PM)	.5	N,T,O,M
1309-64-4	antimony trioxide	5 (PM)	.5	T
86-88-4	ANTU ( $\alpha$ -naphthylthiourea)	3	.3	N,T,O,M
7440-37-1	argon	simple asphyxiant		
64742-95-6	Aromatic 100 (see trimethyl benzene)	1230 (250)	123 (25)	D
64742-94-5	Aromatic 150	2560 (455)	256 (46)	D
64742-94-5	Aromatic 200	4200 (620)	420 (62)	D
7440-38-2	arsenic and compounds	5 (organic)	.5	O,E
		.1 (inorg)	.01	O,E
7784-42-1	arsine	1.6 (.5)	.16 (.05)	T,O

BB				
7440-39-3	barium & compounds, as Ba	5	.5	N,T,O,M
7727-43-7	barium sulfate (PM)	50 (resp)	5	N,O
68359-37-5	Baythroid	50 (PM)	5	D
	(cyfluthrin, also see pyrethrum)			
-----	Beech wood dust	10	1	N,T
17804-35-2	Benomyl (PM)	50 (resp)	5	O
98-87-3	benzal chloride	20 (3)	2 (.3)	D
71-43-2	benzene	30 (10)	3 (1)	O
95-14-7	benzene azimide (benzotriazole)	100 (20)	10 (2)	D
8032-32-4	benzine	3500 (875)	350 (88)	N
	(light petroleum distillate; VM&P naphtha)			
205-99-2	benzo[b]fluoranthene	.5	.05	E
	(see coal tar pitch volatiles)			
100-47-0	benzonitrile	505 (120)	51 (12)	D
50-32-8	benzo[a]pyrene	.03 (PM)	.003	D
95-14-7	benzotriazole (benzene azimide)	100 (20)	10 (2)	D
98-88-4	benzoyl chloride	60 (10)	6 (1)	D
94-36-0	benzoyl peroxide	50	5	N,T,O,M
140-11-4	benzyl acetate	600 (100)	60 (10)	D
100-51-6	benzyl alcohol	500 (110)	50 (11)	D
100-44-7	benzyl chloride	50 (10)	5 (1)	T,O
98-87-3	benzyl dichloride	20 (3)	2 (.3)	D
	(benzal chloride)			
7440-41-7	beryllium and compounds	see TACB Reg III		
121-46-0	bicycloheptadiene	2000	200	D
82657-04-3	Bifenthrin	25	2.5	D
92-52-4	biphenyl	2.3 (o)	1.3	T
111-44-4	bis(chloroethyl) ether	290 (50)	29 (5)	N,T,O,M
	(dichloroethyl ether)			
542-88-1	bis(chloromethyl) ether	.05 (,01)	.005 (.001)	D
1304-82-1	bismuth telluride	100 (PM)	10	N,T
	resp. fraction	50	5	N
	selenium-doped	50	5	N,T,O
80-05-7	bisphenol A	800 (vapor)	80	D
		40 (PM)	4	D

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL	
		$\mu\text{g}/\text{m}^3$ (ppb)	
		30-minute or 1-hour	annual
68475-96-0	Black Grit (Boiler Slag)	50 (PM)	5 D
	<u>borates, tetra, sodium salts:</u>		
1330-43-4	anhydrous	10	1 N,T
11130-12-4	pentahydrate	10	1 N,T
1303-96-4	decahydrate	50	5 N,T
10043-35-3	boric acid	10	1 D
1303-86-2	boron oxide	50 (resp)	5 N,O
10294-33-4	boron tribromide	100 (10)	10 (1) N,T,O
7637-07-2	boron trifluoride	see TACB Reg III	
99-30-9	Botran 75W	100	10 D
	(2,6-dichloro-4-nitroaniline)		
314-40-9	Bromacil	100 (10)	10 (1) N,T,O
7726-95-6	bromine**	6.6 (1)	.66(.1) N,T,O
7789-30-2	bromine pentafluoride	see TACB Reg III	
109-70-6	bromo-3-chloropropane, 1-	.5 (.075)	.05 (.0075) D
74-97-5	bromochloromethane	1680 (o)	1060 T
	(chlorobromomethane)	(320)	(200)
74-96-4	bromoethane	8900 (2000)	890 (200) M
75-25-2	bromoform	52 (5)	5 (.5) N,T,O
106-99-0	butadiene, 1,3-	110 (50)	11 (5) E
106-97-8	butane	19000 (8000)	1900 (800) N,T,O
109-79-5	butanethiol (butyl mercaptan)	1.8 (.5) (o)	1.8 (.5) N,T,O
78-93-3	butanone (methyl ethyl ketone)	3900 (o)	590 T,M
		(1320)	(200)
111-76-2	butoxyethanol	1210 (250)	121 (25) N,T,O
	(ethylene glycol monobutyl ether)		
123-86-4	butyl acetate, n-	1850 (391) (o)	710 (150) N,T,O
105-46-4	butyl acetate, sec-	9500 (2000)	950 (200) NTOM
540-88-5	butyl acetate, tert-	19 (4)	* o-OSHA
141-32-2	butyl acrylate	183 (35) (o)	52 (10) NTOM
71-36-3	butyl alcohol, n-	1220 (407) (o)	150 (50) N,T,O
78-92-2	butyl alcohol, sec-	3000 (1000)	300 (100) NTOM
75-65-0	butyl alcohol, tert-	3000 (1000)	300 (100) NTOM
109-73-9	butylamine, n-	150 (50)	15 (5) N,T,O,M
13952-84-6	butylamine, sec-	150 (50)	15 (5) M
75-64-9	butylamine, tert-	12 (4)	1.2 (.4) D
85-68-7	butyl benzyl phthalate (BBP)	50 (PM)	5 D
128-37-0	butylated hydroxytoluene (BHT)	100	10 N,T,O
109-69-3	butyl chloride, n-	3335 (886) (o)	440 (117) D
1189-85-1	butyl chromate, tert-	.1	.01 E
	(as $\text{CrO}_3$ )		
584-03-2	butylene glycol, 1,2-	2100 (570)	210 (57) D
107-88-0	butylene glycol, 1,3-	4400 (1195)	440 (120) D
110-63-4	butylene glycol, 1,4-	500 (136)	50 (14) D

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL μg/m <sup>3</sup> (ppb)		
		30-minute or 1-hour	annual	
513-85-9	butylene glycol, 2,3-	1400 (380)	140 (38)	D
106-88-7	butylene oxide	206 (70) (o)	50 (17)	D
2426-08-6	butyl glycidyl ether (BGE)	266 (50)	27 (5)	N
7397-62-8	butyl glycolate	270 (50)	27 (5)	D
75-91-2	butyl hydroperoxide, tert-	35 (10)	3.5 (1)	D
111-36-4	butyl isocyanate	9 (2.2)	.9 (.22)	D
138-22-7	butyl lactate	300 (50)	30 (5)	N,T,O
109-79-5	butyl mercaptan, n-	1.8 (.5)	1.8 (.5)	(o)
97-88-1	butyl methacrylate	6970 (1200)	697 (120)	D
614-45-9	butyl peroxybenzoate, tert-	15 (2)	1.5 (.2)	D
99-71-8	butylphenol, p-sec-	130 (21)	13 (2.1)	D
89-72-5	butylphenol, o-sec-	310 (50)	31 (5)	N,T,O
98-54-4	butylphenol, p-tert-	5 (.8)	.5 (.08)	M
98-51-1	butyltoluene, p-tert-	610 (100)	61 (10)	N,T,O,M
-----	butyltoluene diamine, tert-	70 (10)	7 (1)	D
98-19-1	butyl-m-xylene, tert- (see Aromatics 150)	3300 (500)	330 (50)	D
123-72-8	butyraldehyde	14 (5) (o)	*	
616-45-5	butyrolactam, gamma- (2-pyrrolidone)	70	7	D
96-48-0	butyrolactone, gamma-	2800 (800)	280 (80)	D
109-74-0	butyronitrile	220 (80)	22 (8)	N
<hr/>				
7440-43-9	cadmium & compounds, as Cd	.1	.01	N,E
7778-44-1	calcium arsenate (as As)	.1	.01	O,E
1317-65-3	calcium carbonate (marble)	100 (total) 50 (resp)	10 5	N,T N,O
13765-19-0	calcium chromate (as Cr)	.1	.01	E
156-62-7	calcium cyanamide	5	.5	N,T,O
1305-62-0	calcium hydroxide	50	5	N,T,O
1305-78-8	calcium oxide	20	2	N,T
1344-95-2	calcium silicate, synthetic	100	10	T
7778-18-9	calcium sulfate (gypsum)	100 (total) 50 (resp)	10 5	N,T N,O
5794-03-6	camphene (see camphor)			
76-22-2	camphor, synthetic	20	2	N,O
105-60-2	caprolactam dust	10	1	N,T,O
105-60-2	caprolactam vapor	10 (2.2)	1 (.22)	N
2425-06-1	Captafol	1	.1	N,T,O
133-06-2	Captan	50	5	N,T,O
63-25-2	Carbaryl	50	5	N,T,O,M
1563-66-2	Carbofuran	1	.1	N,T,O

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
1333-86-4	carbon black, in presence of PAHs	35 1	3.5 .1	N,T,O N
124-38-9	carbon dioxide	90000 (50000)	9000 (5000)	N,O,M
75-15-0	carbon disulfide**	30 (10)	3 (1)	N
630-08-0	carbon monoxide	must meet NAAQS		
558-13-4	carbon tetrabromide	14 (1)	1.4 (.1)	N,T,O
56-23-5	carbon tetrachloride	126 (20)	13 (2)	N,O
75-44-5	carbonyl chloride** (phosgene)	4 (1)	.4 (.1)	N,T,O,M
353-50-4	carbonyl fluoride	54 (20)	5 (2)	N,T,O
463-58-1	carbonyl sulfide	8 (3)	.8 (.3)	D
120-80-9	catechol	230 (50)	23 (5)	N,T,O
9004-34-6	cellulose	100 (total)	10	N,T
		50 (resp)	5	N,O
21351-79-1	cesium hydroxide	20	2	N,T,O
2917-26-2	cetylmercaptan	53 (5)	5 (.5)	N
57-74-9	Chlordane	5	.5	N,T,O,M
143-50-0	chlordecone (Kepone)	.01	.001	N
8001-35-2	chlorinated camphene (Toxaphene)	5	.5	T,O,M
31242-93-0	chlorinated diphenyl oxide	5	.5	N,T,O,M
7782-50-5	chlorine**	15 (5)	1.5 (.5)	N,T,O,M
10049-04-4	chlorine dioxide	2.8 (1)	.3 (.1)	N,T,O,M
7790-91-2	chlorine trifluoride	see TACB Reg III		
107-20-0	chloroacetaldehyde	32 (10)	3 (1)	N,T,O,M
78-95-5	chloroacetone	38 (10)	4 (1)	T
532-27-4	chloroacetophenone	3.2 (.5)	.3 (.05)	N,T,O
79-04-9	chloroacetyl chloride	2.3 (.5)	.23 (.05)	N,T,O
108-42-9	chloroaniline, m-	31 (6)	3.1 (.6)	D
106-47-8	chloroaniline, p-	53 (10)	5.3 (1)	D
95-51-2	chloroaniline, o-	53 (10)	5.3 (1)	D
108-90-7	chlorobenzene	460 (100)	46 (10)	T
104-83-6	chlorobenzyl chloride	26 (4)	2.6 (.4)	D
2698-41-1	chlorobenzylidene malono- nitrile, o-	4 (.5)	.4 (.05)	N,T,O
74-97-5	chlorobromomethane	10600 (2000)	1060 (200)	T
1126-99-8	chloro-1,3-butadiene, 2- ( $\beta$ -chloroprene)	36 (10)	3.6 (1)	N
59-50-7	chlorocresol	20 (o)	*	
75-68-3	chlorodifluoroethane (Freon 142B)	61700 (18750)	6170 (1875)	D
74-45-6	chlorodifluoromethane (Freon 22)	18000 (5000)	1800 (500)	M
53469-21-9	chlorodiphenyl, 42% Cl <sub>2</sub> (PCBs)	.1	.01	E
11097-69-1	chlorodiphenyl, 54% Cl <sub>2</sub> (PCBs)	.1	.01	E

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
106-89-8	chloro-2,3-epoxypropane (epichlorohydrin)	3.8 (1)	.38 (.1)	T
75-00-3	chloroethane	500 (190)	50 (19)	E
107-07-3	chloroethanol, 2- (ethylene chlorohydrin)	33 (10)	3.3 (1)	N,T,O,M
75-01-4	chloroethylene (vinyl chloride)	130 (50)	13 (5)	T
67-66-3	chloroform	100 (20)	10 (2)	O
-----	chloroglycerin	50 (11)	5 (1)	D
542-88-1	chloromethyl ether, bis-	.047 (.01)	.0047 (.001)	T
107-30-2	chloromethyl methyl ether	.5	.05	D
600-25-9	chloronitropropane	100 (20)	10 (2)	N,T,O
76-15-3	chloropentafluoroethane	63200 (10000)	6320 (1000)	N,T,O
95-57-8	chlorophenol, o-	2 (.36) (o)	*	
108-43-0	chlorophenol, m-	19 (3.6) (o)	*	
106-47-9	chlorophenol, p-	300 (57)	30 (5.7)	D
76-06-2	chloropicrin	7 (1)	.7 (.1)	N,T,O,M
126-99-8	$\beta$ -chloroprene	36 (10)	3.6 (1)	N
598-78-7	chloropropionic acid	4.4 (1)	0.44 (.1)	T
2039-87-4	chlorostyrene, o-	2850 (500)	285 (50)	N,T,O
1897-45-6	Chlorothalonil	15	1.5	D
95-49-8	chlorotoluene, o-	235 (o)	*	
-----	chlorotrifluoromethylphenoxy- toluene	300	30	D
1929-82-4	2-chloro-6-(trichloromethyl)- pyridine (Nitrpyrin)	50 (resp)	5	O
2921-88-2	Chlorpyrifos (Dursban)	2	.2	N,T,O
7738-94-5	chromic acid ( $\text{H}_2\text{CrO}_4$ ) & chromate ( $\text{CrO}_4^{2-}$ )	.1	.01	E
7440-47-3	chromium (VI) compounds, as Cr	.1	.01	E
7440-47-3	chromium (II) & (III) cpds, chromium metal, as Cr	1	.1	E
1333-82-0	chromium trioxide ( $\text{CrO}_3$ ), as Cr	.1	.01	E
14977-61-8	chromyl chloride	.1	.01	E
218-01-9	chrysene	.5	.05	M
2971-90-6	Clopidol	100 (PM) 50 (resp)	10 5	N,T
-----	coal dust, respirable (<5% silica)	20	2	T,O
	(>5% silica) (see quartz)	1	.1	T,O
8007-45-2	coal tar [also 65996-89-6]	1	.1	N
65996-92-1	coal tar distillate	3500 (875)	350 (88)	N
8030-30-6	coal tar naphtha (petroleum distillates, naphtha)	3500 (875)	350 (88)	N
8001-58-9	coal tar oil (creosote)	1	.1	N

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		E
		$\mu\text{g}/\text{m}^3$ (ppb)	30-minute annual or 1-hour	
65996-93-2	coal tar pitch volatiles (assume the fraction of benzo[a]pyrene not total PPAH)	.5	.05	E
7440-48-4	cobalt, metal dust & fume	.5	.05	N, T, O
10210-68-1	cobalt carbonyl	1	.1	N, T, O
16842-03-8	cobalt hydrocarbonyl	1	.1	N, T, O
-----	coke oven emissions	1.5	.15	O
7440-50-8	copper fume	1	.1	N, O, M
7440-50-8	copper dusts & mists	10	1	N, T, O, M
-----	cotton dust, raw	2	.2	Ø
8001-58-9	creosote (coal tar oil)	1	.1	N
1319-77-3	cresol (cresylic acid), mixed isomers	5 (1.1) (o)	10 (2.3)	N
	[also any isomers: 108-39-4; 95-48-4; 106-44-5]			
4170-30-3	crotonaldehyde	60 (20)	6 (2)	N, T, O
299-86-5	Cruformate	50	5	N, T, O
98-82-8	cumene	500 (100) (o)	245 (50)	
80-15-9	cumene hydroperoxide	25 (4.4)	2.5 (.44)	D
420-04-2	cyanamide	20	2	N, T, O
143-33-9	cyanide, potassium	50	5	T, O, M
151-50-8	cyanide, sodium	50	5	T, O, M
460-19-5	cyanogen	210 (100)	21 (10)	N, T, O, M
506-68-3	cyanogen bromide	2.5 (.6)	.25 (.06)	D
506-77-4	cyanogen chloride	.6 (.3)	.06 (.03)	N
204-62-2	cyclododecane	5150 (750)	515 (75)	D
1724-39-6	cyclododecanol	9800 (1300)	980 (130)	D
830-13-7	cyclododecanone	1600 (150)	160 (15)	D
291-64-5	cycloheptane	3400 (850)	340 (85)	D
110-82-7	cyclohexane	1435 (o)	340	
108-93-0	cyclohexanol	613 (153) (o)	200 (50)	
108-94-1	cyclohexanone	481 (120) (o)	100 (25)	
110-83-8	cyclohexene	600 (178) (o)	*	
108-91-8	cyclohexylamine	80 (20)	8 (2)	E
3173-53-3	cyclohexyl isocyanate	20 (4)	2 (.4)	D
1569-69-3	cyclohexylmercaptan	24 (5)	2.4 (.5)	N
121-82-4	cyclonite	15	1.5	N, T, O
29965-97-7	cyclooctadiene	2000 (470)	200 (47)	D
292-64-8	cyclooctane	3500 (750)	350 (75)	D
542-92-7	cyclopentadiene	2030 (750)	203 (75)	N, T, O, M
287-92-3	cyclopentane	3400 (1190)	340 (119)	D
120-92-3	cyclopentanone	1700 (500)	170 (50)	D
68359-37-5	cyfluthrin (Baythroid)	50 (PM)	5	D
13121-70-5	Cyhexatin	50	5	N, T, O
99-87-6	cymene, p- (p-methyl cumene)	2745 (500)	275 (50)	D
66841-24-5	Cypermethrin (see pyrethrum)	50	5	D



CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
764-41-0	dichloro-2-butene, 1,4-	6 (1.2)	.6 (.12)	D
75-71-8	dichlorodifluoromethane (Freon 12)	49500 (10000)	4950 (1000)	N,T,O,M
118-52-5	dichlorodimethylhydantoin	2	.2	N,T,O
75-34-3	dichloroethane, 1,1-	4000 (1000)	400 (100)	NTOM
107-06-2	dichloroethane, 1,2- (ethylene dichloride)	40 (10)	4 (1)	N,O
75-35-4	dichloroethylene, 1,1- (vinylidene chloride)	40 (10)	4 (1)	O
540-59-0	dichloroethylene, 1,2-	7930 (2000)	790 (200)	NTOM
111-44-4	dichloroethyl ether	290 (50)	29 (5)	N,T,O,M
75-43-4	dichlorofluoromethane (Freon 21)	420 (100)	42 (10)	N,T,O,M
96-23-1	dichlorohydrin	130 (25)	13 (2.5)	D
542-88-1	dichloromethyl ether [bis(chloromethyl) ether]	.05	.005	D
75-09-2	dichloromethane (methylene chloride)	260 (75)	26 (7.5)	E
676-97-1	dichloromethyl phosphine oxide	3	.3	D
99-30-9	dichloro-4-nitroaniline, 2,6- (Botran 75W)	100	10	D
-----	dichloronitrobenzene, all isomers	9	.9	D
594-72-9	dichloro-1-nitroethane, 1,1-	120 (20)	12 (2)	N,T,O
120-83-2	dichlorophenol, 2,4-	525	53	D
87-65-0	dichlorophenol, 2,6-	20	*	(o)
78-87-5	dichloropropane, 1,2- (propylene dichloride)	1150(o) (250)	350 (75)	T,O,M
542-75-6	dichloropropene, 1,3-	45 (10)	4.5 (1)	N,T,O
709-98-8	dichloropropionanilide (Propanil)	15 (PM)	1.5	D
75-99-0	dichloropropionic acid, 2,2- (Dalapon)	58 (10)	5.8 (1)	N,T,O,M
76-14-2	dichlorotetrafluoroethane (Freon 114)	69900 (10000)	6990 (1000)	N,T,O,M
62-73-7	Dichlorvos (DDVP)	9 (1)	.9 (.1)	N,T,O,M
141-66-2	Dicrotophos	2.5	.25	N,T,O
5124-30-1	dicyclohexylmethane-4,4'- diisocyanate	.55	.055	D
77-73-6	dicyclopentadiene	31 (6)	27 (5)	(o)
102-54-5	dicyclopentadienyl iron	50 (resp)	5	N,O
60-57-1	Dieldrin	2.5	.25	N,T,O,M
68334-30-5	diesel fuel combustion products	90 (vapor) 10 (PM)	9 1	D D
111-42-2	diethanolamine	130 (30)	13 (3)	N,T,O

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)	30-minute or 1-hour	annual
109-89-7	diethylamine	179 (60) (o)	30 (10)	
100-37-8	diethylaminoethanol	55 (11) (o)	48 (10)	
25340-17-4	diethyl benzene	2500 (455)	250 (46)	D
111-90-0	diethylene glycol monoethyl ether (ethyl Carbitol)	1500 (208)	150 (21)	D
111-40-0	diethylene triamine	42 (10)	4.2 (1)	N,T,O
3710-84-7	diethylhydroxylamine	400	40	D
60-29-7	diethyl ether (ethyl ether)	930 (300) (o)	*	
117-81-7	di(2-ethylhexyl)phthalate (di-sec-octyl phthalate)	50	5	N,T,O
96-22-0	diethyl ketone	7050 (2000)	705 (200)	N,T,O
2524-04-1	diethyl phosphorochlorodithioate (ethyl PCT)	70	7	D
84-66-2	diethyl phthalate	50	5	N,T,O
64-67-5	diethyl sulfate	25	2.5	D
105-55-5	diethylthiourea	50 (PM)	5	D
75-61-6	difluorodibromomethane (Freon 12B2)	8580 (1000)	858 (100)	N,T,O,M
2238-07-5	diglycidyl ether (DGE)**	5.3 (1)	0.53 (.1)	N,T,O
929-06-6	diglycolamine	380	38	D
123-31-9	dihydroxybenzene (hydroquinone)	20	2	T,O,M
110-96-3	diisobutylamine	125	13	D
108-82-7	diisobutylcarbinol (2,6-dimethyl-4-heptanol)	188 (o)	100 (D)	
108-83-8	diisobutyl ketone	639 (110)	145 (25)	(o)
84-69-5	diisobutyl phthalate (see dibutyl phthalate)	50 (PM)	5	D
110-97-4	diisopropanolamine (DIPA)	460	46	D
108-18-9	diisopropylamine	210 (50)	21 (5)	N,T,O
68239-06-5	dimeryl diisocyanate	.25	.025	D
110-71-4	dimethoxyethane, 1,2- (ethylene glycol dimethyl ether, EGDME)	220 (60)	22 (6)	D
109-87-5	dimethoxymethane (methylal)	31100 (10000)	3110 (1000)	N,T,O,M
127-19-5	dimethyl acetamide	360 (100)	36 (10)	N,T,O,M
124-40-3	dimethylamine	92 (50)	9.2 (5)	T
1300-73-8	dimethylaminobenzene (xylidine)	25 (5)	2.5 (.5)	N
108-01-0	dimethylaminoethanol (deanol)	55 (o)	50	D
1704-62-7	dimethylaminoethoxyethanol	130 (24)	13 (2.4)	D
121-69-7	dimethylaniline, N,N-	64 (32) (o)	10 (5)	N
1330-20-7	dimethylbenzene (xylene)	3700 (850) (o)	435 (100)	N,T,O
75-83-2	dimethyl butane (see hexane isomers)	3500 (1000)	350 (100)	N
-----	dimethylcyclohexylamine, N,N-	100	10	D

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
300-76-5	dimethyl-1,2-dibromo-2,2-dichloroethyl phosphate (Naled)	30	3	N,T,O,M
108-01-0	dimethylethanolamine (dimethylaminoethanol)	55 (o)	50	D
115-10-6	dimethyl ether	19100 (10000)	1910 (1000)	M
598-56-1	dimethyl ethyl amine, N,N-	750 (250)	75 (25)	M
68-12-2	dimethylformamide	300 (100)	30 (10)	N,T,O
108-83-8	dimethyl-4-heptanone, 2,6-(diisobutyl ketone)	640 (o) (110)	145 (25)	N,T,O
108-82-7	dimethyl-4-heptanol, 2,6-(diisobutylcarbinol)	188 (o)	100	D
57-14-7	dimethylhydrazine, 1,1-	.25 (,1)	.025 (.01)	T
-----	dimethyl-3-hydroxythiophene, 2,4-	100	10	D
-----	dimethyl oxazolidinone	2500	250	D
131-11-3	dimethylphthalate	50 (PM)	5	N,T,O
3179-63-3	dimethyl propanolamine	750	75	D
77-78-1	dimethyl sulfate	5.2 (1)	.52 (.1)	N,T,O
75-18-3	dimethyl sulfide	3 (o)	*	
67-68-5	dimethyl sulfoxide (DMSO)	140	14	D
148-01-6	dinitolmide (3,5-dintro-o-toulamide; zoalene)	50 (PM)	5	N,T,O
528-29-0	dinitrobenzene (all isomers) [also 99-65-0; 100-25-4]	10 (1.5)	1 (.15)	N,T,O
534-52-1	dinitro-o-cresol	2 (PM)	.2	N,T,O,M
25550-58-7	dinitrophenol	3 (PM)	.3	D
25321-14-6	dinitrotoluene	15 (PM)	1.5	N,T,O
101-67-7	dioctyldiphenylamine	100	10	D
123-91-1	dioxane, 1,4-	900 (250)	90 (25)	T,O
78-34-2	Dioxathion (Delnav)	2 (PM)	.2	N,T,O
1746-01-6	dioxins, polychlorinated-dibenzo-p- (as 2,3,7,8-tetrachlorodibenzo-p-dioxin, TCDD)	---	$9.2 \times 10^{-8}$	E, NY
646-06-0	dioxolane, 1,3-	520 (172)	52 (17)	D
122-39-4	diphenylamine	100 (PM)	10	N,T,O
101-68-8	diphenylmethane-4,4'-diisocyanate (methylene bisphenyl isocyanate)	.5 (.05)	.05 (.005)	N.T
142-84-7	dipropylamine	200 (48)	20 (5)	D
34590-94-8	dipropylene glycol methyl ether	3000 (500)	300 (50)	M
56-18-8	dipropylene triamine	60 (11)	6 (1)	D
111-43-3	dipropyl ether (propyl ether)	2500 (600)	250 (60)	D
123-19-3	dipropyl ketone	2330 (500)	233 (50)	N,T,O
231-36-7	Diquat	5 (total) 1 (resp)	.5 .1	N,T,O T
85-00-7	Diquat dibromide	same as Diquat		
6385-62-2	Diquat dibromide monohydrate	same as Diquat		



CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL	
		$\mu\text{g}/\text{m}^3$ (ppb)	
		30-minute or 1-hour	annual
75-04-7	ethylamine	180 (100)	18 (10) N,T,O,M
541-85-5	ethyl amyl ketone	1310 (250)	131 (25) N,T,O
103-69-5	ethylaniline	20	2 D
100-41-4	ethyl benzene	2000 (460) (o)	434 (100)
-----	ethyl benzene hydroperoxide	4350	435 D
74-96-4	ethyl bromide	220 (50)	22 (5) T
628-81-9	ethyl butyl ether	2340 (560)	234 (56) D
106-35-4	ethyl butyl ketone	2340 (500)	234 (50) N,T,O
75-00-3	ethyl chloride	500 (189)	50 (19) E
541-41-3	ethyl chlorocarbonate (ethyl chloroformate)	5	.5 D
107-12-0	ethyl cyanide (propionitrile)	140 (60)	14 (6) N
74-85-1	ethylene	1170	117 (v)
-----	ethylene bisdithiocarbamates (EBDCs, see ethylene thiourea)	50 (PM)	5 D
107-07-3	ethylene chlorohydrin	33 (10)	3.3 (1) N,T,O,M
110-61-2	ethylene cyanide (succinonitrile)	200 (60)	20 (6) N
107-15-3	ethylenediamine	250 (100)	25 (10) N,T,O,M
106-93-4	ethylene dibromide	3.8 (.5)	.38 (.05) N
107-06-2	ethylene dichloride	40 (10)	4 (1) N,O
107-21-1	ethylene glycol	1270 (500)	127 (50) T,O
111-55-7	ethylene glycol diacetate	555 (o)	85 D
110-71-4	ethylene glycol dimethyl ether (1,2-methoxyethane, EGDME)	220 (60)	22 (6) D
628-96-6	ethylene glycol dinitrate	1	.1 N,O
111-76-2	ethylene glycol monobutyl ether (butyl Cellosolve)	1210 (250)	121 (25) N,T,O
112-07-2	ethylene glycol monobutyl ether acetate	1310 (200)	131 (20) M
110-80-5	ethylene glycol monoethyl ether (ethyl Cellosolve)	180 (50)	18 (5) T
111-15-9	ethylene glycol monoethyl ether acetate	270 (50)	27 (5) T
112-25-4	ethylene glycol monohexyl ether (2-hexyloxyethanol)	2100 (350)	210 (35) D
109-59-1	ethylene glycol monoiso- propyl ether	1060 (250)	106 (25) T,O
109-86-4	ethylene glycol monomethyl ether (methyl Cellosolve)	160 (50)	16 (5) T,M
110-49-6	ethylene glycol monomethyl ether acetate	240 (50)	24 (5) T,M
122-99-6	ethylene glycol monophenyl ether (phenyl Cellosolve)	170 (30)	17 (3) D





CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL $\mu\text{g}/\text{m}^3$ (ppb)	
		30-minute or 1-hour	annual
106-35-4	heptanone, 3- (ethyl butyl ketone)	2340 (500)	234 (50) N,T,O
111-14-8	heptanoic acid	108 (o)	53 D
111-70-6	heptyl alcohol	1900 (o)	270
1639-09-4	heptylmercaptan, n-	1 (o)	*
<b>118-74-1</b>	<b>hexachlorobenzene (HCB)</b>	<b>.25</b>	<b>.025</b> T
87-68-3	hexachlorobutadiene	2.1 (.2)	.21 (.02) N,T,O
58-89-9	Hexachlorocyclohexane, gamma- (Lindane)	5	.5 N,T,O,M
77-47-4	hexachlorocyclopentadiene	1.1 (.1)	.11 (.01) N,T,O
67-72-1	hexachloroethane	97 (10)	10 (1) N,T,O,M
1335-87-1	hexachloronaphthalene	2	.2 N,T,O
1888-71-7	hexachloropropene	60	6 D
2917-26-2	hexadecyl mercaptan (cetylmercaptan)	53 (5)	5 (.5) N
648-16-2	hexafluoroacetone	7 (1)	.7 (.1) N,T,O
124-09-4	hexamethylene diamine	3.2 (o)	*
822-06-0	hexamethylene diisocyanate(HDI)	.34 (.05)	.03 (.005) W
<b>28182-81-2</b>	<b>hexylmenthylene diisocyanate polymer</b>	<b>50 (PM)</b>	<b>5</b> D
629-11-8	hexamethylene glycol	750	75 D
111-49-9	hexamethyleneimine	100 (25)	10 (2.5) D
100-97-0	hexamethylenetetramine	170	17 D
110-54-3	hexane, n-	1760 (500)	176(50) N,T,O,M
-----	hexane, other isomers	3500 (1000)	350 (100) N
<b>124-09-4</b>	<b>hexanediamine, 1,6-</b>	<b>23 (5)</b>	<b>2.3 (.5)</b> T
591-78-6	hexanone, 2- (methyl n-butyl ketone)	40 (10)	4 (1) N
108-10-1	hexone (methyl isobutyl ketone)	2050 (500)	205 (50) N,T,O
108-84-9	hexyl acetate, sec-	12 (2)	* (o)
111-25-1	hexyl bromide	135 (20)	14 (2) D
107-41-5	hexylene glycol	1210 (250)	121 (25) N,T,O
111-31-9	hexylmercaptan, N-	27 (5)	2.7 (.5) N
302-01-2	hydrazine	0.13 (.1)	.013 (.01) T
7782-79-8	hydrazoic acid	2.7 (1)	.27 (.1) M
1333-74-0	hydrogen	simple asphyxiant	
61788-32-7	hydrogenated terphenyls	50 (5)	5 (.5) N,T,O
10035-10-6	hydrogen bromide**	100 (30)	10 (3) N,T,O
7647-01-0	hydrogen chloride**	75 (50)	.1 (c) N,T,O
74-90-8	hydrogen cyanide	50 (47)	5 (4.7) N,O
7664-39-3	hydrogen fluoride**	see TACB Reg III	
10034-85-2	hydrogen iodide	150 (30)	15 (3) D
7722-84-1	hydrogen peroxide	14 (10)	1.4 (1) N,T,O,M
7783-07-5	hydrogen selenide (as Se)	1.6 (.5)	.16 (.05) NTOM
7783-06-4	hydrogen sulfide**	see TACB Reg II	

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL $\mu\text{g}/\text{m}^3$ (ppb) 30-minute annual or 1-hour
123-31-9	hydroquinone	20 N,T,O,M
150-76-5	hydroquinone monomethyl ether (4-methoxyphenol; p-hydroxyanisole)	5 N,T,O
118-93-4	hydroxyacetophenone, 2-	125 D
99-93-4	hydroxyacetophenone, 4-	250 D
-----	hydroxyacetophenone oxime, 4-	125 D
111-41-1	hydroxyethyl ethylenediamine	64 (15) D
868-77-9	hydroxyethyl methacrylate, 2-	317 (60) D
123-42-2	4-hydroxy-4-methyl-2-pentanone (diacetone alcohol)	240 (50)
597-31-9	hydroxypivaldehyde	180 D
999-61-1	hydroxypropyl acrylate	2.8 (.5) N,T,O
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15687-27-1	Ibuprofen	40 D
56-18-8	iminobispropylamine, 3,3'- (dipropylene triamine)	60 (11) 6 (1) D
95-13-6	indene	70 (15) (o) 45 (10) N,T,O
7740-74-6	indium & compounds (as In)	1 .1 N,T,O
7553-56-2	iodine	10 (1) 1 (.1) N,T,O,M
75-47-8	iodoform	6 (o) *
36734-19-7	Iprodione	100 D
1309-37-1	iron oxide (fume)	50 N,T,M
13463-40-6	iron pentacarbonyl	8 (1) .8 (.01) N,T,O,M
-----	iron salts, soluble (as Fe)	10 N,T,O
118-48-9	isatoic anhydride	100 (PM) 10 D
123-92-2	isoamyl acetate	1330 (o) 525 N,T,O
123-51-3	isoamyl alcohol	151 (o) *
124-68-5	isobutanolamine	400 40 D
110-19-0	isobutyl acetate	630 (o) * D
78-83-1	isobutyl alcohol	1520 (500) 152 (50) N,T,O
78-81-9	isobutyl amine	150 (50) 15 (5) M
97-85-8	isobutyl isobutyrate (IBIB)	6000 (980) 600 (98) D
123-17-1	isobutyl heptyl ketone	3750 (500) 375 (50) D
97-86-9	isobutyl methacrylate	1900 (330) 190 (33) D
78-84-2	isobutyraldehyde	138 (o) *
78-82-0	isobutyronitrile	220 (80) 22 (8) N
71121-36-3	isocyanobenzotrifluoride	.38 .038 D
540-84-1	isooctane (methyl heptane)	3500 (750) 350 (75) D
26952-21-6	isooctyl alcohol	2660 (500) 266 (50) N,T,O
78-59-1	isophorone	230 (40) 23 (4) N,O
4098-71-9	isophorone diisocyanate	0.45 (.05) .045 (.005) N,T
78-96-6	isopropanolamine (MIPA)	200 20 D

[illegible][illegible][illegible]

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CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL	
		$\mu\text{g}/\text{m}^3$ (ppb) 30-minute or 1-hour	annual
126-98-7	methylacrylonitrile (methacrylonitrile)	27 (10)	2.7 (1) N,T,O
109-87-5	methylal (dimethoxymethane; methoxymethane)	31100 (10000)	3110 (1000) N,T,O,M
67-56-1	methyl alcohol	2620 (2000)	262 (200) NTOM
74-89-5	methylamine	64 (50)	6.4 (5) T
108-11-2	methyl amyl alcohol (methyl isobutyl carbinol)	292 (70) (o)	104 (25) N,T,O,M
110-43-0	methyl n-amyl ketone	94 (o)	*
100-61-8	methyl aniline, N-	22 (5)	2.2 (.5) N,T,O,M
589-18-4	methylbenzyl alcohol	600 (120)	60 (12) D
74-83-9	methyl bromide**	190 (50)	19 (5) T,O,M
591-78-6	methyl n-butyl ketone	40 (10)	4 (1) N
1634-04-4	methyl-tert-butyl ether (MTBE)	600 (125) (o)	288 (80) D
-----	methylbutyraldehyde	1800 (510)	180 (51) D
74-87-3	methyl chloride	1030 (500)	103 (50) T,O,M
71-55-6	methyl chloroform (1,1,1-trichloroethane)	10800 (2000)	1080 (200) M
79-22-1	methyl chloroformate	2	.2 D
137-05-3	methyl 2-cyanoacrylate	91 (20)	9.1 (2) N,T,O,M
108-87-2	methyl cyclohexane	16100 (4000)	1610 (400) N,T,O
25639-42-3	methyl cyclohexanol	2340 (500)	234 (50) N,T,O,M
583-60-8	methyl cyclohexanone, o-	2290 (500)	229 (50) N,T,O,M
12108-13-3	methyl cyclopentadienyl manganese tricarbonyl	2	.2 N,T,O
96-37-7	methylcyclopentane	2580 (750)	258 (75) D
8022-00-2	methyl demeton	5	.5 N,T,O,M
105-59-9	methyldiethanolamine	500 (100)	50 (10) D
101-68-8	methylene bisphenyl diisocyanate (MDI)	.5 (.05)	.05 (.005) N,T
75-09-2	methylene chloride	260 (75)	26 (7.5) E
101-14-4	methylene bis(2-chloro- aniline), 4,4'- (MBOCA)	2.2 (.2)	.22 (.02) T,O
5124-30-1	methylene bis(4-cyclo- hexylisocyanate)	.54 (.05)	.054 (.005) T
101-77-9	methylene dianiline, 4,4'	8.1 (1)	.81 (.1) T
115-10-6	methyl ether (dimethyl ether)	19100 (10000)	1910 (1000) M
-----	methyl ethyl benzene, all isomers (ethyltoluene, m-, p-, o-)	1250 (250)	125 (25) N,T,O
78-93-3	methyl ethyl ketone (MEK)	3900 (1320) (o)	590 (200) N,T,O,M
96-29-7	methyl ethyl ketone oxime	1960 (550)	196 (55) D
1338-23-4	methyl ethyl ketone peroxide	15 (2)	1.5 (.2) N,T
107-31-3	methyl formate	2460 (1000)	246 (100) N,T,O,M
534-22-5	methylfuran, 2-	550	55 D
540-84-1	methyl heptane (isooctane)	3500 (750)	350 (75) D





CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
111-86-4	octylamine	60 (11)	6 (1)	D
111-88-6	octylmercaptan, n-	30 (5)	3 (.5)	N
27193-28-8	octyl phenol	20	2	D
2687-94-7	octyl pyrrolidone, N-	100	10	D
8012-95-1	oil mist, mineral & others	50	5	N, T, O
20816-12-0	osmium tetroxide	.016 (.002)	.0016 (.0002)	N, T, O, M
144-62-7	oxalic acid	10	1	N, T, O
-----	oxo-hexyl acetate	2750	275	D
3033-62-3	oxybis(N,N-dimethylethylamine) (Thancat ZF-20)	216 (33)	22 (3.3)	D
7783-41-7	oxygen difluoride	see TACB Reg III		
10028-15-6	ozone	must meet NAAQS		

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)	30-minute or 1-hour	annual
93763-70-3	perlite	50		N, O
52645-53-1	Permethrin (see pyrethrum)	50 (PM)	5	D
-----	petroleum distillates (see VM&P naphtha)	3500 (875)	350 (88)	N
8030-30-6	petroleum ether (VM&P naphtha)	3500 (875)	350 (88)	N
8032-32-4	petroleum spirit (VM&P naphtha)	3500 (875)	350 (88)	N
532-27-4	phenacyl chloride ( $\alpha$ -chloroacetophenone)	3.2 (.5)	.32 (.05)	N, T, O
85-01-8	phenanthracene (see coal tar pitch volatiles)	0.5	0.05	E
156-43-4	phenetidine, p-	150	15	D
103-73-1	phenetole (phenyl ethyl ether)			
108-95-2	phenol	154 (40) (o)	19 (5)	N, T, O, M
92-84-2	phenothiazine	50	5	N, T, O
108-45-2	phenylene diamine, m-	1	.1	T
95-54-5	phenylene diamine, o-	1	.1	T
106-50-3	phenylene diamine, p-	1	.1	T
101-84-8	phenyl ether (diphenyl oxide)	8 (1.1) (o)	7 (1)	N, T, O, M
60-12-8	phenylethyl alcohol	500 (110)	50 (11)	D
100-42-5	phenylethylene (styrene)	430 (100) (o)	85 (20)	M
122-60-1	phenyl glycidyl ether (PGE)	60 (10)	6 (1)	N, T, O, M
100-63-0	phenylhydrazine	4.4 (1)	.44 (.1)	T
108-98-5	phenyl mercaptan	4 (.8) (o)	.5 (.1)	N
638-21-1	phenylphosphine	2.3 (.5)	.23 (.05)	N, T, O
122-97-4	phenylpropyl alcohol	1100 (200)	110 (20)	D
298-02-2	Phorate	.5	.05	N, T, O
7786-34-7	Phosdrin (Mevinphos)	.92 (.1)	.092 (.01)	T
75-44-5	phosgene**	4 (1)	.4 (.1)	N, T, O, M
732-11-6	Phosmet (Prolate)	20	2	D
7803-51-2	phosphine**	4.2 (3)	.42 (.3)	N, T, O
7664-38-2	phosphoric acid	10	1	N, T, O
2929-95-5	phosphorodithioic acid esters, zinc salt	1500	150	D
13598-36-2	phosphorous acid	10	1	D
7723-14-0	phosphorus (yellow)	1	.1	N, T, O, M
10025-87-3	phosphorus oxychloride	6.3 (1)	.63 (.1)	N, T, O
10026-13-8	phosphorus pentachloride	8.5 (1)	.85 (.1)	N, T, O, M
1314-80-3	phosphorus pentasulfide	10	1	N, T, O, M
1314-56-3	phosphorus pentoxide	10	1	M
7719-12-2	phosphorus trichloride	11 (2)	1.1 (.2)	N, T, O
85-44-9	phthalic anhydride	61	6.1	N, T, O
626-17-5	phthalodinitrile, m-	50	5	N, T, O
1918-02-1	Picloram	50	5	O
109-06-8	picoline, 2-	53 (14) (o)	8 (2)	D
108-99-6	picoline, 3-	80 (20)	8 (2)	D

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
108-89-4	picoline, 4-	46 (12)	4.6 (1.2)	D
88-89-1	picric acid	.5 (o)	.1	N,T,O
83-26-1	Pindone	1	.1	N,T,O
1330-16-1,	pinene [also 127-91-3; 80-56-8]	64 (11) (o)	*	
110-85-0	piperazine	34	3.4	D
142-64-3	piperazine dihydrochloride	50	5	N,T,O
72-98-9	pivalic acid	250	25	D
3282-30-2	pivaloyl chloride	40	4	D
83-26-1	pivaloyl-1,3-indandione, 2- (pindone)	1	.1	N,T,O
10101-41-4	plaster of Paris (see calcium sulfate)	50 (resp)	5	N,T
7440-06-4	platinum, metal	10	1	N,T,O
7440-06-4	platinum, soluble salts	.02	.002	N,T,O,M
1336-36-3	polychlorinated biphenyls (PCBs, see chlorodiphenyl)	.1	.01	E
65996-93-2	polycyclic aromatic hydro- carbons, particulate (PPAH) (assume the fraction of benzo[a]pyrene not exceed 10% of total PPAH, see coal tar pitch volatiles)	.5	.05	E
9016-45-9	polyethylene (9) glycol nonyl phenyl ether, nonionic surfactant (Tergitol TP-9)	600 (24)	60 (2.4)	D
9003-39-8	poly(1-vinyl-2-pyrrolidinone)	100	10	D
9003-53-2	polystyrene	100	10	D
65997-15-1	Portland cement	50	5	N,O
1310-58-3	potassium hydroxide	20	2	N,T,O
7722-64-7	potassium permanganate	20	2	D
74-98-6	propane	18000 (10000)	1800 (1000)	N,O,M
107-19-7	propargyl alcohol	23 (10)	2.3 (1)	N,T,O
57-57-8	propiolactone, $\beta$ -	15 (5)	1.5 (.5)	T
79-09-4	propionic acid	103 (34) (o)	30 (10)	N,T,O,M
107-12-0	propionitrile	140 (60)	14 (6)	N
93-55-0	propiophenone	2300	230	D
114-26-1	Propoxur (Baygon)	5	.5	N,T,O
109-60-4	propyl acetate, n-	626 (o)	*	
71-23-8	propyl alcohol, n-	4920 (2000)	492 (200)	N,T,O
540-54-5	propyl chloride	30000	3000	D
115-07-1	propylene	117000 (v)	*	
78-89-7	propylene chlorohydrin	170	17	D
78-90-0	propylene diamine	42 (o)	17	D
78-87-5	propylene dichloride	1150 (250) (o)	350 (75)	T,O,M
57-55-6	propylene glycol, vapor	4000 (1290)	400 (129)	D
		20 (PM)	2	D
6423-43-4	propylene glycol dinitrate	3 (.5)	.3 (.05)	N,T,O,M

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
-----	propylene glycol mono-t-butyl ether	5400 (1000)	540 (100)	D
107-98-2	propylene glycol monomethyl ether	3600 (1000)	360 (100)	N,T,O
75-58-8	propyleneimine**	50 (20)	5 (2)	N,T,O
75-56-9	propylene oxide	250 (100)	25 (10)	E
111-43-3	propyl ether (dipropyl ether)	2500 (600)	250 (60)	D
110-74-7	propyl formate	6475 (1800)	650 (180)	D
107-03-9	propylmercaptan, n-	2.3 (.7) (o)	1.6 (.5)	N
627-13-4	propyl nitrate	1050 (250)	105 (25)	N,T,O,M
106-36-5	propyl propionate	4750 (1000)	475 (100)	D
74-99-7	propyne (methyl acetylene)	16400 (10000)	1640 (1000)	N,T,O,M
95-63-6	pseudocumene (1,2,4-trimethylbenzene)	1250 (250)	125 (25)	N,T,O
9002-86-2	PVC	50	5	M
8003-74-7	Pyrethrum (Pyrethrin)	50	5	N,T,O,M
129-00-0	pyrene (see coal tar pitch volatiles)	0.5	0.05	E
110-86-1	pyridine	69 (23) (o)	15 (5)	N,T,O,M
68391-11-7	pyridines, alkyl	150	15	D
120-80-9	pyrocatechol (catechol)	230 (50)	23 (5)	N,T,O
-----	pyronaphtha (dripolene; pyrolysis gasoline)	40(10)	4(1)	D-MSDS
123-75-1	pyrrolidine, 2-	140	14	D



CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
7803-62-5	silicon tetrahydride (silane)	70 (50)	7 (5)	N,T,O
7440-22-4	silver and compounds	.1	.01	N,O,M
-----	soapstone, respirable dust	30	3	N,T,O
	total dust	60	6	
26628-22-8	sodium azide	3 (1)	.3 (.1)	N,T
7631-90-5	sodium bisulfite	50	5	N,T,O
16940-66-2	sodium borohydride	1	.1	D
136-78-7	sodium, 2,4-dichloro- phenoxyethyl sulfate (Sesone)	50	5	N,O
62-74-8	sodium fluoroacetate	.5	.05	N,T,O
1310-73-2	sodium hydroxide	20	2	N,T,O,M
7681-57-4	sodium metabisulfite	50	5	N,T,O
9005-25-8	starch	50	5	N,O
-----	stearates	100	10	T
2885-00-9	stearyl mercaptan (octadecyl mercaptan)	60 (5)	6 (.5)	N
7803-52-3	stibine	5 (1)	.5 (.1)	N,T,O,M
8052-41-3	Stoddard solvent	3250 (1000)	325 (100)	N
7440-24-6	strontium and compounds	20	2	D
7789-06-2	strontium chromate, as Cr	.1	.01	E
57-24-9	Strychnine	1.5	.15	N,T,O,M
100-42-5	styrene, monomer	430* (100) (o)	85 (20)	M
	<b>* under review</b>			
1395-21-7	Subtilisins [also 9014-01-1]	.0006	.00006	N,T,O
108-30-5	succinic anhydride	25	2.5	D
110-61-2	succinonitrile	200 (60)	20 (6)	N
57-50-1	sucrose	50	5	N,O
-----	Sulfinol	230	23	D
75-22-4	Sulfonic N-95 (nonylphenyl ethoxylate)	1000	100	D
3689-24-5	Sulfotep (TEDP)	2	.2	N,T,O,M
7446-09-5	sulfur dioxide	must meet NAAQS & TACB Reg II		
7446-09-5	sulfur dioxide (liquid)**	must meet NAAQS & TACB Reg II		
2551-62-4	sulfur hexafluoride	see TACB Reg III		
7664-93-9	sulfuric acid	see TACB Reg II		
10025-67-9	<b>sulfur monochloride</b>	<b>5.6 (1) (o)</b>	<b>5.5 (1)</b>	<b>N,T,O,M</b>
5714-22-7	sulfur pentafluoride	see TACB Reg III		
7783-60-0	sulfur tetrafluoride	see TACB Reg III		
7791-25-5	sulfuryl chloride	36	3.6	D
2699-79-8	sulfuryl fluoride	see TACB Reg III		
35400-43-2	Sulprofos	10	1	N,T,O
-----	Surfonamine	180	18	D
8065-48-3	Systox	see Demeton		

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)	annual	
		30-minute	or 1-hour	
93-76-5	2,4,5-T (2,4,5-trichloro-phenoxyacetic acid)	100	10	N,T,O,M
14807-96-6	talc (no asbestos), respirable	20	2	N,T,O,M
-----	talc (with asbestos)	use asbestos	ESL	
7440-25-7	tantalum, metal	50	5	N,T,O,M
1314-61-0	tantalum oxide	50	5	N,T,O
3689-24-5	TEDP (Sulfotep)	2	.2	N,T,O,M
13494-80-9	tellurium & compounds	1	.1	N,T,O,M
7783-80-4	tellurium hexafluoride	see TACB Reg III		
3383-96-8	Temephos	50	5	N,O
-----	Tenneco T500-100	2700 (550)	270 (55)	D
107-49-3	TEPP (tetraethylpyrophosphate)	.5	.05	N,T,O,M
9016-45-9	Tergitol TP-9	50 (PM)	5	D
	(polyethylene glycol nonyl phenyl ether)			
68956-56-9	terpenes	2000	200	D
26140-60-3	terphenyls	50 (5)	5 (.5)	N,T,O
79-27-6	tetrabromoethane, 1,1,2,2-	140 (10)	14 (1)	M
634-66-2	tetrachlorobenzenes	1000 (o)	350	D
	[also 95-94-3]			
1746-01-6	tetrachlorodibenzo-p-dioxin, 2,3,7,8- (TCDD)	---	$9.2 \times 10^{-8}$	E,NY
-----	tetrachlorodibenzofuran (TCDF)	---	$1 \times 10^{-6}$	D
76-11-9	tetrachloro-2,2-difluoroethane, 1,1,1,2- (Freon 112A)	41700 (5000)	4170 (500)	N,T,O
76-12-0	tetrachloro-1,2-difluoroethane, 1,1,2,2- (Freon 112)	41700 (5000)	4170 (500)	N,T,O
79-34-5	tetrachloroethane, 1,1,2,2-	70 (10)	7 (1)	N,T,O,M
127-18-4	tetrachloroethylene (perchloroethylene)	340 (50)	34 (5)	E
56-23-5	tetrachloromethane (carbon tetrachloride)	126 (20)	13 (2)	N,O
1335-88-2	tetrachloronaphthalene	20	2	N,T,O
58-90-2	tetrachlorophenol, 2,3,4,6-	20 (o)	7	D
112-57-2	tetraethylenepentamine	400	40	D
78-00-2	tetraethyl lead	.75	.075	N,O
78-10-4	tetraethylorthosilicate	8500 (1000)	850 (100)	M
107-49-3	tetraethylpyrophosphate (TEPP)	.5	.05	N,T,O,M
109-99-9	tetrahydrofuran	5900 (2000)	590 (200)	NTOM
119-64-2	tetrahydronaphthalene (tetraline)	3030 (560)	303 (56)	D
75-59-2	tetramethylammonium hydroxide	10	1	D
110-60-1	tetramethylenediamine	180	18	D
75-74-1	tetramethyl lead	.75	.075	N,O
3333-52-6	tetramethyl succinonitrile	30 (5)	3 (.5)	N,T,O,M

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL	
		$\mu\text{g}/\text{m}^3$ (ppb)	
		30-minute or 1-hour	annual
509-14-8	tetranitromethane	80 (10)	8 (1) N,T,O,M
26544-38-7	tetrapropenylsuccinic anhydride	40 (3.6)	4 (.36) D
7722-88-5	tetrasodium pyrophosphate	50	5 N,T,O
479-45-8	tetryl (2,4,6-trinitrophenyl- methyl-nitramine)	1	.1 O
25265-77-4	Texanol	835 (140)	84 (14) D
7440-28-0	thallium, soluble compounds	1	.1 N,T,O,M
96-69-5	thiobis(t-butyl-m-cresol), 4,4-	50	5 N,O
68-11-1	thioglycolic acid	1.25 (o)	*
7719-09-7	thionyl chloride	50 (10)	5 (1) N,T,O
62-56-6	thiourea (thiocarbamide)	50 (PM)	5 D
137-26-8	Thiram	10	1 T
7440-31-5	tin compounds:		
	organic compounds (as Sn)	1	.1 N,T,O
	metal, oxide & inorganic compounds (except SnH <sub>4</sub> )	20	2 N,T,O
13463-67-7	titanium dioxide, respirable	50	5 O
7550-45-0	titanium tetrachloride	10	1 D
119-93-7	tolidine, o-	.2	.02 N
108-88-3	toluene (toluol)	1880 (500)	188 (50) T
95-80-7	toluene-2,4-diamine	50	5 D
584-84-9	toluene-2,4-diisocyanate (TDI)	.36 (.05)	.035 (.005) NTO
91-08-7	toluene-2,6-diisocyanate	.7 (.1)	.07 (.01) M
95-53-4	toluidine, all isomers [also 108-44-1; 106-49-0]	90 (20)	9 (2) N,T,O
8001-35-2	Toxaphene	5	.5 T,O,M
126-73-8	tributyl phosphate	25 (2)	2.5 (.2) N,T,O
102-85-2	tributyl phosphite	20 (2)	2 (.2) D
76-03-9	trichloroacetic acid	70 (10)	7 (1) N,T,O
120-82-1	trichlorobenzene, 1,2,4-	400 (50)	40 (5) N,T,O,M
71-55-6	trichloroethane, 1,1,1- (methyl chloroform)	10800 (2000)	1080 (200) M
79-00-5	trichloroethane, 1,1,2-	550 (100)	55 (10) T,M
79-01-6	trichloroethylene	1350 (250)	135 (25) N
75-69-4	trichlorofluoromethane (Freon 11)	28000 (o) (5000)	5600 (1000)
67-66-3	trichloromethane (chloroform)	100 (20)	10 (2) O
1321-65-9	trichloronaphthalene	50	5 N,T,O,M
76-06-2	trichloronitromethane (chloropicrin)	6.7 (1)	.67 (.1) N,T,O,M
95-95-4	trichlorophenol, 2,4,5-	440	44 D
88-06-2	trichlorophenol, 2,4,6-	21 (o)	*
96-18-4	trichloropropane, 1,2,3-	600 (100)	60 (10) N,T,O
76-13-1	trichloro-1,2,2-trifluoro- ethane, 1,1,2- (Freon 113)	76000 (10000)	7600 (1000) N,T,O

CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL		
		$\mu\text{g}/\text{m}^3$ (ppb)		
		30-minute or 1-hour	annual	
13121-70-5	tricyclohexyltin hydroxide (Cyhexatin)	50	5	N,T,O
102-71-6	triethanolamine	31 (5)	3 (.5)	T
121-44-8	triethylamine	40 (10)	4 (1)	E
-----	triethylene phosphate	500 (67)	50 (7)	D
280-57-9	triethylene diamine	370 (80)	37 (8)	D
112-24-3	triethylene tetramine	240 (40)	24 (4)	D
-----	trifluoroacetoacetyl chloride	20	2	D
75-63-8	trifluorobromomethane (Freon 13B1)	61000 (10000)	6100 (1000)	N,T,O,M
63979-83-9	tri(isobutenyl)succinic anhydride	10 (1)	1 (.1)	D
552-30-7	trimelletic anhydride	.1	.01	T
563-04-2	trimetacresyl phosphate	3	.3	D
75-98-9	trimethylacetic acid (pivalic acid)	250	25	D
75-50-3	trimethylamine	1 (.4)	*	
25551-13-7	trimethyl benzene (mixed isomers)	1250 (250)	125 (25)	N,T,O
121-43-7	trimethyl borate	13	1.3	D
109-76-2	trimethylene diamine	50	5	D
123-17-1	trimethyl-4-nonanone, 2,6,8- (isobutyl heptyl ketone)	3750 (500)	375 (50)	D
25265-77-4	trimethylpentanediol iso- butyrate (Texanol)	835	84	D
121-45-9	trimethyl phosphite	.5 (o)	*	
88-89-1	trinitrophenol (picric acid)	.5 (o)	.1	N,T,O
118-96-7	trinitrotoluene (TNT)	5	.5	N,T,O
78-30-8	triorthocresyl phosphate	1	.1	N,T,O
110-88-3	trioxane	190	19	D
78-32-0	triparacresylphosphate	3	.3	D
603-34-9	triphenylamine	50	5	N,T,O
115-86-6	triphenyl phosphate	30	3	N,T,O
101-02-0	triphenyl phosphite	25	2.5	D
102-69-2	tripropylamine	16	1.6	D
24800-44-0	tripropylene glycol	400 (vapor) 25 (PM)	40 2.5	D D
27955-94-8	tris(hydroxyphenyl)ethane	60	6	D
26523-78-4	tris(nonylphenol)phosphite	30	3	D
786-19-6	Trithion	1	.1	D
7440-33-7	tungsten, insoluble cpds soluble cpds	50 10	5 1	N,T,O
8006-64-2	turpentine	5560 (1000)	556 (100)	NTOM



CAS No.	SUBSTANCE	EFFECTS SCREENING LEVEL	
		$\mu\text{g}/\text{m}^3$ (ppb)	
		30-minute	annual
		or 1-hour	

7440-65-5	yttrium metal & compounds	10	1	N,T,O
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7646-85-7	zinc beryllium silicate, as Be	see TACB Reg III		
	(see beryllium & cpds)			
7646-85-7	zinc chloride fume	10	1	N,T,O
13530-65-9	zinc chromates, as Cr	.1	.01	T
	[also 1103-86-9; 37300-23-5]			
1314-13-2	zinc oxide, fume	50	5	N,T,O,M
1314-13-2	zinc oxide, dust	50	5	N,O
557-05-1	zinc stearate	50	5	N,O
7440-67-7	zirconium compounds, as Zr	50	5	T,O,M
148-01-6	zoalene (dinitolmide)	50	5	N,T,O

## **V. WATER QUALITY**

### ***Underground Water – "Cry Me a River"***

*James Kowis  
Director, Watershed Management  
Texas Water Commission*

*Mark Jordan  
Assistant Director, Legal Services  
Texas Water Commission*

### ***Watershed Management – "Splish Splash"***

*Barbara Britton  
Director, Standards & Assessments  
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### ***Water Toxics – "Bridge Over Troubled Water"***

*Jim Davenport  
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The Edwards Aquifer

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August 6, 1992

This paper was written by Mark Jordan in his private capacity. No official support or endorsement by the Texas Water Commission or any other agency of the State Government is intended or should be inferred.



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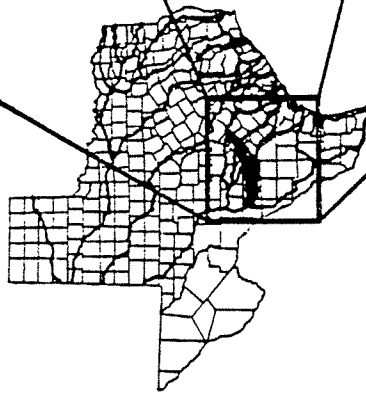
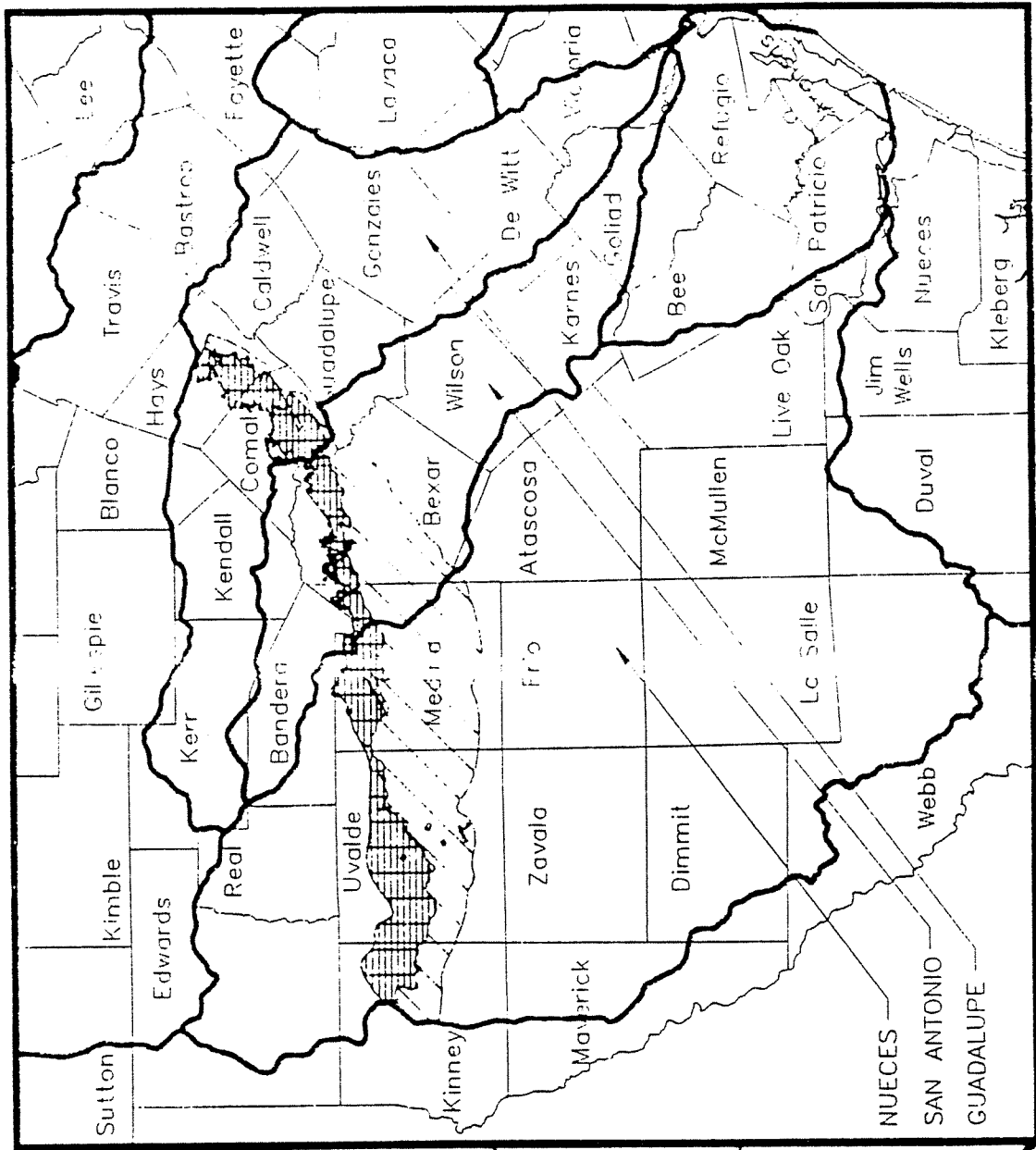
## Attachments

- Emergency Rules
- Proposed Permanent Rules

# EXPLANATION

 Outer Edwards Aquifer (San Antonio Region)  
 Down

 River Basin Boundaries



October 1990  
 (Prepared by: The Texas Water Development Board)

## The Edwards Aquifer

### I. Introduction

The dispute over the management of the Edwards Aquifer affects the rights to and water quality of almost all subsurface and surface water in the Nueces, San Antonio, and Guadalupe River Basins. It also affects aquatic and riparian habitat in both surface and subsurface waters as evidenced by the endangered species lawsuit filed initially by the Sierra Club against the Secretary of the Interior and the U. S. Fish and Wildlife Service. Despite the great economic and environmental significance of the Edwards Aquifer to the South Central Region of Texas and to the state itself, there exists no comprehensive management plan for this unique and vital resource.

This inaction in the face of growing and unchecked demand on the Edwards Aquifer has led to a situation which threatens the public health, safety, and welfare and the economic well-being of the region. The uncertainty over a person's right to use water from the Edwards Aquifer due to current litigation discourages business investment and economic growth, and clouds title to property. This uncertainty also makes it difficult, if not impossible, to develop a management plan to provide for the immediate and long-term water supply needs of the region. Finally, a person's right to use water from a common source shared by others has little value and cannot be protected unless effective and necessary controls are applied to everyone's use.

Almost four decades of negotiations among the affected parties have failed to yield a resolution of the dispute regarding the proper management of the Edwards Aquifer. Legislation seeking to provide a comprehensive and lasting resolution to this issue has been repeatedly defeated. Efforts by San Antonio mayor Henry Cisneros and local representatives of the Edwards Underground Water District during 1986 and 1987 to develop a regional water management plan ended in defeat in the Texas Legislature and resulted in the breakup of the district. Beginning in November 1988 and continuing until his untimely death in August 1991, Texas Water Commissioner John Birdwell made exhaustive and earnest efforts to bring about a local resolution of the dispute. A professional mediator and the mayor of Austin have also unsuccessfully attempted to mediate a settlement. Protracted and costly litigation in both state and federal courts have dragged on for years and trials on the merits have not yet occurred. The creation of a special joint legislative committee in 1990 failed to produce a consensus report, much less

proposed legislation. Most recently, efforts by the current chairman of the Texas Water Commission, John Hall, during the Spring of 1992 also failed to produce a settlement.

Finally, on April 15, 1992, the Texas Water Commission took decisive action by declaring the Edwards Aquifer an underground stream and, thus, state water subject to state regulation. Soon thereafter, the Commission published proposed rules which would provide the procedural framework in which to develop and implement a comprehensive, regional water management plan.

This paper seeks to provide a background and summary of the recent events leading up to the Commission's April 15, 1992, action and the reasons that dispute remains unresolved. The paper also provides recommendations for legislation that recognizes the need for the conjunctive management of both surface and subsurface water in the Edwards Aquifer region.

## II. Location and Characteristics

The Edwards Aquifer has been extensively studied for many years and is generally well understood. Recent studies, reports, and models have provided a large amount of information regarding the physical characteristics and hydrogeology of the Edwards Aquifer. The traditional designation of this water resource as an "aquifer" simple means that it is a subsurface, water-bearing formation. There are many types of aquifers, from static, water bearing sands such as the Ogallala Aquifer, to the free-flowing karst formation of the Edwards Aquifer. This geological designation does not preclude an aquifer from being legally designated an underground stream.

The Southern, or Balcones Fault Zone portion of the Edwards Aquifer is the subject of the current dispute. It is located in the South Central Region of Texas and underlies portions of Kinney, Atascosa, Uvalde, Medina, Bexar, Comal, and Hays counties. The westernmost boundary of the aquifer is at the hydrologic divide near Bracketville in Kinney County. This divide separates the aquifer from subsurface water flows to the Rio Grande Basin. The Balcones Fault Zone portion of the aquifer extends through these seven counties in the shape of a crescent to its northern boundary at the hydrologic divide near Kyle in Hays County. This divide separates the Balcones Fault Zone portion of the aquifer from the Northern or Austin region of the Edwards Aquifer.

The Southern Edwards Aquifer is approximately 175 miles long and covers an expanse of about 3,600 square miles. The average width

of the aquifer is 25 miles. The average depth is 500 feet below the surface and ranges from zero feet at its outcrop on the land surface to 2500 feet below the surface. It is estimated by the United States Geologic Service (USGS) that the aquifer contains somewhere between 25 to 50 million acre-feet of water. This is three times the amount contained in Lake Meade and twice the amount of all other reservoirs in Texas. If the water in the aquifer was spread to cover the entire state of Texas, it would be ankle deep.

The Edwards Aquifer is a karst aquifer, comprised of limestone and dolomite. It is highly porous, containing interconnecting channels and caves. These openings range in size from microscopic to large caverns. They include hairline cracks, open fractures, honeycombed zones and a wide variety of cavities so that the aquifer resembles a huge stone sponge. Water flows relatively quickly through these openings.

Along the aquifer's southern and eastern borders is what is known as the "bad water line." This is where there is potential for underground saltwater intrusion into the aquifer if aquifer hydrologic pressure is lessened. Water movement through the aquifer is slowest here and remains in contact with limestone and gypsum longer, allowing dissolved mineral solids to increase to over 1000 milligrams per liter. When this occurs, the water falls well below public drinking water standards. The freshwater area of the aquifer typically has only 350 parts per million and, generally, is so pure as to not require treatment for human consumption.

The aquifer generally falls in elevation from west to east, dipping toward the Gulf of Mexico. The west end of the top of the formation is at approximately 1,200 feet above mean sea level (msl), and the San Marcos Springs in Hays County are about at 575 feet msl, a drop of 625 feet in about 166 miles. This is a slope of about 3.8 feet per mile, or about 0.07 percent.

The Edwards Aquifer cuts beneath and through the middle of several surface river basins. These basins originate above the recharge zone of the aquifer and include, from west to east, the Nueces, the San Antonio, and the Guadalupe River Basins. Over 75 percent of the water in the Edwards Aquifer comes from the surface flows in the upper segments of these basins. These streams are located in the upper portion of the Nueces River Basin, the upper portion of the San Antonio River Basin, and a part of the upper portion of the Guadalupe River Basin (the "contributory watershed"). The major tributary streams include the West Nueces, Nueces, Dry Frio, Frio, Sabinal, Seco, Hondo, Medina, Helotes, Salado, Cibolo, Dry Comal, and Blanco.

As these streams cross over the recharge zone of the aquifer, almost all of the baseflows and large parts of the flood flows of these streams flow down into the aquifer through faults in the streambeds. The water then continues to travel south from the recharge areas into the artesian (confined) part of the aquifer and then from west to east and northeast until it erupts at springs located along the aquifer's eastern edge. The Comal Springs at New Braunfels and the San Marcos Springs at San Marcos are the largest of these springs.

The water in the aquifer can move very easily where the size and number of solution openings are large and connected with few restrictions. Movement rates of more than 2,100 feet per day have been measured over short distances. As a comparison, a movement rate of one foot per day is generally considered very fast in other aquifers in Texas. Because of the porosity and drop in elevation from the west end of the aquifer to the east, the water in the aquifer has a general directional flow from west to south to east and a relatively rapid current.

The aquifer is confined between impervious layers of rock and slants from a higher elevation in the west to a lower one in the east. This slant and rapid recharge provide a general directional flow of southwest to northeast through the confines of the aquifer's geologic formation. Additionally, this creates great artesian pressure resulting in several springs. Many of these springs contribute significantly to streamflows upon which many water rights are based. In and near the springs at New Braunfels (the Comal Springs) and San Marcos (the San Marcos Springs), as well as inside the aquifer itself, live threatened and endangered fauna and flora, including the Fountain Darter, San Marcos Gambusia, the San Marcos Salamander, the Texas Blind Salamander, and Texas Wild Rice.

### III. Competing Regional Demands on the Edwards Aquifer

The Edwards Aquifer is the sole source of water supply for approximately 1.5 million citizens in the San Antonio region and supports a diverse regional economy that provides employment for approximately 700,000 to 800,000 Texans. Additionally, the Edwards Aquifer is important to the economies of the communities at and downstream of several springs fed by this underground river. These springs include the State's two largest natural springs at New Braunfels and San Marcos. These two springs sustain a significant tourist and recreational economy for these cities.

It is estimated that spring flow from Comal and San Marcos Springs alone provides 21 to 32 percent of the total annual flow of the Guadalupe River at Victoria. Between 70,000 and 80,000 jobs exist

in those counties that are supplied with water from the Guadalupe River below these springs. The economies of Hays and Comal counties and the counties downstream of the springs are clearly dependent on the Edwards Aquifer. This underground river is truly the lifeline of 15 Texas counties.

There are approximately 4,000 wells in the Edwards Aquifer, of which three-fourths are relatively small wells used for domestic and livestock purposes. No one knows the exact number of wells or the amount of water withdrawn from the aquifer. Well registration requirements of the Edwards Underground Water District are not enforced and are inapplicable to half of the aquifer falling outside the district's boundaries. Additionally, there is no requirement that a well must have a meter. USGS studies rely a great deal on voluntary responses to requests for information. Agricultural agencies such as the Soil Conservation Service has some information on agricultural water use, but the agency does not differentiate surface from ground water use. Well logs are required by rules of the Texas Water Well Drillers Board to be filed with the Texas Water Commission. However, there is no requirement that a well owner must report the amounts withdrawn and the purpose of use.

#### A. The West: Farming and Ranching

Only a small portion of the far western reaches of the aquifer extends into Kinney County. No significant users of the aquifer exist there. It is sparsely populated with scattered farms and ranches. The general belief in this county is that the current dispute has little to do with Kinney County and should have little, if any, impact on their use of water. Although invited to participate in the mediation efforts, county officials have so far declined to become significantly involved.

The next county to the east is Uvalde. It has many users comprised mainly of farming and ranching interests. Dependent on these aquifer users are agriculturally related businesses such as farm and ranch supply stores, farm machinery vendors, and food processing and packaging businesses, as well as migrant farm labor. Major crops include cotton, corn, milo, and wheat, as well as a wide variety of fruits and vegetables. Because of the constant, uninterrupted, high water quality supply, many food crops from this area are considered the best in the country.

The Nueces and Frio Rivers, spring fed and, in turn, large contributors to the aquifer's recharge, run through Uvalde County. Streamflow not lost to recharge, evaporation, seepage, and other channel losses and intervening water diverters provides water for

the City of Corpus Christi and the Coastal Bend area and associated bays and estuaries. The major sources of water supply for the Coastal Bend Area are the Choke Canyon Reservoir and Lake Corpus Christi, supplied by the Frio River and the Nueces River, respectively. Freshwater releases from these reservoirs help maintain the viability of estuarine life in Nueces Bay, including shrimp, crabs, and finfish which are the basis of a significant commercial and sport fishery. Any additional surface water appropriation in the Nueces River Basin, including an artificial recharge structure diverting surface stream flow into the Edwards Aquifer, will impact the Coastal Bend Region.

Medina County mainly has farming and irrigation interests, but the urban sprawl from neighboring San Antonio is beginning to spread into the eastern half of that county. The Medina Reservoir, maintained by the Bexar-Medina-Atascosa Water Control and Improvement District No. 1 (BMA), is located on the Medina River near the county's northern boundary with Bandera County. The Medina River runs southeast through Bexar County. The Bexar Metropolitan Water District is presently negotiating a contract with BMA for the purchase of "excess" water from Medina Lake for municipal use in the southeastern and Castle Hills areas of San Antonio. Previously, City of San Antonio and the Edwards Underground Water District have expressed interest in buying Medina Reservoir water for municipal use and recharge of the aquifer. The reservoir bottom contains many recharge features and, thus, the reservoir is already serving to recharge the aquifer at the rate of approximately 40,000 acre-feet per year.

Records of the Soil and Conservation Service, U.S. Department of Agriculture, indicate that during the period 1979-1990, combined agricultural water use in Uvalde and Medina counties on a yearly average was approximately 204,000 acre-feet (126,000 AF/A Uvalde; 78 AF/A Medina). Average total yearly irrigated acreage for this period was approximately 85,000 acres (51,000 acres Uvalde; 34,000 acres Medina). Yearly average acre-feet per acre used during this period was 2.4 AF per acre (2.0 AF/A Medina; 2.47 AF/A Uvalde).

The irrigation season is generally from March until July. Because of the relatively cheap source of supply, there is little incentive for water conservation except to curtail fuel and pumping costs. The absolute and unfettered right to private property and the distrust of government is firmly entrenched in these western counties. The preference is for no regulation of the use of the Edwards Aquifer or, if this is unavoidable, that minimal regulation be done on a local county basis. The western counties generally fault the City of San Antonio for its alleged lack of adequate water conservation measures, uncontrolled growth, unsatiated appetite for

more water from the Edwards Aquifer, and failure to develop alternative sources of water supply. Because of attempts by the City and the Edwards Underground Water District to implement a regional water management and allocation plan by legislation in 1987, aquifer users in these western counties view the City of San Antonio as the major villain in the current dispute. The attempt at implementing this legislation also resulted in elections being held in Uvalde and Medina counties which resulted in these counties leaving the Edwards Underground Water District.

#### B. The Central Area: San Antonio and Local Water Supply Entities

Bexar County is dominated by the City of San Antonio. The use of the aquifer there is predominately for municipal purposes. Additional uses include light manufacturing, breweries, water intensive theme parks such as Sea World and Fiesta Texas (Opry-land), and a considerable residential and military use. During the last five years, the City used on a yearly average basis approximately 180,000 acre-feet. The sole source of water supply for the City is the aquifer.

Attempts by the City to develop alternative surface supplies have so far been unsuccessful. In the 1950's, the City lost its fight with the Guadalupe Blanco River Authority to be the sponsor of Canyon Lake. More recently, in a referendum held in May of 1991, the City's electorate voted (51% to 49%) to abandon the Applewhite Reservoir project, which was to be located on the Medina River. Opponents to the reservoir pointed to the high cost of building the reservoir, the large amount of available water in the Edwards Aquifer, and the alleged wastefulness of storing water in a relatively shallow reservoir in an area which experiences high evaporation rates. When the City defeated the Applewhite project, farmers in the west lost all confidence in the City's ability to do its share in protecting the aquifer.

The San Antonio River provides freshwater inflows to San Antonio Bay, which sustains aquatic and waterfowl habitat. Located near the bay is the Aransas National Wildlife Refuge, winter home of the endangered Whooping Crane.

#### C. The East: New Braunfels, San Marcos, GBRA, Endangered Species, Downstream Cities, Industry, and Agriculture, and Bays and Estuaries

The eastern interests are characterized by their dependence upon springflows from the Comal and San Marcos Springs, which are fed by

the Edwards Aquifer. Diversions from the aquifer diminishes these springflows. These springflows sustain a local water-related tourist industry, federally listed endangered species in the springs, the ecology and water quality of the surface streams for which these springs form the headwaters, surface water use from these streams downstream of the springs by cities, industries, and agriculture, and bays and estuaries into which these surface streams drain.

A significant user in Comal County is New Braunfels, which relies a great deal on tourism for its economy. Tourist attractions include many water-related activities. Comal Springs is one such tourist attraction and is located in New Braunfels. These springs provide habitat for endangered species. The pumping from the aquifer in Bexar County has a direct and almost immediate effect on springflow at Comal.

The Guadalupe-Blanco River Authority maintains Canyon Reservoir in western Comal County above New Braunfels and is a major source of supply to many downstream users. Significant users on the Guadalupe River include Union Carbide, Dow Chemical, Central Power and Light Company, the City of New Braunfels, the City of San Marcos, the City of Seguin, the Canyon Regional Water Authority, the Calhoun County Rural Water Supply Corporation, and numerous irrigation operations.

Hays County has a tourist-based economy similar to New Braunfels. The San Marcos Springs in San Marcos is the location of Aquarena Springs, a major tourist attraction for the area. The springs form the headwaters of the San Marcos River. The San Marcos Springs also provide habitat for threatened and endangered species and flows for the endangered Texas Wild Rice, found immediately downstream in the San Marcos River.

Since the Comal Springs are higher in elevation than San Marcos Springs, protection for Comal Springs will result in protection for San Marcos Springs. No definitive studies have been performed to determine minimum continuous flows necessary to be maintained at Comal or San Marcos Springs to protect the species in accordance with the federal Endangered Species Act. It has been estimated, however, that to provide some continuous flow above zero at Comal Springs during a repeat of the worst drought of record which occurred in the 1950's, total yearly withdrawals from the aquifer could not exceed 200,000 to 220,000 acre-feet. As a comparison, the estimated current amount now being taken from the aquifer is approximately 540,000 acre-feet. To require immediate and full protection to Comal Springs to provide any flow, much less sufficient flow to protect endangered species, if another severe drought were to occur would result in the devastation of the

regional economy and threaten the region's ability to provide adequate water supplies for public drinking and sanitation.

#### IV. Problems Resulting from Uncontrolled Pumping

During the recorded period of 1934 - 1988, longterm average annual recharge of 625,000 acre-feet was equal to longterm average withdrawal from wells and springflow. On an annual basis, recharge has sometimes exceeded and sometimes fallen below such withdrawals and discharges. The maximum estimated annual withdrawal during this period was 540,000 acre-feet. During the worst drought of record, which occurred in the 1950's, recharge amounts fell well below estimated annual withdrawals of 250,000 acre-feet for several consecutive years, lowering the aquifer's level and, consequently, drying up Comal Springs completely for five months in 1956. The endangered species at the Comal Springs perished and were reintroduced at Comal after the springs regained sufficient flows.

Because of population growth, especially in the San Antonio metropolitan area and the Interstate Highway 35 corridor north of the City, it is anticipated that average recharge may not again equal or exceed demands on the aquifer unless effective management of the aquifer is implemented. Problems resulting from the overdrafting, or "mining," of the aquifer include:

- impacts of short-term droughts (2-3 years) would cause aquifer levels to fall rapidly, possibly to the point where the Comal and/or San Marcos Springs would cease to flow;
- economic risks from increased pumping costs and uncertain supplies of water would increase in all the economic sectors;
- long-term drought comparable to the 1950's would cause both Comal and San Marcos Springs to dry, destroying the habitat of endangered species and decreasing the amount of water available to downstream users, resulting in adverse impacts to agriculture and industry;
- the drop in aquifer level at some localities would cause encroachment of "bad" water into the aquifer, laden with

high mineral content and salinity levels;  
and

- the uncertainty over a person's right to use water from the Edwards Aquifer makes it difficult to provide for the immediate and long-term water supply needs of the region; discourages business investment and economic growth; and clouds title to property.

## V. Texas Groundwater Law

### A. Rule of Capture.

Texas has adopted the English common law doctrine of ownership of groundwater by the overlying surface owner. Houston and T.C. Ry. Co. v. East, 98 Tex. 146, 81 S.W. 279 (1904). It is the first and most primitive groundwater allocation doctrine. This doctrine provides that the surface owner may withdraw groundwater for use without limitation or any liability to neighboring owners for any harmful effects resulting from the withdrawal, i.e., no correlative rights exist among the groundwater users. Therefore, a new use is not subject to any limitations to protect older established uses. Rather, when supplies are inadequate for all, the user with the deepest well and most powerful pump will get the water. This is referred to as the "rule of capture."

To significant limitations exist on a landowner's right to capture and use groundwater: first, it cannot be done maliciously with the purpose of injuring a neighbor or amount to wilful waste of the resource. City of Corpus Christi v. Pleasanton, 276 S.W.2d 798, 801 (Tex. 1955). Second, since 1978, an action for damage will lie for negligent pumping of groundwater which results in the subsidence of neighboring land. Friendswood Dev. Co. v. Smith-Southwest Industries, 576 S.W.2d 21, 30 (Tex. 1978)

The doctrine is based on the 1843 English decision of Acton v. Blundell, 152 Eng.Rep 1223. In that case, the court considered groundwater occurrence and usage effects a mystery, which justified a no liability rule because the effects of a person's groundwater use on another's property was unknowable. While this doctrine originally was followed in most western states, today Texas is the only western state adhering to the English rule. The Texas Water Code recognizes the private ownership of groundwater (e.g., §§11.001, 26.002, and 52.002 Tex. Water Code), and courts have confirmed the rule of capture, even while almost inviting

legislative action. Friendswood Dev. Co. v. Smith-Southwest Industries, supra; City of Corpus Christi v. Pleasanton, supra. Problems which may result from the unregulated use of groundwater generally include pollution from saltwater intrusion, overdrafting, and land subsidence.

As one can see, the rule of capture does not protect the individual user's right, nor does it protect the resource. There are common law doctrines based upon private ownership of groundwater which provide more protection. These are briefly discussed below. However, the Legislature has so far chose not to provide the individual landowner a sufficient private cause of action or other legal tools to protect his right. Instead, the landowner has to rely on the double-edged sword of governmental regulation.

Most western states use the prior appropriation doctrine as the rule for allocating groundwater. Nevertheless, in many of these states, groundwater permits are handled separately from appropriations of surface water. As with surface water appropriations, the permit specifies the priority date with respect to senior pumpers, restrictions to protect senior water right holders, rate of withdrawal, the well location, and the purpose and place of use.

The common law "reasonable use doctrine" is followed in many eastern states. Under this doctrine, water may be used without waste on the overlying land. This doctrine is also known as the "American Rule." This doctrine forms the basis of groundwater law in Nebraska and Arizona and constitutes only a modest variation of the rule of capture followed in Texas. Under the reasonable use doctrine, landowners may be liable for actual injuries if their use is unreasonable, i.e., wasteful or if it occurs on non-overlying lands.

The California rule of correlative rights is an extension of the reasonable use doctrine in that it allows non-overlying groundwater use by onon-overling users. This thoery includes pro rata sharing during shortages and allows rights to be established for water stored underground.

Section 858 of the the Restatement of Torts 2d provides that an overlying owner who withdraws groundwater for a beneficial use is not liable for interfering with another's use unless:

- (a) the withdrawal unreasonably causes harm to a neighbor by lowering the water table or reducing artesian pressure;
- (b) the withdrawal exceeds the person's reasonable share of the annual supply or total store of groundwater; or

(c) the withdrawal has a direct and substantial effect upon a watercourse or lake and unreasonably causes harm to a person entitled to the use of its water.

Factors to be considered in determining whether the overlying use is unreasonable include"

- (a) the purpose of the use;
- (b) the suitability of the use to the watercourse;
- (c) the economic value of the use;
- (d) the social value of the use;
- (e) the extent and amount of harm it causes;
- (f) the practicality of avoiding the harm by adjusting the use or method of use;
- (g) the practicality of adjusting the quantity of water used;
- (h) the protection of existing values of water uses, land, investments, and enterprises; and
- (i) the justice of requiring the user causing the harm to bear the loss.

Some states have, to some extent, implemented this section of the Restatement, which has come to be called the "eastern correlative rights doctrine."

C. Underground water conservation districts.

1. Generally.

A State has certain "police" powers it may exercise in order to protect the public health, safety, and welfare. Among these powers is the ability to manage and control a person's property right. This includes the use of groundwater. In 1949, the Texas legislature authorized the voluntary creation of underground water conservation districts (UWCDs) with discretionary power to regulate groundwater withdrawals as long as landowners did not lose their "ownership" of groundwater. This statute, now codified as Chapter 52 of the Texas Water Code, allows the creation of a district through local initiative and confirmation election, or state initiative through the critical area designation process. The latter process, however, still requires local voter approval to confirm district creation. Finally, special districts may be created by legislation pursuant to Art. XVI, §59, of the Texas Constitution.

Statutes relating to the powers and duties of UWCDs are contained in Chapter 52 of the Texas Water Code. UWCDs have the power to "provide for the spacing of water wells," to "regulate the production of wells," and other powers to enable them "to minimize as far as practical the drawdown of the water table." The UCWDs

that have been created have not, for the most part, been aggressive managers of groundwater pumpage. One possible exception is the High Plains Underground Water Conservation District No. 1. This district has, largely through well-spacing requirements and conservation techniques, slowed groundwater development somewhat, although no attempts have been made to control groundwater production and thereby extend the life of the aquifer. This reluctance may be due to the ability of any county to exclude itself from a district's jurisdiction. With that option available to local pumpers, UWCDs are not likely to pursue management practices (assuming they had the desire) that impose limitations on its constituents. Only two districts -- located in Harris - Galveston County area and Ft. Bend County, respectively, have limited pumping. This enforced reduction was to prevent further land subsidence in the district. The exercise of this power successfully withstood court challenges.

The High Plains District is the major success story for underground water conservation districts in Texas. The district's farmers depend almost entirely on the drastically overdrafted Ogallala Aquifer, a large part of which is located in the Texas Panhandle. Soaring energy prices and rapidly dropping water table led to the realization by the region's farmers that they could not afford to pump water indefinitely and that sooner or later the Ogallala Aquifer would be depleted, at least in the economic sense.

After ten years of diligent but entirely self-financed conservation efforts, the district has achieved a region-wide cutback in irrigation water use that ranges between 25 and 40 percent. This was achieved primarily through the following water conservation measures: replacing unlined ditches with pipelines; improvements in furrow irrigation; tailwater pond improvements; soil moisture monitoring devices; and low-head sprinkler systems. Efficient farmers around Lubbock have reduced irrigation requirements by half - from 3 acre-feet a year to one and one-half acre-feet per year. The aquifer level, which had been declining by 2 to 5 feet a year, has begun to stabilize.

The number of underground water conservation districts have recently proliferated. Many are created on a single county basis or less, rarely corresponding to aquifer or management area boundaries. Many districts exist on paper only. A few are created to ensure local control, or non-control, of groundwater. Although districts are required to develop and implement management plans and corresponding rules, some do not. The districts are required to submit management plans and rules to the Texas Water Commission for review only and Commission approval is not required. Despite this limited requirement, the submission of plans and rules is rare. The statute provides no minimum standards that a district must follow and the

Texas Water Commission has no specific oversight or enforcement authority.

Finally, some areas which may desperately need groundwater protection may not have a sufficient tax base to support such a district. This problem is most acute in the Trans-Pecos Region of Texas. The City of El Paso faces the critical problem of finding future water supplies. All area surface waters have been fully appropriated and the City shares a common aquifer with New Mexico and the rapidly expanding Mexican City of Juarez. To meet future demand and provide for growth, El Paso has recently bought land in a sparsely populated region near Fort Davis in order to pump groundwater from that area and transport it 150 miles to El Paso. Ranchers and farmers in the Fort Davis area feel that their water supply and local economy is threatened. In order to protect themselves, many local residents are weighing the costs and benefits of creating a local district.

Additionally, after losing a long fought court battle with the State of Texas over water rights to the Pecos River, the State of New Mexico is considering the purchase of relatively inexpensive Texas groundwater and pumping it just over into New Mexico and releasing it into the Pecos River to meet its obligation to provide Texas water under the Pecos River Compact. In effect, in a water scarce area, New Mexico would use Texas water to meet Texas' share of the Pecos River. No district exists in this area to review and determine the impact of this pumpage on the affected resource and area of Texas and whether such exportation can be legally controlled or prohibited. State statutes do not address this issue.

## 2. The Edwards Underground Water District

During the drought of the 1950s, the level of the Edwards Aquifer plummeted from an annual long-term average elevation of 675 feet msl to an all-time record low of 612 feet msl in 1956. This drought changed the way water was used and managed across the state and brought about the realization that the Edwards Aquifer is not an infinite resource. The drought was finally broken by a record recharge of 1,117,000 acre-feet recharge in 1958. But concerned citizens in the affected region realized that without managing, conserving, and protecting the Edwards Aquifer, the region was at risk.

In 1957, state legislation was introduced to create an underground water conservation district to preserve, conserve, protect, and increase the recharge of the Edwards Aquifer. This legislation was defeated. During the subsequent state legislative session in 1959,

legislation was once again introduced to create a district for the Edwards Aquifer. This time, the legislation passed, creating the Edwards Underground Water District (EUWD). Art. 8280-219, Tex. Water Auxillary Laws.

The five counties initially comprising the district included Uvalde, Medina, Bexar, Comal, and Hays. The EUWD was authorized to "conserve, protect, and increase the recharge of" the Edwards Aquifer. A simillar statement of general authority is also contained in Chapter 52 of the Texas Water Code relating to underground water conservation districts. However, an important distinction is that the powers necessary to carry out this mandate were not specifically conferred on the district. These powers include the ability to require permits for wells and impose pumpage limitations. The district's activities, until the mid-1980s, were largely limited to gathering and disseminating data.

Studies conducted in 1965 by the U.S. Army Corps of Engineers indicated that the Edwards Aquifer could not meet the future water requirements of the area and recommended a total safe-yield withdrawal of 385,000 to 400,000 acre feet.

In 1978, the Bureau of Reclamation pointed out serious consequences associated with continued and unrestricted use of the Edwards Aquifer. The Texas Department of Water Resources, predecessor to the Texas Water Commission, developed the first study of the Edwards Aquifer using computer modeling in 1979. This effort reiterated the need for an annual "safe-yield" withdrawal of 450,000 acre-feet.

In 1983, the Edwards Underground Water District and the City of San Antonio undertook a joint study of the Edwards Aquifer. The study was to look at the regional water resources and needs and would result in a regional water management plan. Delays in completing the study were due to substantial time, effort, and expense devoted to carefully defining the scope of work, appointing advosory committees, selecting qualified consultants, and involving the public to the maximum extent possible.

In 1986, the Regional Water Resources Study was completed. A committee was then formed to explain the study to the affected region and to reach a consensus on the fundamental policies and objectives necessary to develop a regional water management plan. After six months of meetings and deliberations, the committee recommended the implementation of a comprehensive management plan providing that the water of the Edwards Aquifer be allocated, and water conservation and reuse measures be imposed, and alternative water resources be developed.

The reoccurrence of local drought conditions and the ever-increasing demands on the Edwards Aquifer during the 1980's heightened concern over the lack of management of the aquifer. Consequently, legislation was passed in 1987 requiring the EUWD to develop, implement, and enforce a drought management plan "in order to minimize, as far as practicable, the drawdown of the water table or the reduction of artesian pressure and spring flow; to prevent waste; and to protect the groundwater resource from serious harm." The legislation required the plan to contain objective standards for determining when drought conditions exist, specific drought management activities for the stages of drought, and requirements for reducing water use "in accordance with established priorities, which must include uses for essential human needs, agriculture, industrial, power, recreational, commercial, and other categories of use." Additionally, the legislation required that the plan be developed and approved by September 1, 1988. If the district failed to timely adopt a plan meeting the statutory requirements, the Texas Water Commission was to adopt and implement a plan. The legislature also provided that a person could appeal a rule under the district's plan to the Texas Water Commission. Finally, the legislature authorized deannexation elections for the constituent counties.

Meanwhile, the Regional Water Resources Plan was completed and approved by the Edwards Underground Water District and the City of San Antonio in July 1988. The plan contained five components: aquifer recharge; groundwater withdrawal and allocation; conservation; wastewater reuse; and the development of surface water reservoirs. Major conflicts in the region came to the fore upon the adopting of the Regional Water Resources Plan. The main point of contention was the allocation of water by certain uses. Irrigation farmers, although grandfathered and guaranteed a certain amount of water, were vehemently opposed to any limitation on their right to capture groundwater. Similarly, many in San Antonio were uncomfortable with the allocations. Everyone wanted what they always had access to, and there was no mood for compromise.

Pursuant to the recent amendment to its enabling act, the Edwards Underground Water District proceeded with the development of its drought management plan and formally approved a plan on August 23, 1988, a week before the deadline. Approval was obtained only after certain demands by the western counties of Uvalde and Medina were met. During the time this plan was being developed, however, San Antonio Mayor Henry Cisneros was proposing the implementation of the Regional Water Resources Plan which the western counties strongly believed did not fully protect their property rights and interests. Because the western counties were fearful about the possible implementation of the regional plan through statutory authorization from the legislature during the next session, the western counties

decided to take pre-emptive action. Consequently, on January 21, 1989, Medina and Uvalde counties voted to withdraw from the EUWD, leaving the effectiveness of the district's drought management plan uncertain. Legislation proposed in 1989 seeking to implement the regional plan was defeated.

The current drought management plan of the district has a serious flaw providing that its measures cannot be implemented until the aquifer falls below a certain level and there have been several preceding months of abnormally low rainfall. Unfortunately, it is not implemented when aquifer levels are falling critically low due to overdrafting but rainfall has been normal. This flaw led to a crisis situation during the summer of 1990 when aquifer levels fell to a point where Comal Springs was threatened and the United States Fish and Wildlife Service indicated that it would soon take enforcement action under the federal Endangered Species Act if local or state officials failed to act. Finally, due to pressure from the Texas Water Commission, an Emergency Action Plan was adopted by the district and municipal and county governments throughout the five county region. Unfortunately, the district allowed the plan to expire in December 1990 and has failed to amend its drought management plan based upon lessons learned during the summer of 1990.

### 3. The Medina County Underground Water Conservation District

In November of 1989, voters approved the creation of countywide underground water conservation districts in Uvalde and Medina counties. However, an opinion by the Attorney General's Office questioned the legality of the procedures used to create these districts. Therefore, legislation was introduced in 1991 to validate the creation of these districts. Only the bill providing for the Medina County district passed.

The Medina County district has the same powers as those conferred upon a Chapter 52 district (see discussion above under "VI. c. 1."). Although the district has published proposed rules which require certain water conservation measures of users from the Edwards Aquifer in the district and imposes a general water duty of two acre-feet of water per irrigated acre, the district has not adopted any rules as of the date of this writing. Since, some would argue, the Edwards Aquifer should be managed as a whole and in a comprehensive and coordinated way in conjunction with related surface streams, it is difficult to understand how the creation of this single county district, or the creation of separate county districts, serves to address the pressing regional water management issues.

D. The Texas Water Commission.

1. §28.011 Texas Water Code.

There exists varying authority under provisions of the Texas Water Code and other state law for the Texas Water Commission to regulate underground water. Section 28.011 of the Code authorizes the TWC to "make and enforce rules and regulations for conserving, protecting, preserving, and distributing underground, subterranean, and percolating water" and "to do all things necessary" for those purposes. A recent Attorney General's opinion upheld the constitutional validity of this statute, reversing a 1941 attorney general opinion. Atty.Gen.Op. No. DM-54 (November 4, 1991). However, the recent opinion did not address the scope of permissible action under the statute.

After alleged political pressure from agricultural groups and in response to a letter from a state senator from West Texas, the Attorney General wrote in late March 1992 that he thought his recent opinion had been misinterpreted by the Texas Water Commission when the Commission stated it had sufficient authority under §28.011 to manage pumpage from the aquifer if a local resolution of the management dispute was not achieved. This ill-timed and confusing letter by the Attorney General had an immediate impact to the Commission's ability to apply pressure to the parties to reach a negotiated settlement. Soon after the letter was issued, the parties rejected the Commission's proposed settlement agreement which had been based upon extensive discussions with the parties.

Authority granted to the Commission by §28.011 could include the control of pumpage to prevent overdrafting and pollution by saltwater intrusion at the "bad water lines." The statute provides no specific authorization to protect fish and wildlife habitats by the maintenance of minimum springflows fed by an aquifer. However, the Commission may be precluded from taking any action under the statute which would be in conflict with state and federal law providing such protection.

2. Chapter 26 Texas Water Code.

Chapter 26 of the Texas Water Code authorizes the Commission to issue orders, make and enforce rules, and do all other necessary things for the protection of the water quality of all water above and below the surface of the land. Rules promulgated pursuant to this chapter may provide for the restriction of pumpage for this

purpose. Water quality rules requiring pollution abatement plans for any development over the aquifer to protect recharge features already exist under Chapter 313 of the rules of the Commission.

The primary water quality concern in that overdrafting of the aquifer itself may allow the intrusion of highly mineralized water from underground water adjacent to the underground river otherwise held in check because of the hydrostatic pressure of the aquifer. Additionally, reduction in springflows caused by diversions from the Edwards Aquifer will adversely affect the water quality, aquatic and wildlife habitat, and other instream uses of surface streams downstream of the underground stream as well as bays and estuaries. A decrease in the quantity of the water in a stream lessens its assimilative capacity for effluent discharges and other sources of pollution. If springflows fall below certain minimum levels, then the stream segments below the springs would be dominated by return flows from municipal and industrial discharges, along with an undetermined amount of contaminated runoff from adjacent urban and agricultural areas. The result would be pollutant overloading of these streams. The nonpoint source pollution, elevated nutrient concentrations, and increased ambient temperature would devastate the ecological character of the streams immediately below the springs as well as further downstream in the Guadalupe River Basin.

Finally, the direct hydrologic connection between the Edwards Aquifer and surface streams in the contributory watershed requires the careful management of diversions from and wastewater discharges to rivers which flow into and provide "recharge" to the aquifer. Such management is necessary to protect the water quality of the aquifer.

### 3. Chapter 11 Texas Water Code.

Under Texas law, all water that is below the surface of the land is presumed to be percolating groundwater, which is owned by the landowner, unless and until it is established that such water is in an underground stream or the underflow of a surface stream. See, e.g., Pecos County WCID No. 1 v. Williams, 271 S.W.2d 503, 506 (Tex. Civ. App. - El Paso 1954, writ ref'd n.r.e.); Texas Co. v. Burkett, 117 Tex, 16, 296 S.W. 273, 278 (1927); Bartley v. Sone, 527 S.W.2d 754, 760 (Tex. Civ. App. - San Antonio 1974, writ ref'd n.r.e.). Groundwater flowing in definite underground streams, however, is governed by surface water law and is subject to prior appropriation. Id. State water is subject to regulation by the Texas Water Commission in accordance with Chapter 11 Texas Water Code. Any authorization to divert and use state water is a right of use, and actual ownership of the water remains with the state, held in trust

for the public's benefit. South Texas Water Co. v. Bieri, 247 S.W. 2d 268 (Civ.App. 1952).

Texas caselaw provides that an underground stream is state water if it has the same characteristics of a surface watercourse. See, e.g., A.H. Denis, III, et al. v. Kickapoo Land Co., et al., 771 S.W.2d 235, 236-237 (Tex. App. - Austin 1989, writ denied). Those characteristics include a stream which has:

- Known and well-defined boundaries which contain the flow of the water;
- A known and well-defined source of water;
- A flow or movement of the water (i.e., current) in a known direction;
- A known destination for the flow of the water; and
- Is of sufficient volume or magnitude (e.i., utility.) to be put to beneficial use. See, e.g., Hoeffs v. Short, 273 S.W. 785, 787 (Tex. 1925); Pecos County WCID No. 1, supra, at 506.

Additional guidance may be obtained by other jurisdictions than Texas courts regarding the characteristics of underground streams. The Florida Supreme Court found, for example, that water flowing below the surface of the land is also an underground stream if it can support fish and other aquatic wildlife. Tampa Water Works Co. v. Cline, 37 Fla. 586, 588 (1896).

A large body of knowledge has been developed and accumulated over many years with regard to the physical characteristics and use of the Edwards Aquifer as well as its direct hydrologic interrelation with the surface waters of the Nueces, San Antonio, and Guadalupe River Basins. After thorough examination and consideration of all available studies, reports, and information, Commission staff concludes that the Edwards Aquifer exhibits all of the above characteristics of an underground river.

**a. Defined and Known Boundaries:**

The Edwards and Associated Limestones (Balcones Fault Zone) aquifer occurs as a narrow, arcuate band, 5-40 miles wide, which stretches 175 miles from a hydro-geologic division near Brackettville in Kinney County eastward through San Antonio and then northward through San Marcos

to a hydrogeologic divide near the city of Kyle in Hays County. This hydrogeologic divide, which serves as the northern-most boundary of the San Antonio segment of the aquifer, coincides approximately with the divide between the Colorado and Guadalupe River Basins. The aquifer occurs in the Balcones Fault Zone, which follows the same general east to northeast trend. The Aquifer is underlain by the relatively impermeable Upper Member of the Glen Rose Formation which serves as an aquitard. The aquifer dips to the south and southeast and occurs under artesian conditions where it is confined by the overlying Del Rio Clay. The aquifer is bounded to the north and northwest by the updip limit of its outcrop at the surface, which is its recharge zone. It is bounded to the south and southeast by the downdip limit of fresh water defined as 1,000 milligrams per liter of dissolved solids, known as the "bad water line".

The Edwards aquifer in this area possesses known and defined boundaries and the water in the aquifer is contained within a well defined subterranean zone with confinement above and below by aquitards and confined laterally by hydrologic barriers.

**b. Water Source:**

The Aquifer receives inflow primarily from surface water flowing in surface streams which cross the outcrop of the aquifer (i.e. its recharge zone) and lose a portion of their flow to the permeable rocks of the aquifer that are exposed at the surface. Approximately 80% of the Aquifer's recharge is from these surface stream losses. Approximately 5-6% of the recharge is from the deeper Glen Rose aquifer. The remainder of the recharge is from percolation and recharge to solution cavities in the interstream areas.

**c. Current and Direction of Flow:**

The hydrogeologic characteristics of the Edwards Aquifer makes this water resource unique in the State of Texas. Through its "recharge zone," the Edwards Aquifer captures and diverts flows of major surface streams in the upper portions of the Nueces and San Antonio River Basins. These surface streams provide approximately eighty percent of the "recharge" to the aquifer. Water "recharging" the aquifer continues to flow downgradient, generally moving west to east to northeast, through the confined and known

boundaries of the aquifer, eventually erupting at several springs.

**d. Destination:**

Water flowing through the aquifer once again flows in surface streams by emerging at several springs, including the Leona River Springs near Uvalde, San Antonio and San Pedro Springs in San Antonio, Comal Springs in New Braunfels, Hueco Springs in the Guadalupe River near New Braunfels, and San Marcos Springs in San Marcos. Water from these springs continues to flow in the Nueces, San Antonio, and Guadalupe River Basins and contribute to freshwater inflows for bays and estuaries along the Gulf of Mexico.

**e. Aquatic Habitat:**

The Edwards aquifer supports unique fish and other aquatic species and their habitat, both within the aquifer in the subsurface and through year-round discharge to the major natural springs. Records of the Guadalupe River drainage indicates the presence of 75 different species of fish occurring in the river basin. While there are many unique species found in the basin, three of the more prominent include the San Marcos gambusia, Fountain darter, and the Guadalupe bass. Approximately 40 species of aquatic plants have been reported to be found in the basin, including the endemic species Texas wild rice. The aquifer itself provides habitat for several rare and endangered species of blind salamanders and two species of blind catfish.

**f. Utility:**

The Edwards Aquifer is also "of sufficient magnitude and volume to be serviceable to the persons through or along whose land it flows." The Edwards Aquifer is of great economic importance both to the region that relies upon it and to the State of Texas. The Edwards Aquifer is the sole source of water supply for approximately 1.5 million citizens in the San Antonio region and supports a diverse regional economy that provides employment for approximately 700,000 to 800,000 Texans. Additionally, the Edwards Aquifer is important to the economies of the communities at and downstream of several springs fed by the aquifer. These springs include the State's two

largest natural springs at New Braunfels and San Marcos. These two springs sustain a significant tourist and recreational economy for these cities.

It is estimated that spring flow from Comal and San Marcos Springs alone provides 21 to 32 percent of the total annual flow, and up to 70% of the total flow during droughts, of the Guadalupe River at Victoria. Seventy to Eighty Thousand jobs exist in those counties that are supplied with water from the Guadalupe River below these springs. The economies of Hays and Comal counties and the counties downstream of the springs are clearly dependent on the Edwards Aquifer.

The Water Rights Adjudication Act (the "Act"), subchapter G, Chapter 11, Texas Water Code, provides, in part, that a person claiming a right to use state water must have filed with the Texas Water Commission a sworn claim or certified filing evidencing such use not later than September 1, 1969. The Act does not apply to certain domestic and livestock use. To be recognized, a claim had to be based on actual beneficial use for the period from 1963 to 1967. The use period was extended to 1970 for projects under construction at the time the Act was passed. Failure to file the required sworn statement "extinguishes and bars any claim of water rights." Any remaining state water not appropriated under the Act is available for appropriation with certain limitations through a permitting process administered by the Commission pursuant to subchapter D, Chapter 11, Texas Water Code. Such limitations include, but are not limited to, restrictions on the diversion and use of water for the protection of senior water rights, water quality, aquatic and wildlife habitat, instream uses, and bays and estuaries. Additionally, a water right is limited to that amount which can be beneficially used without waste for the authorized purpose but not to exceed the amount authorized.

Based upon the presumption that water contained in the Edwards Aquifer is percolating groundwater and, thus, private water, no known claims for the use of water from the Edwards Aquifer were filed under the Act. Consequently, no right to use State water from the Edwards Aquifer has been adjudicated. If found to be an underground stream and, thus, state water, the right to use water in the Edwards Aquifer is subject to appropriation by permit issued by the Commission, except for exempt domestic and livestock purposes, in accordance with §11.121 et seq. Texas Water Code. The Commission may reserve from appropriation all or a portion of the water rights vested in the State to satisfy the State's obligation to protect water quality, the public health, safety, and welfare,

aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose.

If water in the Edwards Aquifer is determined to be state water, Commission regulation of the use of the Edwards Aquifer would not be an unconstitutional taking of private water. Because waters of the Edwards Aquifer would be unappropriated State waters, constitutional provisions relating to the taking of private water would not apply. Tex. Const., art. XVI, §59; See, also, In re Adjudication of Water Rights of the Upper Guadalupe Segment, 642 S.W.2d 438 (Tex. 1982). Additionally, the regulation of the use of water from the Edwards Aquifer to protect water quality in accordance with Chapter 26 of the Texas Water Code is a valid exercise of the "police powers" of the State necessary to protect the public health, safety, and welfare. The Commission is not authorized to recognize any equitable rights to the use of State water based upon the erroneous presumption of percolating groundwater and historical use. The failure to previously assert State ownership of the Edwards Aquifer does not grant any right to an historical user of the Aquifer since the doctrine of laches does not apply to the State and a person may not adversely possess State property.

#### 4. Edwards Underground Water District Enabling Act.

As discussed above, Section 3 of the Edwards Underground Water District's enabling act provides that the District must develop, implement, and enforce a drought management plan "in order to minimize, as far as practicable, the drawdown of the water table or the reduction of artesian pressure and spring flow; to prevent waste; and to protect the groundwater resource from serious harm." The legislation requires the plan to contain objective standards for determining when drought conditions exist, specific drought management activities for the stages of drought, and requirements for reducing water use "in accordance with established priorities, which must include uses for essential human needs, agriculture, industrial, power, recreational, commercial, and other categories of use." If the District fails to timely adopt a plan in accordance with the statute, the the Texas Water Commission is authorized to develop and implement a plan.

The act also provides that a person can appeal the reasonableness and validity of a rule under the District's plan to the Texas Water Commission. Pursuant to TWC procedural rules contained in 31 Tex.Admin.Code §275.91 et seq. relating to such appeals, the definition of "person" with a right to appeal includes the TWC Executive Director and Public Interest Counsel. One may argue that

fatal weaknesses exist in the District's present plan and rules, including: triggering conditions tied to both aquifer level and rainfall; the absence of water conservation requirements; the unequal application of the rules; the inadequacy of the rules to achieve the statutory goals; and the irreconcilable conflict with federal laws for the protection of endangered species. All such weaknesses are designated grounds for appeal under Commission rules. The preamble for the adoption of these rules further provide that nothing in the rules shall be construed as a determination by the Commission that the District did timely develop a drought management plan that adequately meets all statutory requirements and, thus, constitutes a plan as contemplated by Section 3 of the enabling act.

5. §11.202 Texas Water Code.

Finally, in response to the large amount of water being taken from the Edwards Aquifer by a catfish farm in southern Bexar County, the Texas Legislature amended Section 11.202 of the Code to provide a moratorium on the drilling of any new artesian well producing 5,000 gallons per hour or more in the southern portion of the Edwards Aquifer unless authorized by the Texas Water Commission. Such authorization may be granted if the applicant can demonstrate that only a beneficial use of the water will be made and no waste will occur. The Commission is authorized to delegate this regulatory power to a local district.

This prohibition does not apply to wells such as the catfish farm which were drilled and producing prior September 1, 1991. Additionally, the statute does not apply to wells drilled after December 31, 1993.

VI. Litigation and Mediation Chronology

A. In Re: Adjudication of the Rights to Use Water from the Edwards Aquifer.

On June 19, 1989, the Guadalupe-Blanco River Authority (GBRA) filed suit in state district court in Hays County seeking a declaratory judgment regarding the ownership of the water in the Edwards Aquifer. Specifically, GBRA requested the court to declare that the waters in the Edwards Aquifer are contained in an underground stream and, thus, are owned by the State of Texas in trust for the benefit of the public. Such water would be subject to regulation as state water by the Texas Water Commission in conjunction with the Commission's ongoing regulation of the Guadalupe River and its other

tributaries. In its suit, GBRA claims that massive, unregulated pumping from the Edwards Aquifer is threatening to cause severe and irreparable harm to the Comal and San Marcos springs, the Guadalupe River Basin, the San Antonio Bay and Estuary, and the aquifer itself. GBRA further requested the court to make any water rights granted subject to conditions necessary to protect and maintain adequate and continuous flow of water from the Comal and San Marcos springs. A petition was filed by federal agencies who were named defendants in the suit to remove the matter to federal district court. The court denied the petition and an appeal was filed with the 5th Circuit Court of Appeals. On August 2, 1991, the appellate court upheld the federal district court action on other grounds and remanded the case back to state district court where the matter is presently pending.

In July of 1989, GBRA filed a notice of violations of the federal Endangered Species Act with the Secretary of the Department of the Interior. In its notice, GBRA claims that the pumping of the Edwards Aquifer is endangering the well-being of several endangered and one threatened species. These species live in the Comal Springs. If the pumping continues, the notice alleges, the spring flows will cease and the critical habitats of these species will be destroyed.

B. Special Joint Committee on the Edwards Aquifer.

During September of 1989, the Lieutenant Governor and the Speaker of the House approved a Proclamation which created the Special Joint Committee on the Edwards Aquifer. The Committee was assigned the responsibility to investigate issues concerning underground and associated surface water management in the region, with the hope that such "dispassionate review at the state level" might shed light on the controversy surrounding a proposed management plan for the region.

Although the Committee did not meet often following its creation until the summer of 1990, it did manage to appoint a Technical Advisory Panel (TAP) and request the TAP to examine all existing technical studies and reports regarding the aquifer and produce a report of its findings. The TAP, relying to a great extent on a model developed in the 1970s by the Texas Water Development Board and published in 1979 by the TWC's predecessor, the Texas Department of Water Resources (Report 239), presented its report to the Committee during February 1990. Included in the report was a discussion of the effects of limiting groundwater withdrawals to an amount less than average, annual recharge.

Since the TAP report was published, the TWC has developed a new model to allow more rapid comparison of different management schemes based upon aquifer level at the index well (J-17) in San Antonio (TWC Rep. LP91-08). The model can also determine approximate aquifer levels associated with springflow amounts and corresponding pumping limits. The TWDB has also undertaken to update and modify the Report 239 model.

C. TWC Mediation Efforts: John Birdwell.

During October of 1989, Texas Water Commission (TWC) Chairman Buck Wynne began looking into the possibility of TWC mediation between aquifer users of the dispute over the proper management of the Edwards Aquifer. The following month, newly-appointed Commissioner John Birdwell assumed the task of mediating the dispute. One reason the TWC decided to attempt mediation was because it was felt that this issue is better resolved at the local level by those who are directly affected, rather than by the courts, whether at the state or federal level. Additionally, it was felt that every opportunity should be explored to avoid costly litigation. It is estimated that litigation costs incurred in the state lawsuit may eventually reach anywhere from \$30 million to \$60 million over a period of several years, depending upon the court's determination of whether the Edwards Aquifer constitutes state water. In constructing his mediation strategy, Commissioner Birdwell determined that the Commission itself would not propose a plan, but would solicit ideas from representative users and then hopefully facilitate a consensus management plan that was fair to all parties. The agreed plan would then be presented to the legislature for possible enactment into law.

Commissioner Birdwell first contacted officials and members of the various user groups and asked whether they were interested in participating in the mediation. All groups responded affirmatively. Then each group was asked to choose representatives to participate in mediation. Initial meetings were held with individual user group representatives to ascertain the different positions and the potential for consensus. Later, meetings were held en masse in the form of mediation. An exhaustive series of meetings was held throughout the region from January to August 1990. Several proposal outlines were developed but none achieved total consensus.

The major unresolved issues include whether regional pumpage allocations would be imposed on the different users. San Antonio was willing to accept pumping limitations, but only if the western counties of Uvalde and Medina would also. Additionally, San Antonio made its acceptance of pumping limitations contingent upon some

sharing of the costs for San Antonio to develop alternative water supply sources (e.g., surface water reservoirs) by those users of the Guadalupe River who would benefit from continued springflow. San Antonio also stated that it would not agree to any limitation which would guarantee spring flow at Comal in time of drought. The agricultural users of the two western counties refused to consider any allocation or limitation on their pumpage. The Guadalupe River users were divided on the financial contribution requested by San Antonio, with GBRA being the leading, and perhaps only, dissenter. Other unresolved issues included water exportation and marketing and the amount of representation each user group would have on any regulatory entity established to implement the plan. Finally, aquifer users in Hays and Comal counties as well as Guadalupe River users wanted Texas Water Commission oversight to ensure implementation of a management plan. This proposal received a cold response from the other representatives.

In late Spring of 1990, the Sierra Club joined GBRA by also filing a notice of intent to file a lawsuit under the Endangered Species Act.

#### D. Emergency Action Plan.

During the early summer of 1990, aquifer levels became critically low, threatening spring flow at Comal. The drought management plan of the EUWD was not triggered despite the low levels since there had not been a period of abnormally low rainfall. The U. S. Fish and Wildlife Service, the agency responsible for enforcement of the federal Endangered Species Act, indicated that if conditions continued to worsen, it would have no choice but to intervene. The members of the Special Joint Committee on the Edwards Aquifer had not been able to address the management issues because of more pressing statewide legislative concerns regarding school financing and jail construction. The mediation efforts, although having made a great deal of progress, had not achieved consensus because of the remaining issues mentioned above.

In response to this critical situation, Commissioner Birdwell decided the time had come for the Commission to act, rather than mediate. In July of 1990, Commissioner Birdwell asked that the EUWD convene a meeting to consider adoption of an Emergency Action Plan (EAP) developed by Commission staff. The EAP provided that use reduction measures would be implemented in stages depending upon aquifer level. The EAP also provided requirements for reducing water use in accordance with established priorities of use. Additionally, cities within the district were required to submit to the EUWD for review and approval ordinances implementing the EAP. After lengthy debate, two sessions, and warnings from individual TWC

commissioners that the state agency would "rock and roll" if the EAP was not accepted by the EUWD, the EUWD finally adopted the Commission's plan. Then heavy rains fell during the following month, when the irrigation season had passed, and the aquifer began to recover. The EAP adopted by the EUWD provided it would expire December 31, 1990, subject to renewal. The EUWD did not renew the EAP nor has it amended its drought management plan to address the latter plan's many shortcomings.

E. Professional Mediation: John Folk-Williams.

During the Summer of 1990, the Special Joint Committee on the Edwards Aquifer began to meet regularly and hold hearings throughout the affected region. In early August, the co-chairperson of the Joint Committee, Sen. Cindy Krier (R-San Antonio), asked Commissioner Birdwell to step aside and proposed the employment of a professional mediator. In November 1990, the group decided upon John Folk-Williams of Western Network in Santa Fe, New Mexico. Mr. Folk-Williams was paid with Texas Water Development Board funds.

In December 1990, the staff of the Joint Committee prepared a report for committee adoption recommending a management plan for the entire region affected by the aquifer. The plan proposed the creation of the Edwards Aquifer Regional System responsible for the conjunctive management and development of water resources in the Edwards Aquifer, the Nueces, San Antonio, and Guadalupe rivers, and the associated bays and estuaries. The proposed management scheme would entail a two-tiered systems approach with a top tier of regional planners and a second tier of local managing subunits. The staff's report received very little support from the Committee members. The Committee decided against adopting the plan, but rather voted to simply present the staff's report to the legislature for its consideration. The Committee also voted that if the mediation by Mr. Folk-Williams resulted in agreement before the end of January, the Committee would recommend its enactment. However, if the mediation did not produce results by that time, the individual legislators were free to file their own proposed legislation.

F. 1991 Legislative Session.

The resolution creating the Joint Committee expired in mid-January 1991. Mr. Folk-Williams' mediation efforts were unsuccessful. The same issues left unresolved at the time Commissioner Birdwell's mediation was cut short still remained. Eighteen bills related to the Edwards Aquifer were filed and only one, validating the creation

of the Medina County Underground Water Conservation District, passed.

G. Sierra Club v. Lujan.

During the waning moments of the regular session, the Sierra Club filed suit on May 21, 1991, in the federal district court in Midland against the Secretary of the Department of the Interior and the U.S. Fish and Wildlife Service alleging failure to carry out the mandates of the Endangered Species Act. The Sierra Club complaint requests that the defendants be enjoined to restrict withdrawals from the Edwards Aquifer at any time the instantaneous springflow from the Comal Springs is less than 350 cubic feet per second. The suit also requests that the defendants be ordered to develop and implement a recovery plan for the endangered and threatened species found in the aquifer and the Comal Springs. Days later, the GBRA filed to intervene in the suit on the side of the Sierra Club.

On August 13, 1991, the defendants responded to the suit by denying that they had failed to protect endangered species by allowing uncontrolled pumping from the aquifer. The federal government also stated that the Midland court lacks jurisdiction over the case; the Sierra Club failed to include in the suit "all necessary and indispensable" parties; the Sierra Club lacks legal standing to pursue the suit; and the group failed to stipulate a claim for damages.

The federal district court in Midland heard several motions on December 20, 1991, relating to jurisdiction, party intervention, alignment, and contested issues. An evidentiary hearing was set to begin May 4, 1992.

H. The Catfish Farm.

During the late summer and early fall of 1991, the public concern over the massive withdrawals from the Edwards Aquifer by the Pucek catfish farm (Living Waters Artesian Springs, Ltd.) reached a climax. On August 13, 1991, the Commission requested an opinion from the Attorney General on the validity of a statute providing the Commission with regulatory authority over groundwater. Additionally, a lawsuit was filed in mid-October by the Edwards Underground Water District and the San Antonio River Authority to enjoin the catfish farm from discharging water from the facility until a determination had been made by the Commission and the EPA on whether the discharge required a wastewater discharge permit. Additionally, the suit alleged that the farm was wasting artesian water. By statute, the Commission joined the lawsuit as an indispensable party. By consent

decree, the catfish farm agreed not to make any further withdrawals until the permit question was resolved.

I. Attorney General Opinion on §28.011.

On November 3, 1991, the Attorney General issued his opinion finding valid the statute providing the Commission with groundwater regulatory authority. This opinion overturned an earlier opinion issued 40 years ago. The following day, the Commission stated in a news conference that the Commission would impose a management plan on the users of the Edwards Aquifer unless the local parties reached agreement on a plan within ninety days. The reason for the delay, the Commission stated, was the agency's policy that groundwater issues should be undertaken by the Commission through direct regulatory action only as a last resort and that a local resolution should be sought first.

J. Mayor Bruce Todd Mediation.

Shortly thereafter, the mayors of San Antonio and San Marcos approached Austin Mayor Bruce Todd and asked whether he would mediate the dispute and help the parties reach an agreement within the ninety days prescribed by the Commission. Todd agreed and the parties consented to participate in these negotiations. On February 5, 1992, Mayor Todd presented the Commission with a report of the status of his mediation efforts. Although the mediation group had agreed on many management concepts, no details had been worked out. Especially significant was the lack of agreement on what amount of protection was to be provided for Comal Springs. After receiving the report, Chairman Hall stated that he would meet with the parties individually during the following two weeks to obtain input on what the Commission's management plan should contain.

K. TWC Proposed Interim Management Plan

On February 18, 1992, the Commission published its concept paper providing a summary of its proposed interim management plan. In presenting the plan, Commission Chairman gave the local parties until mid-March 1992 to come up with its own plan or the Commission would take steps to impose its own.

According to the Commission's plan, overall pumpage from the aquifer would be reduced from an estimated current use of 538,000 acre-feet per year to 400,000 acre-feet in order to provide significant protection for springflows at Comal Springs and continuous

protection for San Marcos Springs. A regional water conservation and reuse plan would be implemented to achieve a cut in water use by 25 percent. San Antonio would accelerate its efforts to develop alternative water supplies.

The plan also called for immediate studies on the feasibility of supplementing springflows to protect endangered species and establishing a voluntary dry year option that would pay farmers not to pump. Additionally, the plan asked for Guadalupe River water users to help pay for the irrigation buy-outs and to comply with the same stringent water conservation measures that are proposed for the aquifer users since they would be the beneficiaries of the sustained springflows. Finally, the plan proposed the creation of a blue ribbon advisory council to draft a longterm regional water management plan by 1995. As one can see, many of the plans components included earlier management tools and goals provided in the regional plan developed by the Edwards Underground Water District and the City of San Antonio in 1988.

The Commission's plan came under attack from all sides. The farmers still disliked any allocation of use among types of users and criticized the voluntary dry year option as having devastating impacts on the agricultural community and associated businesses and activities.

The springflow interests criticized the plan as not providing enough protection for springflows should the worst drought of record occur again. This same criticism was expressed in a letter by the regional director of the U. S. Fish and Wildlife Service. The federal agency also criticized the plan for too much reliance on voluntary conservation and for not adequately controlling future uses.

San Antonio officials stated that the plan would mean higher taxes and water rates to pay farmers not to irrigate. San Antonio representatives also stated that the plan was too unclear on how the costs for implementing the water conservation and surface water development measures would be shared across the affected region.

#### L. TWC Proposed Settlement Agreement.

By mid-March 1992, no progress had been made by the local parties to come up with an agreed regional management plan for the aquifer. Therefore, on April 2, 1992, the Commission distributed for the parties' review and approval by April 14, 1992, a settlement agreement based upon the Commission's February 18, 1992, proposed interim management plan. Shortly before distributing the proposal,

the Attorney General wrote his letter stating he thought the Commission had misinterpreted his earlier opinion regarding the validity of §28.011 of the Texas Water Code. He wrote that the statute did not provide the Commission the authority to undertake the management of the aquifer. This curiously-timed letter had great impact on the Commission's ability to bring pressure to bear on the parties to reach a settlement. The proposed settlement agreement offered by the Commission was unanimously rejected.

M. TWC Adoption of Emergency Rules

On April 15, 1992, one day after the deadline to consider and approve the Commission's proposed settlement agreement, the Commission adopted rules on an emergency basis declaring the Edwards Aquifer to be an underground stream and, thus, state water subject to Commission regulation pursuant to Chapter 11 of the Texas Water Code. Although some action by the Commission was anticipated, most observers thought the Commission would act pursuant to §28.011, despite the recent confusing, seemingly contradictory, and perhaps politically motivated comments by the Attorney General.

Simultaneously with the adoption of the emergency rules, the Commission published proposed permanent rules providing the procedural steps necessary for a person to obtain state authorization to divert and use water from the Edwards Aquifer. The emergency rules placed a moratorium on new wells, provided interim authorization for all current users to continue using water for beneficial purposes without waste; and exempted from permitting small domestic and livestock uses.

The Commission also filed and obtained a continuance of the May 4, 1992, trial in the Sierra Club's endangered species lawsuit until August 10, 1992, so that the Commission could complete its rulemaking process. A second continuance for this purpose was requested and granted until October 26, 1992.

Almost immediately upon adoption of the emergency rules, the western irrigation interests sought and failed to obtain a temporary restraining order against the Commission. Additionally, the GBRA filed a motion in Travis County district court for a summary judgement determining the validity of the Commission's finding the Edwards Aquifer an underground stream and its authority to regulate use from the aquifer. Several more lawsuits against the Commission followed, including, but not limited to, those from the City of San Antonio, San Antonio businesses, industries and insurance companies, the Texas and Southwest Cattle Raisers Association, and the Texas Sheep and Goat Raisers Association. All lawsuits regarding the

validity of the Commission's actions are still pending at the time of this writing.

VII. The Next Step: Refocus on the Legislature.

The common conclusion by all the parties is that the current situation cannot continue. Most importantly, the litigation must stop, if for no other reason than the unproductive costs. Even if the Commission's action are invalidated and the federal lawsuit is dismissed, a serious problem remains. Current and foreseeable demands on the Edwards Aquifer will exceed its supply capability. If another severe drought occurs, endangered species will be destroyed.

After the Commission adopted its emergency rules, the San Antonio legislative delegation requested the Commission to delay putting into effect any permanent rules until the Legislature had been given an opportunity to act during the 1993 legislative session. The delegation did not want to see any unnecessary expense or confusion result should the Commission begin its permitting process only to have it undone by legislation or the courts. The Commission responded that it would proceed with the adoption of rules, but would delay the implementation of certain application requirements and permitting actions until the Legislature had a chance to address the issue. This cooperative agreement has renewed some hope that the Legislature will finally resolve the decades old dispute.

The Commission is in agreement with most parties that local management is best. Many are in agreement that a single regional district should be created and be given sufficient authority to develop and implement a comprehensive and coordinated regional water management plan which provides for the conjunctive management of the region's surface and ground water. Otherwise, legal rules that are out of touch with hydrologic reality will produce a nightmare for administrators and decisionmakers.

Legislation that attempts to finesse serious conflicts by delegating resolution to the discretion of the administrators only postpones the day of reckoning. An administrative agency must receive clear directions from the legislature and a regulatory approach works best in conjunction with incentive and assistance programs.

Arguably, the Commission is the only existing entity with the authority to develop and implement a comprehensive, coordinated regional water management plan. Some legislative initiatives have contemplated the elimination of Commission authority to regulate any subsurface water. Before doing this, however, the Legislature

should ensure that local districts with sufficient and mandatory powers and duties are created to resolve all pending issues. In the absence of a local district, the Legislature should provide greater protection to the individual right to withdraw groundwater by moving away from the free-for-all situation caused by the rule of capture and adopting a common law doctrine which gives the landowner the legal tools to protect his own property rights.

MJ:lgs

# Emergency Sections

An agency may adopt a new or amended section or repeal an existing section on an emergency basis if it determines that such action is necessary for the public health, safety, or welfare of this state. The section may become effective immediately upon filing with the *Texas Register*, or on a stated date less than 20 days after filing, for no more than 120 days. The emergency action is renewable once for no more than 60 days.

**Symbology in amended emergency sections.** New language added to an existing section is indicated by the use of **bold text**. [Brackets] indicate deletion of existing material within a section.

## TITLE 31. NATURAL RESOURCES AND CONSERVATION

### Part IX. Texas Water Commission

#### Chapter 298. Edwards Underground River

The Texas Water Commission (TWC) adopts on an emergency basis new Chapter 298, §§298.1-298.6, 298.11-298.13, and 298.41-298.43, concerning the finding that the Edwards Aquifer (Edwards Underground River) is an underground river and, thus, state water, and providing for the commission determination and administration of rights to the use of state water in the Edwards Underground River and the protection of the water quality of the Edwards Underground River and related surface streams pursuant to the Texas Water Code, Chapters 11 and 26, and other applicable law.

The physical characteristics and hydrogeology of the Balcones Fault Zone of the Edwards Aquifer making it an underground stream are unique in the State of Texas. No other aquifer in the state is known to have these characteristics. These rules apply only to the Edwards Aquifer located in Kinney, Uvalde, Medina, Atascosa, Bexar, and Comal Counties, and in Hays County south of the hydrogeologic division near Kyle.

The purpose of this emergency adoption is to provide interim authorization to current users of the state water diverted from the Edwards Underground River until permanent rules can be developed and adopted providing for commission determination and administration of rights to the use of this underground stream. These rules also provide that the commission may, by order, limit such interim authorization as necessary to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes. Finally, the rules provide for a moratorium on new diversions and use. The moratorium or restrictions on existing use, however, do not apply to exempt domestic and livestock uses.

Subchapter A: General Provisions, §§298.1-298.6, contains rules relating to: the finding of the Edwards Aquifer as an underground stream and, thus, state water; defining the boundaries of the underground river; and the definitions of terms used in the chapter.

Subchapter B: Interim Authorizations, §§298.11-298.13, contains rules providing

that those currently diverting water from the underground river are provided interim authorization by rule to continue beneficially using such water without waste and subject to certain limitations until the commission develops and adopts permanent rules for the determination and administration of the rights to divert and use state water from the Edwards Underground River. Such limitations include those necessary to protect the water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes.

Subchapter E: Regulation of Diversions-General, §§298.41-298.43, contains rules prohibiting the waste of water and providing that interim authorizations to divert and use water from the Edwards Underground River are subject to limitation, curtailment, and amendment for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes.

After a careful and thorough review and analysis of applicable law and available studies, reports, data, and other information, the commission finds that the Edwards Aquifer is an underground stream and, thus, state water subject to commission regulation pursuant to the Texas Water Code, Chapter 11.

Texas courts have followed the English common law doctrine of "absolute ownership" of percolating groundwater by the surface owner. This doctrine provides that the surface owner may withdraw such groundwater for use without limitation as long as it is for a beneficial purpose and is nonwasteful. Generally, a person withdrawing percolating groundwater bears no responsibility to neighboring owners for any harmful effects resulting from the withdrawal, i.e., no correlative rights exist among the groundwater users.

Under Texas law, all water below the surface of the land is presumed to be percolating groundwater, which is owned by the landowner, unless and until it is established that such water in an underground stream or is the underflow of a surface stream. Water flowing in definite underground streams, however, is governed by surface water law and is subject to prior appropriation.

Texas caselaw provides that an underground stream is state water if it has the same characteristics of a surface watercourse. Those characteristics include a stream which has a source of supply, defined boundaries, a directional flow or current, a destination, and is of sufficient volume to be serviceable to persons through and along whose land the stream flows (i.e., utility).

A large body of knowledge has been developed and accumulated over many years with regard to the hydrology, physical characteristics, and use of the Edwards Aquifer and its direct hydrologic connection to flow in surface streams in the Nueces, San Antonio, and Guadalupe River Basins. After lengthy study and examination of all available such studies, reports, and information, the commission finds that the Edwards Aquifer has all those characteristics of a watercourse.

The hydrogeologic characteristics of the Edwards Aquifer makes this water resource unique in the State of Texas. Through its "recharge zone," the Edwards Aquifer captures and diverts flows of major surface streams in the upper portions of the Nueces and San Antonio River Basins (the contributory watershed). Surface streams in the contributory watershed of the Edwards Aquifer provide approximately 80% of the "recharge" to the underground river. Thus, the Edwards Aquifer has a definite source of water.

The Edwards Aquifer also has a directional flow or current, defined boundaries, and a definite destination. Water "recharging" the underground river continues to flow downgradient, generally moving west to east to northeast, through the confined and known boundaries of the aquifer, eventually erupting at several springs, including the Leona Springs, the San Pedro Springs, the San Antonio Springs, the Comal Springs, and the San Marcos Springs. Water from these springs continues to flow in the Nueces, San Antonio, and Guadalupe River Basins (the catchment area), and contribute to freshwater inflows for bays and estuaries along the Gulf of Mexico.

The Edwards Aquifer also has great utility. It is of great economic importance both to the region that relies upon it and to the State of Texas. The Edwards Aquifer is the sole source of water supply for approximately 1.5 million citizens in the San Antonio region and supports a diverse regional economy that provides employment for approximately 700,000 to 800,000 Texans. Additionally, the Edwards Aquifer is important to the economies of the communities at and downstream of several springs fed by this underground river. These springs include the state's two largest natural springs at New Braunfels and San Marcos. These two springs sustain a significant tourist and recreational economy for these cities.

It is estimated that spring flow from Comal and San Marcos Springs alone provides 21 to 32% of the total annual flow of the Guadalupe River at Victoria. Between 70,000 and 80,000 jobs exist in those counties that are supplied

with water from the Guadalupe River below these springs. The economies of Hays and Comal Counties and the counties downstream of the springs are clearly dependent on the Edwards Aquifer. This underground river is truly the lifeline of 15 Texas counties.

Like a surface stream, the Edwards Aquifer also supports fish and other aquatic life, both within the aquifer in the subsurface and through year-round discharge to the major natural springs. Some of these aquatic species are federally listed as threatened or endangered species.

The use of the waters in the Edwards Underground River and related surface streams also has a direct impact on the water quality of these surface streams. The direct hydrologic connection between the Edwards Underground River and surface streams providing 'recharge' to the underground stream requires the careful management of diversions from, and wastewater discharges to, these surface streams in order to protect the water quality of the underground stream. Additionally, reduction in springflows caused by diversions from the Edwards Underground River and/or insufficient 'recharge' adversely affects the water quality, aquatic and wildlife habitat, and other instream uses of streams downstream of the underground stream as well as bays and estuaries. A decrease in the quantity of the water in a stream lessens its assimilative capacity for effluent discharges and other sources of pollution. If springflows fall below certain minimum levels, then the stream segments below the springs would be dominated by return flows from municipal and industrial discharges, along with an undetermined amount of contaminated runoff from adjacent urban and agricultural areas. The result would be pollutant overloading of these streams. The nonpoint source pollution, elevated nutrient concentrations, and increased ambient temperature would devastate the ecological character of the streams immediately below the springs as well as further downstream in the Guadalupe River Basin. Finally, overdrafting of the aquifer itself may allow the intrusion of highly mineralized water from underground water adjacent to the underground river otherwise held in check because of the hydrostatic pressure of the aquifer.

Despite the great economic and environmental significance of this underground river to the region and to the state, there exists no comprehensive management plan for the underground river. This inaction in the face of growing and unchecked demand on the Edwards Underground River has led to an emergency situation creating an imminent peril to the public health, safety, and welfare. The uncertainty over a person's right to use state water from the Edwards Underground River makes it difficult to provide for the immediate and long-term water supply needs of the region; discourages business investment and economic growth; and clouds title to property. Additionally, it is necessary that emergency action be taken to prevent speculative and unregulated drilling of wells, resulting in the harmful overdraft of the Edwards Aquifer which would cause adverse impacts to water quality, the public health, safety, and welfare, aquatic and wildlife habitat, other instream

uses, and bays and estuaries prior to the notice and adoption of permanent rules. Because the Edwards Underground River is state water, it is imperative to provide immediate authorization to current beneficial use to lawfully provide for the public's water supply needs until a final determination can be made with respect to the use of this underground stream.

Almost four decades of negotiations among the affected parties have failed to yield a resolution of the dispute regarding the proper management of the Edwards Aquifer. Proposed legislation seeking to address this issue has been repeatedly defeated. For the past three years, exhaustive and earnest efforts were made by the commission to bring about a local resolution of the dispute. The commission presented to the parties a fair and equitable settlement agreement based upon extensive discussions with the parties for their approval by April 14, 1992. The agreement was rejected.

The dispute is the subject of costly and protracted litigation in both the state and federal courts and the latter may result in the federal takeover of one of the state's most vital natural resources. The oppressive heat and decrease in rainfall which occurs during the summer months is almost here and the heavy irrigation season has begun. Levels in the underground stream dropped from record highs in 1987 to critically low levels in less than two years. If the region experiences another hot, dry summer like the summer of 1990, flows in the underground stream could drop to a level where springflows cease, thereby adversely affecting surface water quality and endangered species. Trial is set to begin in federal court on May 4, 1992, to determine whether the unregulated usage of the Edwards Underground River which will cause springflows to fall below minimum levels is a violation of the federal Endangered Species Act. Unless significant protection is provided for the maintenance of minimum springflows, it is likely that the federal government will implement its own regulatory scheme.

Soon after the adoption of these emergency sections, the commission will submit to the *Texas Register* for notice and public comment permanent rules finding the Edwards Aquifer to be state water and providing for commission determination and administration of water rights to this underground stream. These rules would also provide for the establishment of an advisory council and the development and implementation of a comprehensive, long-term, regional water management plan. A hearing will be held by the commission to receive public comment relating to the proposed sections, including the determination that the Edwards Aquifer is an underground stream and state water.

## Subchapter A. General Provisions

### • 31 TAC §§298.1-298.6

The new sections are adopted on an emergency basis under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt

rules necessary for the performance of its duties and responsibilities in accordance with the Texas Water Code and other state law. These rules are adopted on an emergency basis pursuant to the Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-12b, §5(d).

**§298.1. Purpose.** The purpose of this chapter is to provide interim authorization to current users of state water diverted from the Edwards Underground River until permanent rules can be developed and adopted providing for commission determination and administration of rights to divert and use water from the Edwards Underground River. Additionally, the purpose of these rules is to provide that the commission may limit such interim authorization as necessary to protect water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes. During the consideration of the adoption of permanent rules, the commission will hold a public hearing and receive public comment with regard to the proposed rules, including the commission's determination based upon available studies and information that the Edwards Aquifer is an underground stream and, thus, state water.

### §298.2. Edwards Aquifer is State Water.

(a) The Edwards Aquifer is an underground stream and water contained therein is state water subject to commission regulation in accordance with the Texas Water Code, Chapter 11 and all other applicable law and rules of the commission relating to the commission's authority over water rights, including the issuance of water rights, water rights adjudication, cancellation of water rights, and the enforcement of water rights.

(b) No known claims of riparian water rights, claims under the Texas Water Code, §11.143, claims of water rights under the Irrigation Acts of 1889 and 1895, or any other claims of water rights to the diversion and use of the Edwards Underground River were filed pursuant to the Water Rights Adjudication Act, the Texas Water Code, §§11.301 *et seq.* Consequently, no right to use state water from the Edwards Underground River has been adjudicated and, thus, water in the underground river is subject to appropriation by permit issued by the commission, except for exempt domestic and livestock purposes, in accordance with the Texas Water Code, §§11.121 *et seq.*

(c) Any authorization to divert and use state water is a right of use, and actual ownership of the water remains with the state, held in trust for the public's benefit. The commission may reserve from appropriation all or a portion of the water rights vested in the state and superior to any right

of use to satisfy the state's obligation to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose. Any dedication of springflows by such reservation for public purposes is not subject to diversion or appropriation by any holder of a water right granted by the state.

(d) The designation of the Edwards Aquifer as an underground stream is for the purposes provided in this section and shall not affect rules of the commission providing for the protection of the water quality of an aquifer designated as a sole or principal source aquifer as provided by 40 Code of Federal Regulations (CFR) Part 149, pursuant to the Safe Drinking Water Act, §1424(e), 42 United States Code 300h-3(e).

**§298.3. Applicability to Southern Portion of the Edwards Aquifer.** The rules contained in this chapter specifically apply to that portion of the Edwards Aquifer described by §298.5 of this title (relating to Effect of Invalidity of Rule) and located in Kinney County east of the hydrologic division near Brackettville which separates flow in the Nueces River Basin from flow to the Rio Grande Basin, and in Uvalde, Medina, Atascosa, Bexar, Guadalupe, and Comal Counties and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin. These rules are not intended to be applied to any other aquifer in the State of Texas.

**§298.4. Boundaries of the Edwards Underground River.**

(a) The lateral boundaries of the Edwards Underground River, as used in this chapter, are: on the north and northwest, the updip limit of the outcrop of the Edwards and Associated Limestones; on the south, the line known as the bad-water line which separates water containing less than 1,000 milligrams per liter of total dissolved solids from water containing more than this concentration of total dissolved solids; on the west, the hydrologic division near Brackettville in Kinney County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Rio Grande Basin; on the east, the hydrologic division northeast of Kyle in Hays County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Colorado River Basin.

(b) The lateral boundaries of the Edwards Underground River are those boundaries of "Subdivision No. One of the Underground Water Reservoir in the Edwards Limestone Balcones Escarpment Area" defined by the Board of Water Engi-

neers of the State of Texas, a predecessor of the Texas Water Commission, by Order dated January 10, 1957, as modified by the Texas Water Commission by Order dated April 18, 1988, and incorporated in this rule by reference. These orders are available for inspection at the office of the chief clerk of the commission in Austin, during the commission's regular business hours.

**§298.5. Effect of Invalidity of Rule.** If any provision of any rule or its application to any person or circumstances is held invalid, the invalidity does not affect other provisions or applications of the rule which can be given effect without the invalid provision or application, and to this end the provisions of the rule are severable.

**§298.6. Definitions.** The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise. Except as otherwise provided in this section, the definitions provided by §297.1 of this title (relating to Definitions) apply to this chapter.

**Authorized well**—A well which diverts water from the Edwards Underground River for which interim authorization was granted pursuant to this chapter, or that is exempt for domestic and livestock purposes.

**Beneficial use**—The use of only that amount of water which is reasonable and necessary for a purpose authorized by law, when reasonable intelligence and reasonable diligence are used in applying the water to that purpose. Water which is wasted, lost, or inefficiently used because of, but not limited to, inefficient diversion works or distribution systems, excessive applications or per capita use, excessive or unnecessary evaporation, transpiration or seepage, the discharge or escape of water from a well into a surface stream or reservoir for no authorized beneficial purpose, or by pollution is not beneficially used.

**Commission**—The Texas Water Commission and any successor agency.

**Conservation**—

(A) The development of other water resources that reduce the demand for water from the Edwards Aquifer;

(B) Those best management practices, techniques, and technologies that will reduce the consumption of water, eliminate the loss or waste of water, maximize the efficiency in the use of water, prevent the pollution of water, and maximize the recycling and reuse of water so that the demand for water from the Edwards Aquifer is reduced;

(C) Those measures that seek to make a water supply available for future or alternative uses to the greatest extent practicable for the benefit of the environment and the public health, safety, and welfare; and

(D) any other measure that would sustain or enhance the water supply to provide for future long-term needs.

**Diversion of water**—Any act or failure to act that results in the taking of water from the Edwards Aquifer by or through manmade facilities including the pumping of wells or allowing waters to flow from artesian or other type wells.

**Domestic use**—Use of water by an individual or a household for drinking, washing, or culinary purposes; for irrigation of lawns, or of a family garden and/or orchard when the produce is not sold; for watering of domestic animals; and for water recreation for which no consideration is given or received. If the water is diverted, it must be diverted solely through the efforts of the user.

**Edwards Aquifer or aquifer**—That portion of an arcuate belt of porous, waterbearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Atascosa, Bexar, and Comal Counties, and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, and Edwards Formation, the Georgetown Formation, and the Walnut Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation and underlie the less-permeable Del Rio Clay regionally.

**Edwards underground river or underground river**—The Edwards Aquifer as defined by this section and the boundaries of which are provided by §298.5 of this title (relating to Effect of Invalidity of Rule).

**Existing user**—A person that has diverted and beneficially used water from the Edwards Underground River on or before April 15, 1992.

**Instream uses**—The use of water for the protection of water quality, the maintenance of aquatic and wildlife habitat, navigation, recreation, and bays and estuaries.

**Livestock use**—The use of water for the open-range watering of livestock connected with farming, ranching, or dairy enterprises.

**New well**—A well, the drilling of which, was commenced on or after April 15, 1992.

**Overdrafting**—The average long-term depletion of the aquifer in excess of the average long-term recharge of the aquifer necessary to sustain appropriate rights and environmental needs. Overdrafting also occurs when overall aquifer withdrawal is in balance with recharge but locally excessive withdrawals are causing adverse impacts, including, but not limited to, degradation of water quality.

**Pollution**—The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to public health, safety, or welfare, or impairs the usefulness of the public enjoyment of the waters for any lawful or reasonable purpose.

**Producing well**—A well capable of producing water from the Edwards Aquifer without modification or the placement of additional equipment and which has produced water for a beneficial purpose prior to April 15, 1992.

**Replacement well**—A well that is drilled to replace an existing well and where the existing well that is being replaced is permanently closed.

**Reuse**—The use for one or more purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

**Waste**—The diversion of water from the Edwards Aquifer if the water diverted is not used for a beneficial purpose; the unreasonable loss of water through faulty design or negligent operation of a well or a water delivery or application system; the use of quantities of water in an amount in excess of the amount reasonably necessary to beneficially use the water for an authorized purpose; or the diversion of water from the aquifer at a rate, in an amount, or in any manner that causes or threatens to cause pollution of the aquifer by the intrusion of water or contaminants detrimental to any beneficial purpose, or adversely impacts surface water quality.

**Well**—A bored, drilled, or driven shaft, or an artificial opening in the ground made by digging, jetting, or some other method, where the depth of the well is greater than its largest surface dimension, but not including any surface pit, surface excavation, or natural depression.

Issued in Austin, Texas, on April 15, 1992.

TRD-9205308 Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

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For further information, please call: (512) 463-8069

## Subchapter B. Interim Authorization

### • 31 TAC §§298.11-298.13

The new sections are adopted on an emergency basis under the Texas Water Code, §§5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary for the performance of its duties and responsibilities in accordance with the Texas Water Code and other state law. These rules are adopted on an emergency basis pursuant to the Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-12b, §5(d).

#### §298.11. *Exemption for Domestic and Livestock Use.*

(a) Without limitation or prohibition as provided by §§298.12, 298.13, 298.42, and 298.43 of this title (relating to Interim Authorizations Pending Disposition of Permit Applications; Moratorium on New Authorizations; Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes; and Emergencies), a person may construct on that person's own property a well for the diversion of water from the Edwards Underground River and beneficially use such water without waste for domestic and livestock purposes only.

(b) A person may use water for domestic and livestock purposes pursuant to this section only on property owned by that person and may not transport the water off that person's property.

(c) The exemption provided by this section does not apply where the flows of one well are combined with flows from any other well prior to the use of the water.

#### §298.12. *Interim Authorization Pending Disposition of Permit Applications.*

(a) A person owning a producing well which diverts water from the Edwards Underground River, other than a domestic and livestock well that is exempt under §298.11 of this title (relating to Exemption for Domestic and Livestock Use), may continue to divert water from the underground river by using that well in accordance with the terms of this section.

(b) All interim authorizations granted by this section, and all diversions made pursuant to these authorizations, are subject to limitation, curtailment, and amendment to prevent waste, achieve water conservation, and to maintain and protect adequate springflows from the Comal and San Marcos Springs for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries as set

forth in Subchapter E of this chapter (relating to Regulation of Diversions-General).

#### §298.13. *Moratorium on New Authorizations.*

(a) A person may not drill a new well or divert water from the Edwards Underground River by using a well not a producing well except as authorized by the commission.

(b) Subsection (a) of this section shall not apply to a replacement well if:

(1) the amount, rate, volume, purpose of use, and any other requirement applicable to the well replaced is met by the operation of the replacement well; and

(2) the executive director is notified by the owner of the wells at least 48 hours prior to the commencement of the drilling of the replacement well.

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## Subchapter E. Regulation of Diversions-General

### • 31 TAC §§298.41-298.43

The new sections are adopted on an emergency basis under the Texas Water Code, §§5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary for the performance of its duties and responsibilities in accordance with the Texas Water Code and other state law. These rules are adopted on an emergency basis pursuant to the Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-12b, §5(d).

#### §298.41. *Waste Prohibited.*

(a) The waste of water is prohibited.

(b) No person may divert, supply, use, or reuse any water from the Edwards Aquifer, or supply, use, or reuse any water from other sources that reduces the demand for water from the Edwards Underground River, in excess of the amount of water needed for beneficial use for the intended purpose or purposes of use.

§298.42. *Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes.*

(a) All authorized diversions of water from the Edwards Underground River are subject to limitation, curtailment, and amendment as may be ordered by the commission from time to time in order to protect the water quality of the Edwards Underground River, the health, safety, and welfare of the people who divert and/or use water from the Edwards Underground River, and to water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose, and to maintain compliance with applicable law.

(b) Each person diverting water from the Edwards Underground River shall limit and curtail such diversions as may be ordered by the commission from time to time to effectuate the purposes of this chapter.

*§298.43. Emergencies.*

(a) The commission may declare an emergency when the level of the Edwards Aquifer drops to a level where adverse impacts are occurring or may soon occur to water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, or bays and estuaries.

(b) Upon the declaration of an emergency, the commission may by order impose additional requirements and restrictions upon the diversion, supply, use, or reuse of water from the Edwards Underground River to the extent that it determines such requirements and restrictions are justified, taking into consideration all relevant issues including, without limitation, public health and safety and the economic well-being of the region and the state.

(c) In making any determination under subsections (a) and (b) of this section,

the commission shall, to the extent practicable, seek public comment from all affected persons.

(d) The executive director shall notify the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service immediately upon the declaration of an emergency pursuant to this section and shall inform these agencies of any commission actions in response to the emergency.

Issued in Austin, Texas, on April 15, 1992.

TRD-9205310

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Effective date: April 15, 1992

Expiration date: August 13, 1992

For further information, please call: (512) 463-8069

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## Control of Hydrogen Sulfide

### • 31 TAC §112.31

The Texas Air Control Board (TACB) proposes an amendment to §112.31, concerning allowable emissions-residential, business, or, commercial property. The amendment lowers the existing allowable downwind concentration of hydrogen sulfide to a level consistent with the odor threshold of hydrogen sulfide.

Lane Hartsock, deputy director of air quality planning, has determined that for the first five-year period the section is in effect, the fiscal implications for state and local units of government as a result of enforcing the section would be minor expenses of record review and enforcement.

Mr. Hartsock also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be reduced emissions and odor nuisances. There are no anticipated costs to small businesses or persons as a result of administering the section as proposed.

A public hearing on this proposal will be held at 6 p.m. on May 21, 1992, in the City of Houston Pollution Control Building Auditorium located at 7411 Park Place Boulevard, Houston. A second hearing will be held at 11 a.m. on May 22, 1992, at the John Gray Institute, 855 Florida Avenue, Beaumont.

The hearings are structured for the receipt of oral and written comments by interested persons. Interrogation or cross-examination is not permitted, however, the TACB staff will discuss the proposal at 5:30 p.m., before the Houston hearing, and at 10:30 a.m., before the Beaumont hearing, and will be available to answer questions. Written comments not presented at the hearings may be submitted to the TACB central office in Austin through May 25, 1992. Material received by the Regulation Development Division by 4 p.m. on that date will be considered by the board prior to any final action on the proposed section. Copies of the proposal are available at the central office of the TACB, Air Quality Planning Annex, located at 12118 North IH35, Austin, Texas 78753, and at all TACB regional offices. For further information, contact Mr. Robert B. Cameron at (512) 908-1495.

The amendment is proposed under the Texas Clean Air Act (TCAA), §382.017, Texas Health and Safety Code (Vernon 1990), which provides the TACB with the authority to adopt rules consistent with the policy and purposes of the TCAA.

**§112.31. Allowable Emissions-Residential, Business, or Commercial Property.** No person may cause, suffer, allow, or permit emissions of hydrogen sulfide from a source or sources operated on a property or multiple sources operated on contiguous properties to exceed a net ground level concentration of 0.01 [0.08] parts per mil-

lion averaged over any 30-minute period if the downwind concentration of hydrogen sulfide affects a property used for residential, business, or commercial purposes.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 17, 1992.

TRD-9205475

Lane Hartsock  
Deputy Director, Air Quality  
Planning  
Texas Air Control Board

Proposed date of adoption: July 17, 1992

For further information, please call: (512) 908-1451

## Part IX. Texas Water Commission

### Chapter 298. Edwards Underground River

The Texas Water Commission (TWC) proposes new Chapter 298, §§298.1-298.7, 298.11-298.20, 298.21-298.23, 298.31, 298.32, 298.41, 298.42, 298.51, 298.61, and 298.71, concerning the commission determination and administration of rights to the use of state water in the Edwards Underground River (Edwards Aquifer) and the protection of the water quality of the Edwards Underground River and related surface streams pursuant to the Texas Water Code, Chapters 11 and 26, and other applicable law.

Subchapter A: General Provisions, §§298.1-298.7, contains rules relating to: the finding of the Edwards Aquifer as an underground stream and, thus, state water; defining the boundaries of the underground river; the applicability of existing commission rules to the underground river; and the definitions of terms used in the chapter.

Subchapter B: Permits and Other Authorizations, §§298.11-298.20, contains rules providing that, except for certain exempt domestic and livestock uses, all users of the Edwards Underground River must obtain commission authorization for the diversion and use of water. Those currently diverting water from the underground river and who can demonstrate a historical record of actual beneficial use prior to April 15, 1992, the effective date of related emergency rules, are provided interim authorization by rule to continue beneficially using such water without waste and subject to certain limitations until a final determination is made on their permit applications. Such limitations include those necessary to protect the water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes. Interim authorization will be granted only to those persons who submit an application, declaration of historical use, and water conservation and reuse plan on or be-

fore September 1, 1992. A moratorium will be imposed on the commission review and action on applications by persons not qualifying for interim authorization until final action is taken on those applications submitted on or before September 1, 1992, and accompanied by a declaration of historical use and a water conservation and reuse plan. The moratorium is necessary until historical claims can be evaluated and a determination is made on the availability of unappropriated water for new uses.

Subchapter C: Conveyances, §§298.21-298.23, contains rules providing for the approval and notification of contractual sales of water and the transfer and sale of water rights to the Edwards Underground River. The proposed subchapter also contains a rule relating to the application by a city or town to acquire an appropriation from a water right holder without compensation pursuant to the Wagstaff Act, the Texas Water Code, §11.028.

Subchapter D: Water Use Measurement and Reporting, §298.31 and §298.32, contains rules requiring that all wells, except those used for exempt domestic and livestock purposes, must be equipped with a measuring device or, subject to approval by the executive director, some other equally accurate means of measuring the amount of water diverted must be provided. The proposed subchapter also contains a rule requiring annual use reports to be submitted to the commission.

Subchapter E: Regulation of Diversions-General, §298.41 and §298.42, contains rules prohibiting the waste of water and providing that all authorizations to divert and use water from the Edwards Underground River are subject to limitation, curtailment, and amendment for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries.

Subchapter F: Regulation of Diversions-Emergency, §298.51, contains rules providing that any authorization to divert and use water from the Edwards Underground River may be subject to limitation by order of the commission upon declaration of an emergency in order to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries, and other public purposes as well as maintain compliance with applicable law.

Subchapter G: Local Government, §298.61, provides for the involvement of affected local governmental entities in the presentation of comments and recommendations to the commission regarding the regulation of the Edwards Underground River. The proposed subchapter also provides for the possible creation of a separate water division for the Edwards Underground River and the appointment of a local regulatory entity with sufficient jurisdiction and authority to act as the watermaster for the Edwards Underground River, unless prohibited by law.

Subchapter H: Permanent Resources Plan, §298.71, creates the South-Central Texas Water Resources Advisory Council for the purpose of developing a long-range regional water management plan for review and action by the commission.

Norma Nance, director of budget, planning and evaluation, has determined that for the first five-year period the sections are in effect there will be fiscal implications as a result of enforcing or administering the sections. The effect on state government will be an increase in revenue of approximately \$350,000 in fiscal year 1992 and \$15,000 in each of the fiscal years 1993-1996. Cost to state government will increase by \$150,000 in fiscal years 1992 and 1993 and \$50,000 in fiscal years 1994-1996. The effects on local governments making application for water rights will be equal to the effects on any other applicant. The effect on applicants will be represented by the costs of making application, paying application fees, development of water conservation plans, and installation of required metering devices. Costs per applicant are anticipated to vary between \$200 and \$30,000 depending on the number of wells to be permitted, the scope of conservation plans, and whether measuring devices are currently in place. Generally, any costs attributable to the regulation of the appropriation or diversion of state waters under the Water Code, Chapter 11 would be applicable to permittees subject to these sections and to the same extent as all other permittees statewide. The costs to small businesses making application would be the same as other businesses and would vary according to the same factors.

Nance also has determined that for each year of the first five years the sections are in effect the public benefit anticipated as a result of enforcing the sections will be improvement in: the protection of the quality and quantity of the water resources of the state, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and freshwater inflows to bays and estuaries. Most diversions for livestock or domestic uses are exempt from the permit requirements under these sections. There is no anticipated economic cost to persons required to comply with these sections, except for those subject to the requirement to make application for the use of state water.

Comments on the proposal may be submitted to Mark Jordan, Assistant Director, Legal Division, Texas Water Commission, P.O. Box 13087, Austin, Texas 78711-3087, (512) 463-8069, for 45 days following the date of publication. Additionally, a public hearing will be held on the 26th day of May 1992, to receive public comment on the proposed sections. The commission will notify all interested persons of the time and location of this hearing by publication in the *Texas Register* prior to May 25, 1992. Public comment may be submitted in either oral or written form and may contain studies, reports, computer models, data, and other information relating to the proposed rules, including the determination of the Edwards Aquifer as an underground stream and, thus, state water.

## Subchapter A. General Provisions

### • 31 TAC §§298.1-298.7

The new sections are proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

**§298.1. Purpose.** The purpose of this chapter is to provide for the determination and administration by the commission of the rights to divert and use state water from the Edwards Underground River (Edwards Aquifer) and for the protection of the water quality, of the Edwards Underground River and related surface streams, and the protection of the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries in accordance with the Texas Water Code, Chapters 11 and 26 and other applicable state law and rules of the commission.

#### **§298.2. Edwards Aquifer is State Water.**

(a) The Edwards Aquifer (Edwards Underground River) is an underground stream and water contained therein is state water subject to commission regulation in accordance with the Texas Water Code, Chapter 11 and all other applicable law and rules of the commission relating to the commission's authority over water rights, including the issuance of water rights, water rights adjudication, cancellation of water rights, and the enforcement of water rights.

(b) No known claims of riparian water rights, claims under the Texas Water Code, §11.143, claims of water rights under the Irrigation Acts of 1889 and 1895, or any other claims of water rights to the diversion and use of the Edwards Underground River were filed pursuant to the Water Rights Adjudication Act, the Texas Water Code, §11.301 et seq. Consequently, no right to use state water from the Edwards Underground River has been adjudicated and, thus, water in the underground river is subject to appropriation by permit issued by the commission, except for exempt domestic and livestock purposes, in accordance with the Texas Water Code, §11.121 et seq.

(c) Any authorization to divert and use state water is a right of use, and actual ownership of the water remains with the state, held in trust for the public's benefit. The commission may reserve from appropriation all or a portion of the water rights vested in the state and superior to any right of use to satisfy the state's obligation to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose. Any dedica-

tion of springflows by such reservation for public purposes is not subject to diversion or appropriation by any holder of a water right granted by the state.

(d) The designation of the Edwards Aquifer as an underground stream is for the purposes provided in this section and shall not affect rules of the commission providing for the protection of the water quality of an aquifer designated as a sole or principal source aquifer as provided by 40 Code of Federal Regulation (CFR), Part 149, pursuant to the Safe Drinking Water Act, §1424(e), 42 United States Code 300h-3(e).

**§298.3. Applicability of Commission Rules.** Except as specifically provided otherwise by this chapter, all commission rules relating to the application for, and granting and enforcement of, permits for the diversion and use of state water including, but not limited to, Chapters 281, 295, 297, and 337 of this title (relating to Applications processing; Water Rights, Procedural; Water Rights, Substantive; and Enforcement), shall apply to the diversion and use of water from the Edwards Underground River. A provision contained in this chapter supersedes a rule outside this chapter to the extent of any conflict. A conflict exists only if the substance of the rule in this chapter and any related provision is irreconcilable with the substance of a rule outside this chapter.

**§298.4. Applicability of Rules to Southern Portion of the Edwards Aquifer.** The rules contained in this chapter specifically apply to that portion of the Edwards Aquifer described by §298.5 of this title (relating to Boundaries of the Edwards Underground River) and located in Kinney County east of the hydrologic division near Brackettville which separates flow in the Nueces River Basin from flow to the Rio Grande Basin, and in Uvalde, Medina, Atascosa, Bexar, Guadalupe, and Comal Counties and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin. These rules are not intended to be applied to any other aquifer in the State of Texas.

#### **§298.5. Boundaries of the Edwards Underground River.**

(a) The lateral boundaries of the Edwards Underground River, as used in this chapter, are: on the north and northwest, the updip limit of the outcrop of the Edwards and Associated Limestones; on the south, the line known as the bad-water line which separates water containing less than 1,000 milligrams per liter of total dissolved solids from water containing more than this concentration of total dissolved solids; on the

west, the hydrologic division near Brackettville in Kinney County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Rio Grande Basin; on the east, the hydrologic division northeast of Kyle in Hays County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Colorado River Basin. The Edwards Underground River is underlain by the Upper Member of the Glen Rose formation and confined by the overlying Del Rio Clay.

(b) The lateral boundaries of the Edwards Underground River are those boundaries of "Subdivision No. One of the Underground Water Reservoir in the Edwards Limestone Balcones Escarpment Area" defined by the Board of Water Engineers of the State of Texas, a predecessor of the Texas Water Commission, by order dated January 10, 1957, as modified by the Texas Water Commission by order dated April 18, 1988, and incorporated in this rule by reference. These orders are available for inspection at the office of the chief clerk of the commission in Austin, during the commission's regular business hours.

**§298.6. Effect of Invalidity of Rule.** If any provision of any rule or its application to any person or circumstances is held invalid, the invalidity does not affect other provisions or applications of the rule which can be given effect without the invalid provision or application, and to this end the provisions of the rule are severable.

**§298.7. Definitions.** The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise. The definitions contained in §297.1 of this title (relating to Water Rights, Substantive) apply to this chapter unless otherwise provided in this section.

**Authorized well**—A well which diverts water from the Edwards Underground River for which a permit has been issued by the commission, or temporary authorization granted pursuant to this chapter, or that is exempt for domestic and livestock purposes. All applicable rules must have been met, and such well must have been in compliance with all existing law relating to well construction, spacing, and other applicable law on or before April 15, 1992.

**Beneficial use**—The use of only that amount of water which is reasonable and necessary for a purpose authorized by law, when reasonable intelligence and reasonable diligence are used in applying the water to that purpose. Water which is wasted, lost, or inefficiently used because of, but not limited to, inefficient diversion works or distribution systems, excessive applications or per capita use, excessive or unnecessary

evaporation, transpiration or seepage, the discharge or escape of water from a well into a surface stream or reservoir for no authorized beneficial purpose, or by pollution is not beneficially used.

**Commission**—The Texas Water Commission and any successor agency.  
**Conservation**—

(A) The development of other water resources that reduce the demand for water from the Edwards Underground River;

(B) Those best management practices, techniques, and technologies that will reduce the consumption of water, eliminate the loss or waste of water, maximize the efficiency in the use of water, prevent the pollution of water, and maximize the recycling and reuse of water so that the demand for water from the Edwards Underground River is reduced;

(C) Those measures that seek to make a water supply available for future or alternative uses to the greatest extent practicable for the benefit of the environment and the public health, safety, and welfare; and

(D) any other measure that would sustain or enhance the water supply to provide for future long-term needs.

**Diversion of water**—Any act or failure to act that results in the taking of water from the Edwards Underground River by or through manmade facilities including the pumping of wells or allowing waters to flow from artesian or other type wells.

**Domestic use**—Use of water by an individual or a household for drinking, washing, or culinary purposes; for irrigation of lawns or of a family garden and/or orchard when the produce is not sold; for watering of domestic animals; and for water recreation for which no consideration is given or received. If the water is diverted, it must be diverted solely through the efforts of the user.

**Edwards Aquifer or aquifer**—That portion of an arcuate belt of porous, waterbearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Atascosa, Bexar, and Comal Counties, and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, and Edwards Formation, the Georgetown Formation, and the Walnut Formation. The per-

meable aquifer units generally overlie the less-permeable Glen Rose Formation and underlie the less-permeable Del Rio Clay regionally.

**Edwards Underground River or underground river**—The Edwards Aquifer as defined by this section and the boundaries of which are provided by §298.5 of this title (relating to Boundaries of the Edwards Underground River).

**Existing user**—A person that has diverted and beneficially used water from the Edwards Underground River on or before April 15, 1992.

**Instream uses**—The use of water for the protection of water quality, the maintenance of aquatic and wildlife habitat, navigation, recreation, and bays and estuaries.

**Irrigation system efficiency**—The percentage of that amount of irrigation water used which is beneficially used by the crops in production relative to the amount of water diverted from the source of supply.

**Livestock use**—The use of water for the open-range watering of livestock connected with farming, ranching, or dairy enterprises.

**New well**—A producing well, the drilling of which, was completed after April 15, 1992.

**Per capita use**—The sum total of residential, commercial, and public and institutional uses diverted into a water supply system divided by population served.

**Pollution**—The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to public health, safety, or welfare, or impairs the usefulness of the public enjoyment of the waters for any lawful or reasonable purpose.

**Producing well**—A well capable of producing water from the Edwards Underground River without modification or the placement of additional equipment and which has lawfully produced water for a beneficial purpose prior to April 15, 1992.

**Replacement well**—A well that is drilled to replace an existing well and where the existing well that is being replaced is permanently plugged and closed.

**Reuse**—The use for one or more purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

**Waste**—The diversion of water from the Edwards Underground River if the water diverted is not used for a beneficial purpose; the unreasonable loss of water through faulty design or negligent operation of a well or a water delivery or application system; the use of quantities of water in an amount in excess of the amount reasonably necessary to beneficially use the water for

an authorized purpose; or the diversion of water from the Edwards Underground River at a rate, in an amount, or in any manner that causes or threatens to cause pollution of the Edwards Underground River by the intrusion of water or contaminants detrimental to any beneficial purpose, or adversely impacts surface water quality.

Well—A bored, drilled, or driven shaft, or an artificial opening in the ground made by digging, jetting, or some other method, where the depth of the well is greater than its largest surface dimension, but not including any surface pit, surface excavation, or natural depression.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205421

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-8069

## Subchapter B. Permits and Other Authorizations

### • 31 TAC §§298.11-298.20

The new sections are proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### §298.11. Permit Required.

(a) Except as provided by §298.12 and §298.13 of this title (relating to Permit Exemption for Domestic and Livestock Use and Interim Authorizations Pending Disposition of Permit Applications), no person may divert any water from the Edwards Underground River, or begin construction of any well or other work designed for the diversion of water from the Edwards Underground River, without first obtaining a permit from the commission to make the diversion.

(b) Except as provided otherwise in subsection (c) of this section, the priority date of any permit issued by the commission pursuant to this section shall be the date the application is accepted for filing by the commission.

(c) Each application by an existing user received by the commission on or before September 1, 1992, shall be deemed to be accepted for filing on September 1, 1992, for purposes of time priority if, by that date, the application, maps, and other

submitted materials are in substantial compliance with the requirements of the statutes and rules applicable to applications for permits under the Texas Water Code, §11.121 and the requirements set forth in this chapter.

(d) Permits issued pursuant to this section may be for a term of years, or for a particular time or season of the year.

(e) Permits issued pursuant to this section may contain such other conditions or limitations as the commission deems necessary or appropriate to accomplish the purposes of this chapter.

(f) All authorizations granted by permits issued pursuant to this section, and all diversions made pursuant to these authorizations, are subject to limitation, curtailment, and amendment to achieve water conservation, prevent waste, and to maintain and protect adequate springflows from the Comal and San Marcos Springs for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries as set forth in §§298.41, 298.42, and 298.51 of this title (relating to Waste Prohibited; Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream uses, Bays and Estuaries, and Other Public Purposes; and Emergencies).

#### §298.12. Permit Exemption for Domestic and Livestock Use.

(a) Without obtaining a permit under §298.11 of this title (relating to Permit Required), a person may construct on that person's own property a well for the diversion of water from the Edwards Underground River and beneficially use such water without waste for domestic and livestock purposes only.

(b) A person may use water for domestic and livestock purposes pursuant to this section only on property owned by that person and may not transport the water off that person's property.

(c) The exemption provided by this section does not apply where the flows of one well are combined with flows from any other well prior to the use of the water.

#### §298.13. Interim Authorizations Pending Disposition of Permit Applications.

(a) A person owning a producing well which diverts water from the Edwards Underground River, other than a domestic and livestock well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use), may continue to divert water from the underground river by using that well in ac-

cordance with the terms of this section if, but only if, the well was in compliance with all rules and statutes relating to well construction, approval, location, spacing, and any other applicable law on or before April 15, 1992, and the person files the following with the commission on or before September 1, 1992:

(1) an application for a permit under §298.11 of this title (relating to Permit Required) to divert water from the Edwards Underground River by using that well, and such application and accompanying maps and other materials are in substantial compliance with the requirements of the statutes and rules applicable to applications for permits under the Texas Water Code, §11.121 and the requirements set forth in this chapter;

(2) a declaration of historical, actual beneficial use pursuant to §298.14 of this title (relating to Declarations of Historical Use) for a nonexempt well owned by that person; and

(3) a water conservation and reuse plan as provided by §298.15 of this title (relating to Water Conservation and Reuse Plan).

(b) Each person qualifying under subsection (a) of this section for interim authorization to divert and use water from the Edwards Underground River may continue to divert and beneficially use water without waste by using a nonexempt well owned by that person. Such use may not exceed on an annual basis the historic, maximum, annual, actual beneficial use of water from the well without waste as evidenced by the person's declaration of historical use, unless such amount is determined otherwise by the commission pursuant to subsection (c) of this section.

(c) On its own motion, on motion of the executive director, or on the motion of any affected person, the commission shall determine the following:

(1) the extent to which, and the purposes of use for which, water was actually diverted from the Edwards Underground River by using the well and applied to beneficial use without waste prior to the date these rules were adopted; and

(2) the extent to which, and the purposes of use for which, water is then being diverted from the Edwards Underground River by using the well and applied to beneficial use without waste.

(d) In making determinations pursuant to subsection (c) of this section, the commission shall utilize all available information including, but not limited to, the water conservation and reuse plans and declarations of historical use filed pursuant to §298.15 and §298.14, respectively, of this title.

(e) It shall be the burden of the declarant of historical use to demonstrate by substantial and convincing evidence that person's historical beneficial use without waste.

(f) In its review and action upon an application submitted on or before September 1, 1992, pursuant to §298.11 of this title, the commission shall not recognize more than that amount which the commission has determined to have been beneficially used without waste in accordance with this section.

(g) All interim authorizations granted by this section, and all diversions made pursuant to these authorizations, are subject to limitation, curtailment, and amendment to prevent waste, achieve water conservation, and to maintain and protect adequate springflows from the Comal and San Marcos Springs for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries as set forth in §§298.41, 298.42, and 298.51 of this title (relating to Waste Prohibited; Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes; and Emergencies).

(h) The authorizations granted by this section shall terminate with respect to diversions from a well upon entry of a final and appealable order by the commission acting on the application or applications under §298.11 of this title for permits for those wells.

#### §298.14. *Declarations of Historical Use.*

(a) Each person owning a producing well diverting water from the Edwards Underground River shall, on or before September 1, 1992, file with the commission a sworn declaration of historical actual use for the well, other than a domestic and livestock well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use), covering the period beginning January 1, 1982, and ending on or before April 15, 1992.

(b) Each declaration of historical use shall include the following information, to the extent the information is available or capable of being calculated or estimated:

(1) the name and mailing address of each person holding an ownership interest in the well;

(2) the name and mailing address of any other person holding any other interest in the well or the real property on which the well is located;

(3) the location of the well described in latitude and longitude and dis-

tance and direction from the nearest survey corner, the date of commencement of construction of the well, and the date of first withdrawal and beneficial use of water from the well;

(4) the maximum volume of water diverted by the well during a calendar year since January 1, 1982;

(5) the purpose or purposes of use to which the water was applied;

(6) the maximum volume of such water that was beneficially used for each purpose of use during a calendar year since January 1, 1982;

(7) the place of use of the water;

(8) if the claim is for irrigation:

(A) the legal description and a map of the land irrigated with water produced from the well and the year in which the land was first irrigated;

(B) the type of crops grown on the land and the cropping patterns used; and

(C) the irrigation methods and devices actually used in the irrigation of the land;

(9) evidence of the ownership and other interests in the well, and in the real property on which the well is located, of all persons listed in response to subsection (b)(1) and (2) of this section;

(10) the location of all other wells in which any person listed in response to subsection (b)(1) or (2) of this section has an interest, and a reference to the declaration of historical use filed for that well;

(11) one or more sworn statements reciting that all of the information contained in the declaration of historical use is based on the personal knowledge of the person or persons making the sworn statements and is true and correct; and

(12) other pertinent information the executive director may require.

(c) All declarations of historical use filed with the commission shall be available in the offices of the commission for public inspection during regular office hours.

§298.15. *Water Conservation and Reuse Plan.* A water conservation and reuse plan shall be submitted with any permit application or for any other authorization to divert and use water from the Edwards Underground River and shall conform to the following applicable requirements:

(1) Municipal use. A water conservation plan for municipal use shall provide the following:

(A) a utility evaluation which must, at a minimum, discuss:

(i) the current population of the service area and the source and basis for such data;

(ii) the size of the service area;

(iii) total number of water connections;

(iv) net yearly rate of new connections over the most previous five-year period;

(v) average monthly water use data during the previous five years for all categories of users (e.g., residential, commercial, industrial);

(vi) overall average daily water use, including peak daily water use, peak to average use ratio, and unaccounted water percentage;

(vii) percentages of potable water customers who: are served by wastewater systems owned or controlled by the applicant; have septic tanks or other private sewerage systems; and are served by a wastewater system not owned or controlled by the applicant;

(viii) average daily amount of wastewater treated, peak daily wastewater flows, and amount of return flows;

(ix) peak daily design capacity for water and wastewater systems;

(x) previous five-year average annual revenues from water sales and list of major water customers; and

(xi) previous five-year average annual cost of water operations;

(B) a population and water use projection analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's water conservation goals;

(C) specification of conservation goals including, but not limited to, per capita water use goals, the basis for the development of such goals, and a time frame for achieving the specified goals;

(D) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses, for meter repair, and for periodic meter replacement;

(F) conservation-oriented water rates and water rate structures;

(G) a program of leak detection, repair, and water loss accounting for the transmission, delivery, and distribution system;

(H) a program of continuing public education and information regarding water conservation;

(I) adoption of ordinances, plumbing codes, and/or rules requiring water conserving fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(J) a program for retrofitting existing structures with water conserving fixtures;

(K) reuse of wastewater and/or greywater;

(L) a program and ordinances regarding xeric practices and vegetation;

(M) a description of the method for monitoring the effectiveness and efficiency of the water conservation plan;

(N) a description and copy of the authority and means by which the applicant will implement and enforce the water conservation plan; and

(O) any other water conservation practice, method, or technique which the applicant shows to be appropriate for achieving the stated goal or goals of the applicant's water conservation plan.

(2) Industrial or mining use. A water conservation plan for industrial or mining use must provide the following:

(A) an analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's water conservation practices;

(B) the maximum potential for recycling/reuse of water not consumed in the industrial or mining process;

(C) specification of conservation goals, the basis for the development of such goals, and a time frame for achieving the specified goals;

(D) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(E) leak detection, repair, and water loss accounting for the transmission, delivery, and distribution system;

(F) adoption of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

(G) any other water conservation practice, method, or technique which the applicant shows to be appropriate for achieving the stated goal or goals of the applicant's water conservation plan.

(3) Irrigation use. A water conservation plan for irrigation purposes must provide the following:

(A) a description of the agricultural production process which shall include, but is not limited to, the type of crops and acreage of each crop to be irrigated, monthly irrigation diversions, and any seasonal or annual crop rotation;

(B) a description of the irrigation method or system and equipment including pumps, flow rates, plans, and/or sketches of the system layout;

(C) an analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's water conservation practices;

(D) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(E) an assessment of the efficiency of the irrigation system, which may be performed by the Soil Conservation Service, the Texas Water Development Board, the Texas Agricultural Extension Service, an underground water conservation district, or a Texas registered professional engineer;

(F) water conserving irrigation equipment and application system or method including, but not limited to, surge irrigation, low pressure sprinkler, drip irrigation, and non-leaking pipe;

(G) leak-detection, repair, and water-loss control;

(H) scheduling the timing and/or measuring the amount of water applied, for example, soil moisture monitoring;

(I) land improvements for retaining or reducing runoff, and increasing the infiltration of rain and irrigation water including, but not limited to, land levelling, furrow diking, terracing, and weed control;

(J) tailwater recovery and reuse;

(K) application of xeric practices and vegetation;

(L) soil types and characteristics, including the existence of high salinity concentrations or other natural or artificial conditions which may result in the pollution of water resources and the impairment of existing water rights because of contaminated runoff and return flows; and

(M) any other water conservation practice, method, or technique which the applicant shows to be appropriate for achieving conservation.

(4) Any other purpose or use. A water conservation plan for any other purpose or use not specifically addressed in this section must provide for the implementation of those best management practices, techniques, and technologies that will be used to reduce the consumption of water, eliminate the loss or waste of water, maximize the efficiency in the use of water, and maximize the recycling and reuse of water.

(5) Wholesale water suppliers. A water conservation plan for a wholesale water supplier must include the following:

(A) an analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's or customers' water conservation practices;

(B) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(C) a program to assist customers in the development of conservation plans using the applicable elements in this section;

(D) a requirement in every water supply contract entered into on or

after the effective date of these rules, including any contract extension or renewal, that each successive wholesale customer develop and implement water conservation measures using the applicable elements in this section. If the customer intends to resale the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this section; and

(E) a program of metering and leak detection and repair for the applicant's transmission, deliver, and distribution system.

(6) Alternative sources of water supply. A water conservation plan must provide information as to any feasible alternative source of supply to the Edwards Aquifer and the requested appropriation.

(7) Exemptions to the requirement to submit water conservation plans. Applications to impound water for in-place use only, for emergency use in accordance with §295.91 of this title (relating to Application), and for temporary use of water in accordance with §295.61 of this title (relating to Applications) are exempt from having to submit a water conservation plan pursuant to this section. However, all water right holders must exercise reasonable diligence to avoid waste and achieve water conservation so that the use state water is limited to the amount which is being or can be beneficially used for the authorized purposes without waste but not to exceed the amount specifically appropriated.

#### *§298.16. Commission Review and Action On Water Conservation Plan.*

(a) Information provided by the applicant in the water conservation and reuse plan shall be considered by the commission in determining whether any feasible alternative to the requested appropriation exists and whether the requested amount of appropriation as measured at the point of withdrawal is reasonable and necessary for the proposed use. Based upon its review, the commission shall determine whether to deny or grant, in whole or in part, the requested appropriation.

(b) It shall be the burden of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

(c) Minimum irrigation system efficiency performance standards for agricul-

tural irrigation systems in place and in use prior to April 15, 1992, shall be as follows:

- (1) surface-furrow: 72%;
- (2) surface (border, basin, flood): 60%;
- (3) sprinkler: 78%;
- (4) center pivot: 82%;
- (5) LEPA: 95%; and
- (6) drip: 85%.

(d) No new irrigation use from a new well will be authorized that does not employ the most efficient irrigation system appropriate to the area and crops to be irrigated and using the best available technology.

(e) The per capita use goal to be achieved by a municipal user within the 10-year interim period provided by Subchapter F of this chapter (relating to Regulation of Diversions-Emergency) shall not exceed 120 gallons per person per day unless the applicant can demonstrate that such goal cannot be reasonably attained by the applicant within this time period.

(f) Any water conservation measures prescribed by the commission shall be implemented as required by the terms and conditions of the commission order or water right, or by rule.

(g) Information relating to the implementation of the water conservation and reuse plan and related permit conditions required under this section must be provided in the annual report provided by §295.202 of this title (relating to Reports) on the form prescribed by the executive director. Such information shall include a discussion of the progress made toward the obtainment of water conservation goals.

#### *§298.17. Right Limited to Beneficial Use.*

(a) Except as further limited by Subchapters E and F of this title (relating to Regulation of Diversions-General and Regulation of Diversions-Emergency), the right to use state water under any permit or other authorization is limited to the amount which is being or can be beneficially used for the authorized purposes without waste but not to exceed the amount specifically appropriated.

(b) Water which is wasted, lost, or inefficiently used because of, but not limited to, inefficient diversion works or distribution systems, excessive applications or per capita use, excessive or unnecessary evaporation, transpiration or seepage, faulty design, or by pollution is not beneficially used and is a violation of the water right.

(c) The right to appropriate that amount not beneficially used cannot be perfected and is subject to limitation, cancellation, and forfeiture as provided by law.

#### *§298.18. Moratorium on New Authorizations.*

(a) A person may not drill a new well or divert water from the Edwards Underground River by using a well, not a producing well, except as authorized by the commission.

(b) The commission shall not consider or take action on any application relating to any proposed or existing well for which there is no evidence or historical record of actual beneficial use prior to April 15, 1992, until a final determination has been made on all applications submitted on or before September 1, 1992, and accompanied by a declaration of historical use and a water conservation and reuse plan provided by §298.14 and §298.15 of this title (relating to Declarations of Historical Use and Water Conservation and Reuse Plan).

(c) Any authorization other than interim authorization granted pursuant to §298.13 of this title (relating to Interim Authorizations Pending Disposition of Permit Applications) for the diversion and beneficial use of water from the Edwards Underground River shall not be granted unless it is determined by the commission that such new use provides for the implementation of water conservation, reuse, distribution, and application measures using best available technology.

(d) Subsection (a) of this section shall not apply to a replacement well if:

(1) the amount, rate, volume, purpose of use, and any other requirement applicable to the well replaced is met by the operation of the replacement well; and

(2) the executive director is notified by the owner of the wells not later than 10 days after the completion of the drilling of the replacement well. Such notice shall provide the ownership, location by latitudinal and longitudinal coordinates and distance from nearest survey corner, date of plugging of well that was replaced, a copy of the driller's pump test to determine well production capacity, and the actual rate of withdrawal.

#### *§298.19. Amendments Required.*

(a) Each holder of a permit issued under §298.11 of this title (relating to Permit Required), and each person granted interim authorization under §298.13 of this title (relating to Interim Authorizations Pending Disposition of Permit Applications), must obtain prior authorization from the commission to change the purpose of use (which includes using water for any additional purpose of use or any secondary use), to change the location of any well, rate of withdrawal, place of use or acreage to be irrigated, or to alter the permit or interim authorization in any other manner.

(b) An application to amend an existing water right for any of the following reasons must include a water conservation and reuse plan as provided by applicable provisions of §298.15 of this title (relating to Water Conservation and Reuse Plan):

(1) to increase the amount of the appropriation;

(2) to change the purpose or use of the appropriation;

(3) to extend the term of the appropriation; or

(4) to change the place of use, unless the request is to expand the amount of acreage to be irrigated adjacent to the existing, authorized irrigated tract without an increase in the appropriation.

(c) An agreement providing for the contractual sale of water from the Edwards Aquifer for a period of less than three years shall be filed with the executive director for approval not later than 30 days prior to the effective date of the sale agreement.

#### §298.20. Approval for Alterations.

(a) A person may not make any alteration, enlargement, or other change to any well from which water is diverted from the Edwards Underground River without first obtaining the approval of the commission, except for ordinary maintenance or emergency repair of the well and except as provided by subsections (b) and (c) of this section.

(b) Without obtaining commission approval, a person may modify a well if the modification does not alter the location or rate of production of the well.

(c) Without obtaining commission approval, a person may modify a well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use) if the well continues to qualify for exemption after that modification.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.  
TRD-9205422

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-8069

### Subchapter C. Conveyances

#### • 31 TAC §§298.21-298.23

The new sections are proposed under the Texas Water Code, §5.103 and §5.105,

which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

**§298.21. Transfer of Ownership and Change of Address.** In addition to meeting applicable requirements contained in commission rules relating to the transfer and sale of water rights, each person required to file a declaration of historical use under §298.14 of this title (relating to Declarations of Historical Use), and each person to whom a permit is issued pursuant to §298.11 of this title (relating to Permit Required), shall notify the commission of a change in name or mailing address or any transfer of the ownership of the well or permit. Any person to whom the well or permit is transferred shall notify the commission of the transfer and shall furnish any additional information as required by the executive director.

**§298.22. Contractual Sales.** Commission approval for a contractual sale of water is subject to the imposition of the conservation and reuse requirements contained in the seller's permit or to which the buyer is subject as directed or modified by the executive director.

**§298.23. Application by City or Town to Acquire Appropriation Without Compensation (Wagstaff Act).**

(a) The Wagstaff Act, Texas Water Code, §11.028, provides that any appropriation made after May 17, 1931, for any purpose other than domestic or municipal use is subject to the right of any city or town to make further appropriations of the water for domestic or municipal use without paying for the water.

(b) Except as authorized by the commission, no city or town may make further appropriation pursuant to the Wagstaff Act.

(c) In determining whether to approve such further appropriation pursuant to subsection (b) of this section, the commission shall consider the social and economic hardship of the proposed appropriation on the affected person and community and shall seek to minimize the impact upon irrigation or other uses which may be subject to the Act.

(d) An application for commission approval pursuant to subsection (b) of this section must be submitted to the commission for review and approval and notice and opportunity for hearing given to the affected water right holders prior to commission action on any such further appropriation.

(e) An application must contain all applicable information necessary for a

transfer of a water right and must be accompanied by a water conservation and reuse plan as provided by §298.15 of this title (relating to Water Conservation and Reuse Plan).

(f) The commission shall not approve an application for further appropriation if the commission finds:

(1) the application does not meet commission requirements as provided by subsection (e) of this section;

(2) proper notice and opportunity for hearing was not provided to all affected persons;

(3) the proposed transfer would adversely affect senior water rights not subject to appropriation pursuant to subsection (a) of this section;

(4) the applicant fails to demonstrate a need for the amount of the appropriation;

(5) the applicant has not eliminated all nonessential and discretionary use, including, but not limited to, recreational or aesthetic use, lawn watering, car washing, or any other use not essential for the public health, safety, and welfare;

(6) there is a feasible alternative to the proposed appropriation; or

(7) the proposed appropriation would adversely impact water quality or the environment or be detrimental to the public health, safety, or welfare.

(g) Information provided by the applicant in the water conservation and reuse plan shall be considered by the commission in determining whether any feasible alternative to the requested appropriation exists and whether the requested amount of appropriation as measured at the point of diversion is reasonable and necessary for the proposed use. Based upon its review, the commission shall determine whether to deny or grant, in whole or in part, the requested appropriation.

(h) It shall be the burden of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists, that the requested amount of appropriation is necessary and reasonable for the proposed use, and is otherwise justified pursuant to this section.

(i) Any water conservation measures prescribed by the commission shall be implemented as required by the terms and conditions of the commission order or water right, or by rule.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205423

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

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For further information, please call: (512) 463-8069

## Subchapter D. Water Use Management and Reporting

### • 31 TAC §298.31, §298.32

The new sections are proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### §298.31. *Water Use Measurement.*

(a) The owner of each well which diverts water from the Edwards Underground River, other than a well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use), shall install and maintain a measuring device designed to indicate the flow rate and the amount of water diverted by that well. The measuring device shall indicate flow rate and amount, with instantaneous readout in cubic feet per second or gallons per minute, and have a flow totalizer with a readout in acre-feet or gallons, and must be accurate within 5.0%.

(b) The measuring device for each well capable of operation before the date these rules were proposed by the commission shall be installed before December 31, 1992, or before any water is diverted by that well, whichever is later. For any other well, the measuring device shall be installed before any water is withdrawn from that well.

(c) The requirement to install and maintain a measuring device in any well may be waived by the executive director, upon written request by the well owner to utilize an alternative method of determining the flow rate and the amount of water diverted by the well. The proposed alternative method must result in determinations of flow rate and amounts of water diverted within an accuracy of 5.0%.

#### §298.32. *Reports.*

(a) Not later than March 1 of each year, beginning in 1993, each person required to file a declaration of historical use under §298.14 of this title (relating to Declarations of Historical Use), and each person to whom a permit is issued pursuant to §298.11 of this title (relating to Permit Required), shall file with the commission a

written report of water use for the preceding calendar year on a form prescribed by the executive director, providing the information required by the executive director.

(b) The commission by order, rule, or permit condition may require of any person such other record keeping, reporting of water use, and notification of water demands, as may be determined by the commission to be necessary or desirable to accomplish the purposes of this chapter.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205424

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-8069

## Subchapter E. Regulation of Diversions-Genera

### • 31 TAC §298.41, §298.42

The new sections are proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary for the performance of its duties and responsibilities under the Texas Water Code and other state law.

#### §298.41. *Waste Prohibited.*

(a) The waste of water is prohibited.

(b) No person may divert, supply, use, or reuse any water from the Edwards Aquifer, or supply, use, or reuse any water from other sources that reduces the demand for water from the Edwards Underground River, in excess of the amount of water needed for beneficial use for the intended purpose or purposes of use.

#### §298.42. *Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes.*

(a) All authorized diversions of water from the Edwards Underground River, and all authorizations and rights to make such diversions are subject to limitation, curtailment, and amendment as may be ordered by the commission from time to time in order to protect the water quality of the Edwards Underground River, the health, safety, and welfare of the people who divert and/or use water from the Edwards Underground River, and to protect water quality,

public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose, and to maintain compliance with applicable law.

(b) Each person diverting water from the Edwards Underground River shall limit and curtail such diversions as may be ordered by the commission from time to time to effectuate the purposes of this chapter.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205425

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

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For further information, please call: (512) 463-8069

## Subchapter F. Regulation of Diversions-Emergency

### • 31 TAC §298.51

The new section is proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### §298.51. *Emergencies.*

(a) The commission may declare an emergency when the level of the Edwards Aquifer drops to a level where adverse impacts are occurring or may soon occur to water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, or bays and estuaries.

(b) Upon the declaration of an emergency, the commission may impose additional requirements and restrictions upon the diversion, supply, use, or reuse of water from the Edwards Underground River to the extent that it determines such requirements and restrictions are justified, taking into consideration all relevant issues including, without limitation, public health and safety and the economic well-being of the region and the state.

(c) In making any determination under subsections (a) and (b) of this section, the commission shall, to the extent practicable, hold public hearings and otherwise seek public comment from all affected persons.

(d) The executive director shall notify the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service immediately upon the declaration of an emergency pursuant to this section and shall

inform these agencies of any commission actions in response to the emergency.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205426 Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

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For further information, please call: (512) 463-8069

## Subchapter G. Local Government

### • 31 TAC §298.61

The new section is proposed under the Texas Water Code, §5.103 and §5. 105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### §298.61. Delegation of Responsibilities.

(a) Upon request by an underground water conservation district or other political subdivision of the state overlying the Edwards Underground River, the commission may delegate to that political subdivision any of the commission's responsibilities under this chapter within the geographical boundaries of that political subdivision, except to the extent that the delegation is prohibited by law.

(b) The commission will give appropriate consideration to the recommendations of local governmental entities concerning matters at issue under this chapter within the geographical boundaries of the local governmental entity, such as relative amounts of withdrawals to be authorized among permit applicants within those boundaries, and additional requirements to be imposed to further reduce withdrawals and use of available water within those boundaries.

(c) The commission may establish a separate water division for the Edwards Underground River pursuant to the Texas Water Code, §11.325 and may delegate the duties and responsibilities of watermaster for such division to an appropriate local or regional entity, unless prohibited by law.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205427 Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

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For further information, please call: (512) 463-8069

## Subchapter H. Permanent Management Plan

### • 31 TAC §298.71

The new section is proposed under the Texas Water Code, §5.103 and §5. 105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### §298.71. Advisory Council.

(a) To assist the Texas Water Commission in the development and implementation of a long-range, comprehensive regional water management plan, the executive director shall establish the South-Central Texas Water Resources Advisory Council pursuant to commission resolution made April 15, 1992, whose members shall include, but are not limited to, a qualified representative chosen by each of the following entities or groups:

- (1) the executive director of the Texas Water Commission, whose representative shall serve as chair;
- (2) the Texas Water Development Board;
- (3) the Texas Parks and Wildlife Department;
- (4) the Edwards Underground Water Conservation District or its successor;
- (5) the Medina County Underground Water Conservation District or its successor;
- (6) the Guadalupe-Blanco River Authority;
- (7) the San Antonio River Authority;
- (8) the Nueces River Authority;
- (9) any other appropriate federal, state, regional, or local governments; and

(10) public interest groups, business and industry, and established environmental groups.

(b) Matters to be studied by the South Central Texas Water Management Advisory Council and upon which the Council shall make recommendations to the commission include, but are not limited to:

- (1) the effectiveness of the rules contained in this chapter and any recommended changes;
- (2) the feasibility of artificially augmenting springflows for the protection

of aquatic and wildlife habitat and other beneficial purposes;

(3) the artificial recharge of the aquifer;

(4) the identification of existing alternative sources of water for users of the aquifer;

(5) the development of new alternative sources of water for aquifer users;

(6) recommendations to the legislature regarding necessary changes, if any, to state law to provide for the proper management of the water resources in the area affected by diversions from the Edwards Underground River;

(7) the impact of springflows on the bays and estuaries; and

(8) any other matter pertinent to the development and implementation of a long-range, comprehensive, conjunctive management of the Edwards Aquifer and hydrologically interrelated surface waters in the Nueces, San Antonio, and Guadalupe River Basins.

(c) The South Central Texas Water Management Advisory Council shall meet as often as necessary to carry out its duties and responsibilities and shall present its recommendations to the commission not later than September 1, 1994.

(d) The commission shall review and take action on the council's recommendations not later than January 1, 1995.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205428 Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-8069

## Chapter 331. Underground Injection Control

### Subchapter I. Financial Responsibility

#### • 31 TAC §331.147

The Texas Water Commission (TWC) proposes new §331.147, concerning underground injection control. The new section is proposed in order to incorporate rules promulgated by the Environmental Protection Agency pursuant to their authority under the federal Solid Waste Disposal Act; as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), 42 United States Code, §§6901 et seq. as amended.

This new section is proposed to provide both consistency with existing Texas Administrative Code (TAC) regulations and clarification of the TWC's regulatory intent.

The new section delineates the acceptable wording for trust agreements, guarantee bonds, performance bonds, irrevocable standby letters of credit, letters from the chief financial officer, and plugging and abandonment guarantees.

Norma Nance, director of budget and planning, has determined that for the first five-year period the section is in effect there will be no fiscal implications for state or local government as a result of enforcing or administering the section. The purpose of the section is to incorporate current federal requirements into state regulations to establish consistency. There are no additional fiscal impacts or incremental costs attributable to the adoption of the regulations that do not accrue to an affected party currently in compliance with existing federal requirements.

Ms. Nance also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be enhanced enforcement of the provisions of the Texas Solid Waste Disposal Act and the rules of the commission regarding the regulation of hazardous waste and the protection of the quality of the water resources of the state. There will be no effect on small businesses. There is no anticipated economic cost to persons who are required to comply with the section as proposed.

Comments on the proposal may be submitted to Bob Warneke, Staff Attorney, Legal Division, Texas Water Commission, P.O. Box 13087, Austin, Texas 78711-3087.

Comments will be accepted until 5 p.m., 30 days after the date of this publication to facilitate public comments on the proposed amendments to this chapter.

The new section is proposed under the Texas Water Code, §5.103 and §5.105, which provides TWC with the authority to adopt any rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the State of Texas, and to establish and approve all general policy of the commission. In addition, the Texas Water Code, §27.019 authorizes TWC to adopt rules and procedures reasonably required for the performance of its powers and duties under Chapter 27. TWC is designated the state agency which manages injection wells which are not within the jurisdiction of the Railroad Commission. As such, TWC is required to maintain the quality of fresh water in the state to the extent consistent with the public health and welfare, the operation of existing industries and the economic development of the state, to prevent underground injection that may pollute fresh water, and to require the use of all reasonable methods to implement this policy.

**§331.147. Wording of the Instruments.** Wording of the instruments includes: trust agreement; surety bond guaranteeing payment into a trust fund;

surety bond guaranteeing performance of plugging and abandonment; letter of credit; certificate of insurance; letter from the chief financial officer; and corporate guarantee are located in Exhibits A-F of this section.

(1) A trust agreement for a trust fund, as specified in §331.144(1) of this title (relating to Financial Assurance for Plugging and Abandonment), must be worded as follows, except that instructions in parenthesis are to be replaced with the relevant information and the parenthesis deleted:

#### Exhibit A

#### TRUST AGREEMENT

TRUST AGREEMENT, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of State] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "incorporated in the State of \_\_\_\_\_" or "a national bank"], the "Trustee."

Whereas, the Texas Water Commission, "TWC," an agency of the State of Texas, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an injection well shall provide assurance that funds will be available when needed for plugging and abandonment of the injection well,

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facility(ies) identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee,

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) Facility or activity means any "underground injection well" or any other facility or activity that is subject to regulation under the Underground Injection Control Program.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA

Identification Number, name, address, and the current plugging and abandonment cost estimate, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of TWC. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by TWC.

Section 4. Payment for Plugging and Abandonment. The Trustee shall make payments from the Fund as the Executive Director shall direct, in writing, to provide for the payment of the costs of plugging and abandonment of the injection wells covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Executive Director from the Fund for plugging and abandonment expenditures in such amounts as the Executive Director shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Executive Director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like use in the

conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with

certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate Executive Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Executive Director shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement of any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed

upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Executive Director, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Executive Director to the Trustee shall be in writing, signed by his designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or TWC hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or TWC, except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the appropriate Executive Director, by certified mail within 10 days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the

Grantor, the Trustee, and the appropriate Executive Director, or by the Trustee and the appropriate Executive Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Executive Director, or by the Trustee and the Executive Director if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Executive Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of [insert name of State].

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 31 Texas Administrative Code §331.147(a)(1) as such regulations were constituted on the date first above written.

[Signature of Grantor]

By [Title]

Attest: [Title]

[Seal]

[Signature of Trustee]

By

Attest:

[Title]

[Seal]

(2) The following is an example of the certification of acknowledgment which must accompany the trust agreement for a trust fund as specified in §331.144(1) of this title State requirements may differ on the proper content of this acknowledgment.

State  
of \_\_\_\_\_

County

of \_\_\_\_\_

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order to the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[signature of Notary Public]

(3) A surety bond guaranteeing payment into a trust fund, as specified in §331.144 of this title must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Exhibit B

BOND FINANCIAL GUARANTEE

Dated bond executed:

Effective date:

Principal: [legal name and business address of owner or operator].

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"].

State of incorporation:

Surety(ies): [name(s) and business address(es)].

EPA Identification Number, name, address, and plugging and abandonment amount(s) for each facility guaranteed by this bond [indicate plugging and abandonment amounts separately]: \_\_\_\_\_

Total penal sum of bond:  
\$ \_\_\_\_\_

Surety's bond number:

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Texas Water Commission (hereinafter called TWC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Underground Injection Control Regulation (UIC), to have a permit or comply with requirements to operate under rule in order to own or operate each injection well identified above, and

Whereas said Principal is required to provide financial assurance for plugging and abandonment as a condition of the permit or provisions to operate under rule, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used provide such financial assurance;

Now, therefore, the condition of the obligation are such that if the Principal shall faithfully, before the beginning of plugging and abandonment of each injection well identified above, fund the standby trust fund in the amount(s) identified above for the injection well,

Or if the Principal shall fund the standby trust fund in such amount(s) within 15 days after an order to begin plugging and abandonment is issued by an Executive Director or a U.S. district court or other court of competent jurisdiction,

Or, if the Principal shall provide alternate financial assurance, as specified in Subchapter I of 31 Texas Administrative Code Chapter 331, as applicable, and obtain the Executive Director's written approval of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the Executive Director from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by an Executive Director that the Principal has

failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the injection well(s) into the standby trust funds as directed by the Executive Director.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Executive Director, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Executive Director(s), as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Executive Director(s) of the Region(s) in which the bonded facility(ies) is (are) located.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new plugging and abandonment amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Executive Director(s).

In Witness Whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The person whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 31 Texas Administrative Code §331.147(b) as such regulations were constituted on the date this bond was executed.

Principal  
[Signature(s)]  
[Name(s)]  
[Title(s)]  
[Corporate seal]  
Corporate Surety(ies)  
[Name and address]

State of incorporation:  
\_\_\_\_\_  
Liability limit:  
\$ \_\_\_\_\_

[Signature(s)]  
[Name(s) and title(s)]  
[Corporate seal]  
[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium:  
\$ \_\_\_\_\_

(4) A surety bond guaranteeing performance of plugging and abandonment, as specified in §331.144(3) of this title must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### Exhibit C PERFORMANCE BOND

Date bond executed:  
\_\_\_\_\_  
Effective date:  
\_\_\_\_\_

Principal: [legal name and business address of owner or operator].

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"].

State of incorporation:  
\_\_\_\_\_

Surety(ies): [name(s) and business address(es)]  
\_\_\_\_\_  
\_\_\_\_\_

EPA Identification Number, name, address, and plugging and abandonment amounts(s) for each injection well guaranteed by this bond [indicate plugging and abandonment amounts for each well]:  
\_\_\_\_\_  
\_\_\_\_\_

Total penal sum of bond:  
\$ \_\_\_\_\_

Surety's bond number:  
\_\_\_\_\_

Know All Persons By These Presents.

That We, the Principal and Surety(ies) hereto are firmly bound to the Texas Water Commission [hereinafter called TWC], in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind

ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Underground Injection Control Regulations, as amended, to have a permit or comply with provisions to operate under rule for each injection well identified above, and

Whereas said Principal is required to provide financial assurance for plugging and abandonment as a condition of the permit or approval to operate under rule, and

Whereas said Principal shall establish a standby trust fund as required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform plugging and abandonment, whenever required to do so, of each injection well for which this bond guarantees plugging and abandonment, in accordance with the plugging and abandonment plan and other requirements of the permit or provisions for operating under rule and other requirements of the permit or provisions for operating under rule as may be amended, pursuant to all applicable laws, statutes, rules and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance as specified in Subchapter I of 31 Texas Administrative Code Chapter 331, and obtain the Executive Director's written approval of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the Executive Director(s) from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by an Executive Director that the Principal has been found in violation of the plugging and abandonment requirements of Subchapter I of 31 Texas Administrative Code Chapter 331, for an injection well which this bond guarantees performances of plugging and abandonment, the Surety(ies) shall either perform plugging and abandonment in accordance with the plugging and abandonment plan and other permit requirements or provisions

for operating under rule and other requirements or place the amount for plugging and abandonment into a standby trust fund as directed by the Executive Director.

Upon notification by an Executive Director that the Principal has failed to provide alternate financial assurance as specified in Subchapter I of 31 Texas Administrative Code Chapter 331, and obtain written approval of such assurance from the Executive Director(s) during the 90 days following receipt by both the Principal and the Executive Director(s) of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the injection well(s) into the standby trust fund as directed by the Executive Director.

The surety(ies) hereby waive(s) notification of amendments to plugging and abandonment plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice by certified mail to the owner and operator and to the Executive Director provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Executive Director, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Executive Director.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new plugging and abandonment amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Executive Director.

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording on this surety bond is identical to the wording specified in 31 Texas Administrative Code §331.147(c) as such regulation was constituted on the date this bond was executed.

Principal.

[Signature(s)]

[Name(s)] [

Title(s)]

[Corporate seal]

[Corporate Surety(ies)]

[Name and address]

State of incorporation:

Liability limit: \$ \_\_\_\_\_.

[Signature(s)]

[name(s) and title(s)]

Corporate seal:

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ \_\_\_\_\_.

(5) A letter of credit, as specified in §331.144(4) of this title must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Exhibit D

#### IRREVOCABLE STANDBY LETTER OF CREDIT

Executive Director

Texas Water Commission

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. \_\_\_\_\_ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars \$ \_\_\_\_\_, available upon presentation of

(1) Your sight draft, bearing reference to this letter of credit No. \_\_\_\_\_, and

(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Safe Drinking Water Act."

This letter of credit is effective as of [date] and shall expire on [date at least 1

year later], but such expiration date shall be automatically extended for a period of [at least 1 year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in 31 Texas Administrative Code §331.147(d) as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution] [Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

(e) A certificate of insurance, as specified in 31 Texas Administrative Code §331.144(5) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certificate of Insurance for Plugging and Abandonment

Name and Address of Insurer (herein called the "insurer"):

Name and Address of Insurer (herein called the "insurer"):

Injection Wells covered: [list for each well: The EPA Identification Number, name, address, and the amount of insurance for plugging and abandonment (these amounts for all injection wells covered must total the face amount shown below).] Face Amount:

Policy Number:

Effective Date:

The insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for plugging and abandonment for the injection wells identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 31 Texas Administrative Code §331.144(5), as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Executive Director of the Texas Water Commission ("TWC"), the Insurer agrees to furnish to the Executive Director(s) a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 31 Texas Administrative Code §331.147(e) as such regulations were constituted on the date shown immediately below.

[Authorized signature of Insurer]

[Name of person signing]

[Title of person signing]

[Signature of witness or notary:]

[Date]

(6) A letter from the chief financial officer, as specified in §331.144(6) of this title must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Exhibit E

LETTER FROM CHIEF FINANCIAL OFFICER

[Address to Executive Director]

I am the chief financial officer of [name and address of firm.] This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in Subchapter I of 31 Texas Administrative Code Chapter 331.

[Fill out the following four paragraphs regarding injection wells and associated cost estimates. If your firm has no injection wells that belong in a particular paragraph, write "None" in the space indi-

cated. For each injection well, include its EPA Identification Number, name, address, and current plugging and abandonment cost estimate.]

1. This firm is the owner or operator of the following injection wells for which financial assurance for plugging and abandonment is demonstrated through the financial test specified in Subchapter I of 31 Texas Administrative Code Chapter 331. The current plugging and abandonment cost estimate covered by the test is shown for each injection well: \_\_\_\_\_.

2. This firm guarantees, through the corporate guarantee specified in Subchapter I of 31 Texas Administrative Code Chapter 331, the plugging and abandonment of the following injection wells owned or operated by subsidiaries of this firm. The current cost estimate for plugging and abandonment so guaranteed is shown for each injection well: \_\_\_\_\_.

3. In States where TWC is not administering the financial requirements of Subchapter I of 31 Texas Administrative Code Chapter 331, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the plugging and abandonment of the following injection wells through the use of a test equivalent or substantially equivalent to the financial test specified in Subchapter I of 31 Texas Administrative Code Chapter 331. The current plugging and abandonment cost estimate covered by such a test is shown for each injection well: \_\_\_\_\_.

4. This firm is the owner or operator of the following injection wells for which financial assurance for plugging and abandonment is not demonstrated either to TWC or a State through the financial test or any other financial assurance mechanism specified in Subchapter I of 31 Texas Administrative Code Chapter 331 or equivalent or substantially equivalent State mechanisms.

The current plugging and abandonment cost estimate not covered by such financial assurance is shown for each injection well: \_\_\_\_\_.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph (6)(A)(i) of §331.144 of this title (relating to Financial Assurance for Plugging and Abandonment) are used. Fill in Alternative II if the criteria of paragraph (6)(A)(ii) of §331.144 of this title (relating

to Financial Assurance for Plugging and Abandonment) are used.]

#### ALTERNATIVE 1

1.

(a) Current plugging and abandonment cost.....

\$ \_\_\_\_\_

(b) Sum of the company's financial responsibilities under 31 Texas Administrative Code Chapter 335, Subchapters E and F, currently met using the financial test or corporate guarantee.....

(c) Total of lines a and b

\*2. Total liabilities [if any portion of the plugging and abandonment cost is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4].....

\*3. Tangible net

worth.....

\*4. Net

Worth.....

\*5. Current

assets.....

\*6. Current

liabilities.....

\*7. Net working capital [line 5 minus

line

6].....

\*8. The sum of net income plus depreciation, depletion and amortization.....

\*9. Total assets in U. S. (required only if less than 90% of

firm's assets are located in U.S.).....

Yes No

10. Is line 3 at least \$10 million?.....

11. Is line 3 at least 6 times line 1(c)?.....

12. Is line 7 at least 6 times line 1(c)?.....

\*13. Are at least 90% of firm's assets located in the U.S.?

If not, complete line

14.....

14. Is line 9 at least 6 times line

1(c)?.....

15. Is line 2 divided by line 4 less than

2.0?.....

16. Is line 8 divided by line 2 greater than

0.1?.....

17. Is line 5 divided by line 6 greater than

1.5?.....

## ALTERNATIVE II

1.

(A) Current plugging and abandonment

cost.....\$

(b) Sum of the company's financial responsibilities under 31 Texas Administrative Code Chapter 335, Subchapters E and F, currently met using the financial test or corporate guarantee (c) Total of lines a and

b.....

2. Current bond rating of most recent issuance of this firm and

name of rating

service.....

3. Date of issuance of

bond.....

4. Date of maturity of

bond.....

\*5. Tangible net worth [if any portion of the plugging and

abandonment cost estimate is included in "total liabilities"

on your firm's financial statements, you may add the amount

of that portion to this

line].....

\*6. Total assets in U.S. (required only if less than 90% of

firm's assets are located in

U.S.).....

Yes No

7. Is line 5 at least \$10

million?.....

8. Is line 5 at least 6 times line

1(c)?.....

\*9. Are at least 90% of the firm's assets located in the U.S.?

If not, complete line

10.....

10. Is line 6 at least 6 times line

1(c)?.....

I hereby certify that the wording of this letter is identical to the wording specified in 31 Texas Administrative Code §331.146(f) as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

(7) A corporate guarantee as specified in §331.144(6) of this title must be worded as follows except that instructions in brackets are to be replaced with the relevant information and the bracketed material deleted:

### Exhibit F

### GUARANTEE FOR PLUGGING AND ABANDONMENT

Guarantee made this \_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, by [name of guaranteeing entity], a business corporation organized under the laws of the State of \_\_\_\_\_, herein referred to as guarantor, to the Texas Water Commission (TWC), obligee, on behalf of our subsidiary [owner or operator] of [business address].  
Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 31 Texas Administrative Code §331.147(6).

2. [Owner or operator] owns or operates the following Class I hazardous waste injection well covered by this guarantee: [List for each facility: EPA Identification Number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.]

3. "Plugging and abandonment plan" as used below refers to the plans maintained as required by Subchapter I of 31 Texas Administrative Code Chapter 331 for the plugging and abandonment of injection wells as identified above.

4. For value received from [owner or operator], guarantor guarantees to TWC that in the event that [owner or operator] fails to perform ["plugging and abandonment"] of the above facility(ies) in accordance with the plugging and abandonment plan and other requirements when required to do so, the guarantor will do so or fund a trust fund as specified in 31 Texas Administrative Code §331.144 in the name of [owner or operator] in the amount of the adjusted plugging and abandonment cost estimates prepared as specified in 31 Texas Administrative Code §331.143.

5. Guarantor agrees that, if at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor will send within 90 days, by certified mail, notice to the Executive Director(s) for the Region(s) in which the facility(ies) is (are) located and to [owner or operator] that he intends to provide alternate financial assurance as specified in 31 Texas Administrative Code §331.144 in the name of [owner or operator]. Within 30 days after sending such notice, the guarantor will establish such financial assurance if [owner or operator] has not done so.

6. The guarantor agrees to notify the Executive Director, by certified mail, of a voluntary or involuntary case under Title 11, U.S. Code, naming guarantor as debtor, within 10 days after its commencement.

7. Guarantor agrees that within 30 days after being notified by the Executive Director of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of plugging and abandonment, he will establish alternate financial assurance, as specified in 31 Texas Administrative Code §331.144, in the name of [owner or operator] if [owner or operator] has not done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the plugging and abandonment plan, the extension or reduction of the time of performance of plugging and abandonment or any other modification or alteration of an obligation of [owner or operator] pursuant to 31 Texas Administrative Code Chapter 331.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial assurance requirements of 31 Texas Administrative Code Chapter 331 for the above-listed facilities, except that guarantor may cancel this guarantee by sending notice by certified mail, to the Executive Director in which the facility(ies) is (are) located and to [owner or operator], such cancellation to become effective no earlier

than 120 days after actual receipt of such notice by both TWC and [owner or operator] as evidenced by the return receipts.

10. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance and obtain written approval of such assurance from the Executive Director within 90 days after a notice of cancellation by the guarantor is received by both the Executive Director and [owner or operator], guarantor will provide alternate financial assurance as specified in 31 Texas Administrative Code §331.144 in the name of the [owner or operator].

11. Guarantor expressly waives notice of acceptance of this guarantee by the Texas Water Commission or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the plugging and abandonment plan.

I hereby certify that the wording of this guarantee is identical to the wording specified in 31 Texas Administrative Code §331.147(g).

Effective

date: \_\_\_\_\_

\_\_\_\_\_  
[Name of guarantor]

\_\_\_\_\_  
[Authorized signature for guarantor]

\_\_\_\_\_  
[Type name of person signing]

\_\_\_\_\_  
[Title of person signing]

\_\_\_\_\_  
Signature of witness or

nota-

ry: \_\_\_\_\_

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas on April 20, 1992.

TRD-9205478

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-8069

## TITLE 34. PUBLIC FINANCE

### Part VIII. State Depository Board

#### Chapter 171. Collateral Transactions

##### • 34 TAC §171.1

The State Depository board proposes an amendment to §171.1, concerning depositing, exchanging, and withdrawing security collateral for state deposits. The purpose of the

amendment is to expand the types of securities which are deemed acceptable as collateral for state funds.

John A. Bell, deputy treasurer for finance, has determined that for the first five-year period the section is in effect there will be no fiscal implications for state or local government as a result of enforcing or administering the section.

Mr. Bell also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be less restrictive requirements for acceptable security collateral for state deposits. There will be no effect on small businesses. There is no anticipated economic cost to persons who are required to comply with the section as proposed.

Comments on the proposal may be submitted to Alicia M. Fechtel, General Counsel, Texas State Treasury Department, 111 East 17th Street, Austin, Texas 78701, (512) 463-5971.

The amendment is proposed under the Texas Government Code, §404.013, which provides the Texas State Depository Board with the authority to adopt and enforce rules governing the establishment and conduct of state depositories, the handling of funds in the depositories, and the investment of state funds that the public interest requires.

##### §171.1. Deposit of Acceptable Security Collateral.

(a) Acceptable security collateral. The state treasurer shall approve all acceptable securities offered as collateral for state funds. Acceptable securities shall include those securities with fixed, stated rates and shall include acceptable mortgage-backed securities with declining principal balances. The following securities are hereby deemed acceptable by the State Depository Board as collateral for state funds:

(1)-(3) (No change.)

(4) Federal Home Loan Mortgage Corporation discount notes and primary debt instruments or debentures and mortgage-backed securities with a remaining maturity of 15 years or less;

(5)-(12) (No change.)

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 14, 1992.

TRD-9205357

Alicia M. Fechtel  
General Counsel  
Texas State Treasury  
Department

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-5971

## TITLE 37. PUBLIC SAFETY AND CORRECTIONS

### Part III. Texas Youth Commission

#### Chapter 93. General Provisions

##### Records, Reports, Forms

##### • 37 TAC §93.53

The Texas Youth Commission (TYC) proposes an amendment to §93.53, concerning documentation of serious incidents pertaining to an individual youth. The amendment requires that the incident report be filed in the security file. Specified administrators will be notified of serious medical incidents. Also, the title of the facility administrator has been changed to program administrator.

John Franks, director of finance, has determined that for the first five-year period the section is in effect there will be no fiscal implications for state or local government as a result of enforcing or administering the section.

Mr. Franks also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be more efficient filing system and more thorough notification of administrators in the case of serious medical incidents. There will be no effect on small businesses. There is no anticipated economic cost to persons who are required to comply with the sections as proposed.

Comments on the proposal may be submitted to Gail Graham, Policy and Manuals Coordinator, Texas Youth Commission, 4900 North Lamar Boulevard, P.O. Box 4260, Austin, Texas 78765.

The new section is proposed under the Human Resources Code, §61.034, which provides the Texas Youth Commission with authority to make rules appropriate to the proper accomplishment of its function.

##### §93.53. Incident Report.

(a) Policy. The Texas Youth Commission (TYC) utilizes a standard format to document serious incidents pertaining to an individual youth. The program [facility] administrator immediately notifies, by electronic mail, the executive director or his designee of those incidents when media inquiry could be expected and/or where the daily operation of the facility could be affected.

(b) Rules.

(1) (No change.)

(2) The Incident Report, form CCF-225, is used to document:

(A)-(C) (No change.)



The Edwards Aquifer

Mark Jordan  
Attorney at Law  
Austin Texas  
August 6, 1992

This paper was written by Mark Jordan in his private capacity. No official support or endorsement by the Texas Water Commission or any other agency of the State Government is intended or should be inferred.


## The Edwards Aquifer

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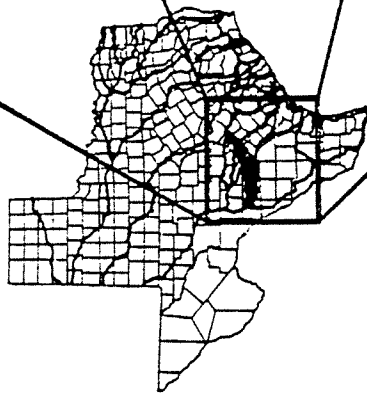
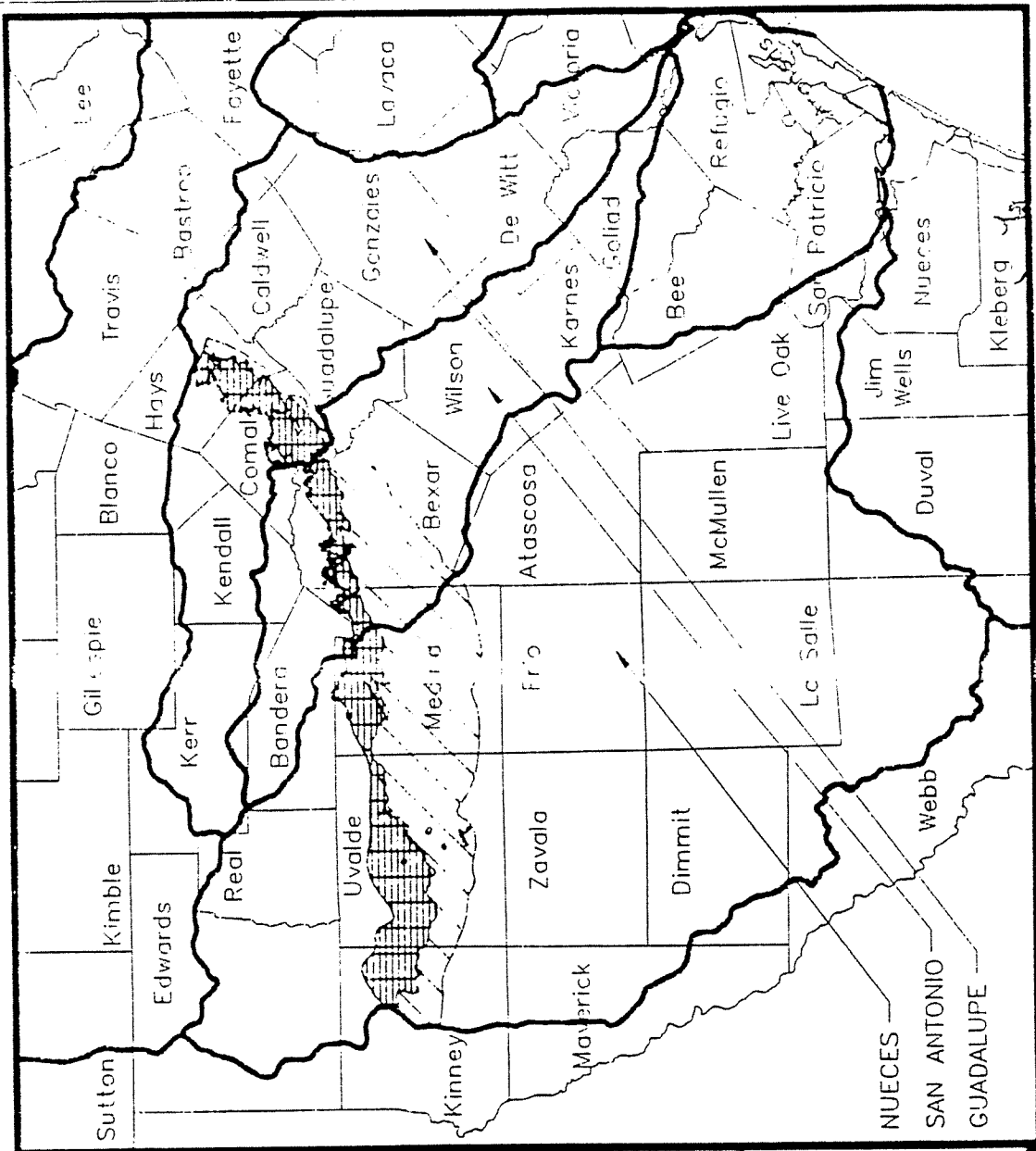
## Attachments

- Emergency Rules
- Proposed Permanent Rules

# EXPLANATION


 Edwards Aquifer  
 (San Antonio Region)


 River Basin Boundaries



October 1990  
 (Prepared by: The Texas Water Development Board)

## The Edwards Aquifer

### I. Introduction

The dispute over the management of the Edwards Aquifer affects the rights to and water quality of almost all subsurface and surface water in the Nueces, San Antonio, and Guadalupe River Basins. It also affects aquatic and riparian habitat in both surface and subsurface waters as evidenced by the endangered species lawsuit filed initially by the Sierra Club against the Secretary of the Interior and the U. S. Fish and Wildlife Service. Despite the great economic and environmental significance of the Edwards Aquifer to the South Central Region of Texas and to the state itself, there exists no comprehensive management plan for this unique and vital resource.

This inaction in the face of growing and unchecked demand on the Edwards Aquifer has led to a situation which threatens the public health, safety, and welfare and the economic well-being of the region. The uncertainty over a person's right to use water from the Edwards Aquifer due to current litigation discourages business investment and economic growth, and clouds title to property. This uncertainty also makes it difficult, if not impossible, to develop a management plan to provide for the immediate and long-term water supply needs of the region. Finally, a person's right to use water from a common source shared by others has little value and cannot be protected unless effective and necessary controls are applied to everyone's use.

Almost four decades of negotiations among the affected parties have failed to yield a resolution of the dispute regarding the proper management of the Edwards Aquifer. Legislation seeking to provide a comprehensive and lasting resolution to this issue has been repeatedly defeated. Efforts by San Antonio mayor Henry Cisneros and local representatives of the Edwards Underground Water District during 1986 and 1987 to develop a regional water management plan ended in defeat in the Texas Legislature and resulted in the breakup of the district. Beginning in November 1988 and continuing until his untimely death in August 1991, Texas Water Commissioner John Birdwell made exhaustive and earnest efforts to bring about a local resolution of the dispute. A professional mediator and the mayor of Austin have also unsuccessfully attempted to mediate a settlement. Protracted and costly litigation in both state and federal courts have dragged on for years and trials on the merits have not yet occurred. The creation of a special joint legislative committee in 1990 failed to produce a consensus report, much less

proposed legislation. Most recently, efforts by the current chairman of the Texas Water Commission, John Hall, during the Spring of 1992 also failed to produce a settlement.

Finally, on April 15, 1992, the Texas Water Commission took decisive action by declaring the Edwards Aquifer an underground stream and, thus, state water subject to state regulation. Soon thereafter, the Commission published proposed rules which would provide the procedural framework in which to develop and implement a comprehensive, regional water management plan.

This paper seeks to provide a background and summary of the recent events leading up to the Commission's April 15, 1992, action and the reasons that dispute remains unresolved. The paper also provides recommendations for legislation that recognizes the need for the conjunctive management of both surface and subsurface water in the Edwards Aquifer region.

## II. Location and Characteristics

The Edwards Aquifer has been extensively studied for many years and is generally well understood. Recent studies, reports, and models have provided a large amount of information regarding the physical characteristics and hydrogeology of the Edwards Aquifer. The traditional designation of this water resource as an "aquifer" simple means that it is a subsurface, water-bearing formation. There are many types of aquifers, from static, water bearing sands such as the Ogallala Aquifer, to the free-flowing karst formation of the Edwards Aquifer. This geological designation does not preclude an aquifer from being legally designated an underground stream.

The Southern, or Balcones Fault Zone portion of the Edwards Aquifer is the subject of the current dispute. It is located in the South Central Region of Texas and underlies portions of Kinney, Atascosa, Uvalde, Medina, Bexar, Comal, and Hays counties. The westernmost boundary of the aquifer is at the hydrologic divide near Bracketville in Kinney County. This divide separates the aquifer from subsurface water flows to the Rio Grande Basin. The Balcones Fault Zone portion of the aquifer extends through these seven counties in the shape of a crescent to its northern boundary at the hydrologic divide near Kyle in Hays County. This divide separates the Balcones Fault Zone portion of the aquifer from the Northern or Austin region of the Edwards Aquifer.

The Southern Edwards Aquifer is approximately 175 miles long and covers an expanse of about 3,600 square miles. The average width

of the aquifer is 25 miles. The average depth is 500 feet below the surface and ranges from zero feet at its outcrop on the land surface to 2500 feet below the surface. It is estimated by the United States Geologic Service (USGS) that the aquifer contains somewhere between 25 to 50 million acre-feet of water. This is three times the amount contained in Lake Meade and twice the amount of all other reservoirs in Texas. If the water in the aquifer was spread to cover the entire state of Texas, it would be ankle deep.

The Edwards Aquifer is a karst aquifer, comprised of limestone and dolomite. It is highly porous, containing interconnecting channels and caves. These openings range in size from microscopic to large caverns. They include hairline cracks, open fractures, honeycombed zones and a wide variety of cavities so that the aquifer resembles a huge stone sponge. Water flows relatively quickly through these openings.

Along the aquifer's southern and eastern borders is what is known as the "bad water line." This is where there is potential for underground saltwater intrusion into the aquifer if aquifer hydrologic pressure is lessened. Water movement through the aquifer is slowest here and remains in contact with limestone and gypsum longer, allowing dissolved mineral solids to increase to over 1000 milligrams per liter. When this occurs, the water falls well below public drinking water standards. The freshwater area of the aquifer typically has only 350 parts per million and, generally, is so pure as to not require treatment for human consumption.

The aquifer generally falls in elevation from west to east, dipping toward the Gulf of Mexico. The west end of the top of the formation is at approximately 1,200 feet above mean sea level (msl), and the San Marcos Springs in Hays County are about at 575 feet msl, a drop of 625 feet in about 166 miles. This is a slope of about 3.8 feet per mile, or about 0.07 percent.

The Edwards Aquifer cuts beneath and through the middle of several surface river basins. These basins originate above the recharge zone of the aquifer and include, from west to east, the Nueces, the San Antonio, and the Guadalupe River Basins. Over 75 percent of the water in the Edwards Aquifer comes from the surface flows in the upper segments of these basins. These streams are located in the upper portion of the Nueces River Basin, the upper portion of the San Antonio River Basin, and a part of the upper portion of the Guadalupe River Basin (the "contributory watershed"). The major tributary streams include the West Nueces, Nueces, Dry Frio, Frio, Sabinas, Seco, Hondo, Medina, Helotes, Salado, Cibolo, Dry Comal, and Blanco.

As these streams cross over the recharge zone of the aquifer, almost all of the baseflows and large parts of the flood flows of these streams flow down into the aquifer through faults in the streambeds. The water then continues to travel south from the recharge areas into the artesian (confined) part of the aquifer and then from west to east and northeast until it erupts at springs located along the aquifer's eastern edge. The Comal Springs at New Braunfels and the San Marcos Springs at San Marcos are the largest of these springs.

The water in the aquifer can move very easily where the size and number of solution openings are large and connected with few restrictions. Movement rates of more than 2,100 feet per day have been measured over short distances. As a comparison, a movement rate of one foot per day is generally considered very fast in other aquifers in Texas. Because of the porosity and drop in elevation from the west end of the aquifer to the east, the water in the aquifer has a general directional flow from west to south to east and a relatively rapid current.

The aquifer is confined between impervious layers of rock and slants from a higher elevation in the west to a lower one in the east. This slant and rapid recharge provide a general directional flow of southwest to northeast through the confines of the aquifer's geologic formation. Additionally, this creates great artesian pressure resulting in several springs. Many of these springs contribute significantly to streamflows upon which many water rights are based. In and near the springs at New Braunfels (the Comal Springs) and San Marcos (the San Marcos Springs), as well as inside the aquifer itself, live threatened and endangered fauna and flora, including the Fountain Darter, San Marcos Gambusia, the San Marcos Salamander, the Texas Blind Salamander, and Texas Wild Rice.

### III. Competing Regional Demands on the Edwards Aquifer

The Edwards Aquifer is the sole source of water supply for approximately 1.5 million citizens in the San Antonio region and supports a diverse regional economy that provides employment for approximately 700,000 to 800,000 Texans. Additionally, the Edwards Aquifer is important to the economies of the communities at and downstream of several springs fed by this underground river. These springs include the State's two largest natural springs at New Braunfels and San Marcos. These two springs sustain a significant tourist and recreational economy for these cities.

It is estimated that spring flow from Comal and San Marcos Springs alone provides 21 to 32 percent of the total annual flow of the Guadalupe River at Victoria. Between 70,000 and 80,000 jobs exist

in those counties that are supplied with water from the Guadalupe River below these springs. The economies of Hays and Comal counties and the counties downstream of the springs are clearly dependent on the Edwards Aquifer. This underground river is truly the lifeline of 15 Texas counties.

There are approximately 4,000 wells in the Edwards Aquifer, of which three-fourths are relatively small wells used for domestic and livestock purposes. No one knows the exact number of wells or the amount of water withdrawn from the aquifer. Well registration requirements of the Edwards Underground Water District are not enforced and are inapplicable to half of the aquifer falling outside the district's boundaries. Additionally, there is no requirement that a well must have a meter. USGS studies rely a great deal on voluntary responses to requests for information. Agricultural agencies such as the Soil Conservation Service has some information on agricultural water use, but the agency does not differentiate surface from ground water use. Well logs are required by rules of the Texas Water Well Drillers Board to be filed with the Texas Water Commission. However, there is no requirement that a well owner must report the amounts withdrawn and the purpose of use.

#### A. The West: Farming and Ranching

Only a small portion of the far western reaches of the aquifer extends into Kinney County. No significant users of the aquifer exist there. It is sparsely populated with scattered farms and ranches. The general belief in this county is that the current dispute has little to do with Kinney County and should have little, if any, impact on their use of water. Although invited to participate in the mediation efforts, county officials have so far declined to become significantly involved.

The next county to the east is Uvalde. It has many users comprised mainly of farming and ranching interests. Dependent on these aquifer users are agriculturally related businesses such as farm and ranch supply stores, farm machinery vendors, and food processing and packaging businesses, as well as migrant farm labor. Major crops include cotton, corn, milo, and wheat, as well as a wide variety of fruits and vegetables. Because of the constant, uninterrupted, high water quality supply, many food crops from this area are considered the best in the country.

The Nueces and Frio Rivers, spring fed and, in turn, large contributors to the aquifer's recharge, run through Uvalde County. Streamflow not lost to recharge, evaporation, seepage, and other channel losses and intervening water diverters provides water for

the City of Corpus Christi and the Coastal Bend area and associated bays and estuaries. The major sources of water supply for the Coastal Bend Area are the Choke Canyon Reservoir and Lake Corpus Christi, supplied by the Frio River and the Nueces River, respectively. Freshwater releases from these reservoirs help maintain the viability of estuarine life in Nueces Bay, including shrimp, crabs, and finfish which are the basis of a significant commercial and sport fishery. Any additional surface water appropriation in the Nueces River Basin, including an artificial recharge structure diverting surface stream flow into the Edwards Aquifer, will impact the Coastal Bend Region.

Medina County mainly has farming and irrigation interests, but the urban sprawl from neighboring San Antonio is beginning to spread into the eastern half of that county. The Medina Reservoir, maintained by the Bexar-Medina-Atascosa Water Control and Improvement District No. 1 (BMA), is located on the Medina River near the county's northern boundary with Bandera County. The Medina River runs southeast through Bexar County. The Bexar Metropolitan Water District is presently negotiating a contract with BMA for the purchase of "excess" water from Medina Lake for municipal use in the southeastern and Castle Hills areas of San Antonio. Previously, City of San Antonio and the Edwards Underground Water District have expressed interest in buying Medina Reservoir water for municipal use and recharge of the aquifer. The reservoir bottom contains many recharge features and, thus, the reservoir is already serving to recharge the aquifer at the rate of approximately 40,000 acre-feet per year.

Records of the Soil and Conservation Service, U.S. Department of Agriculture, indicate that during the period 1979-1990, combined agricultural water use in Uvalde and Medina counties on a yearly average was approximately 204,000 acre-feet (126,000 AF/A Uvalde; 78 AF/A Medina). Average total yearly irrigated acreage for this period was approximately 85,000 acres (51,000 acres Uvalde; 34,000 acres Medina). Yearly average acre-feet per acre used during this period was 2.4 AF per acre (2.0 AF/A Medina; 2.47 AF/A Uvalde).

The irrigation season is generally from March until July. Because of the relatively cheap source of supply, there is little incentive for water conservation except to curtail fuel and pumping costs. The absolute and unfettered right to private property and the distrust of government is firmly entrenched in these western counties. The preference is for no regulation of the use of the Edwards Aquifer or, if this is unavoidable, that minimal regulation be done on a local county basis. The western counties generally fault the City of San Antonio for its alleged lack of adequate water conservation measures, uncontrolled growth, unsatiated appetite for

more water from the Edwards Aquifer, and failure to develop alternative sources of water supply. Because of attempts by the City and the Edwards Underground Water District to implement a regional water management and allocation plan by legislation in 1987, aquifer users in these western counties view the City of San Antonio as the major villain in the current dispute. The attempt at implementing this legislation also resulted in elections being held in Uvalde and Medina counties which resulted in these counties leaving the Edwards Underground Water District.

#### B. The Central Area: San Antonio and Local Water Supply Entities

Bexar County is dominated by the City of San Antonio. The use of the aquifer there is predominately for municipal purposes. Additional uses include light manufacturing, breweries, water intensive theme parks such as Sea World and Fiesta Texas (Opry-land), and a considerable residential and military use. During the last five years, the City used on a yearly average basis approximately 180,000 acre-feet. The sole source of water supply for the City is the aquifer.

Attempts by the City to develop alternative surface supplies have so far been unsuccessful. In the 1950's, the City lost its fight with the Guadalupe Blanco River Authority to be the sponsor of Canyon Lake. More recently, in a referendum held in May of 1991, the City's electorate voted (51% to 49%) to abandon the Applewhite Reservoir project, which was to be located on the Medina River. Opponents to the reservoir pointed to the high cost of building the reservoir, the large amount of available water in the Edwards Aquifer, and the alleged wastefulness of storing water in a relatively shallow reservoir in an area which experiences high evaporation rates. When the City defeated the Applewhite project, farmers in the west lost all confidence in the City's ability to do its share in protecting the aquifer.

The San Antonio River provides freshwater inflows to San Antonio Bay, which sustains aquatic and waterfowl habitat. Located near the bay is the Aransas National Wildlife Refuge, winter home of the endangered Whooping Crane.

#### C. The East: New Braunfels, San Marcos, GBRA, Endangered Species, Downstream Cities, Industry, and Agriculture, and Bays and Estuaries

The eastern interests are characterized by their dependence upon springflows from the Comal and San Marcos Springs, which are fed by

the Edwards Aquifer. Diversions from the aquifer diminishes these springflows. These springflows sustain a local water-related tourist industry, federally listed endangered species in the springs, the ecology and water quality of the surface streams for which these springs form the headwaters, surface water use from these streams downstream of the springs by cities, industries, and agriculture, and bays and estuaries into which these surface streams drain.

A significant user in Comal County is New Braunfels, which relies a great deal on tourism for its economy. Tourist attractions include many water-related activities. Comal Springs is one such tourist attraction and is located in New Braunfels. These springs provide habitat for endangered species. The pumping from the aquifer in Bexar County has a direct and almost immediate effect on springflow at Comal.

The Guadalupe-Blanco River Authority maintains Canyon Reservoir in western Comal County above New Braunfels and is a major source of supply to many downstream users. Significant users on the Guadalupe River include Union Carbide, Dow Chemical, Central Power and Light Company, the City of New Braunfels, the City of San Marcos, the City of Seguin, the Canyon Regional Water Authority, the Calhoun County Rural Water Supply Corporation, and numerous irrigation operations.

Hays County has a tourist-based economy similar to New Braunfels. The San Marcos Springs in San Marcos is the location of Aquarena Springs, a major tourist attraction for the area. The springs form the headwaters of the San Marcos River. The San Marcos Springs also provide habitat for threatened and endangered species and flows for the endangered Texas Wild Rice, found immediately downstream in the San Marcos River.

Since the Comal Springs are higher in elevation than San Marcos Springs, protection for Comal Springs will result in protection for San Marcos Springs. No definitive studies have been performed to determine minimum continuous flows necessary to be maintained at Comal or San Marcos Springs to protect the species in accordance with the federal Endangered Species Act. It has been estimated, however, that to provide some continuous flow above zero at Comal Springs during a repeat of the worst drought of record which occurred in the 1950's, total yearly withdrawals from the aquifer could not exceed 200,000 to 220,000 acre-feet. As a comparison, the estimated current amount now being taken from the aquifer is approximately 540,000 acre-feet. To require immediate and full protection to Comal Springs to provide any flow, much less sufficient flow to protect endangered species, if another severe drought were to occur would result in the devastation of the

regional economy and threaten the region's ability to provide adequate water supplies for public drinking and sanitation.

#### IV. Problems Resulting from Uncontrolled Pumping

During the recorded period of 1934 - 1988, longterm average annual recharge of 625,000 acre-feet was equal to longterm average withdrawal from wells and springflow. On an annual basis, recharge has sometimes exceeded and sometimes fallen below such withdrawals and discharges. The maximum estimated annual withdrawal during this period was 540,000 acre-feet. During the worst drought of record, which occurred in the 1950's, recharge amounts fell well below estimated annual withdrawals of 250,000 acre-feet for several consecutive years, lowering the aquifer's level and, consequently, drying up Comal Springs completely for five months in 1956. The endangered species at the Comal Springs perished and were reintroduced at Comal after the springs regained sufficient flows.

Because of population growth, especially in the San Antonio metropolitan area and the Interstate Highway 35 corridor north of the City, it is anticipated that average recharge may not again equal or exceed demands on the aquifer unless effective management of the aquifer is implemented. Problems resulting from the overdrafting, or "mining," of the aquifer include:

- impacts of short-term droughts (2-3 years) would cause aquifer levels to fall rapidly, possibly to the point where the Comal and/or San Marcos Springs would cease to flow;
- economic risks from increased pumping costs and uncertain supplies of water would increase in all the economic sectors;
- long-term drought comparable to the 1950's would cause both Comal and San Marcos Springs to dry, destroying the habitat of endangered species and decreasing the amount of water available to downstream users, resulting in adverse impacts to agriculture and industry;
- the drop in aquifer level at some localities would cause encroachment of "bad" water into the aquifer, laden with

high mineral content and salinity levels;  
and

- the uncertainty over a person's right to use water from the Edwards Aquifer makes it difficult to provide for the immediate and long-term water supply needs of the region; discourages business investment and economic growth; and clouds title to property.

## V. Texas Groundwater Law

### A. Rule of Capture.

Texas has adopted the English common law doctrine of ownership of groundwater by the overlying surface owner. Houston and T.C. Ry. Co. v. East, 98 Tex. 146, 81 S.W. 279 (1904). It is the first and most primitive groundwater allocation doctrine. This doctrine provides that the surface owner may withdraw groundwater for use without limitation or any liability to neighboring owners for any harmful effects resulting from the withdrawal, i.e., no correlative rights exist among the groundwater users. Therefore, a new use is not subject to any limitations to protect older established uses. Rather, when supplies are inadequate for all, the user with the deepest well and most powerful pump will get the water. This is referred to as the "rule of capture."

To significant limitations exist on a landowner's right to capture and use groundwater: first, it cannot be done maliciously with the purpose of injuring a neighbor or amount to wilful waste of the resource. City of Corpus Christi v. Pleasanton, 276 S.W.2d 798, 801 (Tex. 1955). Second, since 1978, an action for damage will lie for negligent pumping of groundwater which results in the subsidence of neighboring land. Friendswood Dev. Co. v. Smith-Southwest Industries, 576 S.W.2d 21, 30 (Tex. 1978)

The doctrine is based on the 1843 English decision of Acton v. Blundell, 152 Eng.Rep 1223. In that case, the court considered groundwater occurrence and usage effects a mystery, which justified a no liability rule because the effects of a person's groundwater use on another's property was unknowable. While this doctrine originally was followed in most western states, today Texas is the only western state adhering to the English rule. The Texas Water Code recognizes the private ownership of groundwater (e.g., §§11.001, 26.002, and 52.002 Tex. Water Code), and courts have confirmed the rule of capture, even while almost inviting

legislative action. Friendswood Dev. Co. v. Smith-Southwest Industries, supra; City of Corpus Christi v. Pleasanton, supra. Problems which may result from the unregulated use of groundwater generally include pollution from saltwater intrusion, overdrafting, and land subsidence.

As one can see, the rule of capture does not protect the individual user's right, nor does it protect the resource. There are common law doctrines based upon private ownership of groundwater which provide more protection. These are briefly discussed below. However, the Legislature has so far chose not to provide the individual landowner a sufficient private cause of action or other legal tools to protect his right. Instead, the landowner has to rely on the double-edged sword of governmental regulation.

Most western states use the prior appropriation doctrine as the rule for allocating groundwater. Nevertheless, in many of these states, groundwater permits are handled separately from appropriations of surface water. As with surface water appropriations, the permit specifies the priority date with respect to senior pumpers, restrictions to protect senior water right holders, rate of withdrawal, the well location, and the purpose and place of use.

The common law "reasonable use doctrine" is followed in many eastern states. Under this doctrine, water may be used without waste on the overlying land. This doctrine is also known as the "American Rule." This doctrine forms the basis of groundwater law in Nebraska and Arizona and constitutes only a modest variation of the rule of capture followed in Texas. Under the reasonable use doctrine, landowners may be liable for actual injuries if their use is unreasonable, i.e., wasteful or if it occurs on non-overlying lands.

The California rule of correlative rights is an extension of the reasonable use doctrine in that it allows non-overlying groundwater use by onon-overling users. This thoery includes pro rata sharing during shortages and allows rights to be established for water stored underground.

Section 858 of the the Restatement of Torts 2d provides that an overlying owner who withdraws groundwater for a beneficial use is not liable for interfering with another's use unless:

- (a) the withdrawal unreasonably causes harm to a neighbor by lowering the water table or reducing artesian pressure;
- (b) the withdrawal exceeds the person's reasonable share of the annual supply or total store of groundwater; or

(c) the withdrawal has a direct and substantial effect upon a watercourse or lake and unreasonably causes harm to a person entitled to the use of its water.

Factors to be considered in determining whether the overlying use is unreasonable include"

- (a) the purpose of the use;
- (b) the suitability of the use to the watercourse;
- (c) the economic value of the use;
- (d) the social value of the use;
- (e) the extent and amount of harm it causes;
- (f) the practicality of avoiding the harm by adjusting the use or method of use;
- (g) the practicality of adjusting the quantity of water used;
- (h) the protection of existing values of water uses, land, investments, and enterprises; and
- (i) the justice of requiring the user causing the harm to bear the loss.

Some states have, to some extent, implemented this section of the Restatement, which has come to be called the "eastern correlative rights doctrine."

#### C. Underground water conservation districts.

##### 1. Generally.

A State has certain "police" powers it may exercise in order to protect the public health, safety, and welfare. Among these powers is the ability to manage and control a person's property right. This includes the use of groundwater. In 1949, the Texas legislature authorized the voluntary creation of underground water conservation districts (UWCDs) with discretionary power to regulate groundwater withdrawals as long as landowners did not lose their "ownership" of groundwater. This statute, now codified as Chapter 52 of the Texas Water Code, allows the creation of a district through local initiative and confirmation election, or state initiative through the critical area designation process. The latter process, however, still requires local voter approval to confirm district creation. Finally, special districts may be created by legislation pursuant to Art. XVI, §59, of the Texas Constitution.

Statutes relating to the powers and duties of UWCDs are contained in Chapter 52 of the Texas Water Code. UWCDs have the power to "provide for the spacing of water wells," to "regulate the production of wells," and other powers to enable them "to minimize as far as practical the drawdown of the water table." The UCWDs

that have been created have not, for the most part, been aggressive managers of groundwater pumpage. One possible exception is the High Plains Underground Water Conservation District No. 1. This district has, largely through well-spacing requirements and conservation techniques, slowed groundwater development somewhat, although no attempts have been made to control groundwater production and thereby extend the life of the aquifer. This reluctance may be due to the ability of any county to exclude itself from a district's jurisdiction. With that option available to local pumpers, UWCDs are not likely to pursue management practices (assuming they had the desire) that impose limitations on its constituents. Only two districts -- located in Harris - Galveston County area and Ft. Bend County, respectively, have limited pumping. This enforced reduction was to prevent further land subsidence in the district. The exercise of this power successfully withstood court challenges.

The High Plains District is the major success story for underground water conservation districts in Texas. The district's farmers depend almost entirely on the drastically overdrafted Ogallala Aquifer, a large part of which is located in the Texas Panhandle. Soaring energy prices and rapidly dropping water table led to the realization by the region's farmers that they could not afford to pump water indefinitely and that sooner or later the Ogallala Aquifer would be depleted, at least in the economic sense.

After ten years of diligent but entirely self-financed conservation efforts, the district has achieved a region-wide cutback in irrigation water use that ranges between 25 and 40 percent. This was achieved primarily through the following water conservation measures: replacing unlined ditches with pipelines; improvements in furrow irrigation; tailwater pond improvements; soil moisture monitoring devices; and low-head sprinkler systems. Efficient farmers around Lubbock have reduced irrigation requirements by half - from 3 acre-feet a year to one and one-half acre-feet per year. The aquifer level, which had been declining by 2 to 5 feet a year, has begun to stabilize.

The number of underground water conservation districts have recently proliferated. Many are created on a single county basis or less, rarely corresponding to aquifer or management area boundaries. Many districts exist on paper only. A few are created to ensure local control, or non-control, of groundwater. Although districts are required to develop and implement management plans and corresponding rules, some do not. The districts are required to submit management plans and rules to the Texas Water Commission for review only and Commission approval is not required. Despite this limited requirement, the submission of plans and rules is rare. The statute provides no minimum standards that a district must follow and the

Texas Water Commission has no specific oversight or enforcement authority.

Finally, some areas which may desperately need groundwater protection may not have a sufficient tax base to support such a district. This problem is most acute in the Trans-Pecos Region of Texas. The City of El Paso faces the critical problem of finding future water supplies. All area surface waters have been fully appropriated and the City shares a common aquifer with New Mexico and the rapidly expanding Mexican City of Juarez. To meet future demand and provide for growth, El Paso has recently bought land in a sparsely populated region near Fort Davis in order to pump groundwater from that area and transport it 150 miles to El Paso. Ranchers and farmers in the Fort Davis area feel that their water supply and local economy is threatened. In order to protect themselves, many local residents are weighing the costs and benefits of creating a local district.

Additionally, after losing a long fought court battle with the State of Texas over water rights to the Pecos River, the State of New Mexico is considering the purchase of relatively inexpensive Texas groundwater and pumping it just over into New Mexico and releasing it into the Pecos River to meet its obligation to provide Texas water under the Recos River Compact. In effect, in a water scarce area, New Mexico would use Texas water to meet Texas' share of the Pecos River. No district exists in this area to review and determine the impact of this pumpage on the affected resource and area of Texas and whether such exportation can be legally controlled or prohibited. State statutes do not address this issue.

## 2. The Edwards Underground Water District

During the drought of the 1950s, the level of the Edwards Aquifer plummeted from an annual long-term average elevation of 675 feet msl to an all-time record low of 612 feet msl in 1956. This drought changed the way water was used and managed across the state and brought about the realization that the Edwards Aquifer is not an infinite resource. The drought was finally broken by a record recharge of 1,117,000 acre-feet recharge in 1958. But concerned citizens in the affected region realized that without managing, conserving, and protecting the Edwards Aquifer, the region was at risk.

In 1957, state legislation was introduced to create an underground water conservation district to preserve, conserve, protect, and increase the recharge of the Edwards Aquifer. This legislation was defeated. During the subsequent state legislative session in 1959,

legislation was once again introduced to create a district for the Edwards Aquifer. This time, the legislation passed, creating the Edwards Underground Water District (EUWD). Art. 8280-219, Tex. Water Auxillary Laws.

The five counties initially comprising the district included Uvalde, Medina, Bexar, Comal, and Hays. The EUWD was authorized to "conserve, protect, and increase the recharge of" the Edwards Aquifer. A simillar statement of general authority is also contained in Chapter 52 of the Texas Water Code relating to underground water conservation districts. However, an important distinction is that the powers necessary to carry out this mandate were not specifically conferred on the district. These powers include the ability to require permits for wells and impose pumpage limitations. The district's activities, until the mid-1980s, were largely limited to gathering and disseminating data.

Studies conducted in 1965 by the U.S. Army Corps of Engineers indicated that the Edwards Aquifer could not meet the future water requirements of the area and recommended a total safe-yield withdrawal of 385,000 to 400,000 acre feet.

In 1978, the Bureau of Reclamation pointed out serious consequences associated with continued and unrestricted use of the Edwards Aquifer. The Texas Department of Water Resources, predecessor to the Texas Water Commission, developed the first study of the Edwards Aquifer using computer modeling in 1979. This effort reiterated the need for an annual "safe-yield" withdrawal of 450,000 acre-feet.

In 1983, the Edwards Underground Water District and the City of San Antonio undertook a joint study of the Edwards Aquifer. The study was to look at the regional water resources and needs and would result in a regional water management plan. Delays in completing the study were due to substantial time, effort, and expense devoted to carefully defining the scope of work, appointing advosory committees, selecting qualified consultants, and involving the public to the maximum extent possible.

In 1986, the Regional Water Resources Study was completed. A committee was then formed to explain the study to the affected region and to reach a consensus on the fundamental policies and objectives necessary to develop a regional water management plan. After six months of meetings and deliberations, the committee recommended the implementation of a comprehensive management plan providing that the water of the Edwards Aquifer be allocated, and water conservation and reuse measures be imposed, and alternative water resources be developed.

The reoccurrence of local drought conditions and the ever-increasing demands on the Edwards Aquifer during the 1980's heightened concern over the lack of management of the aquifer. Consequently, legislation was passed in 1987 requiring the EUWD to develop, implement, and enforce a drought management plan "in order to minimize, as far as practicable, the drawdown of the water table or the reduction of artesian pressure and spring flow; to prevent waste; and to protect the groundwater resource from serious harm." The legislation required the plan to contain objective standards for determining when drought conditions exist, specific drought management activities for the stages of drought, and requirements for reducing water use "in accordance with established priorities, which must include uses for essential human needs, agriculture, industrial, power, recreational, commercial, and other categories of use." Additionally, the legislation required that the plan be developed and approved by September 1, 1988. If the district failed to timely adopt a plan meeting the statutory requirements, the Texas Water Commission was to adopt and implement a plan. The legislature also provided that a person could appeal a rule under the district's plan to the Texas Water Commission. Finally, the legislature authorized deannexation elections for the constituent counties.

Meanwhile, the Regional Water Resources Plan was completed and approved by the Edwards Underground Water District and the City of San Antonio in July 1988. The plan contained five components: aquifer recharge; groundwater withdrawal and allocation; conservation; wastewater reuse; and the development of surface water reservoirs. Major conflicts in the region came to the fore upon the adopting of the Regional Water Resources Plan. The main point of contention was the allocation of water by certain uses. Irrigation farmers, although grandfathered and guaranteed a certain amount of water, were vehemently opposed to any limitation on their right to capture groundwater. Similarly, many in San Antonio were uncomfortable with the allocations. Everyone wanted what they always had access to, and there was no mood for compromise.

Pursuant to the recent amendment to its enabling act, the Edwards Underground Water District proceeded with the development of its drought management plan and formally approved a plan on August 23, 1988, a week before the deadline. Approval was obtained only after certain demands by the western counties of Uvalde and Medina were met. During the time this plan was being developed, however, San Antonio Mayor Henry Cisneros was proposing the implementation of the Regional Water Resources Plan which the western counties strongly believed did not fully protect their property rights and interests. Because the western counties were fearful about the possible implementation of the regional plan through statutory authorization from the legislature during the next session, the western counties

decided to take pre-emptive action. Consequently, on January 21, 1989, Medina and Uvalde counties voted to withdraw from the EUWD, leaving the effectiveness of the district's drought management plan uncertain. Legislation proposed in 1989 seeking to implement the regional plan was defeated.

The current drought management plan of the district has a serious flaw providing that its measures cannot be implemented until the aquifer falls below a certain level and there have been several preceding months of abnormally low rainfall. Unfortunately, it is not implemented when aquifer levels are falling critically low due to overdrafting but rainfall has been normal. This flaw led to a crisis situation during the summer of 1990 when aquifer levels fell to a point where Comal Springs was threatened and the United States Fish and Wildlife Service indicated that it would soon take enforcement action under the federal Endangered Species Act if local or state officials failed to act. Finally, due to pressure from the Texas Water Commission, an Emergency Action Plan was adopted by the district and municipal and county governments throughout the five county region. Unfortunately, the district allowed the plan to expire in December 1990 and has failed to amend its drought management plan based upon lessons learned during the summer of 1990.

### 3. The Medina County Underground Water Conservation District

In November of 1989, voters approved the creation of countywide underground water conservation districts in Uvalde and Medina counties. However, an opinion by the Attorney General's Office questioned the legality of the procedures used to create these districts. Therefore, legislation was introduced in 1991 to validate the creation of these districts. Only the bill providing for the Medina County district passed.

The Medina County district has the same powers as those conferred upon a Chapter 52 district (see discussion above under "VI. c. 1."). Although the district has published proposed rules which require certain water conservation measures of users from the Edwards Aquifer in the district and imposes a general water duty of two acre-feet of water per irrigated acre, the district has not adopted any rules as of the date of this writing. Since, some would argue, the Edwards Aquifer should be managed as a whole and in a comprehensive and coordinated way in conjunction with related surface streams, it is difficult to understand how the creation of this single county district, or the creation of separate county districts, serves to address the pressing regional water management issues.

D. The Texas Water Commission.

1. §28.011 Texas Water Code.

There exists varying authority under provisions of the Texas Water Code and other state law for the Texas Water Commission to regulate underground water. Section 28.011 of the Code authorizes the TWC to "make and enforce rules and regulations for conserving, protecting, preserving, and distributing underground, subterranean, and percolating water" and "to do all things necessary" for those purposes. A recent Attorney General's opinion upheld the constitutional validity of this statute, reversing a 1941 attorney general opinion. Atty.Gen.Op. No. DM-54 (November 4, 1991). However, the recent opinion did not address the scope of permissible action under the statute.

After alleged political pressure from agricultural groups and in response to a letter from a state senator from West Texas, the Attorney General wrote in late March 1992 that he thought his recent opinion had been misinterpreted by the Texas Water Commission when the Commission stated it had sufficient authority under §28.011 to manage pumpage from the aquifer if a local resolution of the management dispute was not achieved. This ill-timed and confusing letter by the Attorney General had an immediate impact to the Commission's ability to apply pressure to the parties to reach a negotiated settlement. Soon after the letter was issued, the parties rejected the Commission's proposed settlement agreement which had been based upon extensive discussions with the parties.

Authority granted to the Commission by §28.011 could include the control of pumpage to prevent overdrafting and pollution by saltwater intrusion at the "bad water lines." The statute provides no specific authorization to protect fish and wildlife habitats by the maintenance of minimum springflows fed by an aquifer. However, the Commission may be precluded from taking any action under the statute which would be in conflict with state and federal law providing such protection.

2. Chapter 26 Texas Water Code.

Chapter 26 of the Texas Water Code authorizes the Commission to issue orders, make and enforce rules, and do all other necessary things for the protection of the water quality of all water above and below the surface of the land. Rules promulgated pursuant to this chapter may provide for the restriction of pumpage for this

purpose. Water quality rules requiring pollution abatement plans for any development over the aquifer to protect recharge features already exist under Chapter 313 of the rules of the Commission.

The primary water quality concern is that overdrafting of the aquifer itself may allow the intrusion of highly mineralized water from underground water adjacent to the underground river otherwise held in check because of the hydrostatic pressure of the aquifer. Additionally, reduction in springflows caused by diversions from the Edwards Aquifer will adversely affect the water quality, aquatic and wildlife habitat, and other instream uses of surface streams downstream of the underground stream as well as bays and estuaries. A decrease in the quantity of the water in a stream lessens its assimilative capacity for effluent discharges and other sources of pollution. If springflows fall below certain minimum levels, then the stream segments below the springs would be dominated by return flows from municipal and industrial discharges, along with an undetermined amount of contaminated runoff from adjacent urban and agricultural areas. The result would be pollutant overloading of these streams. The nonpoint source pollution, elevated nutrient concentrations, and increased ambient temperature would devastate the ecological character of the streams immediately below the springs as well as further downstream in the Guadalupe River Basin.

Finally, the direct hydrologic connection between the Edwards Aquifer and surface streams in the contributory watershed requires the careful management of diversions from and wastewater discharges to rivers which flow into and provide "recharge" to the aquifer. Such management is necessary to protect the water quality of the aquifer.

### 3. Chapter 11 Texas Water Code.

Under Texas law, all water that is below the surface of the land is presumed to be percolating groundwater, which is owned by the landowner, unless and until it is established that such water is in an underground stream or the underflow of a surface stream. See, e.g., Pecos County WCID No. 1 v. Williams, 271 S.W.2d 503, 506 (Tex. Civ. App. - El Paso 1954, writ ref'd n.r.e.); Texas Co. v. Burkett, 117 Tex, 16, 296 S.W. 273, 278 (1927); Bartley v. Sone, 527 S.W.2d 754, 760 (Tex. Civ. App. - San Antonio 1974, writ ref'd n.r.e.). Groundwater flowing in definite underground streams, however, is governed by surface water law and is subject to prior appropriation. Id. State water is subject to regulation by the Texas Water Commission in accordance with Chapter 11 Texas Water Code. Any authorization to divert and use state water is a right of use, and actual ownership of the water remains with the state, held in trust

for the public's benefit. South Texas Water Co. v. Bieri, 247 S.W. 2d 268 (Civ.App. 1952).

Texas caselaw provides that an underground stream is state water if it has the same characteristics of a surface watercourse. See, e.g., A.H. Denis, III, et al. v. Kickapoo Land Co., et al., 771 S.W.2d 235, 236-237 (Tex. App. - Austin 1989, writ denied). Those characteristics include a stream which has:

- Known and well-defined boundaries which contain the flow of the water;
- A known and well-defined source of water;
- A flow or movement of the water (i.e., current) in a known direction;
- A known destination for the flow of the water; and
- Is of sufficient volume or magnitude (e.i., utility.) to be put to beneficial use. See, e.g., Hoeffs v. Short, 273 S.W. 785, 787 (Tex. 1925); Pecos County WCID No. 1, supra, at 506.

Additional guidance may be obtained by other jurisdictions than Texas courts regarding the characteristics of underground streams. The Florida Supreme Court found, for example, that water flowing below the surface of the land is also an underground stream if it can support fish and other aquatic wildlife. Tampa Water Works Co. v. Cline, 37 Fla. 586, 588 (1896).

A large body of knowledge has been developed and accumulated over many years with regard to the physical characteristics and use of the Edwards Aquifer as well as its direct hydrologic interrelation with the surface waters of the Nueces, San Antonio, and Guadalupe River Basins. After thorough examination and consideration of all available studies, reports, and information, Commission staff concludes that the Edwards Aquifer exhibits all of the above characteristics of an underground river.

**a. Defined and Known Boundaries:**

The Edwards and Associated Limestones (Balcones Fault Zone) aquifer occurs as a narrow, arcuate band, 5-40 miles wide, which stretches 175 miles from a hydro-geologic division near Brackettville in Kinney County eastward through San Antonio and then northward through San Marcos

to a hydrogeologic divide near the city of Kyle in Hays County. This hydrogeologic divide, which serves as the northern-most boundary of the San Antonio segment of the aquifer, coincides approximately with the divide between the Colorado and Guadalupe River Basins. The aquifer occurs in the Balcones Fault Zone, which follows the same general east to northeast trend. The Aquifer is underlain by the relatively impermeable Upper Member of the Glen Rose Formation which serves as an aquitard. The aquifer dips to the south and southeast and occurs under artesian conditions where it is confined by the overlying Del Rio Clay. The aquifer is bounded to the north and northwest by the updip limit of its outcrop at the surface, which is its recharge zone. It is bounded to the south and southeast by the downdip limit of fresh water defined as 1,000 milligrams per liter of dissolved solids, known as the "bad water line".

The Edwards aquifer in this area possesses known and defined boundaries and the water in the aquifer is contained within a well defined subterranean zone with confinement above and below by aquitards and confined laterally by hydrologic barriers.

**b. Water Source:**

The Aquifer receives inflow primarily from surface water flowing in surface streams which cross the outcrop of the aquifer (i.e. its recharge zone) and lose a portion of their flow to the permeable rocks of the aquifer that are exposed at the surface. Approximately 80% of the Aquifer's recharge is from these surface stream losses. Approximately 5-6% of the recharge is from the deeper Glen Rose aquifer. The remainder of the recharge is from percolation and recharge to solution cavities in the interstream areas.

**c. Current and Direction of Flow:**

The hydrogeologic characteristics of the Edwards Aquifer makes this water resource unique in the State of Texas. Through its "recharge zone," the Edwards Aquifer captures and diverts flows of major surface streams in the upper portions of the Nueces and San Antonio River Basins. These surface streams provide approximately eighty percent of the "recharge" to the aquifer. Water "recharging" the aquifer continues to flow downgradient, generally moving west to east to northeast, through the confined and known

boundaries of the aquifer, eventually erupting at several springs.

**d. Destination:**

Water flowing through the aquifer once again flows in surface streams by emerging at several springs, including the Leona River Springs near Uvalde, San Antonio and San Pedro Springs in San Antonio, Comal Springs in New Braunfels, Hueco Springs in the Guadalupe River near New Braunfels, and San Marcos Springs in San Marcos. Water from these springs continues to flow in the Nueces, San Antonio, and Guadalupe River Basins and contribute to freshwater inflows for bays and estuaries along the Gulf of Mexico.

**e. Aquatic Habitat:**

The Edwards aquifer supports unique fish and other aquatic species and their habitat, both within the aquifer in the subsurface and through year-round discharge to the major natural springs. Records of the Guadalupe River drainage indicates the presence of 75 different species of fish occurring in the river basin. While there are many unique species found in the basin, three of the more prominent include the San Marcos gambusia, Fountain darter, and the Guadalupe bass. Approximately 40 species of aquatic plants have been reported to be found in the basin, including the endemic species Texas wild rice. The aquifer itself provides habitat for several rare and endangered species of blind salamanders and two species of blind catfish.

**f. Utility:**

The Edwards Aquifer is also "of sufficient magnitude and volume to be serviceable to the persons through or along whose land it flows." The Edwards Aquifer is of great economic importance both to the region that relies upon it and to the State of Texas. The Edwards Aquifer is the sole source of water supply for approximately 1.5 million citizens in the San Antonio region and supports a diverse regional economy that provides employment for approximately 700,000 to 800,000 Texans. Additionally, the Edwards Aquifer is important to the economies of the communities at and downstream of several springs fed by the aquifer. These springs include the State's two

largest natural springs at New Braunfels and San Marcos. These two springs sustain a significant tourist and recreational economy for these cities.

It is estimated that spring flow from Comal and San Marcos Springs alone provides 21 to 32 percent of the total annual flow, and up to 70% of the total flow during droughts, of the Guadalupe River at Victoria. Seventy to Eighty Thousand jobs exist in those counties that are supplied with water from the Guadalupe River below these springs. The economies of Hays and Comal counties and the counties downstream of the springs are clearly dependent on the Edwards Aquifer.

The Water Rights Adjudication Act (the "Act"), subchapter G, Chapter 11, Texas Water Code, provides, in part, that a person claiming a right to use state water must have filed with the Texas Water Commission a sworn claim or certified filing evidencing such use not later than September 1, 1969. The Act does not apply to certain domestic and livestock use. To be recognized, a claim had to be based on actual beneficial use for the period from 1963 to 1967. The use period was extended to 1970 for projects under construction at the time the Act was passed. Failure to file the required sworn statement "extinguishes and bars any claim of water rights." Any remaining state water not appropriated under the Act is available for appropriation with certain limitations through a permitting process administered by the Commission pursuant to subchapter D, Chapter 11, Texas Water Code. Such limitations include, but are not limited to, restrictions on the diversion and use of water for the protection of senior water rights, water quality, aquatic and wildlife habitat, instream uses, and bays and estuaries. Additionally, a water right is limited to that amount which can be beneficially used without waste for the authorized purpose but not to exceed the amount authorized.

Based upon the presumption that water contained in the Edwards Aquifer is percolating groundwater and, thus, private water, no known claims for the use of water from the Edwards Aquifer were filed under the Act. Consequently, no right to use State water from the Edwards Aquifer has been adjudicated. If found to be an underground stream and, thus, state water, the right to use water in the Edwards Aquifer is subject to appropriation by permit issued by the Commission, except for exempt domestic and livestock purposes, in accordance with §11.121 et seq. Texas Water Code. The Commission may reserve from appropriation all or a portion of the water rights vested in the State to satisfy the State's obligation to protect water quality, the public health, safety, and welfare,

aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose.

If water in the Edwards Aquifer is determined to be state water, Commission regulation of the use of the Edwards Aquifer would not be an unconstitutional taking of private water. Because waters of the Edwards Aquifer would be unappropriated State waters, constitutional provisions relating to the taking of private water would not apply. Tex. Const., art. XVI, §59; See, also, In re Adjudication of Water Rights of the Upper Guadalupe Segment, 642 S.W.2d 438 (Tex. 1982). Additionally, the regulation of the use of water from the Edwards Aquifer to protect water quality in accordance with Chapter 26 of the Texas Water Code is a valid exercise of the "police powers" of the State necessary to protect the public health, safety, and welfare. The Commission is not authorized to recognize any equitable rights to the use of State water based upon the erroneous presumption of percolating groundwater and historical use. The failure to previously assert State ownership of the Edwards Aquifer does not grant any right to an historical user of the Aquifer since the doctrine of laches does not apply to the State and a person may not adversely possess State property.

#### 4. Edwards Underground Water District Enabling Act.

As discussed above, Section 3 of the Edwards Underground Water District's enabling act provides that the District must develop, implement, and enforce a drought management plan "in order to minimize, as far as practicable, the drawdown of the water table or the reduction of artesian pressure and spring flow; to prevent waste; and to protect the groundwater resource from serious harm." The legislation requires the plan to contain objective standards for determining when drought conditions exist, specific drought management activities for the stages of drought, and requirements for reducing water use "in accordance with established priorities, which must include uses for essential human needs, agriculture, industrial, power, recreational, commercial, and other categories of use." If the District fails to timely adopt a plan in accordance with the statute, the the Texas Water Commission is authorized to develop and implement a plan.

The act also provides that a person can appeal the reasonableness and validity of a rule under the District's plan to the Texas Water Commission. Pursuant to TWC procedural rules contained in 31 Tex.Admin.Code §275.91 et seq. relating to such appeals, the definition of "person" with a right to appeal includes the TWC Executive Director and Public Interest Counsel. One may argue that

fatal weaknesses exist in the District's present plan and rules, including: triggering conditions tied to both aquifer level and rainfall; the absence of water conservation requirements; the unequal application of the rules; the inadequacy of the rules to achieve the statutory goals; and the irreconcilable conflict with federal laws for the protection of endangered species. All such weaknesses are designated grounds for appeal under Commission rules. The preamble for the adoption of these rules further provide that nothing in the rules shall be construed as a determination by the Commission that the District did timely develop a drought management plan that adequately meets all statutory requirements and, thus, constitutes a plan as contemplated by Section 3 of the enabling act.

#### 5. §11.202 Texas Water Code.

Finally, in response to the large amount of water being taken from the Edwards Aquifer by a catfish farm in southern Bexar County, the Texas Legislature amended Section 11.202 of the Code to provide a moratorium on the drilling of any new artesian well producing 5,000 gallons per hour or more in the southern portion of the Edwards Aquifer unless authorized by the Texas Water Commission. Such authorization may be granted if the applicant can demonstrate that only a beneficial use of the water will be made and no waste will occur. The Commission is authorized to delegate this regulatory power to a local district.

This prohibition does not apply to wells such as the catfish farm which were drilled and producing prior September 1, 1991. Additionally, the statute does not apply to wells drilled after December 31, 1993.

### VI. Litigation and Mediation Chronology

#### A. In Re: Adjudication of the Rights to Use Water from the Edwards Aquifer.

On June 19, 1989, the Guadalupe-Blanco River Authority (GBRA) filed suit in state district court in Hays County seeking a declaratory judgment regarding the ownership of the water in the Edwards Aquifer. Specifically, GBRA requested the court to declare that the waters in the Edwards Aquifer are contained in an underground stream and, thus, are owned by the State of Texas in trust for the benefit of the public. Such water would be subject to regulation as state water by the Texas Water Commission in conjunction with the Commission's ongoing regulation of the Guadalupe River and its other

tributaries. In its suit, GBRA claims that massive, unregulated pumping from the Edwards Aquifer is threatening to cause severe and irreparable harm to the Comal and San Marcos springs, the Guadalupe River Basin, the San Antonio Bay and Estuary, and the aquifer itself. GBRA further requested the court to make any water rights granted subject to conditions necessary to protect and maintain adequate and continuous flow of water from the Comal and San Marcos springs. A petition was filed by federal agencies who were named defendants in the suit to remove the matter to federal district court. The court denied the petition and an appeal was filed with the 5th Circuit Court of Appeals. On August 2, 1991, the appellate court upheld the federal district court action on other grounds and remanded the case back to state district court where the matter is presently pending.

In July of 1989, GBRA filed a notice of violations of the federal Endangered Species Act with the Secretary of the Department of the Interior. In its notice, GBRA claims that the pumping of the Edwards Aquifer is endangering the well-being of several endangered and one threatened species. These species live in the Comal Springs. If the pumping continues, the notice alleges, the spring flows will cease and the critical habitats of these species will be destroyed.

B. Special Joint Committee on the Edwards Aquifer.

During September of 1989, the Lieutenant Governor and the Speaker of the House approved a Proclamation which created the Special Joint Committee on the Edwards Aquifer. The Committee was assigned the responsibility to investigate issues concerning underground and associated surface water management in the region, with the hope that such "dispassionate review at the state level" might shed light on the controversy surrounding a proposed management plan for the region.

Although the Committee did not meet often following its creation until the summer of 1990, it did manage to appoint a Technical Advisory Panel (TAP) and request the TAP to examine all existing technical studies and reports regarding the aquifer and produce a report of its findings. The TAP, relying to a great extent on a model developed in the 1970s by the Texas Water Development Board and published in 1979 by the TWC's predecessor, the Texas Department of Water Resources (Report 239), presented its report to the Committee during February 1990. Included in the report was a discussion of the effects of limiting groundwater withdrawals to an amount less than average, annual recharge.

Since the TAP report was published, the TWC has developed a new model to allow more rapid comparison of different management schemes based upon aquifer level at the index well (J-17) in San Antonio (TWC Rep. LP91-08). The model can also determine approximate aquifer levels associated with springflow amounts and corresponding pumping limits. The TWDB has also undertaken to update and modify the Report 239 model.

C. TWC Mediation Efforts: John Birdwell.

During October of 1989, Texas Water Commission (TWC) Chairman Buck Wynne began looking into the possibility of TWC mediation between aquifer users of the dispute over the proper management of the Edwards Aquifer. The following month, newly-appointed Commissioner John Birdwell assumed the task of mediating the dispute. One reason the TWC decided to attempt mediation was because it was felt that this issue is better resolved at the local level by those who are directly affected, rather than by the courts, whether at the state or federal level. Additionally, it was felt that every opportunity should be explored to avoid costly litigation. It is estimated that litigation costs incurred in the state lawsuit may eventually reach anywhere from \$30 million to \$60 million over a period of several years, depending upon the court's determination of whether the Edwards Aquifer constitutes state water. In constructing his mediation strategy, Commissioner Birdwell determined that the Commission itself would not propose a plan, but would solicit ideas from representative users and then hopefully facilitate a consensus management plan that was fair to all parties. The agreed plan would then be presented to the legislature for possible enactment into law.

Commissioner Birdwell first contacted officials and members of the various user groups and asked whether they were interested in participating in the mediation. All groups responded affirmatively. Then each group was asked to choose representatives to participate in mediation. Initial meetings were held with individual user group representatives to ascertain the different positions and the potential for consensus. Later, meetings were held en masse in the form of mediation. An exhaustive series of meetings was held throughout the region from January to August 1990. Several proposal outlines were developed but none achieved total consensus.

The major unresolved issues include whether regional pumpage allocations would be imposed on the different users. San Antonio was willing to accept pumping limitations, but only if the western counties of Uvalde and Medina would also. Additionally, San Antonio made its acceptance of pumping limitations contingent upon some

sharing of the costs for San Antonio to develop alternative water supply sources (e.g., surface water reservoirs) by those users of the Guadalupe River who would benefit from continued springflow. San Antonio also stated that it would not agree to any limitation which would guarantee spring flow at Comal in time of drought. The agricultural users of the two western counties refused to consider any allocation or limitation on their pumpage. The Guadalupe River users were divided on the financial contribution requested by San Antonio, with GBRA being the leading, and perhaps only, dissenter. Other unresolved issues included water exportation and marketing and the amount of representation each user group would have on any regulatory entity established to implement the plan. Finally, aquifer users in Hays and Comal counties as well as Guadalupe River users wanted Texas Water Commission oversight to ensure implementation of a management plan. This proposal received a cold response from the other representatives.

In late Spring of 1990, the Sierra Club joined GBRA by also filing a notice of intent to file a lawsuit under the Endangered Species Act.

D. Emergency Action Plan.

During the early summer of 1990, aquifer levels became critically low, threatening spring flow at Comal. The drought management plan of the EUWD was not triggered despite the low levels since there had not been a period of abnormally low rainfall. The U. S. Fish and Wildlife Service, the agency responsible for enforcement of the federal Endangered Species Act, indicated that if conditions continued to worsen, it would have no choice but to intervene. The members of the Special Joint Committee on the Edwards Aquifer had not been able to address the management issues because of more pressing statewide legislative concerns regarding school financing and jail construction. The mediation efforts, although having made a great deal of progress, had not achieved consensus because of the remaining issues mentioned above.

In response to this critical situation, Commissioner Birdwell decided the time had come for the Commission to act, rather than mediate. In July of 1990, Commissioner Birdwell asked that the EUWD convene a meeting to consider adoption of an Emergency Action Plan (EAP) developed by Commission staff. The EAP provided that use reduction measures would be implemented in stages depending upon aquifer level. The EAP also provided requirements for reducing water use in accordance with established priorities of use. Additionally, cities within the district were required to submit to the EUWD for review and approval ordinances implementing the EAP. After lengthy debate, two sessions, and warnings from individual TWC

commissioners that the state agency would "rock and roll" if the EAP was not accepted by the EUWD, the EUWD finally adopted the Commission's plan. Then heavy rains fell during the following month, when the irrigation season had passed, and the aquifer began to recover. The EAP adopted by the EUWD provided it would expire December 31, 1990, subject to renewal. The EUWD did not renew the EAP nor has it amended its drought management plan to address the latter plan's many shortcomings.

E. Professional Mediation: John Folk-Williams.

During the Summer of 1990, the Special Joint Committee on the Edwards Aquifer began to meet regularly and hold hearings throughout the affected region. In early August, the co-chairperson of the Joint Committee, Sen. Cindy Krier (R-San Antonio), asked Commissioner Birdwell to step aside and proposed the employment of a professional mediator. In November 1990, the group decided upon John Folk-Williams of Western Network in Santa Fe, New Mexico. Mr. Folk-Williams was paid with Texas Water Development Board funds.

In December 1990, the staff of the Joint Committee prepared a report for committee adoption recommending a management plan for the entire region affected by the aquifer. The plan proposed the creation of the Edwards Aquifer Regional System responsible for the conjunctive management and development of water resources in the Edwards Aquifer, the Nueces, San Antonio, and Guadalupe rivers, and the associated bays and estuaries. The proposed management scheme would entail a two-tiered systems approach with a top tier of regional planners and a second tier of local managing subunits. The staff's report received very little support from the Committee members. The Committee decided against adopting the plan, but rather voted to simply present the staff's report to the legislature for its consideration. The Committee also voted that if the mediation by Mr. Folk-Williams resulted in agreement before the end of January, the Committee would recommend its enactment. However, if the mediation did not produce results by that time, the individual legislators were free to file their own proposed legislation.

F. 1991 Legislative Session.

The resolution creating the Joint Committee expired in mid-January 1991. Mr. Folk-Williams' mediation efforts were unsuccessful. The same issues left unresolved at the time Commissioner Birdwell's mediation was cut short still remained. Eighteen bills related to the Edwards Aquifer were filed and only one, validating the creation

of the Medina County Underground Water Conservation District, passed.

G. Sierra Club v. Lujan.

During the waning moments of the regular session, the Sierra Club filed suit on May 21, 1991, in the federal district court in Midland against the Secretary of the Department of the Interior and the U.S. Fish and Wildlife Service alleging failure to carry out the mandates of the Endangered Species Act. The Sierra Club complaint requests that the defendants be enjoined to restrict withdrawals from the Edwards Aquifer at any time the instantaneous springflow from the Comal Springs is less than 350 cubic feet per second. The suit also requests that the defendants be ordered to develop and implement a recovery plan for the endangered and threatened species found in the aquifer and the Comal Springs. Days later, the GBRA filed to intervene in the suit on the side of the Sierra Club.

On August 13, 1991, the defendants responded to the suit by denying that they had failed to protect endangered species by allowing uncontrolled pumping from the aquifer. The federal government also stated that the Midland court lacks jurisdiction over the case; the Sierra Club failed to include in the suit "all necessary and indispensable" parties; the Sierra Club lacks legal standing to pursue the suit; and the group failed to stipulate a claim for damages.

The federal district court in Midland heard several motions on December 20, 1991, relating to jurisdiction, party intervention, alignment, and contested issues. An evidentiary hearing was set to begin May 4, 1992.

H. The Catfish Farm.

During the late summer and early fall of 1991, the public concern over the massive withdrawals from the Edwards Aquifer by the Pucek catfish farm (Living Waters Artesian Springs, Ltd.) reached a climax. On August 13, 1991, the Commission requested an opinion from the Attorney General on the validity of a statute providing the Commission with regulatory authority over groundwater. Additionally, a lawsuit was filed in mid-October by the Edwards Underground Water District and the San Antonio River Authority to enjoin the catfish farm from discharging water from the facility until a determination had been made by the Commission and the EPA on whether the discharge required a wastewater discharge permit. Additionally, the suit alleged that the farm was wasting artesian water. By statute, the Commission joined the lawsuit as an indispensable party. By consent

decree, the catfish farm agreed not to make any further withdrawals until the permit question was resolved.

I. Attorney General Opinion on §28.011.

On November 3, 1991, the Attorney General issued his opinion finding valid the statute providing the Commission with groundwater regulatory authority. This opinion overturned an earlier opinion issued 40 years ago. The following day, the Commission stated in a news conference that the Commission would impose a management plan on the users of the Edwards Aquifer unless the local parties reached agreement on a plan within ninety days. The reason for the delay, the Commission stated, was the agency's policy that groundwater issues should be undertaken by the Commission through direct regulatory action only as a last resort and that a local resolution should be sought first.

J. Mayor Bruce Todd Mediation.

Shortly thereafter, the mayors of San Antonio and San Marcos approached Austin Mayor Bruce Todd and asked whether he would mediate the dispute and help the parties reach an agreement within the ninety days prescribed by the Commission. Todd agreed and the parties consented to participate in these negotiations. On February 5, 1992, Mayor Todd presented the Commission with a report of the status of his mediation efforts. Although the mediation group had agreed on many management concepts, no details had been worked out. Especially significant was the lack of agreement on what amount of protection was to be provided for Comal Springs. After receiving the report, Chairman Hall stated that he would meet with the parties individually during the following two weeks to obtain input on what the Commission's management plan should contain.

K. TWC Proposed Interim Management Plan

On February 18, 1992, the Commission published its concept paper providing a summary of its proposed interim management plan. In presenting the plan, Commission Chairman gave the local parties until mid-March 1992 to come up with its own plan or the Commission would take steps to impose its own.

According to the Commission's plan, overall pumpage from the aquifer would be reduced from an estimated current use of 538,000 acre-feet per year to 400,000 acre-feet in order to provide significant protection for springflows at Comal Springs and continuous

protection for San Marcos Springs. A regional water conservation and reuse plan would be implemented to achieve a cut in water use by 25 percent. San Antonio would accelerate its efforts to develop alternative water supplies.

The plan also called for immediate studies on the feasibility of supplementing springflows to protect endangered species and establishing a voluntary dry year option that would pay farmers not to pump. Additionally, the plan asked for Guadalupe River water users to help pay for the irrigation buy-outs and to comply with the same stringent water conservation measures that are proposed for the aquifer users since they would be the beneficiaries of the sustained springflows. Finally, the plan proposed the creation of a blue ribbon advisory council to draft a longterm regional water management plan by 1995. As one can see, many of the plans components included earlier management tools and goals provided in the regional plan developed by the Edwards Underground Water District and the City of San Antonio in 1988.

The Commission's plan came under attack from all sides. The farmers still disliked any allocation of use among types of users and criticized the voluntary dry year option as having devastating impacts on the agricultural community and associated businesses and activities.

The springflow interests criticized the plan as not providing enough protection for springflows should the worst drought of record occur again. This same criticism was expressed in a letter by the regional director of the U. S. Fish and Wildlife Service. The federal agency also criticized the plan for too much reliance on voluntary conservation and for not adequately controlling future uses.

San Antonio officials stated that the plan would mean higher taxes and water rates to pay farmers not to irrigate. San Antonio representatives also stated that the plan was too unclear on how the costs for implementing the water conservation and surface water development measures would be shared across the affected region.

#### L. TWC Proposed Settlement Agreement.

By mid-March 1992, no progress had been made by the local parties to come up with an agreed regional management plan for the aquifer. Therefore, on April 2, 1992, the Commission distributed for the parties' review and approval by April 14, 1992, a settlement agreement based upon the Commission's February 18, 1992, proposed interim management plan. Shortly before distributing the proposal,

the Attorney General wrote his letter stating he thought the Commission had misinterpreted his earlier opinion regarding the validity of §28.011 of the Texas Water Code. He wrote that the statute did not provide the Commission the authority to undertake the management of the aquifer. This curiously-timed letter had great impact on the Commission's ability to bring pressure to bear on the parties to reach a settlement. The proposed settlement agreement offered by the Commission was unanimously rejected.

M. TWC Adoption of Emergency Rules

On April 15, 1992, one day after the deadline to consider and approve the Commission's proposed settlement agreement, the Commission adopted rules on an emergency basis declaring the Edwards Aquifer to be an underground stream and, thus, state water subject to Commission regulation pursuant to Chapter 11 of the Texas Water Code. Although some action by the Commission was anticipated, most observers thought the Commission would act pursuant to §28.011, despite the recent confusing, seemingly contradictory, and perhaps politically motivated comments by the Attorney General.

Simultaneously with the adoption of the emergency rules, the Commission published proposed permanent rules providing the procedural steps necessary for a person to obtain state authorization to divert and use water from the Edwards Aquifer. The emergency rules placed a moratorium on new wells, provided interim authorization for all current users to continue using water for beneficial purposes without waste; and exempted from permitting small domestic and livestock uses.

The Commission also filed and obtained a continuance of the May 4, 1992, trial in the Sierra Club's endangered species lawsuit until August 10, 1992, so that the Commission could complete its rulemaking process. A second continuance for this purpose was requested and granted until October 26, 1992.

Almost immediately upon adoption of the emergency rules, the western irrigation interests sought and failed to obtain a temporary restraining order against the Commission. Additionally, the GBRA filed a motion in Travis County district court for a summary judgement determining the validity of the Commission's finding the Edwards Aquifer an underground stream and its authority to regulate use from the aquifer. Several more lawsuits against the Commission followed, including, but not limited to, those from the City of San Antonio, San Antonio businesses, industries and insurance companies, the Texas and Southwest Cattle Raisers Association, and the Texas Sheep and Goat Raisers Association. All lawsuits regarding the

validity of the Commission's actions are still pending at the time of this writing.

VII. The Next Step: Refocus on the Legislature.

The common conclusion by all the parties is that the current situation cannot continue. Most importantly, the litigation must stop, if for no other reason than the unproductive costs. Even if the Commission's action are invalidated and the federal lawsuit is dismissed, a serious problem remains. Current and foreseeable demands on the Edwards Aquifer will exceed its supply capability. If another severe drought occurs, endangered species will be destroyed.

After the Commission adopted its emergency rules, the San Antonio legislative delegation requested the Commission to delay putting into effect any permanent rules until the Legislature had been given an opportunity to act during the 1993 legislative session. The delegation did not want to see any unnecessary expense or confusion result should the Commission begin its permitting process only to have it undone by legislation or the courts. The Commission responded that it would proceed with the adoption of rules, but would delay the implementation of certain application requirements and permitting actions until the Legislature had a chance to address the issue. This cooperative agreement has renewed some hope that the Legislature will finally resolve the decades old dispute.

The Commission is in agreement with most parties that local management is best. Many are in agreement that a single regional district should be created and be given sufficient authority to develop and implement a comprehensive and coordinated regional water management plan which provides for the conjunctive management of the region's surface and ground water. Otherwise, legal rules that are out of touch with hydrologic reality will produce a nightmare for administrators and decisionmakers.

Legislation that attempts to finesse serious conflicts by delegating resolution to the discretion of the administrators only postpones the day of reckoning. An administrative agency must receive clear directions from the legislature and a regulatory approach works best in conjunction with incentive and assistance programs.

Arguably, the Commission is the only existing entity with the authority to develop and implement a comprehensive, coordinated regional water management plan. Some legislative initiatives have contemplated the elimination of Commission authority to regulate any subsurface water. Before doing this, however, the Legislature

should ensure that local districts with sufficient and mandatory powers and duties are created to resolve all pending issues. In the absence of a local district, the Legislature should provide greater protection to the individual right to withdraw groundwater by moving away from the free-for-all situation caused by the rule of capture and adopting a common law doctrine which gives the landowner the legal tools to protect his own property rights.

MJ:lgs

# Emergency Sections

An agency may adopt a new or amended section or repeal an existing section on an emergency basis if it determines that such action is necessary for the public health, safety, or welfare of this state. The section may become effective immediately upon filing with the *Texas Register*, or on a stated date less than 20 days after filing, for no more than 120 days. The emergency action is renewable once for no more than 60 days.

**Symbology in amended emergency sections.** New language added to an existing section is indicated by the use of **bold text**. [Brackets] indicate deletion of existing material within a section.

## TITLE 31. NATURAL RESOURCES AND CONSERVATION

### Part IX. Texas Water Commission

#### Chapter 298. Edwards Underground River

The Texas Water Commission (TWC) adopts on an emergency basis new Chapter 298, §§298.1-298.6, 298.11-298.13, and 298.41-298.43, concerning the finding that the Edwards Aquifer (Edwards Underground River) is an underground river and, thus, state water, and providing for the commission determination and administration of rights to the use of state water in the Edwards Underground River and the protection of the water quality of the Edwards Underground River and related surface streams pursuant to the Texas Water Code, Chapters 11 and 26, and other applicable law.

The physical characteristics and hydrogeology of the Balcones Fault Zone of the Edwards Aquifer making it an underground stream are unique in the State of Texas. No other aquifer in the state is known to have these characteristics. These rules apply only to the Edwards Aquifer located in Kinney, Uvalde, Medina, Atascosa, Bexar, and Comal Counties, and in Hays County south of the hydrogeologic division near Kyle.

The purpose of this emergency adoption is to provide interim authorization to current users of the state water diverted from the Edwards Underground River until permanent rules can be developed and adopted providing for commission determination and administration of rights to the use of this underground stream. These rules also provide that the commission may, by order, limit such interim authorization as necessary to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes. Finally, the rules provide for a moratorium on new diversions and use. The moratorium or restrictions on existing use, however, do not apply to exempt domestic and livestock uses.

Subchapter A: General Provisions, §§298.1-298.6, contains rules relating to: the finding of the Edwards Aquifer as an underground stream and, thus, state water; defining the boundaries of the underground river; and the definitions of terms used in the chapter.

Subchapter B: Interim Authorizations, §§298.11-298.13, contains rules providing

that those currently diverting water from the underground river are provided interim authorization by rule to continue beneficially using such water without waste and subject to certain limitations until the commission develops and adopts permanent rules for the determination and administration of the rights to divert and use state water from the Edwards Underground River. Such limitations include those necessary to protect the water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes.

Subchapter E: Regulation of Diversions-General, §§298.41-298.43, contains rules prohibiting the waste of water and providing that interim authorizations to divert and use water from the Edwards Underground River are subject to limitation, curtailment, and amendment for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes.

After a careful and thorough review and analysis of applicable law and available studies, reports, data, and other information, the commission finds that the Edwards Aquifer is an underground stream and, thus, state water subject to commission regulation pursuant to the Texas Water Code, Chapter 11.

Texas courts have followed the English common law doctrine of "absolute ownership" of percolating groundwater by the surface owner. This doctrine provides that the surface owner may withdraw such groundwater for use without limitation as long as it is for a beneficial purpose and is nonwasteful. Generally, a person withdrawing percolating groundwater bears no responsibility to neighboring owners for any harmful effects resulting from the withdrawal, i.e., no correlative rights exist among the groundwater users.

Under Texas law, all water below the surface of the land is presumed to be percolating groundwater, which is owned by the landowner, unless and until it is established that such water in an underground stream or is the underflow of a surface stream. Water flowing in definite underground streams, however, is governed by surface water law and is subject to prior appropriation.

Texas caselaw provides that an underground stream is state water if it has the same characteristics of a surface watercourse. Those characteristics include a stream which has a source of supply, defined boundaries, a directional flow or current, a destination, and is of sufficient volume to be serviceable to persons through and along whose land the stream flows (i.e., utility).

A large body of knowledge has been developed and accumulated over many years with regard to the hydrology, physical characteristics, and use of the Edwards Aquifer and its direct hydrologic connection to flow in surface streams in the Nueces, San Antonio, and Guadalupe River Basins. After lengthy study and examination of all available such studies, reports, and information, the commission finds that the Edwards Aquifer has all those characteristics of a watercourse.

The hydrogeologic characteristics of the Edwards Aquifer makes this water resource unique in the State of Texas. Through its "recharge zone," the Edwards Aquifer captures and diverts flows of major surface streams in the upper portions of the Nueces and San Antonio River Basins (the contributory watershed). Surface streams in the contributory watershed of the Edwards Aquifer provide approximately 80% of the "recharge" to the underground river. Thus, the Edwards Aquifer has a definite source of water.

The Edwards Aquifer also has a directional flow or current, defined boundaries, and a definite destination. Water "recharging" the underground river continues to flow downgradient, generally moving west to east to northeast, through the confined and known boundaries of the aquifer, eventually erupting at several springs, including the Leona Springs, the San Pedro Springs, the San Antonio Springs, the Comal Springs, and the San Marcos Springs. Water from these springs continues to flow in the Nueces, San Antonio, and Guadalupe River Basins (the catchment area), and contribute to freshwater inflows for bays and estuaries along the Gulf of Mexico.

The Edwards Aquifer also has great utility. It is of great economic importance both to the region that relies upon it and to the State of Texas. The Edwards Aquifer is the sole source of water supply for approximately 1.5 million citizens in the San Antonio region and supports a diverse regional economy that provides employment for approximately 700,000 to 800,000 Texans. Additionally, the Edwards Aquifer is important to the economies of the communities at and downstream of several springs fed by this underground river. These springs include the state's two largest natural springs at New Braunfels and San Marcos. These two springs sustain a significant tourist and recreational economy for these cities.

It is estimated that spring flow from Comal and San Marcos Springs alone provides 21 to 32% of the total annual flow of the Guadalupe River at Victoria. Between 70,000 and 80,000 jobs exist in those counties that are supplied

with water from the Guadalupe River below these springs. The economies of Hays and Comal Counties and the counties downstream of the springs are clearly dependent on the Edwards Aquifer. This underground river is truly the lifeline of 15 Texas counties.

Like a surface stream, the Edwards Aquifer also supports fish and other aquatic life, both within the aquifer in the subsurface and through year-round discharge to the major natural springs. Some of these aquatic species are federally listed as threatened or endangered species.

The use of the waters in the Edwards Underground River and related surface streams also has a direct impact on the water quality of these surface streams. The direct hydrologic connection between the Edwards Underground River and surface streams providing 'recharge' to the underground stream requires the careful management of diversions from, and wastewater discharges to, these surface streams in order to protect the water quality of the underground stream. Additionally, reduction in springflows caused by diversions from the Edwards Underground River and/or insufficient 'recharge' adversely affects the water quality, aquatic and wildlife habitat, and other instream uses of streams downstream of the underground stream as well as bays and estuaries. A decrease in the quantity of the water in a stream lessens its assimilative capacity for effluent discharges and other sources of pollution. If springflows fall below certain minimum levels, then the stream segments below the springs would be dominated by return flows from municipal and industrial discharges, along with an undetermined amount of contaminated runoff from adjacent urban and agricultural areas. The result would be pollutant overloading of these streams. The nonpoint source pollution, elevated nutrient concentrations, and increased ambient temperature would devastate the ecological character of the streams immediately below the springs as well as further downstream in the Guadalupe River Basin. Finally, overdrafting of the aquifer itself may allow the intrusion of highly mineralized water from underground water adjacent to the underground river otherwise held in check because of the hydrostatic pressure of the aquifer.

Despite the great economic and environmental significance of this underground river to the region and to the state, there exists no comprehensive management plan for the underground river. This inaction in the face of growing and unchecked demand on the Edwards Underground River has led to an emergency situation creating an imminent peril to the public health, safety, and welfare. The uncertainty over a person's right to use state water from the Edwards Underground River makes it difficult to provide for the immediate and long-term water supply needs of the region; discourages business investment and economic growth; and clouds title to property. Additionally, it is necessary that emergency action be taken to prevent speculative and unregulated drilling of wells, resulting in the harmful overdraft of the Edwards Aquifer which would cause adverse impacts to water quality, the public health, safety, and welfare, aquatic and wildlife habitat, other instream

uses, and bays and estuaries prior to the notice and adoption of permanent rules. Because the Edwards Underground River is state water, it is imperative to provide immediate authorization to current beneficial use to lawfully provide for the public's water supply needs until a final determination can be made with respect to the use of this underground stream.

Almost four decades of negotiations among the affected parties have failed to yield a resolution of the dispute regarding the proper management of the Edwards Aquifer. Proposed legislation seeking to address this issue has been repeatedly defeated. For the past three years, exhaustive and earnest efforts were made by the commission to bring about a local resolution of the dispute. The commission presented to the parties a fair and equitable settlement agreement based upon extensive discussions with the parties for their approval by April 14, 1992. The agreement was rejected.

The dispute is the subject of costly and protracted litigation in both the state and federal courts and the latter may result in the federal takeover of one of the state's most vital natural resources. The oppressive heat and decrease in rainfall which occurs during the summer months is almost here and the heavy irrigation season has begun. Levels in the underground stream dropped from record highs in 1987 to critically low levels in less than two years. If the region experiences another hot, dry summer like the summer of 1990, flows in the underground stream could drop to a level where springflows cease, thereby adversely affecting surface water quality and endangered species. Trial is set to begin in federal court on May 4, 1992, to determine whether the unregulated usage of the Edwards Underground River which will cause springflows to fall below minimum levels is a violation of the federal Endangered Species Act. Unless significant protection is provided for the maintenance of minimum springflows, it is likely that the federal government will implement its own regulatory scheme.

Soon after the adoption of these emergency sections, the commission will submit to the *Texas Register* for notice and public comment permanent rules finding the Edwards Aquifer to be state water and providing for commission determination and administration of water rights to this underground stream. These rules would also provide for the establishment of an advisory council and the development and implementation of a comprehensive, long-term, regional water management plan. A hearing will be held by the commission to receive public comment relating to the proposed sections, including the determination that the Edwards Aquifer is an underground stream and state water.

#### Subchapter A. General Provisions

##### • 31 TAC §§298.1-298.6

The new sections are adopted on an emergency basis under the Texas Water Code, §§5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt

rules necessary for the performance of its duties and responsibilities in accordance with the Texas Water Code and other state law. These rules are adopted on an emergency basis pursuant to the Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-12b, §5(d).

**§298.1. Purpose.** The purpose of this chapter is to provide interim authorization to current users of state water diverted from the Edwards Underground River until permanent rules can be developed and adopted providing for commission determination and administration of rights to divert and use water from the Edwards Underground River. Additionally, the purpose of these rules is to provide that the commission may limit such interim authorization as necessary to protect water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes. During the consideration of the adoption of permanent rules, the commission will hold a public hearing and receive public comment with regard to the proposed rules, including the commission's determination based upon available studies and information that the Edwards Aquifer is an underground stream and, thus, state water.

##### §298.2. Edwards Aquifer is State Water.

(a) The Edwards Aquifer is an underground stream and water contained therein is state water subject to commission regulation in accordance with the Texas Water Code, Chapter 11 and all other applicable law and rules of the commission relating to the commission's authority over water rights, including the issuance of water rights, water rights adjudication, cancellation of water rights, and the enforcement of water rights.

(b) No known claims of riparian water rights, claims under the Texas Water Code, §11.143, claims of water rights under the Irrigation Acts of 1889 and 1895, or any other claims of water rights to the diversion and use of the Edwards Underground River were filed pursuant to the Water Rights Adjudication Act, the Texas Water Code, §§11.301 *et seq.* Consequently, no right to use state water from the Edwards Underground River has been adjudicated and, thus, water in the underground river is subject to appropriation by permit issued by the commission, except for exempt domestic and livestock purposes, in accordance with the Texas Water Code, §§11.121 *et seq.*

(c) Any authorization to divert and use state water is a right of use, and actual ownership of the water remains with the state, held in trust for the public's benefit. The commission may reserve from appropriation all or a portion of the water rights vested in the state and superior to any right

of use to satisfy the state's obligation to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose. Any dedication of springflows by such reservation for public purposes is not subject to diversion or appropriation by any holder of a water right granted by the state.

(d) The designation of the Edwards Aquifer as an underground stream is for the purposes provided in this section and shall not affect rules of the commission providing for the protection of the water quality of an aquifer designated as a sole or principal source aquifer as provided by 40 Code of Federal Regulations (CFR) Part 149, pursuant to the Safe Drinking Water Act, §1424(e), 42 United States Code 300h-3(e).

**§298.3. Applicability to Southern Portion of the Edwards Aquifer.** The rules contained in this chapter specifically apply to that portion of the Edwards Aquifer described by §298.5 of this title (relating to Effect of Invalidity of Rule) and located in Kinney County east of the hydrologic division near Brackettville which separates flow in the Nueces River Basin from flow to the Rio Grande Basin, and in Uvalde, Medina, Atascosa, Bexar, Guadalupe, and Comal Counties and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin. These rules are not intended to be applied to any other aquifer in the State of Texas.

**§298.4. Boundaries of the Edwards Underground River.**

(a) The lateral boundaries of the Edwards Underground River, as used in this chapter, are: on the north and northwest, the updip limit of the outcrop of the Edwards and Associated Limestones; on the south, the line known as the bad-water line which separates water containing less than 1,000 milligrams per liter of total dissolved solids from water containing more than this concentration of total dissolved solids; on the west, the hydrologic division near Brackettville in Kinney County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Rio Grande Basin; on the east, the hydrologic division northeast of Kyle in Hays County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Colorado River Basin.

(b) The lateral boundaries of the Edwards Underground River are those boundaries of "Subdivision No. One of the Underground Water Reservoir in the Edwards Limestone Balcones Escarpment Area" defined by the Board of Water Engi-

neers of the State of Texas, a predecessor of the Texas Water Commission, by Order dated January 10, 1957, as modified by the Texas Water Commission by Order dated April 18, 1988, and incorporated in this rule by reference. These orders are available for inspection at the office of the chief clerk of the commission in Austin, during the commission's regular business hours.

**§298.5. Effect of Invalidity of Rule.** If any provision of any rule or its application to any person or circumstances is held invalid, the invalidity does not affect other provisions or applications of the rule which can be given effect without the invalid provision or application, and to this end the provisions of the rule are severable.

**§298.6. Definitions.** The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise. Except as otherwise provided in this section, the definitions provided by §297.1 of this title (relating to Definitions) apply to this chapter.

**Authorized well**—A well which diverts water from the Edwards Underground River for which interim authorization was granted pursuant to this chapter, or that is exempt for domestic and livestock purposes.

**Beneficial use**—The use of only that amount of water which is reasonable and necessary for a purpose authorized by law, when reasonable intelligence and reasonable diligence are used in applying the water to that purpose. Water which is wasted, lost, or inefficiently used because of, but not limited to, inefficient diversion works or distribution systems, excessive applications or per capita use, excessive or unnecessary evaporation, transpiration or seepage, the discharge or escape of water from a well into a surface stream or reservoir for no authorized beneficial purpose, or by pollution is not beneficially used.

**Commission**—The Texas Water Commission and any successor agency.

**Conservation**—

(A) The development of other water resources that reduce the demand for water from the Edwards Aquifer;

(B) Those best management practices, techniques, and technologies that will reduce the consumption of water, eliminate the loss or waste of water, maximize the efficiency in the use of water, prevent the pollution of water, and maximize the recycling and reuse of water so that the demand for water from the Edwards Aquifer is reduced;

(C) Those measures that seek to make a water supply available for future or alternative uses to the greatest extent practicable for the benefit of the environment and the public health, safety, and welfare; and

(D) any other measure that would sustain or enhance the water supply to provide for future long-term needs.

**Diversion of water**—Any act or failure to act that results in the taking of water from the Edwards Aquifer by or through manmade facilities including the pumping of wells or allowing waters to flow from artesian or other type wells.

**Domestic use**—Use of water by an individual or a household for drinking, washing, or culinary purposes; for irrigation of lawns, or of a family garden and/or orchard when the produce is not sold; for watering of domestic animals; and for water recreation for which no consideration is given or received. If the water is diverted, it must be diverted solely through the efforts of the user.

**Edwards Aquifer or aquifer**—That portion of an arcuate belt of porous, waterbearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Atascosa, Bexar, and Comal Counties, and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, and Edwards Formation, the Georgetown Formation, and the Walnut Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation and underlie the less-permeable Del Rio Clay regionally.

**Edwards underground river or underground river**—The Edwards Aquifer as defined by this section and the boundaries of which are provided by §298.5 of this title (relating to Effect of Invalidity of Rule).

**Existing user**—A person that has diverted and beneficially used water from the Edwards Underground River on or before April 15, 1992.

**Instream uses**—The use of water for the protection of water quality, the maintenance of aquatic and wildlife habitat, navigation, recreation, and bays and estuaries.

**Livestock use**—The use of water for the open-range watering of livestock connected with farming, ranching, or dairy enterprises.

**New well**—A well, the drilling of which, was commenced on or after April 15, 1992.

**Overdrafting**—The average long-term depletion of the aquifer in excess of the average long-term recharge of the aquifer necessary to sustain appropriate rights and environmental needs. Overdrafting also occurs when overall aquifer withdrawal is in balance with recharge but locally excessive withdrawals are causing adverse impacts, including, but not limited to, degradation of water quality.

**Pollution**—The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to public health, safety, or welfare, or impairs the usefulness of the public enjoyment of the waters for any lawful or reasonable purpose.

**Producing well**—A well capable of producing water from the Edwards Aquifer without modification or the placement of additional equipment and which has produced water for a beneficial purpose prior to April 15, 1992.

**Replacement well**—A well that is drilled to replace an existing well and where the existing well that is being replaced is permanently closed.

**Reuse**—The use for one or more purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

**Waste**—The diversion of water from the Edwards Aquifer if the water diverted is not used for a beneficial purpose; the unreasonable loss of water through faulty design or negligent operation of a well or a water delivery or application system; the use of quantities of water in an amount in excess of the amount reasonably necessary to beneficially use the water for an authorized purpose; or the diversion of water from the aquifer at a rate, in an amount, or in any manner that causes or threatens to cause pollution of the aquifer by the intrusion of water or contaminants detrimental to any beneficial purpose, or adversely impacts surface water quality.

**Well**—A bored, drilled, or driven shaft, or an artificial opening in the ground made by digging, jetting, or some other method, where the depth of the well is greater than its largest surface dimension, but not including any surface pit, surface excavation, or natural depression.

Issued in Austin, Texas, on April 15, 1992.

TRD-9205308 Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

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For further information, please call: (512) 463-8069

## Subchapter B. Interim Authorization

### • 31 TAC §§298.11-298.13

The new sections are adopted on an emergency basis under the Texas Water Code, §§5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary for the performance of its duties and responsibilities in accordance with the Texas Water Code and other state law. These rules are adopted on an emergency basis pursuant to the Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-12b, §5(d).

#### §298.11. *Exemption for Domestic and Livestock Use.*

(a) Without limitation or prohibition as provided by §§298.12, 298.13, 298.42, and 298.43 of this title (relating to Interim Authorizations Pending Disposition of Permit Applications; Moratorium on New Authorizations; Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes; and Emergencies), a person may construct on that person's own property a well for the diversion of water from the Edwards Underground River and beneficially use such water without waste for domestic and livestock purposes only.

(b) A person may use water for domestic and livestock purposes pursuant to this section only on property owned by that person and may not transport the water off that person's property.

(c) The exemption provided by this section does not apply where the flows of one well are combined with flows from any other well prior to the use of the water.

#### §298.12. *Interim Authorization Pending Disposition of Permit Applications.*

(a) A person owning a producing well which diverts water from the Edwards Underground River, other than a domestic and livestock well that is exempt under §298.11 of this title (relating to Exemption for Domestic and Livestock Use), may continue to divert water from the underground river by using that well in accordance with the terms of this section.

(b) All interim authorizations granted by this section, and all diversions made pursuant to these authorizations, are subject to limitation, curtailment, and amendment to prevent waste, achieve water conservation, and to maintain and protect adequate springflows from the Comal and San Marcos Springs for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries as set

forth in Subchapter E of this chapter (relating to Regulation of Diversions-General).

#### §298.13. *Moratorium on New Authorizations.*

(a) A person may not drill a new well or divert water from the Edwards Underground River by using a well not a producing well except as authorized by the commission.

(b) Subsection (a) of this section shall not apply to a replacement well if:

(1) the amount, rate, volume, purpose of use, and any other requirement applicable to the well replaced is met by the operation of the replacement well; and

(2) the executive director is notified by the owner of the wells at least 48 hours prior to the commencement of the drilling of the replacement well.

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Director, Legal Division  
Texas Water Commission

Effective date: April 15, 1992

Expiration date: August 13, 1992

For further information, please call: (512) 463-8069

## Subchapter E. Regulation of Diversions-General

### • 31 TAC §§298.41-298.43

The new sections are adopted on an emergency basis under the Texas Water Code, §§5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary for the performance of its duties and responsibilities in accordance with the Texas Water Code and other state law. These rules are adopted on an emergency basis pursuant to the Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-12b, §5(d).

#### §298.41. *Waste Prohibited.*

(a) The waste of water is prohibited.

(b) No person may divert, supply, use, or reuse any water from the Edwards Aquifer, or supply, use, or reuse any water from other sources that reduces the demand for water from the Edwards Underground River, in excess of the amount of water needed for beneficial use for the intended purpose or purposes of use.

#### §298.42. *Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes.*

(a) All authorized diversions of water from the Edwards Underground River are subject to limitation, curtailment, and amendment as may be ordered by the commission from time to time in order to protect the water quality of the Edwards Underground River, the health, safety, and welfare of the people who divert and/or use water from the Edwards Underground River, and to water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose, and to maintain compliance with applicable law.

(b) Each person diverting water from the Edwards Underground River shall limit and curtail such diversions as may be ordered by the commission from time to time to effectuate the purposes of this chapter.

*§298.43. Emergencies.*

(a) The commission may declare an emergency when the level of the Edwards Aquifer drops to a level where adverse impacts are occurring or may soon occur to water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, or bays and estuaries.

(b) Upon the declaration of an emergency, the commission may by order impose additional requirements and restrictions upon the diversion, supply, use, or reuse of water from the Edwards Underground River to the extent that it determines such requirements and restrictions are justified, taking into consideration all relevant issues including, without limitation, public health and safety and the economic well-being of the region and the state.

(c) In making any determination under subsections (a) and (b) of this section,

the commission shall, to the extent practicable, seek public comment from all affected persons.

(d) The executive director shall notify the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service immediately upon the declaration of an emergency pursuant to this section and shall inform these agencies of any commission actions in response to the emergency.

Issued in Austin, Texas, on April 15, 1992.

TRD-9205310

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Effective date: April 15, 1992

Expiration date: August 13, 1992

For further information, please call: (512) 463-8069



## Control of Hydrogen Sulfide

### • 31 TAC §112.31

The Texas Air Control Board (TACB) proposes an amendment to §112.31, concerning allowable emissions-residential, business, or, commercial property. The amendment lowers the existing allowable downwind concentration of hydrogen sulfide to a level consistent with the odor threshold of hydrogen sulfide.

Lane Hartsock, deputy director of air quality planning, has determined that for the first five-year period the section is in effect, the fiscal implications for state and local units of government as a result of enforcing the section would be minor expenses of record review and enforcement.

Mr. Hartsock also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be reduced emissions and odor nuisances. There are no anticipated costs to small businesses or persons as a result of administering the section as proposed.

A public hearing on this proposal will be held at 6 p.m. on May 21, 1992, in the City of Houston Pollution Control Building Auditorium located at 7411 Park Place Boulevard, Houston. A second hearing will be held at 11 a.m. on May 22, 1992, at the John Gray Institute, 855 Florida Avenue, Beaumont.

The hearings are structured for the receipt of oral and written comments by interested persons. Interrogation or cross-examination is not permitted, however, the TACB staff will discuss the proposal at 5:30 p.m., before the Houston hearing, and at 10:30 a.m., before the Beaumont hearing, and will be available to answer questions. Written comments not presented at the hearings may be submitted to the TACB central office in Austin through May 25, 1992. Material received by the Regulation Development Division by 4 p.m. on that date will be considered by the board prior to any final action on the proposed section. Copies of the proposal are available at the central office of the TACB, Air Quality Planning Annex, located at 12118 North IH35, Austin, Texas 78753, and at all TACB regional offices. For further information, contact Mr. Robert B. Cameron at (512) 908-1495.

The amendment is proposed under the Texas Clean Air Act (TCAA), §382.017, Texas Health and Safety Code (Vernon 1990), which provides the TACB with the authority to adopt rules consistent with the policy and purposes of the TCAA.

**§112.31. Allowable Emissions-Residential, Business, or Commercial Property.** No person may cause, suffer, allow, or permit emissions of hydrogen sulfide from a source or sources operated on a property or multiple sources operated on contiguous properties to exceed a net ground level concentration of 0.01 [0.08] parts per mil-

lion averaged over any 30-minute period if the downwind concentration of hydrogen sulfide affects a property used for residential, business, or commercial purposes.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 17, 1992.

TRD-9205475

Lane Hartsock  
Deputy Director, Air Quality  
Planning  
Texas Air Control Board

Proposed date of adoption: July 17, 1992

For further information, please call: (512) 908-1451

## Part IX. Texas Water Commission

### Chapter 298. Edwards Underground River

The Texas Water Commission (TWC) proposes new Chapter 298, §§298.1-298.7, 298.11-298.20, 298.21-298.23, 298.31, 298.32, 298.41, 298.42, 298.51, 298.61, and 298.71, concerning the commission determination and administration of rights to the use of state water in the Edwards Underground River (Edwards Aquifer) and the protection of the water quality of the Edwards Underground River and related surface streams pursuant to the Texas Water Code, Chapters 11 and 26, and other applicable law.

Subchapter A: General Provisions, §§298.1-298.7, contains rules relating to: the finding of the Edwards Aquifer as an underground stream and, thus, state water; defining the boundaries of the underground river; the applicability of existing commission rules to the underground river; and the definitions of terms used in the chapter.

Subchapter B: Permits and Other Authorizations, §§298.11-298.20, contains rules providing that, except for certain exempt domestic and livestock uses, all users of the Edwards Underground River must obtain commission authorization for the diversion and use of water. Those currently diverting water from the underground river and who can demonstrate a historical record of actual beneficial use prior to April 15, 1992, the effective date of related emergency rules, are provided interim authorization by rule to continue beneficially using such water without waste and subject to certain limitations until a final determination is made on their permit applications. Such limitations include those necessary to protect the water quality, public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and other public purposes. Interim authorization will be granted only to those persons who submit an application, declaration of historical use, and water conservation and reuse plan on or be-

fore September 1, 1992. A moratorium will be imposed on the commission review and action on applications by persons not qualifying for interim authorization until final action is taken on those applications submitted on or before September 1, 1992, and accompanied by a declaration of historical use and a water conservation and reuse plan. The moratorium is necessary until historical claims can be evaluated and a determination is made on the availability of unappropriated water for new uses.

Subchapter C: Conveyances, §§298.21-298.23, contains rules providing for the approval and notification of contractual sales of water and the transfer and sale of water rights to the Edwards Underground River. The proposed subchapter also contains a rule relating to the application by a city or town to acquire an appropriation from a water right holder without compensation pursuant to the Wagstaff Act, the Texas Water Code, §11.028.

Subchapter D: Water Use Measurement and Reporting, §298.31 and §298.32, contains rules requiring that all wells, except those used for exempt domestic and livestock purposes, must be equipped with a measuring device or, subject to approval by the executive director, some other equally accurate means of measuring the amount of water diverted must be provided. The proposed subchapter also contains a rule requiring annual use reports to be submitted to the commission.

Subchapter E: Regulation of Diversions-General, §298.41 and §298.42, contains rules prohibiting the waste of water and providing that all authorizations to divert and use water from the Edwards Underground River are subject to limitation, curtailment, and amendment for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries.

Subchapter F: Regulation of Diversions-Emergency, §298.51, contains rules providing that any authorization to divert and use water from the Edwards Underground River may be subject to limitation by order of the commission upon declaration of an emergency in order to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries, and other public purposes as well as maintain compliance with applicable law.

Subchapter G: Local Government, §298.61, provides for the involvement of affected local governmental entities in the presentation of comments and recommendations to the commission regarding the regulation of the Edwards Underground River. The proposed subchapter also provides for the possible creation of a separate water division for the Edwards Underground River and the appointment of a local regulatory entity with sufficient jurisdiction and authority to act as the watermaster for the Edwards Underground River, unless prohibited by law.

Subchapter H: Permanent Resources Plan, §298.71, creates the South-Central Texas Water Resources Advisory Council for the purpose of developing a long-range regional water management plan for review and action by the commission.

Norma Nance, director of budget, planning and evaluation, has determined that for the first five-year period the sections are in effect there will be fiscal implications as a result of enforcing or administering the sections. The effect on state government will be an increase in revenue of approximately \$350,000 in fiscal year 1992 and \$15,000 in each of the fiscal years 1993-1996. Cost to state government will increase by \$150,000 in fiscal years 1992 and 1993 and \$50,000 in fiscal years 1994-1996. The effects on local governments making application for water rights will be equal to the effects on any other applicant. The effect on applicants will be represented by the costs of making application, paying application fees, development of water conservation plans, and installation of required metering devices. Costs per applicant are anticipated to vary between \$200 and \$30,000 depending on the number of wells to be permitted, the scope of conservation plans, and whether measuring devices are currently in place. Generally, any costs attributable to the regulation of the appropriation or diversion of state waters under the Water Code, Chapter 11 would be applicable to permittees subject to these sections and to the same extent as all other permittees statewide. The costs to small businesses making application would be the same as other businesses and would vary according to the same factors.

Nance also has determined that for each year of the first five years the sections are in effect the public benefit anticipated as a result of enforcing the sections will be improvement in: the protection of the quality and quantity of the water resources of the state, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and freshwater inflows to bays and estuaries. Most diversions for livestock or domestic uses are exempt from the permit requirements under these sections. There is no anticipated economic cost to persons required to comply with these sections, except for those subject to the requirement to make application for the use of state water.

Comments on the proposal may be submitted to Mark Jordan, Assistant Director, Legal Division, Texas Water Commission, P.O. Box 13087, Austin, Texas 78711-3087, (512) 463-8069, for 45 days following the date of publication. Additionally, a public hearing will be held on the 26th day of May 1992, to receive public comment on the proposed sections. The commission will notify all interested persons of the time and location of this hearing by publication in the *Texas Register* prior to May 25, 1992. Public comment may be submitted in either oral or written form and may contain studies, reports, computer models, data, and other information relating to the proposed rules, including the determination of the Edwards Aquifer as an underground stream and, thus, state water.

## Subchapter A. General Provisions

### • 31 TAC §§298.1-298.7

The new sections are proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

**§298.1. Purpose.** The purpose of this chapter is to provide for the determination and administration by the commission of the rights to divert and use state water from the Edwards Underground River (Edwards Aquifer) and for the protection of the water quality, of the Edwards Underground River and related surface streams, and the protection of the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries in accordance with the Texas Water Code, Chapters 11 and 26 and other applicable state law and rules of the commission.

#### **§298.2. Edwards Aquifer is State Water.**

(a) The Edwards Aquifer (Edwards Underground River) is an underground stream and water contained therein is state water subject to commission regulation in accordance with the Texas Water Code, Chapter 11 and all other applicable law and rules of the commission relating to the commission's authority over water rights, including the issuance of water rights, water rights adjudication, cancellation of water rights, and the enforcement of water rights.

(b) No known claims of riparian water rights, claims under the Texas Water Code, §11.143, claims of water rights under the Irrigation Acts of 1889 and 1895, or any other claims of water rights to the diversion and use of the Edwards Underground River were filed pursuant to the Water Rights Adjudication Act, the Texas Water Code, §11.301 et seq. Consequently, no right to use state water from the Edwards Underground River has been adjudicated and, thus, water in the underground river is subject to appropriation by permit issued by the commission, except for exempt domestic and livestock purposes, in accordance with the Texas Water Code, §11.121 et seq.

(c) Any authorization to divert and use state water is a right of use, and actual ownership of the water remains with the state, held in trust for the public's benefit. The commission may reserve from appropriation all or a portion of the water rights vested in the state and superior to any right of use to satisfy the state's obligation to protect water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose. Any dedica-

tion of springflows by such reservation for public purposes is not subject to diversion or appropriation by any holder of a water right granted by the state.

(d) The designation of the Edwards Aquifer as an underground stream is for the purposes provided in this section and shall not affect rules of the commission providing for the protection of the water quality of an aquifer designated as a sole or principal source aquifer as provided by 40 Code of Federal Regulation (CFR), Part 149, pursuant to the Safe Drinking Water Act, §1424(e), 42 United States Code 300h-3(e).

**§298.3. Applicability of Commission Rules.** Except as specifically provided otherwise by this chapter, all commission rules relating to the application for, and granting and enforcement of, permits for the diversion and use of state water including, but not limited to, Chapters 281, 295, 297, and 337 of this title (relating to Applications processing; Water Rights, Procedural; Water Rights, Substantive; and Enforcement), shall apply to the diversion and use of water from the Edwards Underground River. A provision contained in this chapter supersedes a rule outside this chapter to the extent of any conflict. A conflict exists only if the substance of the rule in this chapter and any related provision is irreconcilable with the substance of a rule outside this chapter.

**§298.4. Applicability of Rules to Southern Portion of the Edwards Aquifer.** The rules contained in this chapter specifically apply to that portion of the Edwards Aquifer described by §298.5 of this title (relating to Boundaries of the Edwards Underground River) and located in Kinney County east of the hydrologic division near Brackettville which separates flow in the Nueces River Basin from flow to the Rio Grande Basin, and in Uvalde, Medina, Atascosa, Bexar, Guadalupe, and Comal Counties and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin. These rules are not intended to be applied to any other aquifer in the State of Texas.

#### **§298.5. Boundaries of the Edwards Underground River.**

(a) The lateral boundaries of the Edwards Underground River, as used in this chapter, are: on the north and northwest, the updip limit of the outcrop of the Edwards and Associated Limestones; on the south, the line known as the bad-water line which separates water containing less than 1,000 milligrams per liter of total dissolved solids from water containing more than this concentration of total dissolved solids; on the

west, the hydrologic division near Brackettville in Kinney County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Rio Grande Basin; on the east, the hydrologic division northeast of Kyle in Hays County that separates underground flow toward the Comal and San Marcos Springs from underground flow to the Colorado River Basin. The Edwards Underground River is underlain by the Upper Member of the Glen Rose formation and confined by the overlying Del Rio Clay.

(b) The lateral boundaries of the Edwards Underground River are those boundaries of "Subdivision No. One of the Underground Water Reservoir in the Edwards Limestone Balcones Escarpment Area" defined by the Board of Water Engineers of the State of Texas, a predecessor of the Texas Water Commission, by order dated January 10, 1957, as modified by the Texas Water Commission by order dated April 18, 1988, and incorporated in this rule by reference. These orders are available for inspection at the office of the chief clerk of the commission in Austin, during the commission's regular business hours.

**§298.6. Effect of Invalidity of Rule.** If any provision of any rule or its application to any person or circumstances is held invalid, the invalidity does not affect other provisions or applications of the rule which can be given effect without the invalid provision or application, and to this end the provisions of the rule are severable.

**§298.7. Definitions.** The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise. The definitions contained in §297.1 of this title (relating to Water Rights, Substantive) apply to this chapter unless otherwise provided in this section.

**Authorized well**—A well which diverts water from the Edwards Underground River for which a permit has been issued by the commission, or temporary authorization granted pursuant to this chapter, or that is exempt for domestic and livestock purposes. All applicable rules must have been met, and such well must have been in compliance with all existing law relating to well construction, spacing, and other applicable law on or before April 15, 1992.

**Beneficial use**—The use of only that amount of water which is reasonable and necessary for a purpose authorized by law, when reasonable intelligence and reasonable diligence are used in applying the water to that purpose. Water which is wasted, lost, or inefficiently used because of, but not limited to, inefficient diversion works or distribution systems, excessive applications or per capita use, excessive or unnecessary

evaporation, transpiration or seepage, the discharge or escape of water from a well into a surface stream or reservoir for no authorized beneficial purpose, or by pollution is not beneficially used.

**Commission**—The Texas Water Commission and any successor agency.  
**Conservation**—

(A) The development of other water resources that reduce the demand for water from the Edwards Underground River;

(B) Those best management practices, techniques, and technologies that will reduce the consumption of water, eliminate the loss or waste of water, maximize the efficiency in the use of water, prevent the pollution of water, and maximize the recycling and reuse of water so that the demand for water from the Edwards Underground River is reduced;

(C) Those measures that seek to make a water supply available for future or alternative uses to the greatest extent practicable for the benefit of the environment and the public health, safety, and welfare; and

(D) any other measure that would sustain or enhance the water supply to provide for future long-term needs.

**Diversion of water**—Any act or failure to act that results in the taking of water from the Edwards Underground River by or through manmade facilities including the pumping of wells or allowing waters to flow from artesian or other type wells.

**Domestic use**—Use of water by an individual or a household for drinking, washing, or culinary purposes; for irrigation of lawns or of a family garden and/or orchard when the produce is not sold; for watering of domestic animals; and for water recreation for which no consideration is given or received. If the water is diverted, it must be diverted solely through the efforts of the user.

**Edwards Aquifer or aquifer**—That portion of an arcuate belt of porous, waterbearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Atascosa, Bexar, and Comal Counties, and in Hays County south of the hydrologic division near Kyle which separates flow toward the San Marcos River from flow to the Colorado River Basin; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, and Edwards Formation, the Georgetown Formation, and the Walnut Formation. The per-

meable aquifer units generally overlie the less-permeable Glen Rose Formation and underlie the less-permeable Del Rio Clay regionally.

**Edwards Underground River or underground river**—The Edwards Aquifer as defined by this section and the boundaries of which are provided by §298.5 of this title (relating to Boundaries of the Edwards Underground River).

**Existing user**—A person that has diverted and beneficially used water from the Edwards Underground River on or before April 15, 1992.

**Instream uses**—The use of water for the protection of water quality, the maintenance of aquatic and wildlife habitat, navigation, recreation, and bays and estuaries.

**Irrigation system efficiency**—The percentage of that amount of irrigation water used which is beneficially used by the crops in production relative to the amount of water diverted from the source of supply.

**Livestock use**—The use of water for the open-range watering of livestock connected with farming, ranching, or dairy enterprises.

**New well**—A producing well, the drilling of which, was completed after April 15, 1992.

**Per capita use**—The sum total of residential, commercial, and public and institutional uses diverted into a water supply system divided by population served.

**Pollution**—The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to public health, safety, or welfare, or impairs the usefulness of the public enjoyment of the waters for any lawful or reasonable purpose.

**Producing well**—A well capable of producing water from the Edwards Underground River without modification or the placement of additional equipment and which has lawfully produced water for a beneficial purpose prior to April 15, 1992.

**Replacement well**—A well that is drilled to replace an existing well and where the existing well that is being replaced is permanently plugged and closed.

**Reuse**—The use for one or more purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

**Waste**—The diversion of water from the Edwards Underground River if the water diverted is not used for a beneficial purpose; the unreasonable loss of water through faulty design or negligent operation of a well or a water delivery or application system; the use of quantities of water in an amount in excess of the amount reasonably necessary to beneficially use the water for

an authorized purpose; or the diversion of water from the Edwards Underground River at a rate, in an amount, or in any manner that causes or threatens to cause pollution of the Edwards Underground River by the intrusion of water or contaminants detrimental to any beneficial purpose, or adversely impacts surface water quality.

Well—A bored, drilled, or driven shaft, or an artificial opening in the ground made by digging, jetting, or some other method, where the depth of the well is greater than its largest surface dimension, but not including any surface pit, surface excavation, or natural depression.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 20, 1992.

TRD-9205421

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-8069

## Subchapter B. Permits and Other Authorizations

### • 31 TAC §§298.11-298.20

The new sections are proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### *§298.11. Permit Required.*

(a) Except as provided by §298.12 and §298.13 of this title (relating to Permit Exemption for Domestic and Livestock Use and Interim Authorizations Pending Disposition of Permit Applications), no person may divert any water from the Edwards Underground River, or begin construction of any well or other work designed for the diversion of water from the Edwards Underground River, without first obtaining a permit from the commission to make the diversion.

(b) Except as provided otherwise in subsection (c) of this section, the priority date of any permit issued by the commission pursuant to this section shall be the date the application is accepted for filing by the commission.

(c) Each application by an existing user received by the commission on or before September 1, 1992, shall be deemed to be accepted for filing on September 1, 1992, for purposes of time priority if, by that date, the application, maps, and other

submitted materials are in substantial compliance with the requirements of the statutes and rules applicable to applications for permits under the Texas Water Code, §11.121 and the requirements set forth in this chapter.

(d) Permits issued pursuant to this section may be for a term of years, or for a particular time or season of the year.

(e) Permits issued pursuant to this section may contain such other conditions or limitations as the commission deems necessary or appropriate to accomplish the purposes of this chapter.

(f) All authorizations granted by permits issued pursuant to this section, and all diversions made pursuant to these authorizations, are subject to limitation, curtailment, and amendment to achieve water conservation, prevent waste, and to maintain and protect adequate springflows from the Comal and San Marcos Springs for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries as set forth in §§298.41, 298.42, and 298.51 of this title (relating to Waste Prohibited; Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream uses, Bays and Estuaries, and Other Public Purposes; and Emergencies).

#### *§298.12. Permit Exemption for Domestic and Livestock Use.*

(a) Without obtaining a permit under §298.11 of this title (relating to Permit Required), a person may construct on that person's own property a well for the diversion of water from the Edwards Underground River and beneficially use such water without waste for domestic and livestock purposes only.

(b) A person may use water for domestic and livestock purposes pursuant to this section only on property owned by that person and may not transport the water off that person's property.

(c) The exemption provided by this section does not apply where the flows of one well are combined with flows from any other well prior to the use of the water.

#### *§298.13. Interim Authorizations Pending Disposition of Permit Applications.*

(a) A person owning a producing well which diverts water from the Edwards Underground River, other than a domestic and livestock well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use), may continue to divert water from the underground river by using that well in ac-

cordance with the terms of this section if, but only if, the well was in compliance with all rules and statutes relating to well construction, approval, location, spacing, and any other applicable law on or before April 15, 1992, and the person files the following with the commission on or before September 1, 1992:

(1) an application for a permit under §298.11 of this title (relating to Permit Required) to divert water from the Edwards Underground River by using that well, and such application and accompanying maps and other materials are in substantial compliance with the requirements of the statutes and rules applicable to applications for permits under the Texas Water Code, §11.121 and the requirements set forth in this chapter;

(2) a declaration of historical, actual beneficial use pursuant to §298.14 of this title (relating to Declarations of Historical Use) for a nonexempt well owned by that person; and

(3) a water conservation and reuse plan as provided by §298.15 of this title (relating to Water Conservation and Reuse Plan).

(b) Each person qualifying under subsection (a) of this section for interim authorization to divert and use water from the Edwards Underground River may continue to divert and beneficially use water without waste by using a nonexempt well owned by that person. Such use may not exceed on an annual basis the historic, maximum, annual, actual beneficial use of water from the well without waste as evidenced by the person's declaration of historical use, unless such amount is determined otherwise by the commission pursuant to subsection (c) of this section.

(c) On its own motion, on motion of the executive director, or on the motion of any affected person, the commission shall determine the following:

(1) the extent to which, and the purposes of use for which, water was actually diverted from the Edwards Underground River by using the well and applied to beneficial use without waste prior to the date these rules were adopted; and

(2) the extent to which, and the purposes of use for which, water is then being diverted from the Edwards Underground River by using the well and applied to beneficial use without waste.

(d) In making determinations pursuant to subsection (c) of this section, the commission shall utilize all available information including, but not limited to, the water conservation and reuse plans and declarations of historical use filed pursuant to §298.15 and §298.14, respectively, of this title.

(c) It shall be the burden of the declarant of historical use to demonstrate by substantial and convincing evidence that person's historical beneficial use without waste.

(f) In its review and action upon an application submitted on or before September 1, 1992, pursuant to §298.11 of this title, the commission shall not recognize more than that amount which the commission has determined to have been beneficially used without waste in accordance with this section.

(g) All interim authorizations granted by this section, and all diversions made pursuant to these authorizations, are subject to limitation, curtailment, and amendment to prevent waste, achieve water conservation, and to maintain and protect adequate springflows from the Comal and San Marcos Springs for the protection of water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, and bays and estuaries as set forth in §§298.41, 298.42, and 298.51 of this title (relating to Waste Prohibited; Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes; and Emergencies).

(h) The authorizations granted by this section shall terminate with respect to diversions from a well upon entry of a final and appealable order by the commission acting on the application or applications under §298.11 of this title for permits for those wells.

#### §298.14. *Declarations of Historical Use.*

(a) Each person owning a producing well diverting water from the Edwards Underground River shall, on or before September 1, 1992, file with the commission a sworn declaration of historical actual use for the well, other than a domestic and livestock well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use), covering the period beginning January 1, 1982, and ending on or before April 15, 1992.

(b) Each declaration of historical use shall include the following information, to the extent the information is available or capable of being calculated or estimated:

(1) the name and mailing address of each person holding an ownership interest in the well;

(2) the name and mailing address of any other person holding any other interest in the well or the real property on which the well is located;

(3) the location of the well described in latitude and longitude and dis-

tance and direction from the nearest survey corner, the date of commencement of construction of the well, and the date of first withdrawal and beneficial use of water from the well;

(4) the maximum volume of water diverted by the well during a calendar year since January 1, 1982;

(5) the purpose or purposes of use to which the water was applied;

(6) the maximum volume of such water that was beneficially used for each purpose of use during a calendar year since January 1, 1982;

(7) the place of use of the water;

(8) if the claim is for irrigation:

(A) the legal description and a map of the land irrigated with water produced from the well and the year in which the land was first irrigated;

(B) the type of crops grown on the land and the cropping patterns used; and

(C) the irrigation methods and devices actually used in the irrigation of the land;

(9) evidence of the ownership and other interests in the well, and in the real property on which the well is located, of all persons listed in response to subsection (b)(1) and (2) of this section;

(10) the location of all other wells in which any person listed in response to subsection (b)(1) or (2) of this section has an interest, and a reference to the declaration of historical use filed for that well;

(11) one or more sworn statements reciting that all of the information contained in the declaration of historical use is based on the personal knowledge of the person or persons making the sworn statements and is true and correct; and

(12) other pertinent information the executive director may require.

(c) All declarations of historical use filed with the commission shall be available in the offices of the commission for public inspection during regular office hours.

**§298.15. *Water Conservation and Reuse Plan.*** A water conservation and reuse plan shall be submitted with any permit application or for any other authorization to divert and use water from the Edwards Underground River and shall conform to the following applicable requirements:

(1) Municipal use. A water conservation plan for municipal use shall provide the following:

(A) a utility evaluation which must, at a minimum, discuss:

(i) the current population of the service area and the source and basis for such data;

(ii) the size of the service area;

(iii) total number of water connections;

(iv) net yearly rate of new connections over the most previous five-year period;

(v) average monthly water use data during the previous five years for all categories of users (e.g., residential, commercial, industrial);

(vi) overall average daily water use, including peak daily water use, peak to average use ratio, and unaccounted water percentage;

(vii) percentages of potable water customers who: are served by wastewater systems owned or controlled by the applicant; have septic tanks or other private sewerage systems; and are served by a wastewater system not owned or controlled by the applicant;

(viii) average, daily amount of wastewater treated, peak daily wastewater flows, and amount of return flows;

(ix) peak daily design capacity for water and wastewater systems;

(x) previous five-year average annual revenues from water sales and list of major water customers; and

(xi) previous five-year average annual cost of water operations;

(B) a population and water use projection analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's water conservation goals;

(C) specification of conservation goals including, but not limited to, per capita water use goals, the basis for the development of such goals, and a time frame for achieving the specified goals;

(D) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses, for meter repair, and for periodic meter replacement;

(F) conservation-oriented water rates and water rate structures;

(G) a program of leak detection, repair, and water loss accounting for the transmission, delivery, and distribution system;

(H) a program of continuing public education and information regarding water conservation;

(I) adoption of ordinances, plumbing codes, and/or rules requiring water conserving fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(J) a program for retrofitting existing structures with water conserving fixtures;

(K) reuse of wastewater and/or greywater;

(L) a program and ordinances regarding xeric practices and vegetation;

(M) a description of the method for monitoring the effectiveness and efficiency of the water conservation plan;

(N) a description and copy of the authority and means by which the applicant will implement and enforce the water conservation plan; and

(O) any other water conservation practice, method, or technique which the applicant shows to be appropriate for achieving the stated goal or goals of the applicant's water conservation plan.

(2) Industrial or mining use. A water conservation plan for industrial or mining use must provide the following:

(A) an analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's water conservation practices;

(B) the maximum potential for recycling/reuse of water not consumed in the industrial or mining process;

(C) specification of conservation goals, the basis for the development of such goals, and a time frame for achieving the specified goals;

(D) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(E) leak detection, repair, and water loss accounting for the transmission, delivery, and distribution system;

(F) adoption of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

(G) any other water conservation practice, method, or technique which the applicant shows to be appropriate for achieving the stated goal or goals of the applicant's water conservation plan.

(3) Irrigation use. A water conservation plan for irrigation purposes must provide the following:

(A) a description of the agricultural production process which shall include, but is not limited to, the type of crops and acreage of each crop to be irrigated, monthly irrigation diversions, and any seasonal or annual crop rotation;

(B) a description of the irrigation method or system and equipment including pumps, flow rates, plans, and/or sketches of the system layout;

(C) an analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's water conservation practices;

(D) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(E) an assessment of the efficiency of the irrigation system, which may be performed by the Soil Conservation Service, the Texas Water Development Board, the Texas Agricultural Extension Service, an underground water conservation district, or a Texas registered professional engineer;

(F) water conserving irrigation equipment and application system or method including, but not limited to, surge irrigation, low pressure sprinkler, drip irrigation, and non-leaking pipe;

(G) leak-detection, repair, and water-loss control;

(H) scheduling the timing and/or measuring the amount of water applied, for example, soil moisture monitoring;

(I) land improvements for retaining or reducing runoff, and increasing the infiltration of rain and irrigation water including, but not limited to, land levelling, furrow diking, terracing, and weed control;

(J) tailwater recovery and reuse;

(K) application of xeric practices and vegetation;

(L) soil types and characteristics, including the existence of high salinity concentrations or other natural or artificial conditions which may result in the pollution of water resources and the impairment of existing water rights because of contaminated runoff and return flows; and

(M) any other water conservation practice, method, or technique which the applicant shows to be appropriate for achieving conservation.

(4) Any other purpose or use. A water conservation for any other purpose or use not specifically addressed in this section must provide for the implementation of those best management practices, techniques, and technologies that will be used to reduce the consumption of water, eliminate the loss or waste of water, maximize the efficiency in the use of water, and maximize the recycling and reuse of water.

(5) Wholesale water suppliers. A water conservation plan for a wholesale water supplier must include the following:

(A) an analysis which supports the applicant's proposed appropriation of water with consideration of the applicant's or customers' water conservation practices;

(B) a description as to which practice and/or device the applicant will utilize to measure and account for the amount of water diverted from the source of supply;

(C) a program to assist customers in the development of conservation plans using the applicable elements in this section;

(D) a requirement in every water supply contract entered into on or

after the effective date of these rules, including any contract extension or renewal, that each successive wholesale customer develop and implement water conservation measures using the applicable elements in this section. If the customer intends to resale the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this section; and

(E) a program of metering and leak detection and repair for the applicant's transmission, deliver, and distribution system.

(6) Alternative sources of water supply. A water conservation plan must provide information as to any feasible alternative source of supply to the Edwards Aquifer and the requested appropriation.

(7) Exemptions to the requirement to submit water conservation plans. Applications to impound water for in-place use only, for emergency use in accordance with §295.91 of this title (relating to Application), and for temporary use of water in accordance with §295.61 of this title (relating to Applications) are exempt from having to submit a water conservation plan pursuant to this section. However, all water right holders must exercise reasonable diligence to avoid waste and achieve water conservation so that the use state water is limited to the amount which is being or can be beneficially used for the authorized purposes without waste but not to exceed the amount specifically appropriated.

#### *§298.16. Commission Review and Action On Water Conservation Plan.*

(a) Information provided by the applicant in the water conservation and reuse plan shall be considered by the commission in determining whether any feasible alternative to the requested appropriation exists and whether the requested amount of appropriation as measured at the point of withdrawal is reasonable and necessary for the proposed use. Based upon its review, the commission shall determine whether to deny or grant, in whole or in part, the requested appropriation.

(b) It shall be the burden of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

(c) Minimum irrigation system efficiency performance standards for agricul-

tural irrigation systems in place and in use prior to April 15, 1992, shall be as follows:

- (1) surface-furrow: 72%;
- (2) surface (border, basin, flood): 60%;
- (3) sprinkler: 78%;
- (4) center pivot: 82%;
- (5) LEPA: 95%; and
- (6) drip: 85%.

(d) No new irrigation use from a new well will be authorized that does not employ the most efficient irrigation system appropriate to the area and crops to be irrigated and using the best available technology.

(e) The per capita use goal to be achieved by a municipal user within the 10-year interim period provided by Subchapter F of this chapter (relating to Regulation of Diversions-Emergency) shall not exceed 120 gallons per person per day unless the applicant can demonstrate that such goal cannot be reasonably attained by the applicant within this time period.

(f) Any water conservation measures prescribed by the commission shall be implemented as required by the terms and conditions of the commission order or water right, or by rule.

(g) Information relating to the implementation of the water conservation and reuse plan and related permit conditions required under this section must be provided in the annual report provided by §295.202 of this title (relating to Reports) on the form prescribed by the executive director. Such information shall include a discussion of the progress made toward the attainment of water conservation goals.

#### *§298.17. Right Limited to Beneficial Use.*

(a) Except as further limited by Subchapters E and F of this title (relating to Regulation of Diversions-General and Regulation of Diversions-Emergency), the right to use state water under any permit or other authorization is limited to the amount which is being or can be beneficially used for the authorized purposes without waste but not to exceed the amount specifically appropriated.

(b) Water which is wasted, lost, or inefficiently used because of, but not limited to, inefficient diversion works or distribution systems, excessive applications or per capita use, excessive or unnecessary evaporation, transpiration or seepage, faulty design, or by pollution is not beneficially used and is a violation of the water right.

(c) The right to appropriate that amount not beneficially used cannot be perfected and is subject to limitation, cancellation, and forfeiture as provided by law.

#### *§298.18. Moratorium on New Authorizations.*

(a) A person may not drill a new well or divert water from the Edwards Underground River by using a well, not a producing well, except as authorized by the commission.

(b) The commission shall not consider or take action on any application relating to any proposed or existing well for which there is no evidence or historical record of actual beneficial use prior to April 15, 1992, until a final determination has been made on all applications submitted on or before September 1, 1992, and accompanied by a declaration of historical use and a water conservation and reuse plan provided by §298.14 and §298.15 of this title (relating to Declarations of Historical Use and Water Conservation and Reuse Plan).

(c) Any authorization other than interim authorization granted pursuant to §298.13 of this title (relating to Interim Authorizations Pending Disposition of Permit Applications) for the diversion and beneficial use of water from the Edwards Underground River shall not be granted unless it is determined by the commission that such new use provides for the implementation of water conservation, reuse, distribution, and application measures using best available technology.

(d) Subsection (a) of this section shall not apply to a replacement well if:

(1) the amount, rate, volume, purpose of use, and any other requirement applicable to the well replaced is met by the operation of the replacement well; and

(2) the executive director is notified by the owner of the wells not later than 10 days after the completion of the drilling of the replacement well. Such notice shall provide the ownership, location by latitudinal and longitudinal coordinates and distance from nearest survey corner, date of plugging of well that was replaced, a copy of the driller's pump test to determine well production capacity, and the actual rate of withdrawal.

#### *§298.19. Amendments Required.*

(a) Each holder of a permit issued under §298.11 of this title (relating to Permit Required), and each person granted interim authorization under §298.13 of this title (relating to Interim Authorizations Pending Disposition of Permit Applications), must obtain prior authorization from the commission to change the purpose of use (which includes using water for any additional purpose of use or any secondary use), to change the location of any well, rate of withdrawal, place of use or acreage to be irrigated, or to alter the permit or interim authorization in any other manner.

(b) An application to amend an existing water right for any of the following reasons must include a water conservation and reuse plan as provided by applicable provisions of §298.15 of this title (relating to Water Conservation and Reuse Plan):

- (1) to increase the amount of the appropriation;
- (2) to change the purpose or use of the appropriation;
- (3) to extend the term of the appropriation; or
- (4) to change the place of use, unless the request is to expand the amount of acreage to be irrigated adjacent to the existing, authorized irrigated tract without an increase in the appropriation.

(c) An agreement providing for the contractual sale of water from the Edwards Aquifer for a period of less than three years shall be filed with the executive director for approval not later than 30 days prior to the effective date of the sale agreement.

#### §298.20. Approval for Alterations.

(a) A person may not make any alteration, enlargement, or other change to any well from which water is diverted from the Edwards Underground River without first obtaining the approval of the commission, except for ordinary maintenance or emergency repair of the well and except as provided by subsections (b) and (c) of this section.

(b) Without obtaining commission approval, a person may modify a well if the modification does not alter the location or rate of production of the well.

(c) Without obtaining commission approval, a person may modify a well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use) if the well continues to qualify for exemption after that modification.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

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For further information, please call: (512) 463-8069

### Subchapter C. Conveyances

#### • 31 TAC §§298.21-298.23

The new sections are proposed under the Texas Water Code, §5.103 and §5. 105,

which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

**§298.21. Transfer of Ownership and Change of Address.** In addition to meeting applicable requirements contained in commission rules relating to the transfer and sale of water rights, each person required to file a declaration of historical use under §298.14 of this title (relating to Declarations of Historical Use), and each person to whom a permit is issued pursuant to §298.11 of this title (relating to Permit Required), shall notify the commission of a change in name or mailing address or any transfer of the ownership of the well or permit. Any person to whom the well or permit is transferred shall notify the commission of the transfer and shall furnish any additional information as required by the executive director.

**§298.22. Contractual Sales.** Commission approval for a contractual sale of water is subject to the imposition of the conservation and reuse requirements contained in the seller's permit or to which the buyer is subject as directed or modified by the executive director.

**§298.23. Application by City or Town to Acquire Appropriation Without Compensation (Wagstaff Act).**

(a) The Wagstaff Act, Texas Water Code, §11.028, provides that any appropriation made after May 17, 1931, for any purpose other than domestic or municipal use is subject to the right of any city or town to make further appropriations of the water for domestic or municipal use without paying for the water.

(b) Except as authorized by the commission, no city or town may make further appropriation pursuant to the Wagstaff Act.

(c) In determining whether to approve such further appropriation pursuant to subsection (b) of this section, the commission shall consider the social and economic hardship of the proposed appropriation on the affected person and community and shall seek to minimize the impact upon irrigation or other uses which may be subject to the Act.

(d) An application for commission approval pursuant to subsection (b) of this section must be submitted to the commission for review and approval and notice and opportunity for hearing given to the affected water right holders prior to commission action on any such further appropriation.

(e) An application must contain all applicable information necessary for a

transfer of a water right and must be accompanied by a water conservation and reuse plan as provided by §298.15 of this title (relating to Water Conservation and Reuse Plan).

(f) The commission shall not approve an application for further appropriation if the commission finds:

(1) the application does not meet commission requirements as provided by subsection (e) of this section;

(2) proper notice and opportunity for hearing was not provided to all affected persons;

(3) the proposed transfer would adversely affect senior water rights not subject to appropriation pursuant to subsection (a) of this section;

(4) the applicant fails to demonstrate a need for the amount of the appropriation;

(5) the applicant has not eliminated all nonessential and discretionary use, including, but not limited to, recreational or aesthetic use, lawn watering, car washing, or any other use not essential for the public health, safety, and welfare;

(6) there is a feasible alternative to the proposed appropriation; or

(7) the proposed appropriation would adversely impact water quality or the environment or be detrimental to the public health, safety, or welfare.

(g) Information provided by the applicant in the water conservation and reuse plan shall be considered by the commission in determining whether any feasible alternative to the requested appropriation exists and whether the requested amount of appropriation as measured at the point of diversion is reasonable and necessary for the proposed use. Based upon its review, the commission shall determine whether to deny or grant, in whole or in part, the requested appropriation.

(h) It shall be the burden of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists, that the requested amount of appropriation is necessary and reasonable for the proposed use, and is otherwise justified pursuant to this section.

(i) Any water conservation measures prescribed by the commission shall be implemented as required by the terms and conditions of the commission order or water right, or by rule.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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## Subchapter D. Water Use Management and Reporting

### • 31 TAC §298.31, §298.32

The new sections are proposed under the Texas Water Code, §5.103 and §5. 105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### *§298.31. Water Use Measurement.*

(a) The owner of each well which diverts water from the Edwards Underground River, other than a well that is exempt under §298.12 of this title (relating to Permit Exemption for Domestic and Livestock Use), shall install and maintain a measuring device designed to indicate the flow rate and the amount of water diverted by that well. The measuring device shall indicate flow rate and amount, with instantaneous readout in cubic feet per second or gallons per minute, and have a flow totalizer with a readout in acre-feet or gallons, and must be accurate within 5. 0%.

(b) The measuring device for each well capable of operation before the date these rules were proposed by the commission shall be installed before December 31, 1992, or before any water is diverted by that well, whichever is later. For any other well, the measuring device shall be installed before any water is withdrawn from that well.

(c) The requirement to install and maintain a measuring device in any well may be waived by the executive director, upon written request by the well owner to utilize an alternative method of determining the flow rate and the amount of water diverted by the well. The proposed alternative method must result in determinations of flow rate and amounts of water diverted within an accuracy of 5.0%.

#### *§298.32. Reports.*

(a) Not later than March 1 of each year, beginning in 1993, each person required to file a declaration of historical use under §298.14 of this title (relating to Declarations of Historical Use), and each person to whom a permit is issued pursuant to §298.11 of this title (relating to Permit Required), shall file with the commission a

written report of water use for the preceding calendar year on a form prescribed by the executive director, providing the information required by the executive director.

(b) The commission by order, rule, or permit condition may require of any person such other record keeping, reporting of water use, and notification of water demands, as may be determined by the commission to be necessary or desirable to accomplish the purposes of this chapter.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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## Subchapter E. Regulation of Diversions-Genera

### • 31 TAC §298.41, §298.42

The new sections are proposed under the Texas Water Code, §5.103 and §5. 105, which provides the Texas Water Commission with the authority to adopt rules necessary for the performance of its duties and responsibilities under the Texas Water Code and other state law.

#### *§298.41. Waste Prohibited.*

(a) The waste of water is prohibited.

(b) No person may divert, supply, use, or reuse any water from the Edwards Aquifer, or supply, use, or reuse any water from other sources that reduces the demand for water from the Edwards Underground River, in excess of the amount of water needed for beneficial use for the intended purpose or purposes of use.

#### *§298.42. Limitation of Diversions to Protect Water Quality, the Public Health, Safety, and Welfare, Aquatic and Wildlife Habitat, Instream Uses, Bays and Estuaries, and Other Public Purposes.*

(a) All authorized diversions of water from the Edwards Underground River, and all authorizations and rights to make such diversions are subject to limitation, curtailment, and amendment as may be ordered by the commission from time to time in order to protect the water quality of the Edwards Underground River, the health, safety, and welfare of the people who divert and/or use water from the Edwards Underground River, and to protect water quality,

public health, safety, and welfare, aquatic and wildlife habitat, instream uses, bays and estuaries, and any other public purpose, and to maintain compliance with applicable law.

(b) Each person diverting water from the Edwards Underground River shall limit and curtail such diversions as may be ordered by the commission from time to time to effectuate the purposes of this chapter.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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## Subchapter F. Regulation of Diversions-Emergency

### • 31 TAC §298.51

The new section is proposed under the Texas Water Code, §5.103 and §5. 105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### *§298.51. Emergencies.*

(a) The commission may declare an emergency when the level of the Edwards Aquifer drops to a level where adverse impacts are occurring or may soon occur to water quality, the public health, safety, and welfare, aquatic and wildlife habitat, instream uses, or bays and estuaries.

(b) Upon the declaration of an emergency, the commission may impose additional requirements and restrictions upon the diversion, supply, use, or reuse of water from the Edwards Underground River to the extent that it determines such requirements and restrictions are justified, taking into consideration all relevant issues including, without limitation, public health and safety and the economic well-being of the region and the state.

(c) In making any determination under subsections (a) and (b) of this section, the commission shall, to the extent practicable, hold public hearings and otherwise seek public comment from all affected persons.

(d) The executive director shall notify the Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service immediately upon the declaration of an emergency pursuant to this section and shall

inform these agencies of any commission actions in response to the emergency.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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## Subchapter G. Local Government

### • 31 TAC §298.61

The new section is proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### §298.61. Delegation of Responsibilities.

(a) Upon request by an underground water conservation district or other political subdivision of the state overlying the Edwards Underground River, the commission may delegate to that political subdivision any of the commission's responsibilities under this chapter within the geographical boundaries of that political subdivision, except to the extent that the delegation is prohibited by law.

(b) The commission will give appropriate consideration to the recommendations of local governmental entities concerning matters at issue under this chapter within the geographical boundaries of the local governmental entity, such as relative amounts of withdrawals to be authorized among permit applicants within those boundaries, and additional requirements to be imposed to further reduce withdrawals and use of available water within those boundaries.

(c) The commission may establish a separate water division for the Edwards Underground River pursuant to the Texas Water Code, §11.325 and may delegate the duties and responsibilities of watermaster for such division to an appropriate local or regional entity, unless prohibited by law.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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## Subchapter H. Permanent Management Plan

### • 31 TAC §298.71

The new section is proposed under the Texas Water Code, §5.103 and §5.105, which provides the Texas Water Commission with the authority to adopt rules necessary to carry out its duties and responsibilities under the Texas Water Code and other state law.

#### §298.71. Advisory Council.

(a) To assist the Texas Water Commission in the development and implementation of a long-range, comprehensive regional water management plan, the executive director shall establish the South-Central Texas Water Resources Advisory Council pursuant to commission resolution made April 15, 1992, whose members shall include, but are not limited to, a qualified representative chosen by each of the following entities or groups:

(1) the executive director of the Texas Water Commission, whose representative shall serve as chair;

(2) the Texas Water Development Board;

(3) the Texas Parks and Wildlife Department;

(4) the Edwards Underground Water Conservation District or its successor;

(5) the Medina County Underground Water Conservation District or its successor;

(6) the Guadalupe-Blanco River Authority;

(7) the San Antonio River Authority;

(8) the Nueces River Authority;

(9) any other appropriate federal, state, regional, or local governments; and

(10) public interest groups, business and industry, and established environmental groups.

(b) Matters to be studied by the South Central Texas Water Management Advisory Council and upon which the Council shall make recommendations to the commission include, but are not limited to:

(1) the effectiveness of the rules contained in this chapter and any recommended changes;

(2) the feasibility of artificially augmenting springflows for the protection

of aquatic and wildlife habitat and other beneficial purposes;

(3) the artificial recharge of the aquifer;

(4) the identification of existing alternative sources of water for users of the aquifer;

(5) the development of new alternative sources of water for aquifer users;

(6) recommendations to the legislature regarding necessary changes, if any, to state law to provide for the proper management of the water resources in the area affected by diversions from the Edwards Underground River;

(7) the impact of springflows on the bays and estuaries; and

(8) any other matter pertinent to the development and implementation of a long-range, comprehensive, conjunctive management of the Edwards Aquifer and hydrologically interrelated surface waters in the Nueces, San Antonio, and Guadalupe River Basins.

(c) The South Central Texas Water Management Advisory Council shall meet as often as necessary to carry out its duties and responsibilities and shall present its recommendations to the commission not later than September 1, 1994.

(d) The commission shall review and take action on the council's recommendations not later than January 1, 1995.

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

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Director, Legal Division  
Texas Water Commission

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## Chapter 331. Underground Injection Control

### Subchapter I. Financial Responsibility

#### • 31 TAC §331.147

The Texas Water Commission (TWC) proposes new §331.147, concerning underground injection control. The new section is proposed in order to incorporate rules promulgated by the Environmental Protection Agency pursuant to their authority under the federal Solid Waste Disposal Act; as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), 42 United States Code, §§6901 et seq, as amended.

This new section is proposed to provide both consistency with existing Texas Administrative Code (TAC) regulations and clarification of the TWC's regulatory intent.

The new section delineates the acceptable wording for trust agreements, guarantee bonds, performance bonds, irrevocable standby letters of credit, letters from the chief financial officer, and plugging and abandonment guarantees.

Norma Nance, director of budget and planning, has determined that for the first five-year period the section is in effect there will be no fiscal implications for state or local government as a result of enforcing or administering the section. The purpose of the section is to incorporate current federal requirements into state regulations to establish consistency. There are no additional fiscal impacts or incremental costs attributable to the adoption of the regulations that do not accrue to an affected party currently in compliance with existing federal requirements.

Ms. Nance also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be enhanced enforcement of the provisions of the Texas Solid Waste Disposal Act and the rules of the commission regarding the regulation of hazardous waste and the protection of the quality of the water resources of the state. There will be no effect on small businesses. There is no anticipated economic cost to persons who are required to comply with the section as proposed.

Comments on the proposal may be submitted to Bob Warneke, Staff Attorney, Legal Division, Texas Water Commission, P.O. Box 13087, Austin, Texas 78711-3087.

Comments will be accepted until 5 p.m., 30 days after the date of this publication to facilitate public comments on the proposed amendments to this chapter.

The new section is proposed under the Texas Water Code, §5.103 and §5.105, which provides TWC with the authority to adopt any rules necessary to carry out its powers and duties under the Texas Water Code and other laws of the State of Texas, and to establish and approve all general policy of the commission. In addition, the Texas Water Code, §27.019 authorizes TWC to adopt rules and procedures reasonably required for the performance of its powers and duties under Chapter 27. TWC is designated the state agency which manages injection wells which are not within the jurisdiction of the Railroad Commission. As such, TWC is required to maintain the quality of fresh water in the state to the extent consistent with the public health and welfare, the operation of existing industries and the economic development of the state, to prevent underground injection that may pollute fresh water, and to require the use of all reasonable methods to implement this policy.

**§331.147. Wording of the Instruments.** Wording of the instruments includes: trust agreement; surety bond guaranteeing payment into a trust fund;

surety bond guaranteeing performance of plugging and abandonment; letter of credit; certificate of insurance; letter from the chief financial officer; and corporate guarantee are located in Exhibits A-F of this section.

(1) A trust agreement for a trust fund, as specified in §331.144(1) of this title (relating to Financial Assurance for Plugging and Abandonment), must be worded as follows, except that instructions in parenthesis are to be replaced with the relevant information and the parenthesis deleted:

#### Exhibit A

#### TRUST AGREEMENT

TRUST AGREEMENT, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of State] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "incorporated in the State of \_\_\_\_\_" or "a national bank"], the "Trustee."

Whereas, the Texas Water Commission, "TWC," an agency of the State of Texas, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an injection well shall provide assurance that funds will be available when needed for plugging and abandonment of the injection well,

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facility(ies) identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee,

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) Facility or activity means any "underground injection well" or any other facility or activity that is subject to regulation under the Underground Injection Control Program.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA

Identification Number, name, address, and the current plugging and abandonment cost estimate, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of TWC. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by TWC.

Section 4. Payment for Plugging and Abandonment. The Trustee shall make payments from the Fund as the Executive Director shall direct, in writing, to provide for the payment of the costs of plugging and abandonment of the injection wells covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Executive Director from the Fund for plugging and abandonment expenditures in such amounts as the Executive Director shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Executive Director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like use in the

conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with

certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate Executive Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Executive Director shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement of any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed

upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Executive Director, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Executive Director to the Trustee shall be in writing, signed by his designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or TWC hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or TWC, except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the appropriate Executive Director, by certified mail within 10 days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the

Grantor, the Trustee, and the appropriate Executive Director, or by the Trustee and the appropriate Executive Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Executive Director, or by the Trustee and the Executive Director if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Executive Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of [insert name of State].

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 31 Texas Administrative Code §331.147(a)(1) as such regulations were constituted on the date first above written.

[Signature of Grantor]

By [Title]

Attest: [Title]

[Seal]

[Signature of Trustee]

By

Attest:

[Title]

[Seal]

(2) The following is an example of the certification of acknowledgment which must accompany the trust agreement for a trust fund as specified in §331.144(1) of this title State requirements may differ on the proper content of this acknowledgment.

State  
of \_\_\_\_\_

County  
of \_\_\_\_\_

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order to the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[signature of Notary Public]

(3) A surety bond guaranteeing payment into a trust fund, as specified in §331.144 of this title must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Exhibit B

FINANCIAL GUARANTEE  
BOND

Dated bond executed:

Effective date:

Principal: [legal name and business address of owner or operator].

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"].

State of incorporation:

Surety(ies): [name(s) and business address(es)].

EPA Identification Number, name, address, and plugging and abandonment amount(s) for each facility guaranteed by this bond [indicate plugging and abandonment amounts separately]: \_\_\_\_\_

Total penal sum of bond:  
\$ \_\_\_\_\_

Surety's bond number:

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Texas Water Commission (hereinafter called TWC), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Underground Injection Control Regulation (UIC), to have a permit or comply with requirements to operate under rule in order to own or operate each injection well identified above, and

Whereas said Principal is required to provide financial assurance for plugging and abandonment as a condition of the permit or provisions to operate under rule, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used provide such financial assurance;

Now, therefore, the condition of the obligation are such that if the Principal shall faithfully, before the beginning of plugging and abandonment of each injection well identified above, fund the standby trust fund in the amount(s) identified above for the injection well,

Or if the Principal shall fund the standby trust fund in such amount(s) within 15 days after an order to begin plugging and abandonment is issued by an Executive Director or a U.S. district court or other court of competent jurisdiction,

Or, if the Principal shall provide alternate financial assurance, as specified in Subchapter I of 31 Texas Administrative Code Chapter 331, as applicable, and obtain the Executive Director's written approval of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the Executive Director from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by an Executive Director that the Principal has

failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the injection well(s) into the standby trust funds as directed by the Executive Director.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Executive Director, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Executive Director(s), as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Executive Director(s) of the Region(s) in which the bonded facility(ies) is (are) located.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new plugging and abandonment amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Executive Director(s).

In Witness Whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The person whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 31 Texas Administrative Code §331.147(b) as such regulations were constituted on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

Corporate Surety(ies)

[Name and address]

State of incorporation:  
\_\_\_\_\_  
Liability limit:  
\$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium:  
\$ \_\_\_\_\_

(4) A surety bond guaranteeing performance of plugging and abandonment, as specified in §331.144(3) of this title must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

#### Exhibit C

#### PERFORMANCE BOND

Date bond executed:  
\_\_\_\_\_  
Effective date:  
\_\_\_\_\_

Principal: [legal name and business address of owner or operator].

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"].

State of incorporation:  
\_\_\_\_\_

Surety(ies): [name(s) and business address(es)]  
\_\_\_\_\_  
\_\_\_\_\_

EPA Identification Number, name, address, and plugging and abandonment amounts(s) for each injection well guaranteed by this bond [indicate plugging and abandonment amounts for each well]:  
\_\_\_\_\_  
\_\_\_\_\_

Total penal sum of bond:  
\$ \_\_\_\_\_

Surety's bond number:  
\_\_\_\_\_  
\_\_\_\_\_

Know All Persons By These Presents.

That We, the Principal and Surety(ies) hereto are firmly bound to the Texas Water Commission [hereinafter called TWC], in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind

ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Underground Injection Control Regulations, as amended, to have a permit or comply with provisions to operate under rule for each injection well identified above, and

Whereas said Principal is required to provide financial assurance for plugging and abandonment as a condition of the permit or approval to operate under rule, and

Whereas said Principal shall establish a standby trust fund as required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform plugging and abandonment, whenever required to do so, of each injection well for which this bond guarantees plugging and abandonment, in accordance with the plugging and abandonment plan and other requirements of the permit or provisions for operating under rule and other requirements of the permit or provisions for operating under rule as may be amended, pursuant to all applicable laws, statutes, rules and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance as specified in Subchapter I of 31 Texas Administrative Code Chapter 331, and obtain the Executive Director's written approval of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the Executive Director(s) from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by an Executive Director that the Principal has been found in violation of the plugging and abandonment requirements of Subchapter I of 31 Texas Administrative Code Chapter 331, for an injection well which this bond guarantees performances of plugging and abandonment, the Surety(ies) shall either perform plugging and abandonment in accordance with the plugging and abandonment plan and other permit requirements or provisions

for operating under rule and other requirements or place the amount for plugging and abandonment into a standby trust fund as directed by the Executive Director.

Upon notification by an Executive Director that the Principal has failed to provide alternate financial assurance as specified in Subchapter I of 31 Texas Administrative Code Chapter 331, and obtain written approval of such assurance from the Executive Director(s) during the 90 days following receipt by both the Principal and the Executive Director(s) of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the injection well(s) into the standby trust fund as directed by the Executive Director.

The surety(ies) hereby waive(s) notification of amendments to plugging and abandonment plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice by certified mail to the owner and operator and to the Executive Director provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Executive Director, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Executive Director.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new plugging and abandonment amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Executive Director.

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording on this surety bond is identical to the wording specified in 31 Texas Administrative Code §331.147(c) as such regulation was constituted on the date this bond was executed.

Principal.

[Signature(s)]

[Name(s)] [

Title(s)]

[Corporate seal]

[Corporate Surety(ies)]

[Name and address]

State of incorporation:

Liability limit: \$ \_\_\_\_\_.

[Signature(s)]

[name(s) and title(s)]

Corporate seal:

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ \_\_\_\_\_.

(5) A letter of credit, as specified in §331.144(4) of this title must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Exhibit D

#### IRREVOCABLE STANDBY LETTER OF CREDIT

Executive Director

Texas Water Commission

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. \_\_\_\_\_ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars \$ \_\_\_\_\_, available upon presentation of

(1) Your sight draft, bearing reference to this letter of credit No. \_\_\_\_\_, and

(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Safe Drinking Water Act."

This letter of credit is effective as of [date] and shall expire on [date at least 1

year later], but such expiration date shall be automatically extended for a period of [at least 1 year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in 31 Texas Administrative Code §331.147(d) as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution] [Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

(e) A certificate of insurance, as specified in 31 Texas Administrative Code §331.144(5) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certificate of Insurance for Plugging and Abandonment

Name and Address of Insurer (herein called the "insurer"):

Name and Address of Insurer (herein called the "insurer"):

Injection Wells covered: [list for each well: The EPA Identification Number, name, address, and the amount of insurance for plugging and abandonment (these amounts for all injection wells covered must total the face amount shown below).] Face Amount:

Policy Number:

Effective Date:

The insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for plugging and abandonment for the injection wells identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 31 Texas Administrative Code §331.144(5), as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Executive Director of the Texas Water Commission ("TWC"), the Insurer agrees to furnish to the Executive Director(s) a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 31 Texas Administrative Code §331.147(e) as such regulations were constituted on the date shown immediately below.

[Authorized signature of Insurer]

[Name of person signing]

[Title of person signing]

[Signature of witness or notary:]

[Date]

(6) A letter from the chief financial officer, as specified in §331.144(6) of this title must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Exhibit E

LETTER FROM CHIEF FINANCIAL OFFICER

[Address to Executive Director]

I am the chief financial officer of [name and address of firm.] This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in Subchapter I of 31 Texas Administrative Code Chapter 331.

[Fill out the following four paragraphs regarding injection wells and associated cost estimates. If your firm has no injection wells that belong in a particular paragraph, write "None" in the space indi-

cated. For each injection well, include its EPA Identification Number, name, address, and current plugging and abandonment cost estimate.]

1. This firm is the owner or operator of the following injection wells for which financial assurance for plugging and abandonment is demonstrated through the financial test specified in Subchapter I of 31 Texas Administrative Code Chapter 331. The current plugging and abandonment cost estimate covered by the test is shown for each injection well: \_\_\_\_\_.

2. This firm guarantees, through the corporate guarantee specified in Subchapter I of 31 Texas Administrative Code Chapter 331, the plugging and abandonment of the following injection wells owned or operated by subsidiaries of this firm. The current cost estimate for plugging and abandonment so guaranteed is shown for each injection well: \_\_\_\_\_.

3. In States where TWC is not administering the financial requirements of Subchapter I of 31 Texas Administrative Code Chapter 331, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the plugging and abandonment of the following injection wells through the use of a test equivalent or substantially equivalent to the financial test specified in Subchapter I of 31 Texas Administrative Code Chapter 331. The current plugging and abandonment cost estimate covered by such a test is shown for each injection well: \_\_\_\_\_.

4. This firm is the owner or operator of the following injection wells for which financial assurance for plugging and abandonment is not demonstrated either to TWC or a State through the financial test or any other financial assurance mechanism specified in Subchapter I of 31 Texas Administrative Code Chapter 331 or equivalent or substantially equivalent State mechanisms.

The current plugging and abandonment cost estimate not covered by such financial assurance is shown for each injection well: \_\_\_\_\_.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph (6)(A)(i) of §331.144 of this title (relating to Financial Assurance for Plugging and Abandonment) are used. Fill in Alternative II if the criteria of paragraph (6)(A)(ii) of §331.144 of this title (relating

to Financial Assurance for Plugging and Abandonment) are used.]

#### ALTERNATIVE 1

1.

(a) Current plugging and abandonment cost.....

\$ \_\_\_\_\_

(b) Sum of the company's financial responsibilities under 31 Texas Administrative Code Chapter 335, Subchapters E and F, currently met using the financial test or corporate guarantee.....

(c) Total of lines a and b

\*2. Total liabilities [if any portion of the plugging and abandonment cost is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4].....

\*3. Tangible net

worth.....

\*4. Net

Worth.....

\*5. Current

assets.....

\*6. Current

liabilities.....

\*7. Net working capital [line 5 minus line

6].....

\*8. The sum of net income plus depreciation, depletion and

amortiza-  
tion.....

\*9. Total assets in U. S. (required only if less than 90% of

firm's assets are located in

U.S.).....

Yes No

10. Is line 3 at least \$10 million?.....

11. Is line 3 at least 6 time line 1(c)?.....

12. Is line 7 at least 6 times line 1(c)?.....

\*13. Are at least 90% of firm's assets located in the U.S.?

If not, complete line

14.....

14. Is line 9 at least 6 times line

1(c)?.....

15. Is line 2 divided by line 4 less than

2.0?.....

16. Is line 8 divided by line 2 greater than

0.1?.....

17. Is line 5 divided by line 6 greater than

1.5?.....

## ALTERNATIVE II

1.

(A) Current plugging and abandonment

cost.....\$

(b) Sum of the company's financial responsibilities under 31 Texas Administrative Code Chapter 335, Subchapters E and F, currently met using the financial test or corporate guarantee (c) Total of lines a and

b.....

2. Current bond rating of most recent issuance of this firm and

name of rating

service.....

3. Date of issuance of

bond.....

4. Date of maturity of

bond.....

\*5. Tangible net worth [if any portion of the plugging and

abandonment cost estimate is included in "total liabilities"

on your firm's financial statements, you may add the amount

of that portion to this

line).....

\*6. Total assets in U.S. (required only if less than 90% of

firm's assets are located in

U.S.).....

Yes No

7. Is line 5 at least \$10

million?.....

8. Is line 5 at least 6 times line

1(c)?.....

\*9. Are at least 90% of the firm's assets located in the U.S.?

If not, complete line

10.....

10. Is line 6 at least 6 times line

1(c)?.....

I hereby certify that the wording of this letter is identical to the wording specified in 31 Texas Administrative Code §331.146(f) as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

(7) A corporate guarantee as specified in §331.144(6) of this title must be worded as follows except that instructions in brackets are to be replaced with the relevant information and the bracketed material deleted:

### Exhibit F

### GUARANTEE FOR PLUGGING AND ABANDONMENT

Guarantee made this \_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, by [name of guaranteeing entity], a business corporation organized under the laws of the State of \_\_\_\_\_, herein referred to as guarantor, to the Texas Water Commission (TWC), obligee, on behalf of our subsidiary [owner or operator] of [business address].

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 31 Texas Administrative Code §331.147(6).

2. [Owner or operator] owns or operates the following Class I hazardous waste injection well covered by this guarantee: [List for each facility: EPA Identification Number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.]

3. "Plugging and abandonment plan" as used below refers to the plans maintained as required by Subchapter I of 31 Texas Administrative Code Chapter 331 for the plugging and abandonment of injection wells as identified above.

4. For value received from [owner or operator], guarantor guarantees to TWC that in the event that [owner or operator] fails to perform ["plugging and abandonment"] of the above facility(ies) in accordance with the plugging and abandonment plan and other requirements when required to do so, the guarantor will do so or fund a trust fund as specified in 31 Texas Administrative Code §331.144 in the name of [owner or operator] in the amount of the adjusted plugging and abandonment cost estimates prepared as specified in 31 Texas Administrative Code §331.143.

5. Guarantor agrees that, if at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor will send within 90 days, by certified mail, notice to the Executive Director(s) for the Region(s) in which the facility(ies) is (are) located and to [owner or operator] that he intends to provide alternate financial assurance as specified in 31 Texas Administrative Code §331.144 in the name of [owner or operator]. Within 30 days after sending such notice, the guarantor will establish such financial assurance if [owner or operator] has not done so.

6. The guarantor agrees to notify the Executive Director, by certified mail, of a voluntary or involuntary case under Title 11, U.S. Code, naming guarantor as debtor, within 10 days after its commencement.

7. Guarantor agrees that within 30 days after being notified by the Executive Director of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of plugging and abandonment, he will establish alternate financial assurance, as specified in 31 Texas Administrative Code §331.144, in the name of [owner or operator] if [owner or operator] has not done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the plugging and abandonment plan, the extension or reduction of the time of performance of plugging and abandonment or any other modification or alteration of an obligation of [owner or operator] pursuant to 31 Texas Administrative Code Chapter 331.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial assurance requirements of 31 Texas Administrative Code Chapter 331 for the above-listed facilities, except that guarantor may cancel this guarantee by sending notice by certified mail, to the Executive Director in which the facility(ies) is (are) located and to [owner or operator], such cancellation to become effective no earlier

than 120 days after actual receipt of such notice by both TWC and [owner or operator] as evidenced by the return receipts.

10. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance and obtain written approval of such assurance from the Executive Director within 90 days after a notice of cancellation by the guarantor is received by both the Executive Director and [owner or operator], guarantor will provide alternate financial assurance as specified in 31 Texas Administrative Code §331.144 in the name of the [owner or operator].

11. Guarantor expressly waives notice of acceptance of this guarantee by the Texas Water Commission or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the plugging and abandonment plan.

I hereby certify that the wording of this guarantee is identical to the wording specified in 31 Texas Administrative Code §331.147(g).

Effective

date: \_\_\_\_\_

[Name of guarantor]

[Authorized signature for guarantor]

[Type name of person signing]

[Title of person signing]

Signature of witness or

notary:

\_\_\_\_\_

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas on April 20, 1992.

TRD-9205478

Mary Ruth Holder  
Director, Legal Division  
Texas Water Commission

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-8069

## TITLE 34. PUBLIC FINANCE

### Part VIII. State Depository Board

#### Chapter 171. Collateral Transactions

##### • 34 TAC §171.1

The State Depository board proposes an amendment to §171.1, concerning depositing, exchanging, and withdrawing security collateral for state deposits. The purpose of the

amendment is to expand the types of securities which are deemed acceptable as collateral for state funds.

John A. Bell, deputy treasurer for finance, has determined that for the first five-year period the section is in effect there will be no fiscal implications for state or local government as a result of enforcing or administering the section.

Mr. Bell also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be less restrictive requirements for acceptable security collateral for state deposits. There will be no effect on small businesses. There is no anticipated economic cost to persons who are required to comply with the section as proposed.

Comments on the proposal may be submitted to Alicia M. Fechtel, General Counsel, Texas State Treasury Department, 111 East 17th Street, Austin, Texas 78701, (512) 463-5971.

The amendment is proposed under the Texas Government Code, §404.013, which provides the Texas State Depository Board with the authority to adopt and enforce rules governing the establishment and conduct of state depositories, the handling of funds in the depositories, and the investment of state funds that the public interest requires.

#### §171.1. Deposit of Acceptable Security Collateral.

(a) Acceptable security collateral. The state treasurer shall approve all acceptable securities offered as collateral for state funds. Acceptable securities shall include those securities with fixed, stated rates and shall include acceptable mortgage-backed securities with declining principal balances. The following securities are hereby deemed acceptable by the State Depository Board as collateral for state funds:

(1)-(3) (No change.)

(4) Federal Home Loan Mortgage Corporation discount notes and primary debt instruments or debentures and mortgage-backed securities with a remaining maturity of 15 years or less;

(5)-(12) (No change.)

This agency hereby certifies that the proposal has been reviewed by legal counsel and found to be within the agency's authority to adopt.

Issued in Austin, Texas, on April 14, 1992.

TRD-9205357

Alicia M. Fechtel  
General Counsel  
Texas State Treasury  
Department

Earliest possible date of adoption: May 25, 1992

For further information, please call: (512) 463-5971

## TITLE 37. PUBLIC SAFETY AND CORRECTIONS

### Part III. Texas Youth Commission

#### Chapter 93. General Provisions

##### Records, Reports, Forms

##### • 37 TAC §93.53

The Texas Youth Commission (TYC) proposes an amendment to §93.53, concerning documentation of serious incidents pertaining to an individual youth. The amendment requires that the incident report be filed in the security file. Specified administrators will be notified of serious medical incidents. Also, the title of the facility administrator has been changed to program administrator.

John Franks, director of finance, has determined that for the first five-year period the section is in effect there will be no fiscal implications for state or local government as a result of enforcing or administering the section.

Mr. Franks also has determined that for each year of the first five years the section is in effect the public benefit anticipated as a result of enforcing the section will be more efficient filing system and more thorough notification of administrators in the case of serious medical incidents. There will be no effect on small businesses. There is no anticipated economic cost to persons who are required to comply with the sections as proposed.

Comments on the proposal may be submitted to Gail Graham, Policy and Manuals Coordinator, Texas Youth Commission, 4900 North Lamar Boulevard, P.O. Box 4260, Austin, Texas 78765.

The new section is proposed under the Human Resources Code, §61.034, which provides the Texas Youth Commission with authority to make rules appropriate to the proper accomplishment of its function.

#### §93.53. Incident Report.

(a) Policy. The Texas Youth Commission (TYC) utilizes a standard format to document serious incidents pertaining to an individual youth. The program [facility] administrator immediately notifies, by electronic mail, the executive director or his designee of those incidents when media inquiry could be expected and/or where the daily operation of the facility could be affected.

(b) Rules.

(1) (No change.)

(2) The Incident Report, form CCF-225, is used to document:

(A)-(C) (No change.)



**TEXAS' WATERSHED ASSESSMENT PROGRAM**

July 27, 1992

Barbara R. Britton

Texas Water Commission

## INTRODUCTION

- Texas watersheds serve more than 17.5 million people.
- Texas' population is expected to double in the next 50 years to 30 to 35 million people (Texas Water Development Board).
- Current demand for water is 75% of existing capacity.
- We expect that, even with conservation efforts, water demands in the state will meet or exceed existing water supplies.
- Clearly, clean useable water is and will continue to be a priority for our State.
- Our new watershed management programs are an attempt to ensure that the limited supplies of water we do have remain unpolluted and available for drinking, recreation, and economic development.

## OVERVIEW

### **Discussion of current Texas Water Commission Watershed Assessment and Planning Programs**

- Focus on Senate Bill 818
- National Estuary Programs
- Rio Grande Border

### **Future Direction of Texas Water Commission Water Quality Program**

- What remains to be done.
- Integration of 818 effort with existing water quality programs.

### NATIONAL PRECEDENT FOR WATERSHED FOCUS

- Watershed Management preceded permit driven system
- Clean Water Act
  - Mandates implementation of the Section 319 nonpoint source program on a watershed basis.
  - Requires Total Maximum Daily Loads on a watershed basis.
  - Issue in the current reauthorization debate.
- EPA is beginning to encourage watershed management
  - Part of EPA's 1992 operating guidance.
- States are beginning to reorient water quality programs in this fashion.
  - North Carolina established a watershed management program without new legislation and with few additional resources

## CURRENT PROGRAM

### Current Water Quality Program Focuses on Point Source Discharges:

- Stream Standards
  - Establish use designations on a stream segment basis, and assume high use if nothing is known about undesignated stream.
  - Numerical criteria are established for each designated use.
- Wasteload evaluations
  - Determine point source effluent limits for oxygen demanding constituents.
  - Allocate pollutant loading to ensure total discharges do not exceed stream standards.
  - Intensive surveys used to calibrate wasteload.
- Monitoring--Focus on point source monitoring. Data is compiled in 305(b) report by watershed.
  - Permitting
    - Considered on a case-by-case basis, not by watershed.

### CURRENT PROGRAM LIMITATIONS

- Nonpoint source pollution is not adequately assessed.
- We do not routinely model for toxics and nutrients.
- We do not assess the impacts of water quality and water supply simultaneously.
- Cumulative water quality impacts on regional ecosystems, aquatic life, critical habitats, and wetlands are not routinely addressed.

HOW DOES A WATERSHED ASSESSMENT AND MANAGEMENT APPROACH ELIMINATE LIMITATIONS IN  
OUR EXISTING PROGRAM?

- Rather than making broad generalizations about the entire state, it allows to address a diversity of issues pertaining to a smaller geographic region.
- It allows us to account for differences between regions.

TEXAS' WATERSHED PROGRAM--SENATE BILL 818

- SB 818 Requires the Texas Water Commission to:

"Ensure the comprehensive regional assessment of water quality in each watershed and river basin of the state."

- Contract with river authorities to conduct assessments
- Oversee development of assessments
- Compile report of all assessments
- Conduct assessments in watershed where river authorities are unable to do so

"Consider the existence and effects of nonpoint source pollution, toxic materials and nutrient loadings in developing water quality standards and related waste load models for water quality."

- Incorporate assessment findings into water quality assessment program.

"Require that all permits for the discharge of waste within a single watershed or within a region of a single watershed contain the same expiration date," to the extent possible

- Incorporate a watershed management approach into permitting process.

(Senate Bill 818, cont.)

- **SB 818 Requires River Authorities to:**
  - Assess regional water quality of their watersheds
  - Convene Basin-Wide Steering Committees to identify significant water quality problems and provide data for assessments.
  - Develop a Public Input Process--Steering Committees are to provide a mechanism for public input process that provides meaningful comments and review of assessments by private citizens

WATER QUALITY ISSUES SB 818 ADDRESSES

- Review of Wastewater Discharges
- Nonpoint Source Pollution
- Nutrient Loading
- Toxics
- Biological Health of Aquatic Life
- Pollution Prevention Efforts
- Public education and Involvement
- Significant enforcement issues
- Basin-wide permitting
- Citizen's Monitoring

OTHER OPPORTUNITIES 818 ASSESSMENTS PROVIDE

- Impact of water supply on ecosystem health
- Wetlands impacts
- Endangered Species Concerns
- Impacts on Drinking Water Supplies

## RESEARCH ISSUES THAT MAY EVOLVE FROM THE 818 PROCESS

- **Land Use Patterns**

- 818 data will enable us to track land use patterns and pollution loadings to each watershed.
- Such data can be a useful surrogate for monitoring.
- Important since resources for monitoring are frequently limited.

- **Monitoring**

- Will the monitoring data the river authorities collect be consistent enough for comparisons?
- Can we make inferences from the data?
- Monitoring is expensive--need to ensure that we are getting the "biggest bang for the buck". Planning is essential.
- Will be looking at joint projects with EPA to develop probabilistic monitoring designs to ensure consistency and meaningfulness of monitoring data.

**RESEARCH ISSUES (cont.)**

- **Data and Information Collection and Analysis**
  - Senate Bill 818 is the pilot project for the Agency's TRAC's data automation system.  
Will include GIS component.
  - Important to be able to collect and assess on ongoing monitoring efforts.

THE NEW WATERSHED APPROACH WILL REQUIRE NEW PROGRAM DIRECTION

- To establish standards for toxics and nutrients on a watershed basis.
- To begin developing models that account for:
  - Point and nonpoint source pollution
  - Toxics
  - Nutrients

818 FORCES US TO REORIENT OUR FOCUS ON WATER QUALITY ISSUES

To Summarize: It Is A Reorientation of the Existing Program and Requires Integration with Existing Efforts

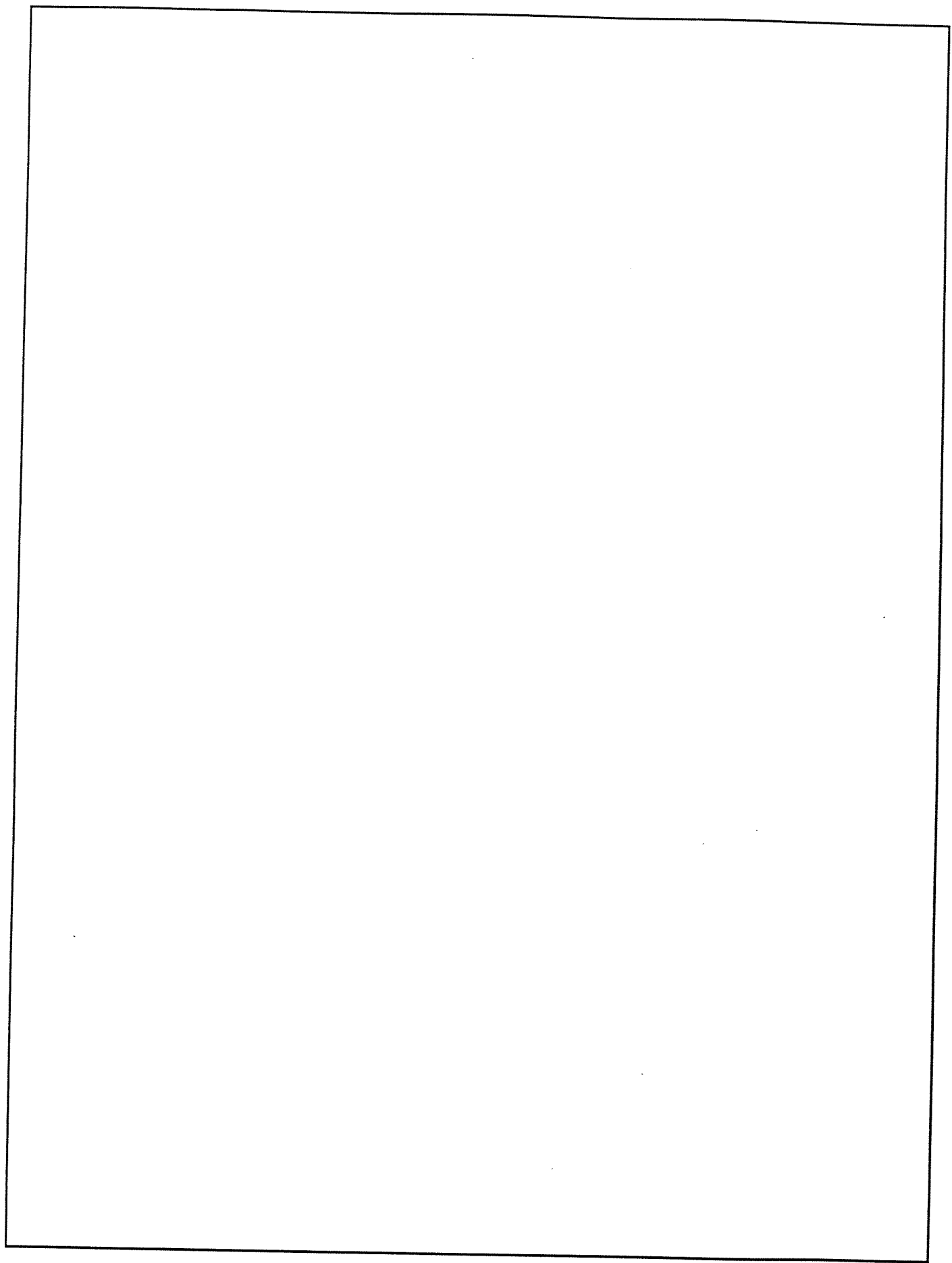
- Water Quality Management Planning -- Clean Water Act 604 (b)
- Water Quality Inventory -- Clean Water Act 305 (b)
- National Estuary Programs -- Clean Water Act Section 320
  - Galveston Bay
  - Corpus Christi
- Integrated Border Environmental Plan
- EPA's proposed multi-media human exposure assessment on the Texas Mexico Border
- Rio Grande Toxics Study
- EPA's Environmental Monitoring and Assessment Program (EMAP)
- Comparative Risk Study

HOW IS THE PROGRAM FUNDED?

- Fees on Wastewater Permit Holders
- Fees on Water Rights Permit Holders

PROGRAM IMPLEMENTATION SCHEDULE

- Implementation Rules (December 1991)
- Fee Rules (February 1992)
- Permitting Rules
- Assessment Guidance for River Authorities
- Contracts with River Authorities (July)
- Rio Grande Assessment (Due October 1)
- River Authority Assessments Due to TWC October 1
- Assessment Report due to the Governor December 1, 1991
- Second Assessment due December 1, 1993.

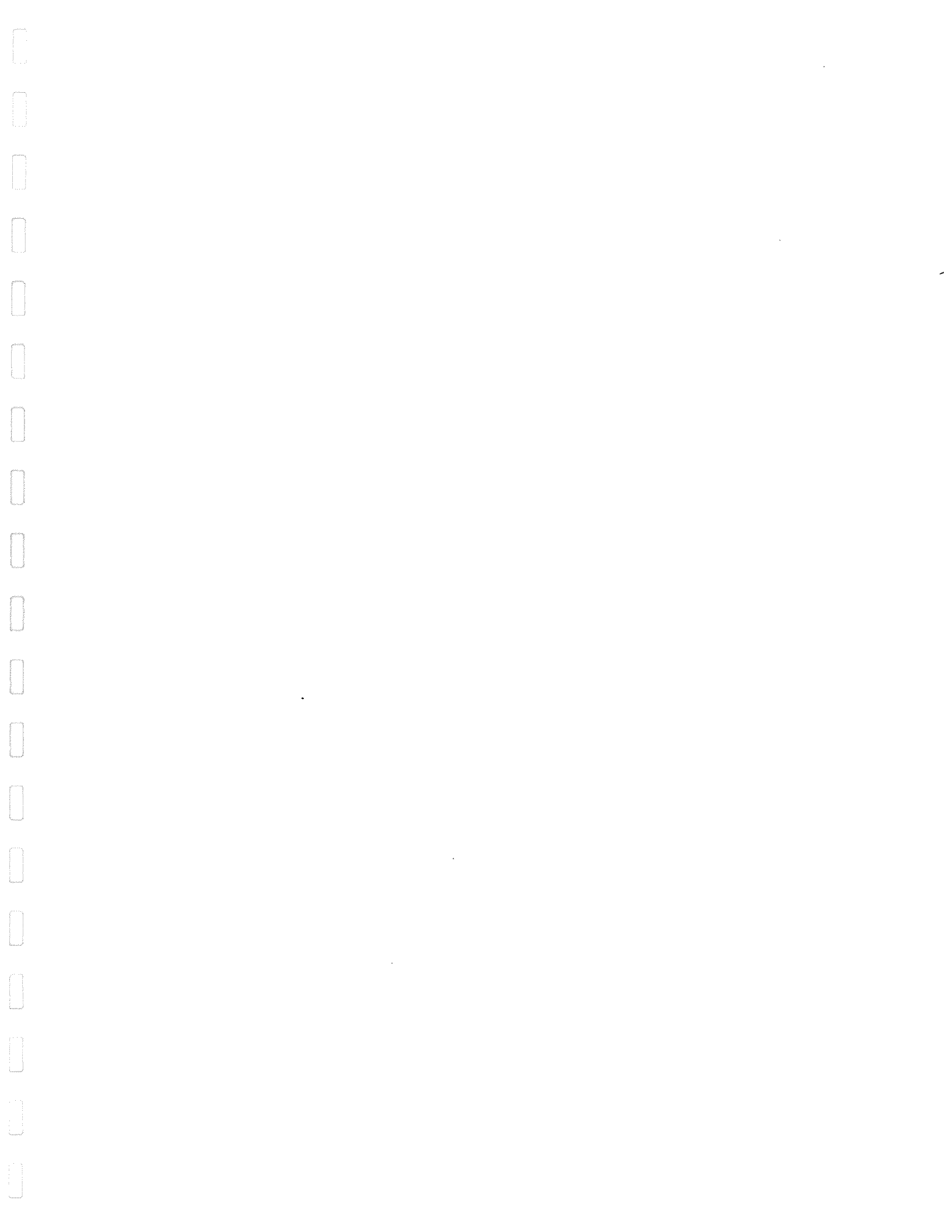




**TOXIC SUBSTANCES IN WATER  
REGULATORY OVERVIEW**

**FACT SHEET AND SUPPORTING INFORMATION**

**Jim Davenport  
Texas Water Commission**



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# TOXIC SUBSTANCES IN WATER REGULATORY OVERVIEW

## FACT SHEET AND SUPPORTING INFORMATION

Jim Davenport  
Texas Water Commission

### I. Toxic Impacts in Texas Waters

- A. Efforts to estimate the occurrence of toxic materials are hampered by dwindling resources to conduct monitoring. Available data indicates, however, that most Texas surface waters are not seriously impacted by toxic substances. As available information on the distribution and effects of specific toxics increases, however, the number of potential toxic "hot spots" in the state also increases.
- B. The most recent statewide assessment in Texas is provided by the "1992 Texas Water Quality Inventory" (TWC, in press). The summary section on toxic substances is attached (ATTACHMENT 1). Additional indicators of toxic impacts include the following:
  - 1. The current state list of toxic "hot spots" cites 22 major waterbodies which are potentially degraded by toxic materials. Heavy metals, dioxins, and pesticides such as chlordane are the most frequent contaminants. Fishing advisories or bans due to toxic substances (dioxin, chlordane, or mercury) have been placed on seven major waterbodies by the Texas Department of Health.
  - 2. Testing of public drinking water supply systems using surface water or mixed surface and ground water indicated an exceedance of any chemical or radiological maximum contaminant levels in only seven of 899 systems tested (after treatment).
  - 3. Effluent biomonitoring tests on major dischargers in Texas indicate that 18% of municipal discharges and 14% of industrial dischargers cause significant instream toxicity to aquatic life, and a toxicity reduction evaluation is required for these discharges.
- C. Groundwater contamination also remains a concern. Potential problems include Class V wells, nitrates, saline contamination, pesticides, and abandoned and improperly constructed wells. (ATTACHMENT 2). Geographic assessments of groundwater quality in Texas are presented in "Ground Water Quality of Texas"

(TWC Report 89-01, 1989) and in the "1992 Texas Water Quality Inventory" (TWC, in press).

## II. Evolution and New Directions of Toxic Control Strategies

### A. Federal

1. The 1972 Federal Water Pollution Control Act (Clean Water Act) established key management tools for water quality programs:
  - \* "Instream" standards
  - \* Monitoring and research
  - \* Permitting
    - \*\* Technology based
    - \*\* Water-quality based (to meet standards)
  - \* Funding
    - \*\* Construction of public treatment facilities
    - \*\* Local area planning
2. The water quality management approaches established by the Clean Water Act were initially applied primarily to conventional pollutants. The 1987 Amendments to the Act and related EPA regulations have rapidly re-directed the basic federal water quality management to focus on toxic controls. Examples include:
  - \* Requirements for numerical toxic criteria in state standards
  - \* Identification and remediation of toxic "hot spots" in each state
  - \* Accelerated development of toxic criteria
  - \* Effluent biomonitoring requirements
3. Implementation of federal policies has required a variety of procedural development, legal action, and recalibration. Major examples include:

- \* Federal Promulgation of water quality standards in states where numerical toxic criteria are deemed insufficient (not Texas)
  - \* Re-evaluation of numerical criteria for dioxin
  - \* Proposal of less stringent procedures to estimate the biologically available proportion of metals
  - \* Development of a comprehensive implementation document entitled "Technical Support Document for Water-Quality Based Toxics Control" (revised 1990).
4. Many pending EPA policies are couched in terms of possible revisions/additions to requirements for state water quality standards. Current issues are summarized in the June 1992 EPA Criteria and Standards newsletter (ATTACHMENT 3). Key topics related to toxic substances include:
- \* National consistency versus state flexibility for human health criteria
  - \* The role of biological criteria
  - \* Wet weather standards applicable to nonpoint sources
  - \* Future implementation of biomonitoring (whole effluent testing)
  - \* Improving risk assessment for human health criteria
  - \* Protection and toxic criteria for bottom sediments
  - \* Applicability of standards to intermittent streams
5. Preliminary proposals for Federal Clean Water Amendments (e.g. Senate 1081) have specifically included new toxics provisions, such as:
- \* Zero discharge of toxic pollutants with high bioaccumulation rates
  - \* Adoption of numerical criteria for all priority pollutants by each state

B. Texas

1. The Texas Surface Water Quality Standards have undergone major revisions in 1988 and 1991 to better address toxic pollutants (ATTACHMENT 4):
  - \* Numerical instream criteria to protect aquatic life, for 35 toxic substances
  - \* Numerical instream criteria to protect human consumption of drinking water and fish, for 61 toxic substances
  - \* Effluent biomonitoring requirements, which also include lethality testing of undiluted effluent
  - \* TWC is scheduled to conduct another major revision of the Texas Surface Water Quality Standards in 1993/1994
2. TWC has initiated "Clean Texas 2000," an environmental partnership with Texas businesses, local governments, communities, organizations and citizens to reduce and prevent pollution (ATTACHMENT 5). Key components which directly address toxic substances include the following:
  - \* Hazardous Waste and Toxics Reduction
  - \* Recycle Texas
  - \* Texas Watch (citizens' participation in waste collection, monitoring, etc.)
3. SB 818, passed by the Texas Legislature in 1991, promotes assessment and control of cumulative toxic (and other) impacts on a watershed basis, as a joint effort by TWC and river authorities. This legislation also requires that toxic substances be included in TWC wasteload evaluations of major waterbodies. An initial wasteload evaluation for nickel in the Houston Ship Channel was conducted this year, and additional work is ongoing to include other potentially toxic metals in this evaluation.
4. The ongoing Galveston Bay National Estuary Program and the proposed Corpus Christi Bay National Estuary Program are designed to develop management plans that will include comprehensive toxic control strategies.

5. Other state regional, and local agencies have also generally improved capabilities to monitor, assess, and control toxic pollutants in water. This is also true of many cities, industries, and agricultural operations.
6. In 1991, TWC convened the Clean Water Council, an advisory group with diverse representation from across the state. This council has actively reviewed major water quality issues and is now completing final drafts of recommendations for consideration by the Commission.
7. Procedures to preclude toxicity from permitted discharges are established in "Implementation of the Texas Water Commission Standards Via Permitting."

**ATTACHMENT 1**

**Excerpt on Toxic Pollutants**

**1992 Texas Water Quality Inventory**

## Public Health/Aquatic Life Concerns

### Size of Waters Affected by Toxicants

The available data on toxic substances were reviewed in order to estimate the extent of waters in the State which are potentially impacted. This review included sampling data for concentrations of toxic materials in the water column and in edible fish tissue. The results of biomonitoring tests for total toxicity for both instream water and effluents from treated wastewater discharges were also considered. The statewide extent of waterbodies with exceedances of the TSWQS or other indicators of concern is summarized in Table 8. Waterbodies which are under fishing closures or consumption advisories by the Texas Department of Health due to excessive concentrations of toxic substances in edible fish tissue are listed in Table 9. Fish kills which are suspected or known to have been caused by toxicants are listed in Table 10.

TABLE 8

Summary of Total Waterbody Size Affected by Toxics

Waterbody Type/Units	Size Monitored for Toxics	Size with Elevated Levels of Toxics
Streams and Rivers/Miles	3,802	309
Reservoirs/Acres	157,236	500
Bays/Square Miles	919.00	58

TABLE 9

Fishing Bans and Advisories

Segment-Waterbody	Pollutant	Source	Size	Closure or Consumption Advisory
0601-Neches River	Dioxin	Paper Mill	23 miles	All fish consumption advisory
0805-Upper Trinity River 0806-West Fork Trinity River 0829-Clear Fork Trinity River 0841-Lower West Fork Trinity River	Chlordane	Urban Use	62 miles 1.0 mile 23.0 miles 27.0 miles	Fish closure
1005, 1006, 1007-Houston Ship Channel	Dioxin	Paper Mill	32 miles	Catfish and blue crab consumption advisory
1201-Brazos River Tidal	Dioxin	Chemical Industry	23 miles	All fish consumption advisory
1429-Town Lake in Austin		Urban Use	500 acres	All fish consumption advisory
2202-Arroyo Colorado Above Tidal	DDT	Unknown	63 miles	All fish consumption advisory
2453-Lavaca Bay 2454-Cox Bay	Mercury	Spillage at docks	58 square miles	Fish closure

TABLE 10  
Toxic Related Fish Kills

Waterbody	Pollutant	Source	Size	Comments
Prairie Dog Town Fork of the Red River	Ammonia	Suspected discharge from WWTP	6.5 miles	WWTP effluent limits to be reviewed
Sabine River Tidal	Triphenyl boron	Chemical manufacturing	6 miles	Discharge via outfall canal, in alkaline solution
Adams Bayou Tidal	Nonvolatile resin	Chemical manufacturing	1 mile	Discharge via outfall canal
Lake Creek	Methanol	Train wreck	0.1 mile	Spill and fire
Discharge Canal to Brazos River Tidal	Unknown	Chemical manufacturing	0.5 mile	Kill limited to canal
Discharge Canal to Brazos River Tidal	Unknown	Chemical manufacturing	0.1 mile	Kill limited to canal suspected, pH problem
Discharge Canal to Brazos River Tidal	Unknown	Chemical manufacturing	1 mile	Kill limited to canal dissolved oxygen very low
Colorado River near Sweetwater	Corrosion Inhibitor	Truck wreck	0.07 mile	Spill partially contained sediment removed
Nott Branch	Herbicide	Excessive application	2 miles	Water almost black, also low dissolved oxygen
Gilleland Creek	Chlorine	WWTP	1 mile	Plant recently increased its capacity
Callihan Farm Pond	Ammonia	Runoff from Hog Operations	1.0 mile	Fish swimming erratically
Leon Creek	Cleaning Solution	Aircraft maintenance	1.1 mile	Discharge of cleaning solution from C-5 washrack
Water Supply Ditch near Pharr	Algicide	Excessive application	2.0 miles	CuSO <sub>4</sub> crystals undissolved, low flow
Bayport Ship Channel	Vinyl Acetate	Barge spill	2 miles	Barge at loading dock
San Fernando Creek	Formaldehyde	Chemical manufacturing	2 miles	Spill of untreated wastewater

## Priorities and Concerns for Toxic Substances

The TWC Toxic Control Program within the last five years includes the following elements:

- o Biomonitoring requirements for larger permitted discharges.
- o Revision of the fixed-station monitoring program, intensive survey priorities, and the development of instream biological survey procedures to improve surveillance of the occurrence and impact of toxic substances.
- o Statewide assessment of nonpoint source impacts, and initiation of specific nonpoint source management plans.
- o Implementation of wellhead protection programs.
- o Expansion of municipal water pollution control and abatement programs, which are required for all cities in Texas with a population of 5,000 or more.
- o Control and clean-up of underground storage tanks statewide.
- o Establishment of a cooperative TOXNET program between the TWC and EPA Region 6. Water is collected at 16 sites on quarterly frequencies and sent to EPA Region 6 Laboratory in Houston where bioassays are performed to screen for ambient toxicity.
- o Addition of most priority pollutants to routine parameter coverages for water, sediment, and fish tissue samples collected at selected TWC Statewide Monitoring Network sites.
- o Adaption of a large number of numerical criteria in the Texas Surface Water Quality Standards to protect aquatic life and human health. The toxic substances which have been assigned numerical criteria are listed in Table 11.
- o Development of detailed procedures to implement water quality based permitting for toxic substances, entitled "Implementation of Surface Water Quality Standards Through Permitting".

During the next two years, the TWC intends to continue and improve the implementation of these new programs. (See Surface Water Monitoring Program Section for a discussion of monitoring activities for toxic substances.) In addition, the TWC will initiate further review of the toxic-related portions of the TSWQS and the implementation procedures.

TABLE 11

**Toxic Substances with Numerical Criteria in the  
Texas Surface Water Quality Standards**

Toxicants with Criteria to Protect Aquatic Life:	
Aldrin	Hexachlorocyclohexane (Lindane)
Aluminum	Lead
Arsenic	Malathion
Cadmium	Mercury
Carbaryl	Methoxychlor
Chlordane	Mirex
Chlorpyrifos	Nickel
Chromium (Tri)	Total PCB's
Chromium (Hex)	Parathion
Copper	Phenanthrene
Cyanide	Pentachlorophenol
DDT	Selenium
Demeton	Silver
Dieldrin	Toxaphene
Endosulfan	Tributyltin
Endrin	2,4,5-Trichlorophenol
Guthion	Zinc
Heptachlor	
Toxicants with Human Health Criteria to Protect Human Consumption of Drinking Water and Fish:	
Aldrin	2,4-D
Alpha-hexachlorocyclohexane	Danitol
Arsenic	Dibromochloromethane
Barium	1,2-Dibromoethane
Benzene	Dieldrin
Benzidine	p-Dichlorobenzene, (1,4-Dichlorobenzene)
Beta-hexachlorocyclohexane	1,2-Dichloroethane
Bis(chloromethyl) ether	1,1-Dichloroethylene
Cadmium	Dicofol
Carbon Tetrachloride	Dioxins/Furans (TCDD Equivalents)
Chlordane	Endrin
Chlorobenzene	Flouride
Chloroform	Gamma Hexachlorocyclohexane (Lindane)
Chromium	Heptachlor
Cresols	Heptachlor Epoxide
DDD	Hexachlorobenzene
DDE	Hexachlorobutadiene
DDT	Pentachlorophenol
Hexachloroethane	Pyridine
Hexachlorophene	Selenium
Lead	Silver
Mercury	1,2,4,5-Tetrachlorobenzene
Methoxychlor	Tetrachloroethylene
Methyl Ethyl Ketone	Toxaphene
Mirex	2,4,5-TP (Silvex)
Nitrate-N	2,4,5-Trichlorophenol
Nitrobenzene	Trichloroethylene
n-Nitrosodiethylamine	1,1,1-Trichloroethane
N-Nitroso-di-n-Butylamine	TTHM (Total Trihalomethanes)
PCB's	Vinyl Chloride
Pentachlorobenzene	

**ATTACHMENT 2**

**Groundwater Fact Sheet**

**1992 Texas Water Quality Inventory**

## **Status of Ground Water Quality**

The Commission published Ground Water Quality of Texas, Report 89-01, in March 1989. This report presents the results of three ground water data compilation efforts. Maps and discussion of natural ground water quality in the major and minor aquifers of Texas, identified in Figures 1 and 2, are presented. The major sources of contamination in Texas, both natural and man-induced, are identified and assessed. Maps and discussion of statewide aquifer pollution potential, utilizing the DRASTIC methodology, are also presented.

The report makes the following conclusions with regard to ground water quality and the effects of man's activities. It is not thought that the usefulness of the State's ground water resources has been appreciably reduced. Probably less than one percent of the State's ground water has been contaminated by man. This assessment is, however, based on sparse data. Naturally occurring aquifer conditions, such as deeper saline water and minerals in the soil and aquifer matrix, probably affect the quality of more ground water than all other contamination sources. The report also concludes that man-induced contamination is local in effect and confined to shallow aquifers in the most heavily populated and industrialized areas of the State. Finally, much of the man-induced contamination is probably attributable to past activities subject to little or no regulation.

Preliminary results of the Texas Groundwater Protection Committee's work in compiling data on ground water contamination incidents related to regulated activities are in line with the above conclusions. Analysis of available data and ranking of major sources of groundwater contamination show that most incidents are related to point source activities such as petroleum storage tanks and industrial waste disposal (Table 23).

TABLE 23

## Ranking of Major Sources of Ground Water Contamination

Activity	Contaminant
Underground Petroleum Storage Tanks	gasoline, diesel
Industrial Generator Hazardous Waste	organics, metals, and solvents
Oil and Gas Activities	sodium chloride
Agricultural Chemicals	nitrates
Industrial and Municipal Wastewater	nitrates, sulfates

Approximately 80 percent of the known documented contamination incidents involving regulated activities are associated with underground petroleum storage tanks. Industrial hazardous waste generators are the next largest category at about 10 percent. The categories of oil and gas activities, agricultural activities, and industrial and municipal wastewater account for the remainder.

**Special Concerns**

There are several important ground water protection projects which have been completed, initiated or were on-going since the last water quality inventory. These projects involve the gathering, compilation and presentation of ground water quality and pollution potential data; the development and implementation of new water quality protection management programs; and, increased coordination of protection activities among state, local and federal agencies. These efforts reflect a greater emphasis on protecting the ground water resource rather than regulating a specific activity.

Ground Water data collection efforts are an ongoing concern. Tracking ground water quality and ground water contamination are essential to protection of the ground water resources and the evaluation and implementation of protection programs. Efforts in data collection, underway and planned, include compilation of a pesticides in ground water data base, continued efforts in compiling ground water contamination data and improvements to management and availability of data bases.

In the area of new program development and implementation, the State's ground water nonpoint source management programs are of special concern. The nonpoint source management program focuses efforts in two areas: protection of public supply wells and an agricultural chemicals management plan. Current efforts involve implementation of a cooperative wellhead protection program designed to address and mitigate contamination in a specified geographic area surrounding public supply wells or wellfields. The

TWC through the Texas Groundwater Protection Committee is working with several state agencies to develop a statewide agricultural chemicals and agents management plan. This plan will address aquifer vulnerability, agricultural chemical contamination potential, specific pesticide management plans, and interagency coordination.

**ATTACHMENT 3**

**NEWSLETTER**

**EPA Water Quality Criteria and Standards**

**June 1992**

# *Newsletter*

## *Water Quality Criteria & Standards*

823-N-92-002

No. 7

Volume 3

June 1992

### **3RD NATIONAL WQC/WQS MEETING**

#### **PROGRAM DIRECTION & ISSUE DECISIONS FOR FY 1994-1996**

August 31-September 3, 1992

Las Vegas, Nevada

Recently much attention in the water quality criteria and standards program has been on State adoption of standards for toxic pollutants exemplified in the National Toxics Rule. There is still important work to be done in assuring successful implementation of water quality standards for toxic pollutants. However, this is a timely juncture, for the Agency and all involved in the protection of water quality to discuss the future direction, priorities and shape of the program.

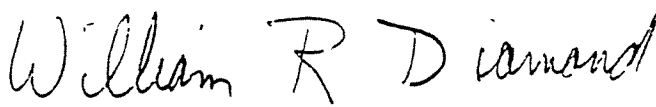
The timeliness of this program evaluation is driven by several factors,

- \* A better appreciation of the nature of the problems still threatening our nation's water raises questions about the need for program changes to more effectively address these problems.
- \* The beginning of a new triennial review cycle next year, demands a clear statement of EPA's expectations to allow States and dischargers sufficient time to plan their activities.
- \* The extensive work conducted in recent years to develop the scientific foundation for the next generation of criteria and standards - i.e. sediment, biological, wet weather and wildlife - is about to bear fruit. These new types of standards individually and collectively raise a host of new policy, program and implementation issues. The unique aspects of some of these emerging tools also leads some to question the current validity of longstanding policies, practices and principles.
- \* Budget constraints demand that we decide which among a number of worthy and needed efforts should receive our highest attention.
- \* Finally, the pending statutory reauthorization presents an opportunity to either make fundamental program changes or to re-commit to time-honored program tenets and requirements.

All of these advances and developments are evidence that the water quality program is evolving into something broader and different than that with which we have dealt for the past 20 years. To help EPA and others evaluate the merits of different program directions, this conference is designed to present and debate alternate approaches for EPA and all of us to consider regarding a number of major program components and issues. We hope these presentations will help to bring into sharper focus the policy, program and scientific choices facing us in these areas. It will also allow an airing of the reasons for and against various alternatives. We expect this will help EPA formulate a position on each of these areas and hope it will trigger an ongoing discussion among all of us as these issues evolve in the coming months. We see this meeting as one part in a continuing process to shape and enhance the water quality program to best address today's highest risks.



Margaret Stasikowski, Director  
Health & Ecological Criteria Division



William R. Diamond, Director  
Standards & Applied Science Division

## National Meeting

This issue of the Newsletter outlines the sessions to be held at the upcoming National Meeting in Las Vegas. A Registration form is also attached should you wish to register for the meeting. There is no registration fee. If you have any questions, contact Patti Morris at 202-260-2806.

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### "Life After Toxics": What Direction Now?

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#### *(NATIONAL CONSISTENCY VS. GEOGRAPHIC FLEXIBILITY - THE ROLE OF RISK IN PRIORITY SETTING)*

The Clean Water Act has struck a balance between some degree of national consistency (national water quality criteria guidance under section 304; national policies and regulations; and EPA oversight, review and approval of States standards) and flexibility to adapt national guidance to local circumstances (State primacy, site-specific criteria). Recently, events have brought this balance under scrutiny and there have been calls to alter this fundamental CWA principle.

+ As States have adopted WQS for toxic pollutants, some have questioned the disparity among States in the risk levels and exposure assumptions relative to protection of human health. They have argued that at a minimum there should be consistency among the States in human health risk levels.

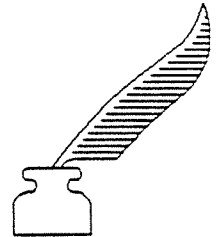
+ Others assert that advances in science allow more accurate tailoring of standards to local and regional conditions. They claim it runs counter to good science to establish national standards that are more stringent (and more expensive) than is necessary to protect the ecology.

+ Some Congressional actions, such as the Great Lakes Critical Programs Act, indicate

a preference for consistency in standards and implementation practices across States and waterbodies.

+ Some recent EPA actions, such as the Watershed Initiative, are moving the agency toward a waterbody focus for criteria and standards.

+ Major bills pending for Clean Water Act reauthorization (Senate 1081) include provisions which move strongly in the direction of uniformity in water quality criteria and standards. Proponents assert such provisions assure greater equity among dischargers in different States and speed the clean-up of distressed waters by avoiding the long delays that have become the norm in state adoption of water quality standards.



+ Actions to address concerns about "environmental equity" could take the form of either greater national consistency (setting criteria and standards to protect highly exposed populations through stringent assumptions on risk levels and consumption parameters) or increased use of site specific standards (based on local information on consumption patterns).

The CWA has traditionally included broad program mandates that leaves EPA with flexibility to decide the specifics of implementation. However, the trend of recent amendments has been toward greater statutory specificity. This limits the ability to set priorities based upon risk at a time there is increased ability to set risk-based priorities and more calls to rely on it.

These issues raise several questions for the future of the program. Fundamental ones include,

- Should the water quality program be geared to greater national consistency or increased geographical flexibility and tailoring?

-Does the answer vary depending on the type of criteria (chemical specific numeric vs. biological vs. whole effluent vs. wildlife)?

-Should a distinction be made between standards to protect human health vs. ecological standards?

-What should be the role of risk in setting program priorities?

-Is a statutory change necessary or desirable to address these issues? If so, what form should it take?

-Is there sufficient data available to decide these issues at this time?

Related issues can also influence decisions on this subject.

\*Are these issues impacted if there is a requirement to move aggressively toward the Clean Water Act goal of zero discharge?

\*Should EPA alter its allocation of scientific and research resources away from development of methodologies and criteria documents and toward assistance at the local level to speed tailoring of criteria and implementation?

\*Given the relative success of the Clean Water Act programs should we tamper with provisions that are at the core of the statute?

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## **Biological Measures: Can and Should They Be Implemented?**

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Traditionally water quality has been evaluated and discharges regulated based on chemical-specific numeric measures. However, recent advances in research have developed new tools that give insight into other aspects of water body integrity. These hold the promise of helping us more effectively achieve the Clean Water Act goals of restoring and maintaining the chemical, physical, and biological integrity

of the Nation's waters. However, they also raise important scientific, policy and legal questions. One such advance is biological measures, which provide information on the biological health and integrity of a water body based on an assessment of species population and diversity.

Biological measures have demonstrated their utility in assessing water quality and identifying problems, particularly for



nonpoint sources and non-traditional water quality problems. They provide insight into not only the degree to which ecological values are being attained, but also the causes of ecosystem damage. The techniques for measuring and evaluating biological quality are still evolving, but there have been significant improvements in the past two decades. As the techniques continue to improve, several questions and issues arise that should be addressed:

-Why are biological measures important? What types of environmental problems require biological measures to effect solutions? How large or important a real-world problem is this? What are the risks at issue? Can nonpoint sources ever be fully addressed without such measures?

-Is the science of biological measures sufficiently advanced to allow their use in regulatory programs for problem identification? Assessment of attainment or non-attainment of Clean Water Act goals? Establishing limitations for total maximum daily loads, wasteload allocations, load allocations, NPDES permits?

-How should the measures be used in a regulatory context? Is the regulatory structure capable of using biological measures with consistency and effectiveness? What changes would be necessary to enhance their use? Are biological measures analogous to whole effluent toxicity limits where they measure an impact and the responsible party must determine the necessary steps to eliminate the

impairment? If we do not use biological measures in regulatory programs, how do we address issues of biological impairment and integrity?

-What are the practical implications of adopting narrative biological criteria? Numeric criteria? Will States be able to proceed individually, or will concerns about national consistency make the process occur more slowly?

-Do States have the resources and knowledge base to allow effective implementation? What steps are necessary to enhance State ability—new policies, regulations, guidance, research?

-Is a statutory change necessary or desirable to help address these issues? If so, what form should it take?

-Should more resources, research and attention be committed to this area, and if so, from where should they be diverted?

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## **CSOs/Wet Weather: Are Today's WQC Relevant?**

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Approximately 1,200 combined sewer systems in the United States serve a population of 43 million. Most combined sewer systems are located in old areas with almost 85 percent of the systems located in 11 States in the Northeast and Great Lakes (ME, MA, VT, NJ, NY, PA, WV, IL, IN, MI, OH). Such systems are prevalent in smaller communities — approximately 62 percent of combined sewer systems serve 10,000 people or



less. Only seven percent of the systems serve populations greater than 100,000, but these systems account for 70 percent of the people served by combined sewers.

Combined sewer overflows (CSOs) consist of untreated mixtures of sanitary sewage, industrial wastewater, and stormwater runoff. CSO discharges may contain high levels of suspended solids, bacteria, heavy metals, floatables, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. Discharges of these pollutants in high volumes over a short time can cause exceedances of applicable State numeric and narrative water quality standards. Such exceedances may pose risks to human health, threaten aquatic life and their habitat, and impair the use and enjoyment of receiving waters. Stormwater and urban runoff can cause similar problems. In the 1990 National Water Quality Inventory, States identified urban runoff, stormwater runoff and CSOs as the sources of impairment, where the sources were identified, for 13% of the river miles, 31% of lake acres, 14% of the Great Lakes shore miles, 38% of estuarine square miles and 40% of ocean shore miles.

On August 10, 1989, EPA issued the National CSO Strategy. The Strategy reaffirmed that CSOs are point sources subject to NPDES permit requirements including both technology-based and water quality-based requirements of the Clean Water Act (CWA). Cost estimates of controlling CSOs range from the \$20 - \$50 billion range all the

way up to \$150 billion.

In August 1991, the Office of Water initiated an Expedited Plan to accelerate the implementation of the National Strategy. As part of the expedited plan the Agency is simultaneously examining (1) the use of a design standard against which to plan/size facilities for the control of CSOs and (2) the applicability to wet weather discharges of existing assumptions in the water quality criteria development, water quality standards adoption, total maximum daily load/waste load allocation and permitting processes. Congress is also looking at approaches to control CSOs.

CSOs and other wet weather discharges raise a number of question for the WQC/WQS program, including –

- o What are the relative risks of wet weather events compared to other threats/impairments? What priority would activities on wet weather be given relative to other WQC/WQS activities?

- o What are the characteristics of wet weather discharges that pose the greatest risk to human health and aquatic life for which "wet weather standards to permits priorities" should be established, i.e., toxics, bacteria, floatables/solids, dissolved oxygen sags, physical flows, etc.?

- o If a design standard is developed for the control of CSOs, what is an appropriate basis for such a standard – number of overflows per year, capture of the first flush,

treatment of flows above a multiplier of dry weather flow or flow emanating from a certain size storm? At what level (i.e., how big a storm) should the design standard be established? Can a design standard ever be correlated to a water quality standard?

- o If a community implements controls to meet the design standard, as part of a CSO permit, does the design standard become a surrogate for meeting the State's water quality standards, protecting the community from citizen suits for violating water quality standards?

How does the design standard approach correlate with the CWA requirement that permits be written to meet water quality standards?

- o Will communities commit to investing in facilities that do not ensure that they meet water quality standards?

- o Rather than focusing on controlling overflows to a design standard that may not meet water quality standards, should the Agency focus its efforts on developing approaches for States to use in adopting and implementing water quality standards for wet weather discharges? Do the chemical, physical, hydrological and biological characteristics of wet weather events affect the assumptions used in the standards to permits process (i.e., water quality criteria development, water quality standards adoption,



**TMDL/WLA, and permits)?**

**o What elements of or assumptions in the standards to permits process should be examined/revised –**

**oo duration of exposure assumptions for human health criteria?**

**oo duration/frequency exceedances for aquatic life criteria?**

**oo site-specific criteria development guidance?**

**oo use of biological criteria and the policy of independent applicability of the criteria?**

**oo refinement of uses?**

**oo designation of seasonal/partial uses?**

**oo variances for wet weather-impacted waters?**

**oo high flow exemption to water quality standards?**

**oo design assumptions (stream flow, etc.) to be used in modeling CSO events?**

**oo probability bases for WLAs and permit limits?**

**oo use of acute or chronic criteria for CSO permit limits?**

**oo expression of numeric permit limits for CSOs (i.e., maximum**

**daily or average monthly, etc)?**

**o Under existing guidance is there more that States can do to refine their standards to permits process to make the processes more applicable to wet weather discharges?**

**o Is a statutory change necessary or desirable to address these issues? If so what form should it take?**

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## **Whole Effluent Toxicity**

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Whole effluent toxicity (WET) has been used in the NPDES permit program as a means to implement the "no toxics in toxic amounts" provisions of State water quality standards over the past 5-10 years. It is a means of assessing the acute and chronic toxicity of mixtures to aquatic organisms. Existing guidance recommends the use of narrative criteria to implement whole effluent toxicity into NPDES permits if the state lacks a whole effluent toxicity numeric criteria.

Recently, some states have attempted to adopt into their standards, not only simple numeric criteria for acute and chronic whole effluent

toxicity, but also language to define the enforceability of whole effluent toxicity violations. Arguments have been raised that random exceedences of toxicity tests are unavoidable and cause no real impairment of designated uses. It is therefore argued that a "pattern of toxicity" should be established as a minimum step for assessing compliance with water quality standards. On the other hand, data indicates that toxicity tests are as reproducible as chemical tests, and so exceedences should not be treated differently.

Others contend that causes of toxicity are difficult to determine, that dischargers who are earnestly addressing a toxicity problem should be allowed considerable time to resolve the problem before EPA takes any enforcement action, and that toxicity test organisms are "too" sensitive for measuring true ecological impacts.

States have generally been implementing WET as an interpretation of their narrative standard "no toxics in toxic amounts". A numerical WET water quality standard may be a more effective approach.

States and EPA have been debating these issues in the context of EPA approval of State water quality standards. Inconsistencies in State approaches have led to different levels of protection among States and discharger complaints against States strongly utilizing WET testing. These issues are important because of the obvious environmental and cost considerations, but also as a precedent for other water quality enforcement actions.

Some of the major issues and questions surrounding this issue are:

- + Should EPA develop and publish Section 304 acute and chronic criteria for whole effluent toxicity?

- + Would adopting WET acute and chronic criteria help or harm state NPDES programs?

- + Is the science of WET testing sufficiently sound to support expansion of its regulatory use in this manner?

- + Do the frequency (1 event in 3 years) and duration (24 hour and 4 day average) factors for chemical criteria directly apply to WET?

- + Do definitions NPDES permitting or enforcement requirements for whole effluent toxicity belong in standards when we don't address this issue with other chemical specific numeric criteria?

- + Will placing definitions of patterns of toxicity and due diligence into a state's standards undercut other states' WET programs?

- + Is a statutory change necessary or desirable to address these issues? If so, what form should it take?

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## Re-examining Independent Applicability

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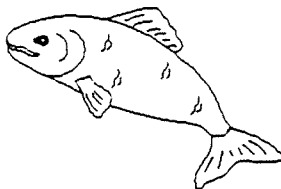
Traditionally, EPA has developed two types of water quality measures: aquatic life criteria and human health criteria. The boundaries of application of these were relatively clear and linked to particular designated uses. Recently EPA is developing additional types of measures such as biological criteria, and whole effluent toxicity testing (WET). The boundaries between these measures are not as clear, and thus the possibility of conflicting results arises.

A simple analysis of the situation would be to say that all of the above measures are intended to protect the water resource. This leads to a simple argument. On one side persons may argue that any signal of an impairment needs to be addressed by source controls. On the other side, the argument is that any signal of no impact means that no source controls are needed. Another analysis values the more comprehensive measures (biological criteria > WET > chemical criteria) higher, and resolves all conflicts according to this scheme. A somewhat more detailed analysis focuses on the differences between the measures. Chemical criteria are designed to address the effects of specific chemicals over the whole range of species. WET limits are meant to catch unknown or unmeasured chemicals or synergistic effects, and use a very limited set of species. Biological criteria are meant to catch more subtle imbalances in the whole ecology. Thus the measures are meant to be



different, and so should be applied independently. This is EPA's present position, and it is detailed in several documents, including the biological criteria program guidance and the 1991 Technical Support Document.

A more sophisticated weight of evidence approach would be to examine any conflicts between these measures in light of their differences. The goal would be to specifically explain any conflicts, rather than to simply assert their validity or invalidity. Clearly this would lead to more precise analysis of water quality, and would have major cost savings for sources.



Recently, a number of States have proposed various water quality implementation measures that in essence override one measure with

another. Other States have flatly said that they do not want to implement biological criteria if it is simply an additional requirement to be applied independently.

To some, the issue will be whether to be maximize environmental protection, and apply all measures to that end, or to minimize cost, and to look at the data in that light. That is basically a political argument. The more technical issues include:

- +Are we confident enough in the accuracy of the newer measures to allow them to override the well established chemical criteria?

- +Is the laboratory development of the chemical criteria so unrepresentative of the real world that we should abandon them where conflicts arise?

- +Do we have the expertise available now to routinely resolve conflicts between the measures in a thoughtful way?

- +Is a statutory change necessary or

desirable to address these issues? If so, what form should it take?

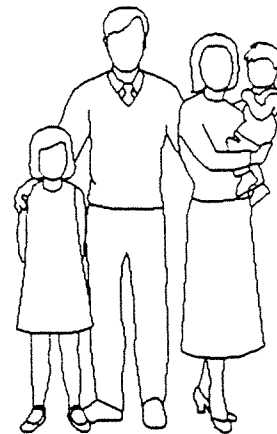
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## Human Health Risk Management: "Who Should We Protect?"

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EPA's water quality criteria for human health are designed to protect against the risk of adverse health effects associated with the ambient concentration of a pollutant. The

human health criteria are primarily based on two endpoints: (1) carcinogenicity and (2) toxicity. The principle routes of exposure are the consumption of contaminated surface water and the ingestion of fish contaminated from polluted water.



For many pollutants, the human health criteria are the limiting factor for the establishment of permit effluent discharge limitations. Although EPA issues criteria guidance documents, it is primarily a State responsibility to give these criteria regulatory force through adoption as WQS.

The human health criteria and standards are derived using a calculation encompassing many risk assessment, exposure and risk management parameters. The existing EPA methodology assumes an average exposure scenario based upon a fish consumption rate of 6.5 grams per day (i.e. approximately one 7 ounce serving per month). Most States use this rate in their WQS. Although most States adopt an incremental cancer risk level of one in one million, a significant number of States have chosen a risk level of one in one hundred thousand. The combination of these factors have recently lead to questions being raised about the exposure and risk management

aspects of the criteria and standards.

+As States have adopted WQS for toxic pollutants, dischargers and interested parties have challenged the fish consumption exposure and risk level assumptions underlying the standards. Issues relate to the adequacy of the data; the degree of conservativeness in the methodology; the appropriateness of the target population being protected; etc.

+During this same process, many have questioned the statutory provisions and risk management policies that allow for diversity among States in the level of human health risk protection provided their citizens.

+In February, 1992, EPA Deputy Administrator Henry Habicht issued Guidance on Risk Characterization. The document established principles to promote greater consistency and comparability in risk assessments and risk management decisions across Agency programs. Implementation of this policy should produce more realistic risk characterizations and encourage more accurate risk communication. Applying this policy to the CWA human health WQS could result in important changes.

+Over the past few months, the issue of "environmental equity" has received increased public and EPA attention. The Agency has been petitioned by the Alabama Attorney General to address these equity issues. In the WQC/WQS program, this takes the form of issues concerning the adequacy of protection of populations that are more highly exposed to the risk of consumption of contaminated fish. These exposure patterns may be based on economic status, religion, racial or ethnic background, or geography. Questions arise about what populations and individuals the WQC/WQS should protect; whether the State or EPA should make that decision; what is sufficient data upon which to base these risk management decisions, etc. Others counter that the existing methodology provides adequate protection to even highly exposed populations because of the generally conservative nature of the methodology.

EPA has initiated a review of its CWA risk assessment methodology for WQC and related



risk management issues. A major aspect of this review will focus on exposure through the consumption of chemically contaminated fish. This triggers a number of specific questions on which EPA is seeking input.

\*How should EPA strike the balance in its risk assessment methodology between being protective enough given continuing scientific uncertainty and not so overprotective as to divert limited pollution control resources to address de minimis risks?

\*What is the appropriate exposure scenario for fish consumption which should be reflected in EPA's criteria development and approval/disapproval of State WQS actions? Should this parameter be dealt with in isolation from the other factors in the risk assessment methodology?

\*Should States be given more or less flexibility in risk assessment and management decisions? Are the existing mechanisms for developing site specific criteria adequate to address concerns about protecting highly exposed populations?

\*Are the data for rates of fish consumption of sufficient quality to justify changing the assumed rate of 6.5 g/person/day?

This debate also raises the issue of whether a statutory change is necessary or desirable and if so what form should it take?

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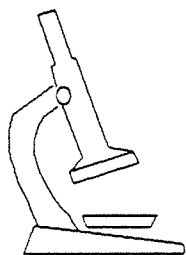
## Sediment Management Policy Decisions

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In recent years there has been an emerging consensus that contaminated sediments are one of the major remaining sources of water body impairment. At the same time there have been significant advances in our scientific

ability to identify and measure the extent of and adverse effects from contaminated sediments. Because of the cross-program and cross-media nature of this problem, a number of new program and policy issues must be addressed. In March of this year, EPA released to the public an outline of the Contaminated Sediment Management Strategy. The strategy describes the policy framework and specific actions EPA could take to promote Agencywide consideration and reduction of the ecological and human health risks posed by sediment contamination. For the past few months we have been promoting a debate on these issues. (Copies of the strategy were mailed to approximately 1000 State and Federal agencies, industry representatives, environmental groups, and private citizens. Three national forums were held to focus debate on the strategy, and written comments were submitted by the public).

One of the key elements of the strategy is the commitment to use a consistent, minimum set of chemical and biological methods across Agency programs to determine whether sediments are contaminated. These methods will include numeric sediment chemical-specific criteria, toxicity bioassays, and bioaccumulation tests. The uses of sediment chemical criteria, which are being proposed for the first time, are particularly controversial:



- + Industry representatives have expressed concern about the use of sediment criteria in calculating permit limits. They feel that water quality-based permit limits are already too stringent and fear that sediment quality-based limits will be even lower and unnecessarily stringent to protect aquatic life.

- + Academics argue that fate and transport models must be enhanced in order to calculate sediment quality-based permit limits.

- + Permitting staff in EPA and the States

are concerned about how priorities will be set for implementing sediment quality-based limits.

- + EPA and State nonpoint source programs are not confident about the effectiveness of traditional BMPs in reducing discharges of sediment contaminants.

- + Solid waste facility managers are worried that RCRA corrective action plans will require that sediment standards adopted by a State be used as mandatory cleanup levels for all contaminated sediments, no matter how costly or technically difficult such compliance might be.

- + Responsible parties fear that enforcement actions against them under CWA, CERCLA, RCRA and TSCA will require that sediment standards be used as mandatory cleanup levels for all contaminated sediments that must be remediated as part of a penalty, no matter how costly or technically difficult such compliance might be.

- + The Corps of Engineers is concerned that dredged material will be required to comply with sediment standards before it can be disposed overboard. The Corps fears that the chemical standards will be too stringent and will result in much more costly disposal of material dredged from navigation channels.

In the coming months, EPA will be formalizing positions on these issues. Some of the questions on which we hope to receive input from our panelists and others, include.

- + What are the practical implications of adopting sediment quality criteria? What are the most difficult programmatic challenges to using criteria in the NPDES and dredging programs? What are the best ways to overcome these challenges?

- + Does the relative human health and environmental risk of contaminated sediments justify increased attention and resources being committed to this area? If so, from where should they be diverted? Does the risk justify acceleration of the program? Can the program feasibly be accelerated?

+Is a statutory change necessary or desirable to help address these issues? If so, what form should it take?

+Do States have the resources and knowledge base to allow effective implementation? What steps are necessary to enhance State ability - new policies, regulations, training/assistance, guidance, research?

+What should be the primary focus of EPA efforts - criteria development; policy guidance; data gathering; encouraging NPS controls; developing remediation technologies; all of the above?

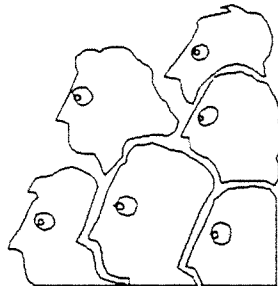
+Should these sediment criteria be treated differently than other types of criteria? Why? How distinguish?

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## Advocates Forum

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A free-wheeling session where a panel of State, Tribal, Local, Industrial and Environmental representatives are asked questions to present and defend their positions on important and controversial issues.



The session would start with each panelist answering a set of general questions,

\*What should EPA do more of or improve?

\*What should EPA initiate that it hasn't done in the past?

\*What should EPA definitely not get involved in?

\*What is the single most important

change you would like to see in the CWA reauthorization?

After the initial statements, questions could be put to some or all of the panelists. The source of the questions would include:

-Questions from the audience.

-Written questions submitted during the course of the conference and screened to ensure general interest and conciseness. They could also be shared with the panelists in advance to enhance concise and coherent responses.

-Questions from the other panelists - either spontaneously or prepared in advance.

-Questions from the moderator.

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## Ecological Risk Assessment

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The term "ecological risk assessment" appears frequently. Yet virtually all of the current practice is to simply set a single number criterion for a single adverse endpoint. Calling this risk assessment seems a trifle overblown, even with the term criteria being replaced by "toxicity quotient". As a step toward qualifying as risk assessment, criteria need to be associated with uncertainty.



Further steps toward a true risk assessment would involve being able to compare the relative probability of a number of endpoints at a given pollutant concentration, or being able to construct a mathematical relationship between pollutant concentration and the probability or severity of a single endpoint.

Steps are being taken to move toward a more comprehensive ecological risk analysis. EPA is circulating a draft ecological risk assessment framework. On the more technical side, EPA is beginning to think of certain measures, such as

nutrient measures or dissolved oxygen, in terms of risk assessment, rather than as criteria. Consideration of a range of adverse effects is being undertaken at some sites, including Superfund sites, and decisions are being taken based on these considerations. All, however, agree that we are much less advanced in the area of ecological risk than we are in human health risk. We need to evaluate ecological risk in order to make informed decisions on a number of source control activities which have major cost implications.

Some of the major questions outstanding are:

- + How close are we to being able to do actual ecological risk analysis, as defined above? What sorts of research need to be conducted?

- + What are the policy implications of actually being able to do real ecological risk assessments in a world reliant on clean demarcations between good and evil?

- + How far along are we in providing actual ecological risk analysis in a way useful to risk managers to make incremental decisions?

- + Is a statutory change necessary or helpful to clarify the role of ecological risk assessment in Clean Water Act criteria and standards programs? If so, what form should it take?

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## **Human Health Risk Assessment "Revising EPA Guidelines"**

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The Clean Water Act of 1977 required EPA to develop criteria for ambient water to protect human health. EPA responded by publishing formal Guidelines for deriving these criteria on November 28, 1980. Human health protective criteria for over 100 toxic pollutants, including pesticides, heavy metals, synthetic organics and dioxin, were published by EPA using these Guidelines.

The Clean Water Act also required EPA to update and revise these human health criteria when necessary. The Agency is in the process of doing this revision now. This session will discuss the major changes under consideration for the human health Guidelines and describe their impact on ambient water quality criteria.

EPA's water quality criteria for human health are designed to protect against the risk of adverse health effects associated with the ambient concentration of a pollutant. The existing human health criteria are primarily based on two endpoints: (1)



carcinogenicity and (2) toxicity. The principle routes of exposure are the consumption of contaminated surface water and the ingestion of fish contaminated from the polluted water.

For many pollutants, the EPA human health criteria are the limiting factor for the establishment of effluent discharge permit limitations. Although EPA issues criteria guidance documents, it is primarily a State's responsibility to give these criteria regulatory force through their adoption as water quality standards.

The importance of having a strong scientific basis for human health criteria has been recently demonstrated in the proposal of the National Toxics Rule, the Agency's reassessment of dioxin health effects, and the development of proposal of the Great Lakes Initiative's human health criteria. All of these activities have raised major concerns about the adequacy and appropriateness of the existing human health criteria Guidelines.

The methodology for deriving human health criteria has not been updated since 1980. Since that time, there have been significant advances in scientific capabilities (i.e. the ability to include information on neurotoxicity, immunotoxicity, or genotoxicity; the ability to quantify bioaccumulation in lieu of bioconcentration), data collection (i.e. IRIS updates), and the evolution of risk assessment

methods (i.e. updates to EPA guidelines for cancer). These changes should enable EPA to develop a more sophisticated and accurate criteria methodology.

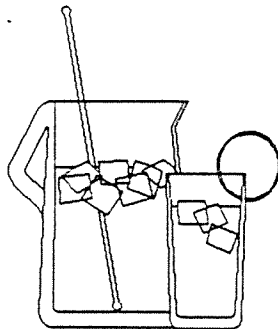
In October, 1991, the General Accounting Office issue a report entitled, Reproductive and Developmental Toxicity: Regulatory Actions Provide Uncertain Protection. The report included recommendations that EPA and other federal agencies put greater emphasis on research and regulation to protect against the potential reproductive and developmental effects of chemicals.

Among the major issues that EPA is considering in revising the human health Guidelines are the following:



+ The existing methodology assumes that consumed fish contain 3% lipids and that only the "edible portion" of fish are actually consumed. What do we need to change in these assumptions?

+ Should we have a water ingestion component in the methodology? The existing methodology assumes that the average person consumes 2 liters/day of untreated surface water. Should we use maximum contaminant level (MCL) values derived under the Safe Drinking Water Act as a substitute for the present approach? What about incidental exposure through swimming?



+ Should criteria for hydrophobic chemicals be expressed as fish tissue concentrations instead of water column concentrations?

+ Should EPA develop "less-than-lifetime" criteria for human health? The existing methodology assumes that a 70 kg

adult is exposed for a lifetime. Accidental spill events and periodic wet weather flows that overload combined sewers have demonstrated that surface waters are often subject to short-term elevated concentration of pollutants. How should the human health impacts from these be assessed?

+ Should other exposure sources be considered in setting ambient water criteria? The existing methodology assumes 100% exposure to a given pollutant occurs through surface water. What should we assume?

+ Should bioaccumulation be considered in calculating criteria? The existing methodology assumes only bioconcentration. How will these factors be derived?

+ What should be the balance in the selection of stringent vs. non-conservative parameters to achieve an overall balanced risk assessment?

+ Should some of the factors in our "risk assessment" methodology more accurately be characterized as risk management decisions?

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## WQS for Ephemeral and Effluent-Dependent Streams

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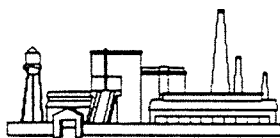
EPA's water quality criteria guidance documents are designed to be sufficiently protective to be applicable to all waterbodies throughout the United States. However, as States have moved to adopt more WQS, dischargers and others have raised questions on how applicable these criteria are to dry and intermittent streams in arid ecosystems. Similar issues arise nationwide where waterbodies are effluent dominated or effluent dependent. Among the difficult issues,

\*What are we trying to protect or achieve in these waterbodies - creation of "full fishable, swimmable streams"; restoration of historic natural flows; simple riparian "green strips"; multiple-use reclaimed water transport

systems?

\*Are these situations so unique as to justify changes in water quality use classifications or development of "new" use classifications which would justify less stringent WQC than the national criteria documents? What should the uses be? What type of Use Attainability Analysis or other data support should be required to support this modification? Does such a change constitute a downgrade?

\*In some cases, the cost of fully meeting WQC/WQS may mean a discharger will remove his discharge from the stream and thereby "eliminate" the waterbody and the water dependent ecosystem. In this situation, should special allowance be made to preserve the stream flow and the ecosystem? What would be the basis for these relaxed requirements? Does the concept of "net environmental benefit" have merit in making these trade-offs? Does this approach have the potential to create "aquatic attractive nuisances" (i.e. Kesterson)?



\*How are these questions related to issues of flow diversions and the need for water reclamation? Are there water rights issues which enhance or prevent constructive or inventive answers?

\*What consideration should be given to potential impacts on non-aquatic species - the value of these "created ecosystems" for migratory birds, wildlife, etc.?

\*How will other current or emerging CWA requirements (Whole Effluent Toxicity requirements; biological criteria) impact the effect of potential changes in uses or criteria? Will they prevent any real adjustment in discharger requirements?

\*How large or important a real world problem is this?

These issues take on pressing importance as

new water quality standards are translated into permit limitations and dischargers face multi-million dollar decisions on how to comply. They also comport with the program questions that are emerging that force us to take a broader view of water protection. The historically narrow focus on ambient water chemistry is now one part of a larger ecosystem-wide water agenda that may require new ideas and hard trade-offs.

For EPA these issues raise several critical questions for the future direction of the program.

+Are the current regulations and policies adequate to allow this issue to be addressed without radical program changes (i.e. provisions allowing modification or downgrade of uses; waste load allocations; provisions for site specific criteria development; variances)? Are these provisions workable or a sham? Which ones hold the greatest potential?

+Are there approaches which are environmentally protective, scientifically defensible and economically sensible?

+Is a statutory change necessary or desirable to help address this issue? If so what form should it take?

+What is the relative risk and environmental importance of this issue vis-a-vis other pressing priorities? Should more research and resources be devoted to this area and if so what area should they be transferred from?

+Is there sufficient data available to decide this issue at this time or should we let it evolve on an ad hoc case-by-case basis?

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## "Ask EPA"

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A free-wheeling session where a panel of EPA's senior water program managers take questions on important and controversial issues.

The session could start in a number of ways,

-Each panelist would be asked to respond to a general program question (i.e. What do you see as the most important challenge facing the water quality programs). [To facilitate short, coherent answers panelists would receive the questions in advance.], or

-Each panelist could receive a different initial question, or

-Panelists could open with remarks similar to those opening the session for the interest group advocates -

\*What should EPA do more of or improve?

\*What should EPA initiate that it hasn't done in the past?

\*What should EPA definitely not get involved in?

\*What is the single most important change you would like to see in the CWA reauthorization?

After the initial statements, questions could be put to some or all of the panelists. The source of the questions would include:

-Questions from the audience.

-Written questions submitted during the course of the conference and screened to ensure general interest and conciseness. They could also be shared with the panelists in advance to enhance concise and coherent responses.

-Questions from the panelists - either spontaneously or prepared in advance.

-Questions from the moderator.

## **FISH CONSUMPTION**

The Risk Assessment and Management Branch of SASD has begun a cooperative project with the State of Delaware and the National Marine Fisheries Service (NMFS) to measure estuarine

and marine fish consumption in Delaware, Mississippi, Alabama, and the West Coast of Florida. Approximately 10,000 anglers will be interviewed in the field as part of the NMFS Marine Recreational Fishing Survey. The interviewers will attempt to determine the length, weight, and species of fish taken by each angler. Successful fishermen will be contacted two weeks later by telephone and will be asked about the disposition of the fish including parts and quantities eaten and methods of preparation. For additional information about the study, contact Skip Houseknecht at (202) 260-7055.



## **News From the States**

### **Ohio**

#### **Biological Criteria and Independent Application**

The State of Ohio has an advanced biological criteria program. Ohio's approach divides the State into various ecoregions with specific, numeric criteria for various metrics measured by the State in performing stream biosurveys. Ohio's biocriteria are used by the State to assess impacts to waterbodies from a variety of causes. The State uses biosurvey data extensively in evaluating designated uses for the waters under its jurisdiction.

Ohio's reliance on biological criteria has led to some conflict with the Region. Specifically, the State included in its most recent standards revision a provision to allow the State to utilize data indicating attainment of biological criteria to supersede data demonstrating the need for either chemical-specific or whole effluent toxicity limits in NPDES permits. The Region disapproved this portion of Ohio's standards on the basis that it would conflict with the requirements of 303(c) by allowing the State to

withhold limits for 307(a) pollutants. Obviously, the provision proposed by Ohio conflicts with USEPA's policy of independent application as well. Ohio and the Region are discussing revisions to the standards to address the Region's concerns.

Most of the other states in the Region are in the process of developing biological criteria. The Ohio River Valley Sanitation Commission is considering developing biological criteria for the Ohio River as a part of its triennial review of standards.

### Vermont

The Vermont Department of Environmental Conservation will be carrying out a mussel monitoring program this summer on 12-15 major Lake Champlain tributaries. The project, scheduled for one year, will be funded by the US EPA through the New England Interstate Pollution Control Commission. The funding is part of a five million dollar federal package allotted for environmental research on Lake Champlain and its basin.

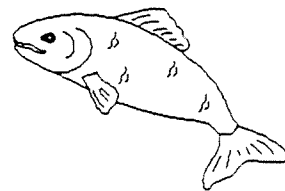
The project will involve transplanting mussels from relatively clean, contaminant-free waters to the mouths of large tributaries for a period of 30 days. At the end of this period the clams will be retrieved and the soft tissues analyzed for contaminants which may have bioaccumulated during the exposure time. Since mussels serve as excellent bioaccumulators of certain contaminants, resulting data should reflect the presence and bioavailability of these contaminants. The results will contribute to the efforts towards source identification of toxic inputs into Lake Champlain from its tributaries. For additional information contact Richard Langdon of the Vermont Agency of Natural Resources at 802-244-4520.

### Maine

The results of the 1991 fish sampling showed that levels of dioxin were lower than in 1988-1990. As a result, fish consumption advisories were removed from the Presumpscot River and

the West Branch of the Sebasticook River. Furthermore, advisories were relaxed for the Androscoggin, Kennebec, and Penobscot Rivers.

For additional information contact Barry Mower of the State of Maine Department of Environmental Protection.



### Alaska

In response to issues related to upcoming permits, Alaska has begun an expedited standards review/revision process for selected WQS. The review includes selection of a human health risk level, adoption of human health criteria for dioxin, and modification of mixing zone language. Concurrently, the state is continuing its triennial review. Completion is planned for September and December, respectively.

### Oregon

Oregon has issued a public notice inviting comments on the issues it intends to address during this next triennial review. Because of considerable comment from municipalities, Oregon is proposing to reexamine its recent adoption of an enterococci bacteria standard. Oregon is proposing to amend its WQS to reinstate the fecal coliform bacteria standards until July 1995, pending completion of further investigations to determine the applicability of the enterococci bacteria standard.

### Washington

Late last year, the state Department of Ecology was close to completion of its triennial review when its authority to include wetlands WQS was challenged. The State put adoption on hold until the issue was addressed by the State Attorney General. Resolution does not appear to be forthcoming in the near future; therefore, the State has decided to remove wetlands

WQS and proceed with its process. Completion is planned for October 1992.

### Region 10 Indian Tribes

The Region is conducting a workshop on WQS for tribes on June 24-25. The workshop will build on the Denver tribal meeting by focusing in more detail on the content of a WQS program and how to develop and draft standards. In addition, information sessions are planned on the relationship of standards to non-point source control, groundwater concerns, and 404 permit issues. State WQS staff will be leading discussions of their State standards and talking about mechanisms for coordination on common water bodies.

### Kansas

The Kansas Department of Health and Environment (KDHE) is planning for multiple public meetings around the State this summer during which the draft water quality standards revisions will be presented and discussed. The likelihood that any final State and Region 7 action on these standards revisions will occur before the publication of the final National

Toxics Rule is extremely remote. Therefore, the KDHE and REgion 7 are preparing for Kansas' inclusion in the National Toxics Rule. KDHE is also assembling standards-to permits implementation procedures in parallel with the standards revisions.

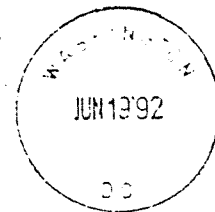
### Nebraska

The Nebraska Department of Environmental Control (NEDC) is very close to finalizing its NPDES Permitting Procedures and Wasteload Allocation Procedures documentation. Between the two documents NDEC is formalizing its standards-to-permits process which will allow for more accelerated permit issuance by the State and concurrence by the Region and avoidance of excessive permit appeal actions. The NPDES Permitting Procedures address reasonable potential, compliance schedules, monitoring frequency and whole effluent toxicity testing. The WLA Procedures include mixing zone requirements, dilution schemes, simple and complex modeling assumptions, protected flows and metals assumptions. Nebraska will be implementing dissolved metals criteria through metals limits expressed as total recoverable in a 1:1 ratio.



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**ATTACHMENT 4**

**1991 REVISIONS TO THE**

**TEXAS SURFACE WATER QUALITY STANDARDS**

## **1990/1991 Standards Revisions**

- \* New procedure for site-specific standards modifications**
- \* Wetlands specifically included**
- \* High aquatic life use for unclassified perennial streams**
- \* New aquatic life toxic criteria:  
aluminum, phenanthrene, tributyltin, carbaryl, and  
2,4,5 trichlorophenol**
- \* Revised aquatic life toxic criteria:  
Higher for copper, mercury, and silver  
Lower for selenium**
- \* New human health toxic criteria for 61 substances**
- \* Lethality testing for undiluted effluent**
- \* Higher aquatic life uses:  
Trinity River, Buffalo Bayou Tidal**
- \* Lower aquatic life uses:  
Dickinson Bayou above Tidal, Brazos River below  
Possum Kingdom, Nolan River**
- \* New Appendix designating aquatic life uses for 63 small  
streams**

## 1991 REVISIONS TO THE TEXAS SURFACE WATER QUALITY STANDARDS

On June 12, 1991, the Texas Water Commission adopted major revisions to the Texas Surface Water Quality Standards (Title 31 of the Texas Administrative Code, Sections 307.1-307.10).

The water quality standards are a means of establishing water quality goals throughout the state, and diverse sources have shaped standards development - including cities, industries, environmental interests, and the U.S. Environmental Protection Agency, which has approval authority over state water quality standards.

In the Texas Surface Water Quality Standards, the hydrologic and geologic diversity of the state is given consideration by dividing major river basins, bays and estuaries into defined segments (referred to as classified or designated segments). The standards rule contains (1) general standards which apply to all surface water in the state, and (2) segment-specific standards which identify appropriate uses (aquatic life, contact or noncontact recreation, drinking water, etc.) and list upper and lower limits for common indicators (criteria) of water quality - such as dissolved oxygen, temperature, pH, dissolved minerals, and fecal coliform bacteria.

Water quality standards are periodically revised in order to incorporate new information on potential pollutants and additional data about water quality conditions in specific waterbodies, and to address new state and federal regulatory requirements. The previous major revisions to the standards were completed in 1988, and a public review of the standards is required at least every three years by the Federal Clean Water Act. Texas has had codified water quality standards since 1967.

Preliminary public comments on the water quality standards were requested in the Texas Register in December 1989, and a preliminary draft of the proposed revisions was circulated for additional comment in July 1990. The proposed revisions were published in the Texas Register dated December 25, 1990; and a public hearing was conducted on February 26, 1991. Thirty-four persons testified at the hearing, and seventy persons submitted written comments.

The Commission made a number of changes to the proposed standards based on public comments. After adoption by the Commission on June 12, 1991 and publication in the Texas Register on June 25, 1991, the revised standards became a state regulation as of July 10, 1991. The revised standards were certified by the Texas Attorney General's Office and submitted on July 22, 1991 to EPA Region VI in Dallas for approval. EPA fully approved the revised Texas Surface Water Quality Standards on September 24, 1991.

The implementation of the revised standards will be described in an update to the Continuing Planning Process document. This update of the implementation procedures will be subject to public suggestions, review, and comment.

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Major 1991 revisions of the standards are summarized as follows:

1. Due to the increasing number and stringency of statewide "across-the-board" standards, an improved procedure was needed to adjust these statewide standards when they are inappropriate for a particular location. Requirements to establish a site-specific modification to the standards are therefore adopted in the 1991 revisions. These requirements include a rigorous "variance" procedure in order to allow a discharger time to gather data to support a different site-specific standard, which is then incorporated into the standards rule if approved by the Commission and EPA. The overall procedure requires substantial justification and provides opportunity for public input.

2. Wetlands are defined and specifically included as waters in the state to which the 1991 water quality standards apply. This definition is added in order to comply with federal requirements, and to provide additional protection for water quality in state wetlands. Additional development of water quality standards for wetlands will be considered in future revisions of the standards.

3. Texas contains approximately 60,000 miles of small streams which are too numerous to be classified with site-specific standards. A minimum aquatic life use and a corresponding dissolved oxygen criterion has therefore been assumed for these streams. In addition, the Commission has conducted numerous studies called "receiving water assessments" over the past three years to insure that the appropriate attainable uses and criteria are established at each site which has been affected by a permitting action of the Commission.

As a major step in 1991 to further protect small streams, the presumed minimum aquatic life use for unclassified perennial streams throughout the state is raised from limited to high, and the dissolved oxygen criterion (minimum allowable 24-hour average concentration) for these streams is substantially elevated from three to five milligrams per liter. This change is adopted in response to data obtained by the Commission over the last three years, which indicates that the majority of such streams should typically obtain at least an intermediate aquatic life use. The staff will continue to review and establish appropriate standards in specific unclassified waters when permit actions occur that could affect those waters. On September 4, 1991, the Commission and EPA Region VI established an agreement on procedures to develop site-specific standards for perennial unclassified streams, for locations where the presumption of high quality aquatic life is inappropriate.

4. Numerical criteria (maximum concentration limits) for substances toxic to fish and other aquatic life were initially established in 1988. These criteria have become an important regulatory component for controlling toxic substances in surface waters. For 1991, criteria to protect aquatic life from toxicity are added for five additional substances - aluminum, phenanthrene, tributyltin; and the pesticides carbaryl and 2,4,5 trichlorophenol. Based on more recent information, the previous aquatic life numerical toxic criteria for copper, mercury, and silver are raised, and the aquatic life criterion for selenium is lowered.

5. Since the previous standards revisions, there have been increasing concerns about the potential need for additional protection of human health from toxic materials in surface waters, and the 1987 Clean Water Act Amendments established a mandate for the development and promulgation of numerical criteria to accomplish this protection. In response, numerical criteria (maximum concentration limits in state waters) to protect human consumption of drinking water and fish are adopted in the 1991 Texas Surface Water Quality Standards. Criteria for 61 potentially toxic substances - such as dioxin, pesticides, various metals and numerous organic chemicals - are included in the new provisions.

6. The 1988 revisions of the standards required larger dischargers to conduct biomonitoring, which involves exposing selected aquatic organisms to samples of the discharge effluent - after dilution of the samples to simulate conditions in the waters receiving the discharge. Biomonitoring provides a way to protect aquatic life from the combined effect of toxic substances. In the 1991 standards revisions, dischargers are also required to demonstrate through biomonitoring that their undiluted effluent does not cause rapid lethality to aquatic organisms. This provision is added to the previous biomonitoring requirements in the standards in order to better protect aquatic organisms in the immediate vicinity of a discharge.

7. In the 1991 standards revisions, designated aquatic life uses and dissolved oxygen criteria are elevated in the Trinity River and Buffalo Bayou Tidal, and lowered in Dickinson Bayou Above Tidal, the Brazos River below Possum Kingdom, and the Nolan River. These changes have been made based on new information on the appropriate uses for these rivers - as determined by use-attainability analyses which have been reviewed by EPA.

8. A new appendix is added to the standards in 1991, which specifies aquatic life uses and dissolved oxygen criteria for 62 sites which were assessed to evaluate the impacts of particular discharges. This addition substantially expands the number of waters in the state which have been designated for site-specific standards.

**ATTACHMENT 5**

**CLEAN TEXAS 2000**

# Clean Texas 2000

Environmental Partnership

April 8, 1992

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# CLEAN TEXAS 2000

## ENVIRONMENTAL PARTNERSHIP

### Purpose:

- ★ To form a partnership with Texas businesses, local governments, communities, organizations and citizens to reduce and prevent pollution;
- ★ To increase environmental awareness among all Texans and achieve the long-term behavior changes necessary to ensure a cleaner and healthier Texas environment; and
- ★ To facilitate environmental accomplishment throughout the state that goes beyond federal and state requirements.

### Components:

**Hazardous Waste and Toxics Reduction.** By the year 2000, an overall reduction by 50 percent or more in the release of toxics and/or the generation of hazardous pollutants in Texas from 1987 levels.

**Recycle Texas.** A comprehensive effort to reduce the disposal of solid waste in landfills by as much as 50-60 percent by the year 2000, by emphasizing composting, community recycling and implementation of recycling programs for waste oil, tires, batteries and oil filters.

**Texas Watch.** A set of volunteer activities that directly involve Texas citizens in pollution control through participation in collections of unused pesticides and household hazardous waste, ground water protection activities, and through citizen water quality monitoring.

**Operation Paper Chase.** The TWC's effort to cut red tape and unnecessary levels of bureaucracy so that predictable, reliable, efficient and effective services may be provided to Texas businesses, local governments and citizens.

**Public Education.** A comprehensive, broad-based, action-oriented public education campaign to increase environmental awareness among Texans and their participation in pollution control activities.

**Environmental Awards Program.** Recognition of excellent environmental performance in various sectors through a set of prestigious annual awards.

## Hazardous Waste and Toxics Reduction

**Status:** Texas benefits from a diverse economy. That economy involves the production of 60 percent of the petrochemicals, 25 percent of the oil refining and a large percentage of other chemical production for the U.S.

Annually, Texas businesses and industries report the generation of 65 million tons of hazardous waste and the release of 800 million pounds of toxics. This accounts for 20 percent of the hazardous waste reported in the U.S. and 13.9 percent of the reported toxics released.

**Goal:** By the year 2000, an overall reduction by 50 percent or more in the release of toxics and/or the generation of hazardous pollutants in Texas from 1987 levels.

*Clean Texas 2000* initiatives will include:

- ★ Persuading Texas firms that report hazardous waste generation and toxic releases to voluntarily reduce such wastes through improved manufacturing processes, innovation and reuse;
- ★ Expanding the TWC technical assistance program to facilitate waste and release reductions by both small and large generators and emitters, and to support efforts that go beyond what current state law requires;
- ★ Streamlining TWC procedures to shorten the regulatory processes and provide greater certainty about the time required for approvals; and
- ★ Ensuring consistent enforcement and tougher penalties for repeat offenders with particular emphasis on pollution prevention.

# Recycle Texas

**Status:** Texas citizens and businesses generate 19.4 million tons of garbage each year that is disposed of in 700 landfills and 12 incinerators. Currently, about 18 percent of the materials going to Texas landfills is yard waste. Nearly a third of the landfills in Texas will have to close over the next two years due to new environmental requirements. This will push garbage disposal costs on a statewide average from the current \$14 per ton to a projected \$25-\$50 per ton. Even higher costs will result unless recycling is maximized.

Currently less than 10 percent of the garbage generated in Texas is recycled. Each year six million tons of paper and over a million tons of glass are buried in Texas landfills.

**Goal:** Reduce by as much as 50-60 percent the amount of garbage going to Texas landfills by the year 2000. *Clean Texas 2000* initiatives will include:

- ★ A comprehensive set of activities to encourage individual and community composting of yard waste and the recycling of household and commercial garbage, as well as the purchase of home and office products made from recycled materials;
- ★ TWC financial and technical assistance to help cities and counties establish community composting and recycling programs; and
- ★ Implementation of TWC administered statewide recycling programs for tires, batteries, motor oil and oil filters, in conjunction with businesses and local governments.

# Texas Watch

**Status:** Increased citizen involvement and participation in pollution control activities is essential to achieving the goal of a cleaner and healthier environment. For example, 70 percent of today's water pollution comes from nonpoint sources, most of which result from people's habits.

Every Texas household generates about 15 pounds of household hazardous waste each year, or just under two million tons per year statewide.

Large quantities of unused or banned pesticides exist on farms and ranches across Texas. Four collection days this year will result in the disposal of 197 tons of such material collected in a 60-county area.

Do-it-yourself oil changers in Texas dump an estimated 17 million gallons of used motor oil on the ground or down storm drains each year.

As a result, Galveston Bay and many waters within the state are polluted or face increasingly high levels of pollution.

**Goal:** To increase direct citizen involvement in activities that reduce pollution to waterways or increase awareness of the pollution threat to a clean water supply. *Clean Texas 2000* initiatives will include the following:

- ★ Expansion of the TWC's citizen volunteer water quality monitoring programs, to provide as many as 20,000 citizen monitors by the year 2000. These volunteers will be monitoring the quality of surface throughout the state;
- ★ Expansion of the TWC's ground water protection program. Communities who depend upon ground water as a source of drinking water are encouraged to contact the TWC for assistance in developing their own local program.
- ★ TWC technical assistance and funding to help cities establish household chemical collection programs; and
- ★ TWC funding and sponsorship of annual agricultural pesticide waste collection days.

# Operation Paper Chase

**Status:** A recent internal review of the TWC by the State Comptroller's Texas Performance Review Division noted significant long-standing problems. The review, requested by the TWC, confirmed the TWC has not been providing the quality of services necessary to protect human health and the environment. For example, extensive backlogs exist in every pollution control program relating to permitting and enforcement. Excessive red tape and unnecessary levels of bureaucracy are also impeding prompt and effective action.

**Goal:** To improve agency operation and cut red tape and unnecessary levels of bureaucracy so that predictable, reliable, efficient and effective services and environmental oversight may be provided to the state. *Clean Texas 2000* initiatives will include:

- ★ Redirection of increased agency resources to key pollution control programs;
- ★ Elimination of all permitting, enforcement and pollution cleanup backlogs within the next 18 months;
- ★ Establishment of specific and reasonable time frames for the processing of permitting and other regulatory matters;
- ★ A variety of actions to provide prompt enforcement of environmental laws to reduce noncompliance levels;
- ★ Implementation of state-of-the-art accounting and budgeting systems, and data tracking systems by the end of fiscal year 1993;
- ★ Establishment of citizen advisory committees to advise the TWC in the areas of hazardous waste, water quality, agriculture and purchasing from minority/women-owned businesses; and
- ★ Establishment of an Ombudsman Office to provide a communication and service focus for the citizens of Texas.

## Public Education

**Status:** A comprehensive, broad-based, action-oriented public education program is the key to increased environmental awareness among Texans and their participation in pollution control activities.

**Goal:** Develop a multi-faceted public education campaign that will reach all areas of the state and all Texans, and result in citizen actions for the environment. *Clean Texas 2000* initiatives will include:

- ★ The annual publication of a *Clean Texas 2000* Home and Garden Environmental Guide. The first will be published April 12th in newspapers across the state to provide information to Texas citizens on specific actions they may take to participate in pollution reduction activities;
- ★ An Environmental and Recycling Information Center to provide "one-stop" access to free environmental informational materials, available through a 1-800 toll-free number;
- ★ Use of professional advertising services to develop a creative and captivating campaign on the benefits of reducing pollution, and the recycling and reuse of various products;
- ★ Implementation of a solid waste and recycling educational curriculum in all Texas schools at all grade levels over the next three years through a TWC/Keep Texas Beautiful partnership.
- ★ A ground water protection seminar held annually at varying locations across the state.
- ★ An annual *Clean Texas 2000* Environmental Fair to provide environmental information and demonstrations with the first planned for April 1993;
- ★ An expanded TWC speakers bureau to provide speakers and environmental exhibits to civic groups, business meetings, exhibitions and schools; and
- ★ An expanded program of technical assistance seminars and workshops providing detailed guidance to the regulated community on all TWC program areas.

# Environmental Awards Program

**Status:** *Clean Texas 2000* will encourage citizen involvement and environmental accomplishments that go well beyond normal effort or federal and state laws. It is imperative, therefore, that excellent performance at every level be recognized through a high profile environmental awards and recognition program.

**Goal:** To recognize excellent environmental performance through an annual awards program, *Clean Texas 2000* will include the following:

- ★ ***Clean Texas 2000 Partners.*** Every business, industry, local government, organization and citizen is invited to become a partner in *Clean Texas 2000*. The TWC will conduct an outreach program to solicit broad-based participation. Every project submitted will be recognized by letter and each *Clean Texas 2000* partner will receive the program newsletter. The following activities are examples of ways partners can help meet the goals of *Clean Texas 2000*:

## **Business and Industry:**

Conduct an environmental audit to identify the amount and types of pollution being generated and to ensure proper collection and disposal.

Operate facilities in compliance with all environmental laws.

Prepare a pollution prevention plan to reduce the amount of hazardous waste generated and/or toxics released by a significant amount by the year 2000.

Develop a plan of action to reduce pollution discharged into waterways and to control nonpoint-source pollution that rainfall washes from company properties into waterways.

Establish water and energy conservation programs.

Form a citizen advisory committee to establish a forum for interaction with the community.

Participate in Recycle Texas by establishing a company recycling program for paper and other materials, and use manufacturing materials and office products made from recycled materials.

Participate in Texas Watch by supporting community programs involving household chemical collection, ground water protection, water quality monitoring, environmental education or other programs, which benefit the local community and the Texas environment.

Coordinate with the TWC to provide technical assistance to help smaller companies comply with environmental laws.

Host conferences and workshops on environmental issues.

Provide expert speakers, materials or in-kind services for school and community environmental education.

Serve on city and state environmental committees and task forces.

#### **Local Governments:**

Conduct an environmental audit to identify the amount and types of pollution being generated to ensure proper control and disposal.

Operate facilities in compliance with all environmental laws.

Develop community programs for composting yard waste, recycling household garbage and collecting household chemicals and used motor oil.

Develop a plan to reduce wastewater discharge pollution, hazardous waste production or air pollution. Meet or exceed all state and federal requirements.

Develop a program to decrease the nonpoint-source pollution that is washed by rainfall off streets and neighborhoods into local creeks, lakes and water supplies.

Develop a ground water protection program.

Sponsor or support citizen water quality monitoring or cleanup programs.

Ban chemicals (for which there are alternatives) in products that contribute to increased wastewater treatment cost or water pollution.

Reduce per capita community water use by 10 percent by 1996 from 1990 levels.

Develop citizen advisory committees to help develop environmental action plans.

Purchase office products and other materials made from recycled materials.

Provide environmental and energy and water conservation information to local citizens.

### **Community Groups:**

Participate in *Clean Texas 2000* by supporting or developing community programs that address commercial and household garbage recycling, composting yard waste, household chemical collection, used motor oil collection and other community environmental needs.

Organize or participate in a ground water protection program if your community depends upon ground water as a drinking water source.

Organize or participate in a citizen water quality monitoring program.

Work with local government to implement a storm drain labeling program.

Implement a water or energy conservation education campaign or project.

Sponsor community workshops, or environmental education events or materials.

Organize or provide volunteers for community cleanups of roads, parks, lakes, rivers and neighborhoods.

Assist local schools in environmental education by providing knowledgeable speakers, environmental materials or other help.

Promote the purchase of recycled goods.

## Schools and School Districts:

Participate in the Texas Watch citizens' water quality monitoring program or ground water protection program.

Provide environmental education at every grade level.

Participate in Recycle Texas by implementing recycling and composting programs within school facilities.

Conduct an environmental audit of labs, cafeterias and other facilities, and develop a plan to control and dispose of hazardous materials and other pollution.

Sponsor school environmental fairs, exhibits or competitions that promote environmental education.

Purchase paper and other products made from recycled materials whenever possible.

Implement water or energy conservation programs.

Implement xeriscaping, which utilizes native plants and landscapes designed to minimize water use.

- ★ **Clean Texas 2000 Partnership Awards.** Presented to *Clean Texas 2000* partners for the most significant projects that help improve the Texas environment or contribute to environmental education.
- ★ **Clean Texas 2000 Industry Honor Roll Awards.** Presented annually to regulated businesses and industry that meet the following specific pollution reduction and environmental citizenship criteria:
  - Development of a waste minimization and pollution plan consistent with Senate Bill 1099 earlier than required and reduce the generation of hazardous waste and/or the emissions tracked by the Toxic Release Inventory Program by a minimum of 50 percent by the year 2000;
  - Implementation of an internal program for environmental review and management to assure high levels of environmental compliance with state and federal standards;

- Formation of a citizen advisory committee;
  - Provision for financial or in-kind services support for one or more community environmental projects such as a household hazardous chemical collection program, ground water protection program or citizen water quality monitoring.
- ★ **The Governor's Awards for Environmental Excellence.** Presented annually for the most outstanding contributions to the Texas environment in the following categories:
- Agriculture
  - Business and Industry
  - Community Service
  - Construction and Land Development
  - Education
  - Journalism
  - Local Governments
  - Youth

The Governor's Awards will recognize exceptional accomplishments that result in significant pollution reduction, demonstrate exceptional environmental leadership or provide a significant public education resource.

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### For more information:

Please contact Phyllis Romano, *Clean Texas 2000* Partnership Coordinator, or Brad Cross, Assistant Partnership Coordinator, at 512/371-6470, or Public Information & Education at 512/463-8028.



# TOXICS CRITERIA AND THE PERMITTEE

*Peggy W. Glass, Ph.D.*



Alan Plummer and Associates, Inc.

# CONCERNS OF PERMITTEES

- THERE IS A REAL PROBLEM
- FUNDS SPENT WILL PRODUCE ENVIRONMENTAL IMPROVEMENTS
- AVAILABILITY OF SUITABLE STUDY METHODS
- AVAILABILITY OF CONTROLS

# REAL PROBLEM

- DEMONSTRATED ENVIRONMENTAL IMPACT
- REALISTIC ASSESSMENT OF RISK

# SAFETY FACTORS

- INDICATOR ORGANISMS
  - ALL ORGANISMS NOT IN ALL ECOSYSTEMS
  - TOXICITY IS SPECIES DEPENDENT
- TOXICITY DATA BASE
  - UNCOMPLEXED, DISSOLVED METALS
  - ATYPICAL pH, HARDNESS, ETC
  - INCONSISTENT RESULTS AMONG RESEARCHERS
  - LIMITED NUMBER OF SPECIES

# SAFETY FACTORS

- CRITERIA - SAFETY FACTOR OF 2
- PERMIT LIMITS
  - DISSOLVED FRACTION
  - DILUTION BASED ON 7Q2 OR 1Q2 STREAM FLOW  
AND 30-DAY AVERAGE MAXIMUM EFFLUENT FLOW
  - PROBABILITY STATISTICS
- 24-HOUR, 100% EFFLUENT TOXICITY TEST

# ENVIRONMENTAL IMPROVEMENT

- BACKGROUND QUALITY
- OTHER SOURCES
- DEMONSTRATED ABILITY  
TO IMPROVE QUALITY
- SCHEDULE
- PRIORITIZE

# STUDY METHODS

- SITE-SPECIFIC CRITERIA
- TRE FOR CHRONIC OR INTERMITTENT TOXICANTS
- MEASURE OF ECOSYSTEM QUALITY
  - TIMING
  - INDICES

# CONTROLS

- AMOUNT TO BE CONTROLLED
- SOURCES
- TREATMENT TECHNIQUES
- VOLUMES TO BE TREATED

# SPECIFIC PROBLEMS

- DIAZINON
- ZINC
- SALINITY EFFECT ON FRESHWATER TRE

# RECOMMENDATIONS FOR PERMITTEES

- OBSERVE RECEIVING STREAM DURING SUMMER LOW-FLOW PERIODS
- KNOW TOXIC LIMITS
- OBTAIN SITE-SPECIFIC DATA ON HARDNESS, pH, TSS, AND FLOW
- INSURE LABORATORY USES MAL METHODS
- IF A TEST EXCEEDS CRITERIA:
  - RE-RUN ON 3-4 SAMPLES
  - CONSIDER RUNNING DISSOLVED AND TOTAL

## **VI. SOLID WASTE**

### ***Solid Waste Disposal and Classification --***

*"Did You Ever Have to Make Up Your Mind?"*

Grace Montgomery  
Chief, Waste Evaluation Section  
Texas Water Commission

### ***Municipal Waste -- "Where Have All the Flowers Gone?"***

Dan Eden  
Director, Municipal Solid Waste Management  
Texas Water Commission

### ***Innovative Remedial Technologies -- "All I Need is a Miracle"***

Robert G. Hornsby  
AWD Technologies  
Houston, Texas

**CRITERIA FOR  
CLASSIFICATION OF  
NONHAZARDOUS  
INDUSTRIAL WASTE**

## **I. Introduction**

- A. Current Classification Guidelines
- B. Reasons for Change

## **II. New Criteria to Classify Nonhazardous Industrial Waste**

- A. Combustibility
- B. Corrosivity
- C. Toxicity

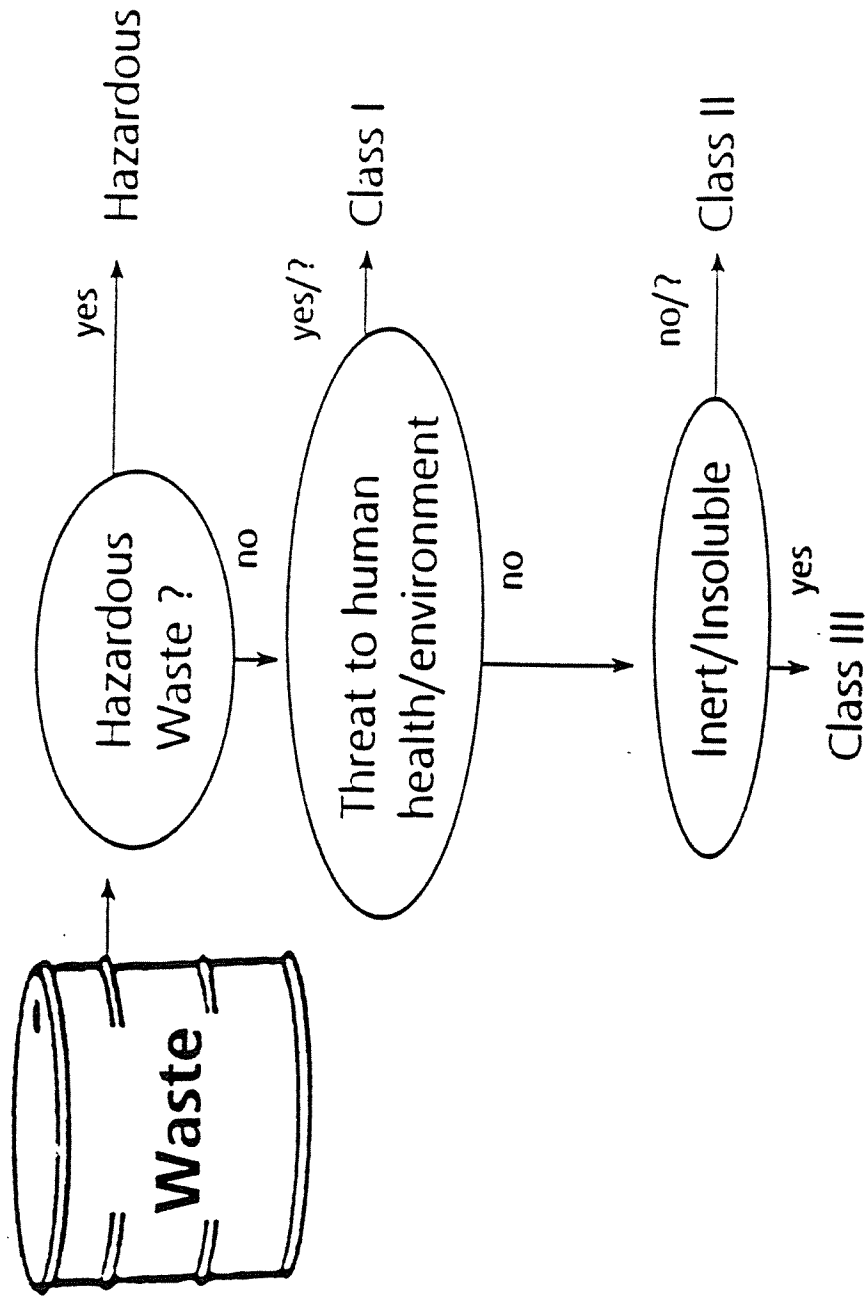
## **III. Reporting**

- A. Generator's Responsibilities
- B. Commission's Responsibilities

## **CURRENT CLASSIFICATION SYSTEM**

- Hazardous
- Nonhazardous Class I
- Nonhazardous Class II
- Nonhazardous Class III

# CURRENT CLASSIFICATION SCHEME



## WASTE CLASSIFICATION

### I. Reasons why waste classification is important:

- A. Provides a means of rank ordering wastes according to the perceived threat that they pose to human health and the environment;
- B. Determines the regulations, such as permitting, reporting, manifesting and disposal requirements that apply to a particular waste; and
- C. Aids emergency response personnel as well as the general public by providing a reasonably accurate indication of the likely danger that a waste poses and thus helps determine the correct response to spill type situations.

### II. Waste Classification Categories

- A. Texas Water Commission - Four (4) categories of industrial waste as defined in 31 Texas Administrative Code (TAC) Chapter 335:
  1. Class I - Hazardous;
  2. Class I non-hazardous;
  3. Class II; and
  4. Class III.
- B. Two (2) categories of waste established under the Resource Conservation and Recovery Act (RCRA).
  1. Hazardous - Listed in 40 Code of Federal Regulations (CFR) Part 261 Subpart D, or Characteristic as specified in 40 CFR Part 261 Subpart C. (Note: all hazardous waste is Class I waste by Texas regulations).
  2. Nonhazardous - Not regulated by EPA. The Texas Water Commission (TWC) regulates industrial nonhazardous waste.

### Pitfalls of making a Hazardous Waste Determination:

**Read the listing descriptions VERY CAREFULLY.** They are written using very specific language which is narrowly drawn (i.e. to be interpreted rather literally). One of the most common mistakes

made by generators is deciding that a waste is a listed hazardous waste because one (1) or more substances found in 40 CFR Part 261 Subpart D is in the waste.

A good example of this sort of false reasoning is provided by paint waste. Most non-water based paints DO contain potentially listed hazardous substances such as xylene, toluene and methyl ethyl ketone. However, the presence of these substances in the paint does NOT automatically mean that the paint waste is a listed hazardous waste. It may be characteristically hazardous due to flash point or leachable methyl ethyl ketone (D035), but in the great majority of instances, it will NOT be a listed hazardous waste.

Commercial chemical products that have been used or that contain more than one (1) active ingredient are NOT LISTED HAZARDOUS WASTES.

Characteristically hazardous wastes are those that exhibit one (1) or more of the characteristics found in 40 CFR Part 261 Subpart C.

Wastes that have flash points less than 140 degrees F (60 degrees Centigrade), a pH less than or equal to 2.0 or greater than or equal to 12.5, or releases hydrogen cyanide or hydrogen sulfide in concentrations of greater than 250 ppm or 500 ppm respectively when subjected to a pH of between 2.0 and 12.5 are characteristically hazardous wastes.

Wastes that leach greater than or equal to the published regulatory limits of substances found in 40 CFR Part 261.24 when subjected to the conditions of the Toxicity Characteristic Leachate Procedure (TCLP) are also characteristically hazardous wastes.

### III. Current Non-hazardous Waste Classification Criteria

#### A. Class I Request

Definition: 31 TAC Section 335.1 defines Class I waste as any industrial solid waste or mixture of industrial solid wastes which because of its concentration, or physical or chemical characteristics, is toxic, corrosive, flammable, a strong sensitizer or irritant, a generator of sudden pressure by decomposition, heat or other means, and may pose a danger to human health or the environment when improperly managed including hazardous waste.

(Note: In essence, what this means is that Class I non-hazardous waste is any waste that, because of its chemical composition and/or physical properties, is perceived by the TWC as posing a significant threat to human health and the environment, but, which for one reason or another, cannot be classified as a Class

I hazardous waste.)

Notification Requirements:

- a. A description of the new waste stream being added;
- b. A description of the process generating the waste\*;
- c. Hazardous waste determination - pursuant to 31 TAC Section 335.62 (Hazardous Waste Determination), all generators are required to make a hazardous waste determination for each waste that they generate and they are also required to provide the TWC with the EPA code(s) for each **hazardous** waste that they generate; and
- d. Provide information on the composition of the waste - Does not need to be too detailed for a Class I request.

\*Examples of Class I non-hazardous wastes are:

- (1) Oil contaminated soil containing greater than 1000 ppm Total Petroleum Hydrocarbons (TPH); and
- (2) Many types of oil based paints;
- (3) Motor oil;
- (4) Electrical equipment containing PCB's;
- (5) Some types of metal grinding wastes (e.g. brass and some types of nickel alloy steels); and
- (6) Wastes for which the TWC has not received sufficient information to demonstrate that they are not Class I non-hazardous.

B. Class II Request

1. Definition: 31 TAC defines Class II waste as any industrial solid waste which cannot be described as Class I or III. (Note: Class II is waste, that is not thought of as being inert or essentially insoluble but at the same time is not considered to pose a significant threat to human health or the environment).\*\*
2. Notification Requirements:
  - a. description of the new stream waste being added;
  - b. A description of the process generating the waste;

- c. Hazardous waste determination - same as for Class I waste;
- d. Composition of the waste - The Commission requires more specific information for a Class II than for a Class I; and
- e. Analytical Requirements - The generator may utilize process knowledge to omit any of the tests listed below, if he/she knows that compound (or group of compounds) is not likely to be present in the waste.

In order to have a waste classified as Class II under the current waste classification system, a generator must submit information based upon either knowledge of the process generating the waste, analytical test results or a combination of the two (2) demonstrating that the waste in question:

- (1) is not a hazardous waste as defined in 40 CFR Part 261.3;
- (2) contains less than a total of the 500 ppm of the constituents listed in 40 CFR Part 261 Appendix VIII or 40 CFR Table 302.4 less 500 ppm;
- (3) contains less than 1000 ppm Total Petroleum Hydrocarbons (TPH);
- (4) contains less than a total of 1 ppm PCB's; and;
- (5) has a flash point greater than 150 F (65.6 degrees Centigrade).

**\*\*Examples of Class II wastes are:**

- (1) General plant trash consisting of paper towels, soft drink cans, glass bottles, candy wrappers and the like. (Note: General plant trash DOES NOT include such things as oil soaked paper towels, oil soaked rags, fluorescent light bulbs, PCB light ballasts, types of copier fluids i.e. anything that is Class I.)
- (2) most types of demolition debris;
- (3) hydrocarbon contaminated soil containing less than 1000 ppm TPH; and
- (4) most types of spent molding sands;
- (5) some types of water based paints; and
- (6) empty containers that have held nothing but Class II materials or that have been both triple rinsed with a solvent capable of removing any remaining residues and rendered unusable.

### C. Class III Request

1. Definition: 31 TAC 335.1 defines Class III waste as inert and essentially insoluble industrial solid waste, including, but not limited to materials such as rock, brick, glass, etc. that are not readily decomposable. Like Class II, Class III is not considered to pose a significant threat to human health or the environment.
2. Notification Requirements - same as that required for Class II plus:  
  
Analytical Requirements - Seven Day Distilled Water Leachate Test (see Technical Guideline #1, Texas Water Commission). The resultant analyses must demonstrate that the waste does not leach greater than the regulatory limits for the constituents listed in the Primary and Secondary Drinking Water Standards (established under the Clean Water Act) published in 40 CFR Part 141 and 40 CFR Part 143 respectively.

These are general guidelines based upon the current waste classification system. The TWC is proposing to establish new waste classification criteria that are scheduled to be incorporated into 31 TAC as Subchapter R.

### IV. Problems with the current waste classification system are that:

- A. It requires all waste codes to be assigned by the TWC thus creating large backlogs which in turn prevents generators from receiving waste codes within a reasonable amount of time;
- B. It is based upon a somewhat arbitrary set of "rules of thumb" and "best professional opinions" none of which is particularly well grounded on an objective and scientific foundation; and
- C. None of the classification standards, however unscientific, have ever been officially adopted by the Commission and are therefore sometimes difficult to enforce.

### V. New Self-Classification System

Under the new "self-classification" system:

- A. Generators will be free, within limits specified in 31 TAC Subchapter R, to classify their own wastes;
- B. The definition of hazardous waste will, of course, remain

unchanged;

C. There will be five (5) ways that a waste may be classified as Class I non-hazardous which are if:

1. it leaches greater than or equal to the levels of one (1) or more of the constituents found in Table I of Appendix I of the new rules. These values consists of the constituent list found in 40 CFR Part 264, Appendix IX, Ground-water Monitoring List. These levels were calculated by the EPA for systemic toxic and carcinogenic effects in humans based upon daily consumption of contaminated water.

(NOTE: In establishing its TCLP criteria, the EPA uses a model of groundwater contamination which is founded upon the premise that:

- a. certain constituents of wastes which are buried in a "typical" landfill will become available to the environment by leaching from the constraints of the landfill;
- b. those constituents will migrate through ground water toward local sources of drinking water (i.e. drinking water wells); and
- c. during the course of migration, the constituents will undergo an attenuation (i.e. dilution) of an average of 100 times their original concentrated after migrating over a specified distance from the landfill.

The TWC used the same model of constituent migration when calculating the values found in Table I of Appendix I. (NOTE: In most cases, the EPA used the Primary Drinking Water (PDW) values found in 40 CFR Part 141 when it calculated TCLP values. However, the EPA did not use the PDW values in all cases e.g. lead. Neither does the TWC always use the PDW standards when calculating the values found in Table I of Appendix I (e.g. the value for arsenic was derived using a value from a health based standard other than the PDW that is lower than the PDW value for arsenic));

2. it is ignitable (i.e. has a flash point of greater than 60 degree C (140 degrees F) but less than or equal to 65.6 degrees C (150 degrees F)). This level recognizes that materials which do not meet the federal hazardous waste criteria for ignitability may still pose a significant threat to human health and the environment. (NOTE: The level of 65.6 degrees C is found in 16 CFR Part 1500.3). The definition of ignitable wastes also includes materials that are typically in a solid state, and which because of their potential to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily, and when so ignited, burn so vigorously and persistently as to create a serious hazard. (Note: These substances are found in Table 2 of Appendix I);

3. it is corrosive. The chief difference between the EPA definition of corrosive waste and the Texas definition is that the Texas definition considers solid and semi-solid wastes. If a solid or semi-solid waste has a pH of less than or equal to 2.0 or greater than or equal to 12.5 when mixed in a 1:1 ratio with ASTM distilled/deionized water then it is Class I non-hazardous;
  4. there is insufficient information to show whether the waste is Class II or Class III, then the waste will be classified as Class I non-hazardous unless, of course, the waste is hazardous; or
  5. it is defined as Class I non-hazardous in Section 335.508.
- D. The formal definition of Class II waste remains essentially unchanged from the existing definition (i.e. a Class II waste is any waste that does not meet the definition of a Class I waste but which is not totally innocuous and inert). In order for a waste to be classified as Class II under the self-classification system, a generator must demonstrate that a waste is not either Class I hazardous or Class I non-hazardous.
- E. The definition of Class III waste is designed to allow only waste that has little if any potential to harm human health or the environment to be classified as Class III. Examples of such wastes are rocks, bricks, glass and certain types of plastics. In order for a waste to be classified as Class III, a generator must demonstrate that the waste is not either Class I hazardous or Class I non-hazardous as well as demonstrating the waste is both inert and essentially insoluble. A demonstration of insolubility will be made by subjecting the waste to the "TWC Seven (7) Day Distilled Water Leachate Test" in order to show that the waste does not leach greater than the Maximum Contaminate Levels, or Total Dissolved Solids listed in 40 CFR Part 141 Subpart B and using the test methods described in 40 CFR Part 261 Appendix II (or equivalent methods approved by the Executive Director) the extract from a representative sample does not leach detectable levels of constituents found in Table

#### VI. Important General Facts About to New Self-Classification System

- A. Under the new self-classification system, certain kinds of wastes will simply be defined as Class I. Such wastes included friable asbestos, RCRA empty containers that have held a Class I material which have NOT been triple rinsed and rendered unusable, wastes containing greater than 50 ppm PCB's, wastes containing greater than 1500 ppm Total Petroleum Hydrocarbons that are NOT under PST jurisdiction, and ALL wastes generated outside of Texas.

- B. Automobile shredder wastes will be handled according to the terms of House Bill 1763 which states that such waste may continue to be disposed of in Municipal landfills.
- C. Wastes generated as a result of production of a "new chemical substance" will be classified as Class I unless the generator can demonstrate that the new waste is Class II or Class III.
- D. Generators may use process knowledge, analytical test results or a combination of the two (2) to classify their wastes.
- E. When using process knowledge, a generator must know, that based upon a knowledge of the ingredients used to make the waste and the likely contaminants that have accumulated in the waste, the waste does not exhibit any of the physical characteristics of a Class I non-hazardous waste nor leach at or above the regulatory levels of the constituents found in Appendix I under TCLP conditions. The generator is free to use any source of information such as Material Data Safety Sheets, manufacturers literature etc. upon which to base a classification based upon "process knowledge". The generator need only evaluate a waste for constituents which are likely to be present based upon the raw material and waste description. (NOTE: This, of course, does not absolve a generator of the responsibility or penalties associated with the misclassification of a waste due to the presence of Appendix I constituents that are present in the waste from unanticipated sources).
- F. A generator may choose to classify their waste based upon analytical methods found in SW-846, EPA-600, ASTM Standard Methods or any other analytical method which has been demonstrated to be equivalent to one (1) of the afore listed methods.
- G. Information that the generator of a waste must maintain is divided into two (2) broad categories - those which must routinely be submitted to the TWC and those which must be maintained on-site.
- H. Information that must routinely be submitted to the TWC includes:
  - 1. A description of the waste;
  - 2. A description of the process by which the waste is generated;
  - 3. A hazardous waste determination;
  - 4. All analytical data and/or process knowledge used to

classify Class III waste; and

5. Waste classification determination.

- I. Information that must be retained on-site in a readily retrievable form includes:

All information required in items 1-5 above as well as all analytical data and/or process knowledge used to characterize Class II or Class III waste including Quality Control data.

VII. The Impact of the New Self-Classification System

The chief impact of the self-classification system will be:

- A. Generators will be able to obtain TWC waste codes in a much more timely fashion than is now possible with the current waste classification system;
- B. The classification criteria of the self-classification system will be official allowing both the TWC and the regulated community to know exactly what criteria are being used to classify a waste thus eliminating the need for ad hoc "rules of thumb" and other relatively subjective standards;
- C. Enforcement action taken against generators with misclassified waste will be easier and better able to withstand judicial review; and
- D. Inspections and monitoring of wastes will need to receive added priority in the allocation of resources by TWC managers.



## PETROLEUM SUBSTANCE WASTE

### Corrective action, Disposal, & Reimbursement

by Tom Bohl

Since the promulgation of state and federal regulations governing the operation and installation of underground storage tanks a few years ago, it seems that tanks are being replaced or removed at every major street and highway intersection in Texas. This large volume of tank removal work has yielded equally copious amounts of contaminated soils and waters for disposal. Staff of the Texas Water Commission's Petroleum Storage Tank Division estimates that over 90% of the sites which come to them are sites where the main release has occurred from underground petroleum storage tanks. These tanks are usually found at gasoline stations, convenience stores, automobile dealerships, fleet operations, and similar places where vehicles are fueled and perhaps repaired. For the most part, the waste from the clean-up of these sites is non-hazardous or exempt from the definition of hazardous waste, and the expenses of the corrective action are eligible for reimbursement from the state.

Although more in the way of clarification and regulation are yet to come, the regulatory landscape in the area of corrective action and disposal of petroleum contaminated substances from underground storage tanks sites is coming more into focus. The Texas Air Control Board (TACB) recently revised its regulations dealing with the permit exemption for treatment of certain

hydrocarbon contaminated soils. The Texas Water Commission (TWC) has promulgated interim regulations dealing specifically with the disposal of petroleum substance waste. Other regulations, dealing with soil treatment and disposal, as well as with remediation contractors are forthcoming, according to TWC staff.

This paper will give a brief overview of Petroleum Storage Tank regulations, with an eye on those tanks subject to the new waste regulations and to the reimbursement program.

## I. OVERVIEW OF THE PETROLEUM STORAGE TANK PROGRAM

At the outset, a general understanding of what types of tanks and activities are regulated under the PST Program is necessary. That is not entirely easy, because there are two systems of regulation, a state system and a federal one. While they are substantially the same in the areas they both regulate, the state system has some added features.

### A. Federal Regulation

Federal Statute: 42 USC §6991, et seq. (Subtitle I of RCRA, §9001, et seq.)

Federal Regulations: 40 CFR Part 280

The federal system regulates only "underground storage tanks" (UST's) which contain "regulated substances". Regulated substances include "petroleum" (these terms are defined below) and substances

listed as hazardous under CERCLA regulations<sup>1</sup>. Federal regulations establish standards for construction and installation of underground storage tanks, retrofitting schedules for tanks already in use on the effective date of federal regulations, and procedures for responding to releases of "regulated substances" from tanks. In addition, there are tank registration requirements, reporting requirements for cases where a leak or spill is discovered, and financial assurance requirements which mandate insurance or some alternate form of security to cover personal injury, property damage and general pollution liability in case of a leak or spill.

The federal laws in Subtitle I of RCRA and in Part 280 of the regulations do address what must be done to lessen the likelihood of a release of product, and they do address procedures for remediation of a leaking underground storage tank ("L.U.S.T.") site. However, the tank regulations stop short of describing how site remediation and waste disposal at such sites squares the treatment of hazardous waste within the RCRA system.

B. State Regulation

State Statute: Texas Water Code, §26.341, et. seq.

State Regulations: 31 Texas Administrative Code, chapter 334.

The state system like the federal system, regulates UST's which contain regulated substances. In addition, the state system regulates the clean up of "petroleum product" releases from

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<sup>1</sup>Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC §9601, et seq.

"aboveground storage tanks" (AST's). The state system also provides tank owners and operators reimbursement for expenses incurred cleaning up releases of "petroleum products" from both underground and aboveground "petroleum storage tanks" (these terms are defined below). It provides reimbursement for corrective action expenses arising from releases of certain substances from waste oil tanks and hydraulic lift systems as well. For purposes of this discussion, the state program will consist of a regulatory side and a funding side.

1. The Regulatory Side The regulatory side addresses all the issues addressed by the federal rules in part 280. It is important to note, though, that there are procedural differences in two sets of rules and a few substantive differences. The state rules have specific construction notification requirements<sup>2</sup>, which if not observed could subject and owner to administrative penalties. A few of the more detailed technical standards for the construction and installation of tanks and ancillary equipment are somewhat different in the state regulations, and so when installing, retrofitting, or removing a tank, it is advisable to compare the federal regulations in Subparts B, C, D, and G of 40 CFR part 280 with the regulations in Subchapter C of 31 TAC Chapter 334. The corrective action procedures in Subparts E and F of the federal regulations were not changed in substance in the state regulations (See: 31 TAC Chapter 334, Subchapter D), but some of

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<sup>2</sup>See: 31 TAC §§334.6 (underground tanks) and 334.126 (aboveground tanks).

the reports that the tank owner provides to the regulator under the federal rules were consolidated into one report on the state level.

In addition to certain requirements imposed on tank operation, removal, and site corrective action, the state rules also establish a system of registration, testing, and continuing education for contractors engaged in the installation, repair, and removal of underground storage tanks (See: Subchapter I, 31 TAC Chapter 334). Further, Water Commission staff has conducted a series of meetings with an advisory committee consisting of members of consumer protection groups, the environmental community, and the remediation industry this year to finalize a set of proposed regulations governing the registration of Corrective Action Specialists. These rules should be proposed as Subchapter J, 31 TAC Chapter 334, and they should appear in the Texas Register to facilitate public comment sometime in August or September, 1992<sup>3</sup>

Finally, state law adds another dimension to petroleum storage tank regulation by including aboveground storage tanks on a limited basis. The jurisdiction of the Texas Water Commission under the state storage tank statute extends only to directing corrective action in response to a release of petroleum products from an aboveground storage tank, fee collection, and tank registration.<sup>4</sup>

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<sup>3</sup>Interview with Ron Pedde, Manager, Responsible Party Remediation ("RPR") Section, Petroleum Storage Tank Division, TWC, conducted July 16, 1992, and interview with Chet Clarke, Team Leader, RPR Section, conducted July 17, 1992.

<sup>4</sup>V.T.C.A., Water Code, §26.3441. An "aboveground storage tank" by definition in §26.342 is one which contains petroleum products.

The rules relating to aboveground petroleum storage tanks are found in Subchapter F of 31 TAC chapter 334.

2. The Funding Side The foundation of the funding side of the program is the Petroleum Storage Tank Remediation Fund, established by House Bill 1588 (71st Legislature, Regular Session, 1989). The Fund may be used by the Water Commission to remediate sites, and dispose of soils and water contaminated by a release of "petroleum products", as defined in §26.344, Texas Water Code, when releases occur from underground or aboveground storage tanks. The Fund may also be used to reimburse owners and operators of petroleum storage tanks who perform the remediation and disposal themselves. The Fund also serves to provide tank owners and operators with some of the insurance coverage they need to meet the pollution liability coverage required by rules in the federal program and rules on the regulatory side of the state program. The Water Code was amended in 1991 to allow reimbursement for corrective action performed in response to releases from waste oil or "spent oil" tanks and from hydraulic lift systems located at facilities where motor vehicles are fueled and serviced. (See: HB 1214, 72nd Legislature, Regular Session, 1991).

C. Types of Tanks Regulated

1. Underground Storage Tank (UST) An underground storage tank is defined in state law as:

...any one or combination of underground tanks and any connecting underground pipes used to contain an accumulation of regulated substances, the volume of which, including the volume of the connecting underground pipes, is 10 percent or more beneath the surface of the ground. §26.342(4), Texas Water Code.

The term "regulated substance" as defined in §26.343 of the Water Code includes:

(1) Substances designated as hazardous under Superfund (See: §101(14) of CERCLA, 42 USC §9601, et seq.), but not those substances which are also classified as hazardous wastes under RCRA;

(2) Petroleum, which is defined as "petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute)," Texas Water Code, §26.342(a)(2) and (b); and,

(3) Other substances which the Commission specifically designates as being hazardous. (NOTE: none have been designated to date.)

This Water Code definition is similar in substance to the federal definition found at 42 U.S.C. §6991(1). The federal rules definition, found at 40 CFR §280.12, and the definitions of "regulated substance", "petroleum substance", and "used oil" in the state rules at 31 TAC §334.2 elaborate greatly on the general list above. They indicate that the waste oil and hydraulic fluids found at service stations are included under the heading of "regulated substance".

2. Aboveground Storage Tank (AST) An aboveground storage tank ("AST") is defined in §26.342(1) of the Texas Water

Code as a "nonvehicular device" which is:

- (A) made of nonearthen materials;
- (B) located on or above the surface of the ground or above the surface of the floor of a structure below ground such as a mineworking, basement, or vault; and,
- (C) designed to contain an accumulation of petroleum.

Note that the Commission limited by rule (31 TAC §334.121, effective June 25, 1990) the types of AST's which are regulated to those which contain "petroleum products." The term "petroleum product" is defined in §26.342(6) of the Water Code as:

...a petroleum product that is obtained from distilling and processing crude oil and that is capable of being used as a fuel for the propulsion of a motor vehicle or aircraft, including motor gasoline, gasohol, other alcohol blended fuels, aviation gasoline, kerosene, distillate fuel oil, and #1 and #2 diesel. The term does not include naphtha-type jet fuel, kerosene-type jet fuel, or a petroleum product destined for use in chemical manufacturing or feedstock of that manufacturing.

D. Types of Tanks for Which Reimbursement under H. B. 1588 May Be Obtained Reimbursement under the state system is available for the allowable costs of expenses incurred when performing corrective action in response to a release of petroleum products from petroleum storage tanks, which are defined at 31 TAC §334.322 as being underground and aboveground tanks containing or used to contain petroleum products. Subchapter H, 31 TAC Chapter 334 sets forth the rules for the reimbursement program. The term "petroleum product" is defined both in §26.342(6) of the Water Code and in

§334.322 of the state rules. The definition is quoted in pertinent part in the preceding section of this paper.

As mentioned earlier, the Water Code allows reimbursement for releases from "spent oil" tanks and hydraulic lift systems. Reimbursement is only available if there are located at a vehicle service and fueling facility<sup>5</sup>, defined as:

A facility where motor vehicles are serviced or repaired and where petroleum products are stored and dispensed from fixed equipment into the fuel tanks of motor vehicles (See: 31 TAC §334.322).

E. Mid-Course Review of Concepts These are the points to remember:

1. The program regulates underground storage tanks containing regulated substances;
2. The program regulates aboveground storage tanks containing petroleum products;
3. The reimbursement fund is available for incidents involving underground and aboveground storage tanks containing petroleum products.
4. The group of substances called "regulated substances" includes all substances called "petroleum" and "petroleum" includes all substances called petroleum products." Thus all the releases coming under the heading of "petroleum product" (making them subject to reimbursement) are also releases of "regulated substances" (making them subject to some federal or state regulation).
5. There are two non-fuel tanks which can come under the reimbursement program, even though they do not contain petroleum products -- waste oil tanks and hydraulic lift systems at vehicle fueling and service facilities.

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<sup>5</sup>31 TAC §334.308(e)--(h)

### III. CORRECTIVE ACTION AND WASTE DISPOSAL

A. The Third Dimension For the most part, the different types of tanks and substances included in the regulatory scheme fit together fairly well. The logic behind the system seems reasonable, albeit somewhat convoluted. When the dimension of corrective action and waste disposal is added to the equation, it becomes a bit more complex. This is true for two main reasons:

1. Most of the treatment and disposal options in use are allowed only for substances which do not constitute hazardous waste under subtitle C of RCRA and 40 CFR part 261; and,
2. The introduction by EPA of the Toxicity Characteristic Leachate Procedure (TCLP) used as a test to determine if a solid waste exhibits the characteristic of toxicity, thus making it a hazardous waste, would likely render most concentrations of petroleum hydrocarbons found in underground and aboveground storage tanks hazardous (See: 55 Fed. Reg. at 11836--11837. March 29, 1990, the preamble to the federal rule). There is however, an exemption for some regulated substances as noted below.

B. Waste Treatment and Disposal Options Being Employed according to TWC staff, these are some of the options being employed currently where there is contamination from releases of gasoline, diesel, or used motor oil which does not produce "hazardous waste" as defined in 40 CFR §261.3:

1. In situ treatment using -
  - a. bioremediation;
  - b. soil vapor extraction;
  - c. pump and treat systems (for groundwater and sometimes for soil)

2. Excavation and treatment of soils on site, using -
  - a. aboveground bioremediation in mobile treatment units the contractor brings onsite;
  - b. mobile thermal desorption units the contractor brings onsite to volatilize the hydrocarbons and capture them for disposal; and,
  - c. tilling of soils onsite.
3. Disposal of soils by -
  - a. using as fill dirt offsite;
  - b. use in asphalt batching for offsite application;
  - c. landfilling; and,
  - d. re-depositing in tank excavation onsite.
4. Disposal of contaminated liquids by -
  - a. injection; and,
  - b. discharge of treated groundwater into surface waters or sewage treatment plants (rarely used).

Onsite treatment activities at L.U.S.T. sites described in numbers 1 and 2 above are governed by the corrective action rules for petroleum storage tanks (Subchapter D, 31 TAC Chapter 334, §§334.71--334.85). Proposals for remediation, called "corrective action plans" or "remedial action plans" ("RAP's") are required in most cases for review and approval by TWC's Petroleum Storage Tank Division staff (See: 31 TAC §334.81).

C. Laws Governing Disposal of Contaminated Media

1. Unauthorized Disposal Disposal of contaminated media is governed by a variety of laws. Unauthorized disposal is prohibited by Subchapter K of the state PST rules, specifically 31

TAC §334.482. That section provides as follows:

§334.482. Petroleum Substance Waste Storage, Treatment and Disposal. No person shall store, treat or dispose of any petroleum substance waste resulting from an underground or aboveground storage tank release except as authorized by the executive director or;

- (1) as authorized by the Texas Department of Health at a facility permitted by the Texas Department of Health [Note: this should be read to mean "as authorized by the Water Commission" in light of the incorporation of landfill regulatory functions into TWC, effective March, 1992]; or
- (2) as authorized by the commission at a facility permitted by the commission; or
- (3) as authorized by both the Texas Railroad Commission and the commission at a facility permitted by the Texas Railroad Commission.

The term "petroleum substance waste" is defined in §334.481 as:

Any waste, excluding hazardous waste, which is generated as a result of a release of a petroleum substance from an underground storage tank or a petroleum product from an aboveground storage tank regulated by the commission pursuant to Chapter 26, Subchapter I of the Texas Water Code.

The types of substance which come under the heading of "petroleum substance" are described in §334.2, and would include gasoline, diesel, and used oil.

In regard to the reimbursement program, an added penalty attaches to the owner or operator who disposes of petroleum product waste in an unauthorized manner. Section 334.308(d) of the PST rules disallows reimbursement for any corrective action measures not performed in accordance with applicable laws.

2. Sending Soils to Landfills Prior to March, 1992, municipal solid waste landfills were regulated by the Texas

Department of Health (TDH). In February, 1991, TDH issued revised guidelines for the placement of gasoline, diesel, and waste oil contaminated soils in these landfills. These guidelines contain maximum contamination levels. The guidelines have not been changed by the TWC and they remain in effect at this time. A copy of the February 1991 directive is included with this paper as Attachment 1.

3. Other Offsite Soil Disposal The maximum contamination levels for landfilled soil represent a tightening of requirements. It is expected that the minimum requirements will become even more stringent over time, and so other alternatives for the soil are being examined by the TWC. Some disposal in the form of asphalt batching and use as fill is being approved under Subchapter K of the PST rules. Note than in §334.482 (quoted above) disposal of petroleum substance waste is prohibited "except as authorized by the executive director." The executive director has issued written guidance for the reuse of petroleum-substance-contaminated soils, a copy of which is included as Attachment 2 to this paper. The guidance document does not specifically state that it is an authorization under 31 TAC §334.482. "Authorized" is defined in §334.481 as, "Allowed in writing, by interim registration, by order, by permit, by license, or by rule", so perhaps this guidance is intended to constitute authorization. However, the wiser course for the tank owner or operator would be to seek written approval for a disposal method at the stage where their remedial action plan is being approved by the TWC staff.

For the tank owner or operator sending soils offsite for treatment and disposal at bioremediation, asphalt batching, or incinerator-type facilities, it is also important to remember that §334.482 requires that these facilities be permitted, or that this method of treatment and disposal is "authorized" by the executive director. The term "authorized" as defined in §334.481 does include "interim registration", and to regulate the various facilities accepting petroleum substance waste, the TWC has begun a program of interim registration of facilities. Tank owners and operators sending waste out are responsible for sending it to registered facilities (facilities which are "authorized") and facility owners and operators must be registered to operate. A copy of TWC's "Guidance Document for Soil Storage or Treatment Facilities" and of a registration application is included with this paper as Attachment 3.

4. Air Issues In addition to authorization by the TWC under Subchapter K, air emissions resulting from asphalt batching, soil ventilation, surface aeration of soils, and other processes fall under the jurisdiction of the Texas Air Control Board (TACB). For some limited activities, the TACB has allowed an exemption from its permitting requirements. This exemption is described in Standard Exemption No. 68, adopted by reference to the TACB's rules at 31 TAC §116.6(a). Standard Exemption No. 68 has been changed effective July 21, 1992. Most notably, the exemption now applies only to

. . . soil and water remediation at the property where the original contamination of the ground water or soil occurred or

at a nearby property secondarily affected by the contamination, but not to any soil or water treatment facility where soils or water are brought in from another property. Such facilities are subject to [TACB rules] §116.1, relating to Permit Requirements. (See: Standard Exemption 68, paragraph (a), included in this paper as Attachment 4).

4. Discharges to Surface Waters and Sewage Treatment Plants In limited instances, groundwater contaminated with "petroleum fuel" may be discharged into surface waters or into sewage treatment plants. This action is authorized under rules relating to TWC's Water Quality Program. The rules appear in Subchapter H of 31 TAC Chapter 321. "Petroleum fuel" is yet another term to put in the list of definitions. It includes: "Gasoline, diesel fuel, fuel oil, kerosene and jet fuel".<sup>6</sup> Surface discharges of waters contaminated by releases of petroleum fuel are allowed under these rules if an emergency order, temporary order, or regular permit to discharge is obtained from the TWC, but the discharge limitations in 31 TAC §321.134 must also be met (See: §321.132(c) ). There are special provisions covering the discharge of contaminated water from underground vaults used by telephone utilities (See: 31 TAC §321.136).

D. Hazardous Waste and the TCLP As noted earlier, the use of the Toxicity Characteristic Leachate Procedure or "TCLP" to determine if a solid waste is hazardous due to toxicity has a profound impact on management of the type of waste discussed in this paper. In response to comments on the "TC" Rule, EPA has

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<sup>6</sup>31 TAC §321.131.

acknowledged that:

. . . petroleum contains several of the hazardous constituents for which regulatory levels are being established. . . (e.g. benzene) some of the petroleum - contaminated media and debris may exhibit the Toxicity Characteristic under. . . [the new TCLP] rule. While the amount and type of media and debris that may exhibit the characteristic at any particular US site will depend upon the petroleum product, soil type, and the size of the release, it is likely that many sites where petroleum UST releases have occurred will contain some media that exhibits the Toxicity Characteristic. The management of any such media and debris would be subject to subtitle C requirements for hazardous waste management.<sup>7</sup>

EPA continued to reason in its response to comments that because of the unknown amount of tanks sites which would come under the rule, application of the rule to petroleum UST's subject to regulation under 40 CFR part 280 (the federal UST rules) would be deferred. The result of the decision to defer is 40 CFR §261.4(b)(10) which exempts a certain class of materials from classification as hazardous waste under certain conditions, which would potentially keep the sites covered by the exception out of the Subtitle C system of regulation. The exemption reads as follows:

(b) *Solid Wastes which are not hazardous wastes.* The following solid wastes are not hazardous wastes:

\* \* \*

(10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of §261.24 (Hazardous Waste Codes D018 through D043 only) and are subject to the corrective action

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<sup>7</sup>(See: 55 Fed. Reg. at 11836--11837, March 29, 1990, the preamble to the federal rule).

regulations under part 280 of this chapter.

Several things must be noted about this exemption:

1. Petroleum contaminated media and debris are exempted, so hazardous substance UST's do not fit in the exemption;
2. Since the exemption extends to those tanks subject to corrective action requirements under 40 CFR Part 280, aboveground storage tanks, which are in the state reimbursement system, do not come within the ambit of this exception, and so TCLP would apply to them;
3. This exemption applies only to the Toxicity Characteristic test in 40 CFR §261.24. If the waste could be shown to be have another characteristic of hazardous waste, it could be hazardous. If there is a mixture of the exempted waste and another waste not meeting the exemption the mixture may still be hazardous;
4. The exemption does not apply in regard to certain of the contaminants for the characteristic of toxicity, but it does apply to the volatile hydrocarbons in petroleum motor fuels, such as benzene and toluene.

### III. THE FUTURE - SUBCHAPTER K AND SUBCHAPTER J

The trend appears to be one where landfills will accept a decreasing amount of the PST soils, so alternative uses for the soil will surely become more attractive. The Water Commission has been working on a much more comprehensive set of regulations for the soil treatment facilities and soil disposal to replace the current Subchapter K. According to TWC staff, the regulations will impose some additional conditions on existing facilities which are currently registered with TWC. New facilities will need to undergo a more comprehensive approval or permitting process. It is anticipated that this new Subchapter K will be completed and published for comments sometime in the fall of 1992.

The next big TWC rules package in this area, however, will be the Subchapter J rules. These rules will establish a set of criteria for registration as a Corrective Action Specialist, including experience and education requirements. The rules will also provide for enforcement and de-certification procedures. Finally, for items to be subject to reimbursement, a consultant used on the job will have to be registered under this subchapter. It is anticipated that these rules will be ready for publication in late August or early September, 1992.

Attachments /



# Texas Department of Health

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Robert A. MacLean, M.D.  
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February 4, 1991

## Disposal of Petroleum-Product-Contaminated Soils at Landfills Permitted by the Texas Department of Health (Revised Requirements)

The requirements established for the disposal of petroleum-product-contaminated soils at landfills permitted by TDH, issued on August 7, 1989, are hereby revised. The revision is necessary because significant quantities of contaminated soils are being sent to municipal landfills due to remedial actions required for underground fuel storage tanks and other spill/release incidents.

Effective immediately, municipal landfills with TDH permits may NOT accept petroleum-product-contaminated soils without specific TDH approval except under the following conditions:

1. Automotive gasoline contaminated soils - Soils which have a total concentration of benzene (B), toluene (T), ethylbenzene (E) and xylene (X) [BTEX] of less than 150 mg/kg (ppm); a total petroleum hydrocarbon (TPH) concentration of less than 600 ppm; and a TCLP benzene concentration of less than 0.25 mg/l may be accepted at a Type I landfill without specific TDH authorization. All other landfills require specific authorization.
2. Diesel fuel contaminated soils - Soils which have a total concentration of benzene (B), toluene (T), ethylbenzene (E) and xylene (X) [BTEX] of less than 150 mg/kg (ppm); a total petroleum hydrocarbon (TPH) concentration of less than 600 ppm; and a TCLP benzene concentration of less than 0.25 mg/l may be accepted at a Type I landfill without specific TDH authorization. All other landfills require specific authorization.
3. Used motor oil contaminated soils - Soils must be tested for lead (total, and E.P. Toxicity or TCLP), total petroleum hydrocarbons (TPH) and total organic halogen (TOX). For Type I landfills, specific TDH approval is required unless total lead is less than 250 ppm, E.P. Toxic or TCLP lead is less than 2.5 mg/l, TPH is less than 600 ppm, TOX is less than 50 ppm and TCLP benzene is less than 0.25 mg/l. Specific approval is required for all other landfills.

Disposal of Petroleum-Product-Contaminated Soils  
Page 2

4. Soils contaminated with any other petroleum products -  
Soils contaminated with any petroleum based product other than gasoline, diesel fuel, or used automotive oil must have written approval from TDH for disposal in a municipal landfill. Disposal requests for these soils will be reviewed on a case-by-case basis.

The above requirements apply irrespective of waste classification code numbers issued by other state agencies. We recommend that the landfill management require copies of, and maintain records of, analytical information received for waste accepted.

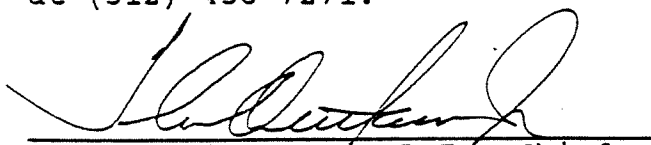
Requests to authorize the disposal of contaminated oils must have analytical data from one composite sample for each 50 cubic yards of contaminated soil. The composite should be comprised of at least four separate grab samples from within the 50 yards with the purpose of obtaining a composite sample representative of the 50 yd<sup>3</sup>. Each sample must be tested for total petroleum hydrocarbons. If additional parameters, - e.g. benzene, lead, TOX, are required, the number of samples to be tested shall be taken from the samples with the highest TPH values as follows:

0-200 yd<sup>3</sup> - 1 sample  
201-500 yd<sup>3</sup> - 2 samples  
501 or more yd<sup>3</sup> - 20% of samples

Although the clean-up of environmental pollution from leaking underground tanks is important, we do not believe the solution of that problem is the creation of a potential future problem at municipal landfill sites.

Petroleum-based fuels are complex mixtures of hydrocarbons. The exact composition of a given fuel will depend upon the crude oil source, the refinery and refining process used, and the grade of fuel. Therefore, the quantification of contamination levels is a difficult problem analytically because the target species are unknown.

Our staff will continue to review the potential problems associated with petroleum-contaminated soils and the disposal of these soils in municipal landfills. If you have any questions concerning this policy, please contact L.E. Mohrmann, Ph.D., C.P.C., here in Austin at (512) 458-7271.



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T. A. Outlaw, Jr., P.E., Chief  
Bureau of Solid Waste Management

John Hall, Chairman  
B. J. Wynne, III, Commissioner  
Pam Reed, Commissioner



## TEXAS WATER COMMISSION

*PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION*

Re: Guidance Document Regarding the Reuse of Petroleum-Substance  
Contaminated Soils

Attached is the TWC Guidance Document on the Reuse of Petroleum-Substance Contaminated Soils. This document describes possible uses for slightly contaminated soils that are an alternative to landfill disposal. This document applies only to those nonhazardous soils which are contaminated with a petroleum substance as a result of a release from an underground or aboveground storage tank.

Should you have any questions regarding this document, contact the Responsible Party Remediation Section of the PST Division at 512/371-6200 or the local TWC District Field Office.

## **Reuse of Petroleum-Substance Contaminated Soil**

The Texas Water Commission (TWC) encourages the development and operation of alternative methods of soil treatment and recognizes that additional uses for the treated soils promote recycling and minimize waste disposal.

The following policy regarding soil reuse defines the potential uses and associated contaminant levels for treated soils and is designed to provide reasonable alternatives to waste disposal. The maximum contaminant levels suitable for each method of reuse should be readily attainable with current treatment technologies while still providing for the protection of human health and safety and the environment.

**NOTE:** This policy relates to a person's responsibility under the Underground and Aboveground Storage Tank regulations as well as Sections 26.121, 26.042, and other relevant sections of the Texas Water Code. Compliance with the guidelines does not excuse a person from any civil liability to third parties associated with the handling, use, or sale of soils.

**NOTE:** This policy applies only to nonhazardous soils contaminated with petroleum substances as a result of a release from an underground or aboveground storage tank as defined in Title 31, Texas Administrative Code, Chapter 334. Any other types of wastes, including all wastes classified as hazardous under state or federal law and any petroleum-substance wastes which contain other contaminants, are not covered by this guidance. These other wastes are likely to be covered under state and federal rules relating to hazardous and solid waste. The hazardous and solid waste rules may require significantly different handling requirements, and there may be substantial fines and penalties imposed on a person who violates those rules.

This guidance assumes that the owner or operator of the leaking tank has made a determination as to what type of waste was removed from the ground. However, the failure of the owner to make a proper waste determination does not excuse any other person who stores, transports, disposes of, or otherwise handles the waste from liability for violation of hazardous and solid waste rules which may apply to them.

### **I. Responsibilities of the Tank Owner/Operator:**

Under 31 TAC Section 334.85 of the TWC rules, all wastes must be managed in the manner required by law. Section 334.482 requires that wastes be disposed of at facilities permitted by the TWC or other appropriate agencies, or in a manner authorized by the TWC. An owner/operator must manage nonhazardous petroleum-substance contaminated soils in accordance with these guidelines or they must insure that these soils are transferred to an authorized facility.

**II. Responsibilities of Any Person Who Applies Nonhazardous Petroleum-Substance Contaminated Soils to the Land:**

Any person who applies nonhazardous petroleum-substance contaminated soils to the land must either follow this guidance or make the land application in accordance with other applicable rules of the TWC or other appropriate agency. Failure to do so may be considered a violation of 31 TAC Section 334.482 and other rules and may result in substantial penalties for those violations.

**III. Reporting Requirements:**

Documentation regarding the reuse activities must be submitted to the TWC with one copy each sent to the Central Office in Austin and to the TWC District Office(s) which encompasses the activity. The documentation should consist of at least the following information:

1. The name, address, phone number, and authorized representative for the generating facility. In the case of a Class A treatment facility (as defined in the attachment) this would be the treatment facility owner. For a Class B, Class C, or Class D treatment facility, this would be the LPST site.
2. The name, address, phone number, and authorized representative for the receiving facility or location. If the receiving location cannot be defined by a street address, then other specifics should be included to identify the exact location.
3. The name, address, phone number, and authorized representative for the landowner at the receiving location.
4. The quantity of soil reused.
5. Documentation on the soil sampling and analytical methods, sample chain-of-custody, and all analytical results (except for soil utilized in an asphalt mix).
6. A detailed description of the reuse methods.
7. The date(s) of reuse.
8. Copies of the consent form signed by the receiving landowner.

**IV. Sampling:**

Treated soils destined for reuse as fill for tankholds or as fill for other uses must be sampled for Total Petroleum Hydrocarbons (TPH) at the rate of one sample per fifty cubic yards of soil (or other sampling frequency as determined by the Executive Director). Soils which will be used for nonasphaltic roadbase material must be sampled at the rate of one sample per 100 cubic yards of material. Each sample shall consist of a composite which is representative of each fifty or 100 cubic yard unit. Every fifth sample should also be analyzed for Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX), and Total Lead. Additionally, each sample must be collected, handled, and analyzed in accordance with all EPA-approved methods. Please note that under no circumstances may the soil be mixed with clean soil or any other material for the purpose of reducing the contaminant levels by dilution.

**V. Detection Limits:**

For the purposes of this policy, nondetectable levels of BTEX and TPH will be 0.5 mg/kg for each component of BTEX and 10.0 mg/kg TPH. Any soils which are properly documented to have nondetectable levels of BTEX and TPH and which do not contain other contaminants (non-petroleum substances) may be utilized in any manner except as limited by this paragraph. Uses and limitations for soils with contaminant levels above detection limits are described below. However, under no circumstances may the soils be used in the recharge or transition zone of a sole-source aquifer or in any other manner which poses a threat to human health or any water in the state.

**VI. Reuse Options:**

**A. Soils Utilized in Asphalt Batching:**

The use of petroleum-substance contaminated soils in an asphalt batching operation must have the approval of the operator and owner of the plant. Additionally, prior to accepting these soils, the plant owner or operator must contact the Texas Air Control Board (TACB) to determine whether a permit or an amendment to their existing permit is required. Contaminated soils may not be accepted without proper authorization or permitting from the TACB.

B. Roadbase Material:

Petroleum-substance contaminated soils may be utilized as roadbase or parking lots that will be covered with concrete or asphalt if the contaminant levels of the soil prior to use are less than 0.5 mg/kg for each component of BTEX and less than 500.0 mg/kg TPH. Roads or parking lots which will not be covered with asphalt or concrete may utilize soils which have contaminant levels prior to usage of less than .5 mg/kg for each component of BTEX and less than 200 mg/kg of TPH. The contaminated soil must be professionally mixed into stabilized base in order to utilize this option. Soil which is not mixed into stabilized road base would have to meet the criteria for clean soil in order to be spread on a road or parking lot. The owner of the road or parking lot (if different from the landowner) must also provide consent for the placement of soil (a copy of the consent form is attached). This option is viable only if the area is not located within a 100-year floodplain. Additionally, this option should not be used when there is a risk of human exposure to the soil.

C. Fill for Other LUST Tankhold:

Soil may be used as fill in another LUST site tankhold under specific conditions. This option may be utilized if the contaminant levels do not exceed 0.5 mg/kg for each component of BTEX and 10.0 mg/kg TPH. Higher contaminant levels may be considered by the TWC if technical documentation is provided to demonstrate that there is no threat of groundwater contamination at the receiving site. The owner of the USTs at the receiving facility along with the landowner (if different) must give consent for this activity. The soil must not be utilized in a tankhold in which a new tank installation will occur.

In all cases, the generator should follow the guidance set forth in this document. Any proposal to deviate from these directives must receive prior authorization from the TWC. Additionally, it remains the responsibility of the generator to ensure that all soil reuse is accomplished in a manner that prevents any unauthorized discharge of contaminants at all times.

In all cases of soil reuse, authorization must be obtained from the landowner of the property on which the soil will be placed, or in the case of asphalt batching, from the owner and operator of the batching plant. This authorization should be in writing with copies maintained by both the generator and the receiver.

**ATTACHMENTS**

## **CLASSES OF TREATMENT AND STORAGE FACILITIES**

### **Class A Facilities:**

Facilities or treatment units which are authorized by the TWC to store or treat petroleum-substance contaminated soils generated from more than one LPST site. Although these facilities will most likely be located elsewhere than a LPST site, one could be located at a LPST site if they manage soils from more than one site.

### **Class B Facilities:**

A mobile treatment unit which will treat petroleum-substance-contaminated waste at only one LPST site at a time.

### **Class C Facilities:**

Facilities or treatment units located elsewhere than the LPST site which are authorized by the TWC to store or treat petroleum-substance contaminated soils generated from only one LPST site.

### **Class D Facilities:**

A facility located at the LPST site which will store or treat the petroleum-substance waste generated from only that site.

**CONSENT**

I consent to having the following amount of petroleum-substance contaminated soil deposited on my property:

Amount of Soil: \_\_\_\_\_

Address/Exact Location Where Deposited: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Soil Received From: (Name, Address, Zip) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Date Deposited: \_\_\_\_\_

BTEX Concentration: \_\_\_\_\_  
(Information supplied by generator)

TPH Concentration: \_\_\_\_\_  
(Information supplied by generator)

\_\_\_\_\_  
Printed Name of Property Owner

\_\_\_\_\_  
Signature of Property Owner

\_\_\_\_\_  
Date

\_\_\_\_\_  
Address, City, State, Zip

\_\_\_\_\_  
Phone Number

**GUIDANCE DOCUMENT  
FOR  
SOIL STORAGE  
OR  
TREATMENT FACILITIES**

**Responsible Party Remediation Section  
Petroleum Storage Tank Division  
Texas Water Commission**

**September 2, 1991**

## **GENERAL STANDARDS FOR SOIL STORAGE OR TREATMENT FACILITIES**

Many underground storage tank (UST) owners are concerned about their present and future liabilities associated with landfill disposal of soils as well as their liabilities associated with leaving contamination in place at their site. The Texas Water Commission (TWC) encourages the development and operation of alternative methods of soil treatment. In order to provide viable alternatives, the TWC has developed guidelines for soil treatment facilities to provide for the proper treatment and disposal of the contaminated media.

### **AUTHORIZATION PROCEDURES**

At the present time, the TWC does not require a permit to operate a facility for the storage or treatment of solely petroleum-substance contaminated media. However, the TWC does require that the owner or operator of the treatment facility or unit obtain authorization from the TWC, and that all other necessary permits, registrations, or notifications are obtained from the appropriate governing agencies or municipalities. Facilities which will accept soils generated from more than one site (including mobile treatment units) must obtain authorization through registration of the facility. Facilities which will store or treat soils from only one LPST site must obtain authorization for the activities from the TWC site coordinator. All relevant information regarding the facility should be submitted to the TWC prior to initiating operations. The TWC also requires that the facility be operated and maintained in such a manner that protects human health and safety and the environment at all times in accordance with Chapter 26.121 of the Texas Water Code.

The following information sets forth the general standards for operating a soil treatment facility or unit. Although these standards are not required specifically by rule, they are written in anticipation of the promulgation of future rules. Even though these requirements are written mainly for a fixed-site facility, any mobile treatment unit should also take into account all applicable portions of this document.

### **LOCATION OF THE FACILITIES**

Several factors are utilized in determining appropriate locations for soil storage or treatment facilities. These include items such as the type of treatment and construction of the facility, as well as the hydrogeology and demographics of the proposed location.

In order to prevent possible harm to the environment or public health and welfare, the facility should not be located:

1. Within 1000 feet of the nearest residence, school, church, hospital, or public park.
2. Within a 100-year floodplain unless the facility is constructed to prevent any adverse effects of a 100-year flood.
3. In the recharge or transition zone of a sole-source aquifer.
4. Within one-half mile of direct drainage to any surface water used to supply public drinking water.

#### ACCEPTABLE TYPES OF CONTAMINATED MEDIA

Treatment facilities covered by this document may accept for storage or treatment only petroleum-substance contaminated media (soils, tank backfill materials) generated as a result of a release from an underground storage tank (UST), excluding media which would be considered hazardous. Petroleum substances include gasoline, diesel fuel, jet fuel, motor oil, and others. Waste oil contaminated soils are acceptable only if the soils are considered nonhazardous and there are no other contaminants present other than the used oil. A complete listing of petroleum substances can be found in Title 31, Texas Administrative Code (TAC), Chapter 334, Subchapter A. The methods of determining whether the media is hazardous are specified in the Code of Federal Regulations Part 261 (40 CFR Part 261).

#### TRACKING OF SOILS

In order to provide assurances that only acceptable soils enter the treatment facility and that the treated soils are appropriately disposed, the owner and operator of the treatment facility should be diligent in tracking the soils.

Once the soil is excavated from around the USTs, the owner of the USTs should sample the stockpiles at a rate of one sample per 50 cubic yards of soil. Each sample should be a composite which is representative of each fifty-cubic yard unit of soil. In most cases, these samples will be analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), and total petroleum hydrocarbons (TPH). Other analyses may be required on a case-by-case basis, especially when waste oil contamination is present.

To confirm that the soil is acceptable for treatment, the owner/operator of the treatment facility should obtain copies of the analytical results. Complete information on the owner and operator of the USTs (including names, addresses and phone numbers) and on the generating site (name, address, phone, contact person, LPST ID number, and facility ID number) should also be obtained prior to accepting the soils for treatment. Upon receiving the soils, a receipt should be issued to the tank owner which details the date, the quantity of soil received, and the treatment

facility's name, address, phone and contact person. The receipt should also indicate that the soils are acceptable for treatment or storage at this facility.

The owner/operator of the treatment facility is responsible for accepting the appropriate soils and for tracking the soils processed at the site. Records on each batch of soil received should be carefully maintained. The owner/operator should also maintain records regarding the results of the treatment (sample analyses) and the final disposition of the treated soils.

#### **STORAGE OF SOILS**

Stockpiled soil awaiting treatment should be handled in an appropriate manner to prevent any spread of contamination at the treatment site. To eliminate the dispersal of the contaminants either by wind or rainwater, the soils should be adequately enclosed in either a building or an impermeable liner.

All buildings should have a roof which prevents leakage of rainfall and should have a floor which is impermeable to water and hydrocarbons. Extreme care must be exerted when utilizing a building for soil storage. Due to the volatilization of potentially explosive or ignitable vapors, the atmosphere in the building must be monitored on a regular basis. Should any indications of a dangerous situation arise, appropriate emergency actions must be initiated.

Soils stockpiled outside should be carefully managed to prevent any contaminant discharge. When utilizing an impervious, synthetic liner, it should be of sufficient thickness to prevent tearing. All seams should be adequately sealed. The liner and clean soil should form a berm around the stockpile to prevent the run-on or run-off of rainwater. In case water and/or leachate requires removal from the stockpile, a plan should be developed beforehand to provide for the removal and proper disposal of the contaminated liquids. Other appropriate methods of preventing run-on and run-off from the stockpiles may be utilized. Along with rainwater run-off, wind dispersal can also result in the spread of contaminants. Therefore, all stockpiles should be fully covered with an impervious, synthetic material at all times.

The owner/operator should carefully plan the receipt of soils with the operations of the treatment system in order to provide for the most efficient processing of the soils. All soil received at the facility should be stockpiled for not more than sixty days prior to initiating treatment.

## **THE TREATMENT SYSTEM**

As stated in the introduction, authorization from the TWC must be received prior to initiating the storage or treatment of petroleum-substance contaminated media. The owner or operator of the treatment facility should submit to the TWC information which details the future activities at the site. This should include specifics of the type of treatment, the design and construction of the unit, and documentation on the efficiency of the treatment method. Information should also be included regarding the proposed methods of reuse or disposal of any contaminated media generated during the treatment process. All information necessary to evaluate the appropriateness of the treatment or storage facility should be provided. Although the proposal may include details which may be considered proprietary, this information can be marked confidential.

## **CONFIRMATION SAMPLING**

Subsequent to treatment, confirmation sampling must be conducted to determine the residual contaminant levels in the soils. The sampling should consist of one composite sample which is representative of each fifty cubic yards of soil. All samples must be collected and handled in accordance with all EPA-approved methods. The analyses must be conducted by an independent laboratory also in accordance with all EPA-approved methods. Each sample must be analyzed for TPH using either modified Method 8015 or Method 418.1. The method utilized must be more representative of actual contaminant conditions and justification must be provided for the method utilized. Every fifth sample should also be analyzed for BTEX components using EPA Method 8020 (GC/PID) with Method 5030 (Purge and Trap). Based on analytical results and other site-specific information the TWC may require alternate sampling frequencies.

## **SOIL STORAGE AFTER TREATMENT**

All soil stored on site subsequent to treatment must be handled in a manner which prevents the dispersal or discharge of contaminants at all times. Unless, and until it is documented that the soil contains nondetectable levels of contamination, the soil should be handled in the same manner as untreated soil. Additionally, treated soil should be removed from the site within sixty days from the date of treatment.

## **FINAL DISPOSITION OF TREATED SOILS**

Based on the final contaminant levels of the treated soils, various options may exist for disposal or reuse of the soils. The proposal for reuse must be approved by this agency.

## **SECURITY**

Each facility, including areas of stockpiled soils, should be adequately secured to prevent the intrusion of unwanted animals or persons. This can be accomplished by several means, such as fencing, security personnel, etc. Information regarding the chosen option should be submitted in the registration for the facility.

## **CONTINGENCY PLAN AND EMERGENCY PROCEDURES**

For all treatment or storage facilities, the owner/operator should prepare a contingency plan which provides for specific procedures to be conducted during emergencies. Emergencies for which the plan should cover include fires, explosions, and releases or spills of any contaminated media.

## **RECORDKEEPING AND REPORTING**

Immediate notification to the TWC is required for any breakdown, shutdown, releases, or spills which result in the discharge of any contaminants to the ground, surface water, or groundwater.

Additionally, any situation which results in the increase in the emission of air contaminants above permitted limits or which cause a nuisance must be reported to the Texas Air Control Board.

The owner/operator of the treatment facility is responsible for maintaining accurate, detailed records regarding all activities at the site. The owner/operator of the facility is also responsible for any reporting and notification requirements to the TWC. This includes notification to the appropriate TWC District Field Office of the movement of any mobile treatment unit at least forty-eight hours prior to initiating soil treatment.

# TEXAS WATER COMMISSION

## APPLICATION

for

## INTERIM REGISTRATION

for

## PETROLEUM-SUBSTANCE WASTE

## MANAGEMENT FACILITIES/UNITS

This form should be utilized to register facilities or units which will treat, store, or otherwise manage nonhazardous petroleum-substance contaminated media generated as a result of a release from an underground or aboveground storage tank. Upon receipt of an administratively complete application, a confirmation of the registration will be issued by the TWC.

### Facility/Unit Owner:

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_  
Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: (     ) \_\_\_\_\_

### Facility/Unit Operator:

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_  
Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: (     ) \_\_\_\_\_

### Landowner:

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_  
Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: (     ) \_\_\_\_\_

Is the Facility/Unit Stationary or Mobile? \_\_\_\_\_

If a Stationary Facility, complete the next part.

Location of the Facility/Unit:

Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone No. (    ) \_\_\_\_\_

Provide a Description of the Type(s) of Petroleum-Substance Contaminated Soil Management, Treatment, Reuse, or Recycling:

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Provide a Description of the Methods of Petroleum-Substance Contaminated Soil Storage and Handling:

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Provide a Description of Petroleum-Substance Contaminated Soil Sampling Methods and Frequencies and Analytical Procedures:

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Provide a Description of the Final Disposition of the Petroleum-Substance Contaminated Soils:

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Provide a Description of the Controls to Prevent Run-On and Run-Off From the Soils:

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**Provide Documentation on the Sources of Any Existing Waste at the Site and the Projected Sources, Types, and Contaminant Levels of the Wastes to be Managed at the Facility/Unit:**

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**Provide a Description of the Controls to Prevent Wind Dispersal of the Petroleum-Substance Contaminated Soils:**

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**Provide a Description of the Method(s) of Securing the Facility to Prevent the Intrusion of Unwanted Animals or Persons:**

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**Provide a Description of the Contiguous Land Use (i.e. - Residential, Commercial, Industrial, Agricultural) Along with a Description of the Prescribed Zoning for the Immediate Area:**

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**Provide Identification of Every Residence, School, Church, or Hospital Within 1000 Feet of the Facility:**

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**Provide Identification of the Sole-Source Aquifer if the Facility/Unit is Located on the Recharge or Transition Zone of a Sole Source Aquifer:**

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Provide Identification of Any Surface Water Drainages Which Are Used to Supply Public Drinking Water Located Within One-Half Mile of the Facility/Unit:

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Additional documentation which should be attached to this application includes:

- 1) Copies of all necessary permits, notifications, or registrations required by any other governing agency or municipality.
- 2) A site map drawn to scale, which indicates the facility/unit, all nearby structures, roads, and surface water drainages. Also include a U.S.G.S. topographic map which clearly designates the site and all surrounding areas within at least two miles of the site.
- 3) A copy of the latest available version of the 100-year floodplain map covering the area of the facility produced by the Federal Emergency Management Agency (FEMA) or other appropriate entity.
- 4) Additional sheets as necessary to complete the application.

The completed application for registration and attachments should be submitted to:

Petroleum Storage Tank Division  
Texas Water Commission  
P.O. Box 13087, Capitol Station  
Austin, Texas 78711-3087  
Attn: RPR Section

A copy of the application and attachments should also be submitted to the appropriate TWC District Field Office.

I \_\_\_\_\_  
(Print Owner's Name) (Title)

state that I have knowledge of the facts herein set forth and that the same are true and correct to the best of my knowledge and belief. The facility will operate in compliance with all applicable federal, state, and local regulations.

\_\_\_\_\_  
(Owner's signature) (Date)

62.-67. (No change.)

68. Equipment used to reclaim or destroy chemicals removed from contaminated ground water, contaminated water condensate in tank and pipeline systems, or contaminated soil, for the purpose of remedial action, provided all the following conditions are satisfied:

- (a) Applicability shall pertain to soil and water remediation at the property where the original contamination of the ground water or soil occurred or at a nearby property secondarily affected by the contamination, but not to any soil or water treatment facility where soils or water are brought in from another property. Such facilities are subject to §116.1, relating to Permit Requirements.
- (b) For treating groundwater or soil contaminated with petroleum compounds, the total emissions of petroleum hydrocarbons shall not exceed 1 pound per hour, except that benzene emissions also must meet the conditions of Standard Exemption 118(c) and (d). For purposes of this exemption, petroleum is considered to include (1) liquids or gases produced from natural formations of crude

oil, tar sands, shale, coal and natural gas, or (2) refinery fuel products to include fuel additives.

- (c) For treating groundwater or soil contaminated with chemicals other than petroleum, emissions must meet the requirements of Standard Exemption 118(b), (c) and (d). If the groundwater or soil is contaminated with both petroleum and other chemicals, the petroleum compound emissions must meet condition (c) of this exemption and the other chemical emissions must comply with condition (d) of this exemption. The emission of any chemical not having a Limit (L) Value in Table 118A of Standard Exemption 118 is limited to 1 pound per hour.
- (d) The handling and processing (screening, crushing, etc.) of contaminated soil and the handling and conditioning (adding moisture) of remediated soil shall be controlled such that there are no visible emissions with the exception of moisture.
- (e) If abatement equipment is used to meet conditions (b) and (c), the equipment must satisfy one of the following conditions:
  - (1) The vapors shall be burned in a direct-flame combustion device (incinerator, furnace, boiler,

heater or other enclosed direct-flame device) operated in compliance with Standard Exemption 88(b) and (c).

- (2) The vapors shall be burned in a flare which meets the requirements of Standard Exemption 80 and the requirements of 40 CFR 60.18 which shall take precedence over Standard Exemption 80 in any conflicting requirements whether or not New Source Performance Standards apply to the flare.
- (3) The vapors shall be burned in a catalytic oxidizer which destroys at least 90 percent of the vapors. An evaluation of oxidizer effectiveness shall be made at least weekly using a portable flame or photoionization detector or equivalent instrument to determine the quantity of carbon compounds in the inlet and outlet of the catalytic oxidizer. Records of oxidizer performance shall be maintained in accordance with condition (g).
- (4) The vapors shall be routed through a carbon adsorption system (CAS) consisting of at least two activated carbon canisters that are connected in series. The system shall meet the following additional requirements:

- (A) The CAS shall be sampled and recorded weekly to determine breakthrough of volatile organic compounds (VOC). Breakthrough is defined as a measured VOC concentration of 50 parts per million by volume (ppmv) in the outlet of the initial canister. The sampling point shall be at the outlet of the initial canister, but before the inlet to the second or final polishing canister. Sampling shall be performed while venting maximum emissions to the CAS. (Example: during loading of tank trucks, during tank filling, during process venting.)
- (B) A flame ionization detector (FID) shall be used for VOC sampling. The FID shall be calibrated prior to sampling with certified gas mixtures (propane in air) of  $10 \text{ ppmv} \pm 2 \text{ percent}$  and of  $100 \text{ ppmv} \pm 2 \text{ percent}$ .
- (C) When the VOC breakthrough is measured, the waste gas flow shall be switched to the second canister immediately. Within four hours of detection of breakthrough, a fresh canister shall be placed as the new final polishing canister. Sufficient fresh

activated carbon canisters shall be maintained at the site to ensure fresh polishing canisters are installed within four hours of detection of breakthrough.

(D) Records of the CAS monitoring maintained at the plant site, shall include, but are not limited to the following:

1. sample time and date,
2. monitoring results (ppmv),
3. corrective action taken including the time and date of the action, and
4. process operations occurring at the time of sampling.

(E) The registration shall include a demonstration that activated carbon is an appropriate choice for control of the organic compounds to be stripped.

(f) Before construction of the facility begins, the facility shall be registered with the appropriate Texas Air

Control Board (TACB) regional office using Form PI-7. The registration shall contain specific information concerning the basis (measured or calculated) for the expected emissions from the facility. The registration shall also explain details as to why the emission control system can be expected to perform as represented.

- (g) Records required by applicable paragraphs of this exemption shall be maintained at the site and made available to personnel from the TACB, the Texas Water Commission or any local agency having jurisdiction. These records shall be made available to representatives of the TACB and local programs upon request and shall be retained for at least two years following the date that the data is obtained.

69.-70. (No change.)

71. Any permanently or temporarily located concrete plant\* that accomplishes wet batching, dry batching, or central mixing, and operates in compliance with the following conditions:

- (a) All stockpiles shall be sprinkled with water and/or dust-suppressant chemicals as necessary to achieve



**Operating Results From an  
Integrated Soil and Groundwater Remediation System:**

**Selected for the Superfund Innovative  
Technology Evaluation Program**

**Winner of the Air and Waste Management Association  
J. Deane Sensenbaugh Award  
for  
Waste Material Engineering Projects**

**Robert G. Hornsby  
AWD Technologies, Inc.  
400 West Sam Houston Parkway South  
Houston, Texas 77042**

**David J. Jensen  
Lockheed Engineering and Sciences Company  
PO Box 11058  
Burbank, California 91510-1058**

## INTRODUCTION

The Lockheed Corporation has operated and maintained facilities in Southern California since the late 1920s. It was at these facilities that famous aircraft such as the P-38 Lightning, F-104 Starfighter, and the SR-71 Blackbird were produced.

In 1987, solvent contaminated soil and groundwater were identified in the vicinity of Lockheed's Building 175 located in Burbank, California. As a result, the California Regional Water Quality Control Board, Los Angeles Region (CRWQCB) issued Cleanup and Abatement Order No. 87-161 which directed Lockheed to install soil and groundwater remediation systems in the area of Building 175. The order, which was issued on December 17, 1987, required that the respective remedial actions be started by August 15, 1988 and September 15, 1988.

The clean up order required a two media approach to the problem; pump and treat for the groundwater and soil vapor extraction (SVE) for the vadose zone. The challenge for Lockheed was to select remedial technologies which could:

- be built within the deadlines;
- meet the effluent requirements set by the CRWQCB;
- be permitted without delay; and
- provide cost effective treatment which was easy to operate and maintain.

Lockheed selected the AQUADETOX<sup>®</sup> Moderate Vacuum Steam Stripper (MVSS), integrated with a soil vapor extraction (SVE) system because it met these criteria. In addition to reducing solvent concentrations to below drinking water standards, the integrated system had the advantages of no air emission, which facilitated permitting with the South Coast Air Quality Management District, recovering the contaminants for recycling, and providing a more cost effective option than conventional technology. When put on a present-value basis for a 20 year life, the installation and operating costs of the integrated system were approximately one-third less than the cost of the more conventional air stripper and carbon bed technology.

Despite the short time frame provided by the CRWQCB, AWD was able to design, install, and start up the system within the compliance deadlines. Location of the treatment plant and associated extraction and injection wells is shown in Figure 1. A schematic flow diagram of the integrated system is shown in Figure 2. A more detailed discussion of the system's technology and its performance to date is provided below.

## THE TECHNOLOGIES

Integrating the two technologies (MVSS and SVE), provides simultaneous soil and groundwater clean up and represents a significant technology breakthrough. As seen in Figure 2, the MVSS unit extracts and treats contaminated groundwater, while an array of SVE wells removes contaminated soil-gas from the vadose zone. The soil-gas treated by the carbon beds is injected back into the ground to sweep through the soil and remove additional contamination.

AQUADETOX<sup>®</sup> A trademark of The Dow Chemical Company.

The AQUADETOX technology can be used to remove a wide variety of volatile compounds (Table 1) and many compounds that are normally considered nonstrippable (i.e. those with boiling points above 200°C). The application of AQUADETOX for the removal of compounds with boiling points above 200°C and the use of vacuum are patented by The Dow Chemical Company. A patent on the integrated system is owned by AWD Technologies.

## AQUADETOX

The MVSS and SVE units share a 3-bed granulated activated carbon (GAC) unit. When one of the GAC beds is regenerated, the steam and organic vapors are condensed in the secondary condenser of the MVSS unit. Condensed organics are pumped to a storage tank for recycle, water condensate is pumped to the recycle tank for further treatment by the MVSS process, and noncondensables are transferred to the active GAC bed. Independent process flow diagrams for the AQUADETOX MVSS and SVE units are shown on Figures 3 and 4, and each is discussed in more detail in the following sections.

Contaminated groundwater is fed from the extraction well to a cross exchanger, where it is heated by the treated water. The heated water then enters the top of the stripping column (9' diameter x 60' tall) and flows down the column, contacting the rising vapor flow generated by the introduction of steam to the bottom of the column. Under a pressure of 100 mmHg abs., the contaminants are stripped from the liquid into the vapor stream, which exits from the top of the column. The treated water leaves the bottom of the column. The treated water passes through the heat exchanger, where it is cooled and the contaminated feedwater is heated. The water exiting the treatment facility is thereby controlled to 9 to 10°F higher than the incoming groundwater.

The overhead vapors flow to a water-cooled condenser, where the water vapor is condensed and recycled back to the contaminated feedwater. The water for cooling the condenser is provided by diverting a portion of the cool feed stream through the condenser and back to the main feed stream.

Total condensation of the overhead vapors is not possible due to noncondensable gases from "vacuum leaks" and dissolved gas contained in the contaminated groundwater. These noncondensable vapors, carrying some water, inert gases, and VOCs, enter a vacuum pump where they are compressed to atmospheric pressure. Cooling of this compressed vapor stream results in condensation of water and VOCs.

The water phase is recycled to the contaminated feedwater and the organic solvent phase is withdrawn for reclamation by a contract recycler. The coolant for this secondary condenser is supplied from the feedwater as is done for the first condensing unit.

The vent stream from the secondary condenser contains the noncondensable and an equilibrium quantity of VOCs. This stream is passed through vapor-phase GAC prior to discharge into the reinjection wells of the SVE system.

## SOIL VAPOR EXTRACTION SYSTEM

SVE is being used at the Lockheed site for remediation on contaminated soil because of the relatively volatile character of the reported contaminants, depth to groundwater in the range approximately 140 to 150 feet, and the predominantly coarse-grained nature of subsurface soils.

The design of the SVE system focused on the distribution of the wells to produce an effective and nondisruptive pneumatic flow regime. "Effectiveness" of the SVE was judged to depend on establishing radially inward flow (toward an extraction well) throughout the areas of probable soil contamination; "nondisruptive pneumatic flow regime" refers to injection well placement such that (1) fugitive atmospheric emissions are not created, and (2) soil-gas within the areas of probable soil contamination is not displaced from the zone of extraction well influence.

Extraction wells connected to a common header feed up to 300 CFM of contaminated soil-gas to the system for processing and decontamination via carbon adsorption. Liquids collected in the SVE scrubber sump are pumped to the water recycle tank for processing through the MVSS tower. Vapors are passed through the GAC beds for hydrocarbon removal prior to reinjection.

Three GAC beds remove chlorinated hydrocarbons from SVE system extraction well soil-gas, along with vent gases from the AQUADETOX unit. The GAC beds are operated alternately, with two beds online in series while the remaining unit is being regenerated. Once each 8 hours, the regenerated offline bed is placed in service and the spent carbon bed is taken offline and regenerated. Steam is used to strip chlorinated hydrocarbons from the GAC units. The vapors from this regeneration process are condensed and processed in the stripping tower.

Treated soil-gas is reintroduced into the ground at depths ranging from 50 to 150 feet through the vadose zone. The soil-gas then sweeps horizontally through the contaminated soil, picking up additional hydrocarbons, and is once again collected in the soil-gas extraction well system, where hydrocarbons are again removed.

## SYSTEM OPERATION

The groundwater treatment plant operates at an average flow rate of 800 to 1,000 gpm and the SVE at 170 SCFM. The contaminants treated are listed in Table 2. Initially, total VOC concentrations were on the order of 13,000 ppb in the groundwater and 6,000 ppm in the soil-gas. After the integrated system had been operating several months, these concentrations dropped to 5,000 ppb and 450 ppm, respectively. Currently the influent concentrations are on the order of 2,000 ppb and 100 ppm. To date, the AQUADETOX/SVE facility has removed over 68,200 pounds of VOCs.

Table 2 lists the major contaminants in the groundwater feed to the treatment plant. Effluent analyses show that all contaminants are routinely reduced to below the analytical detection level (1 ppb for most contaminants). This equates to a removal efficiency in excess of 99.99%. The soil-gas treatment by two of three 3,500 pound carbon beds reduces VOC concentrations to the order of 5 ppm before the air is reinjected in the ground. This equates to a removal efficiency of better than 99%.

While the treatment plant has operated consistently (>90% availability factor) at average design flow rates, and the outlet VOC concentrations from the AQUADETOX tower remain well within permit limits, it has not been devoid of typical start-up problems and one operational problem. The start-up problems were typically failures of instrumentation and control software bugs, which have been since been resolved. A more persistent problem, however, has been caused by the high alkalinity of the groundwater and resulting calcium carbonate scaling in parts of the treatment plant.

Solubility of the calcium carbonate in the groundwater is reduced in two ways as the water is processed through the MVSS unit. First, the water is heated and, second, carbon dioxide is removed during the stripping process in the column, thereby increasing the pH. The principal disadvantage of scaling is the reduction in heat transfer efficiency of cross exchanger, resulting in greater steam consumption.

Initially, an antiscalant was injected in the feed water. This treatment slowed the scaling due to the subsequent removal of carbon dioxide and concomitant pH increase, but periodically the heat exchanger required acidizing to maintain its heat transfer properties.

A sulfuric acid injection system was later installed to control pH and eliminate scaling. The costs associated with the addition of sulfuric acid were more than offset by: (a) the savings in eliminating antiscalant injection; (b) savings in eliminating phosphoric acid used to clean the heat exchanger periodically; and (c) lowering average steam consumption by improving heat exchanger efficiency. Less than 20% of the steam consumption in the AQUADETOX facility is needed to strip contaminants; the other 80% is needed in raising the incoming water to its boiling point of 120°F at 100 mmHg. The cross exchanger helps reduce this steam requirement by using heat from the effluent water. Future systems may have larger or differently designed cross exchangers to enhance this energy efficient approach.

## CLEANUP ACHIEVEMENTS

The system is effectively cleaning up the soils. Since start up, over 68,200 pounds of organic solvents have been removed from the soil and groundwater. Total VOCs in the groundwater have dropped from an initial 13,000 ppb to approximately 2,000 ppb. The soil VOCs have been reduced from 6,000 ppm to less than 100 ppm. A plot of the drop in concentrations for the system are shown in Figures 5 and 6.

## INDEPENDENT PERFORMANCE EVALUATION

Both the EPA and the State of California conducted comprehensive programs to evaluate the process. The EPA said "groundwater removal efficiencies for the total VOCs (TCE and PCE combined) ranged from 99.92 to 99.99 percent. Soil gas removal efficiencies ranged from 98.0 to 99.9 percent where the GAC beds were regenerated in 8-hour shifts as specified by AWD."

The State of California looked at PCE, TCE, and methylene chloride (MC) in groundwater. They tabulated the following contaminant removal efficiencies for the AQUADETOX stripper:

- 99.98 % for TCE;
- 99.94 % for PCE; and
- 99.84 % for MC.

## OPERATING COSTS

Table 3 shows the estimated operation and maintenance (O&M) costs for 1990 and 1991. As seen in the tables, O&M costs are broken down into categories for labor, materials, electrical power, steam generation, performance monitoring, and water discharge. Labor costs include operator time which is nominally 24 hours per week.

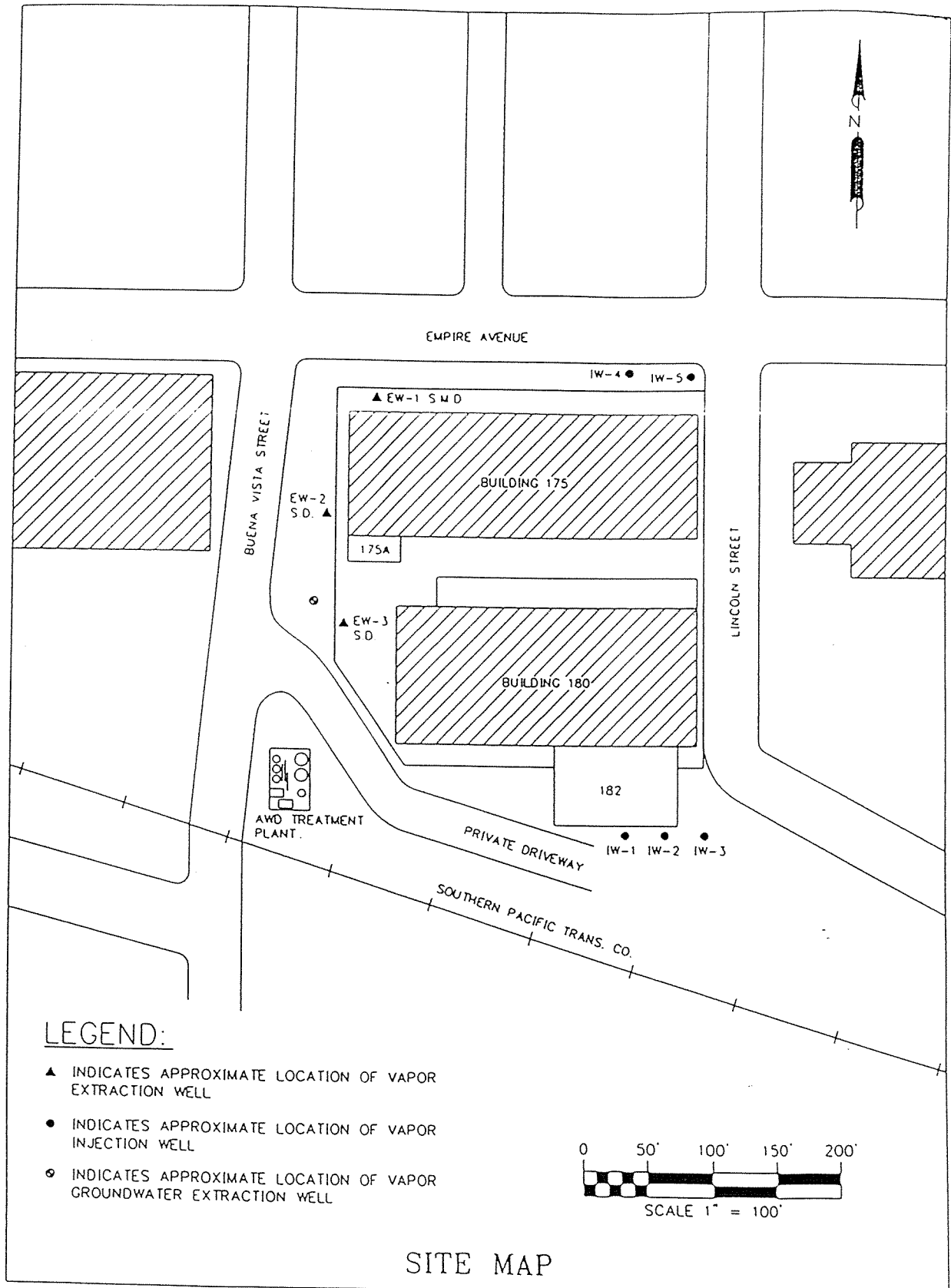
Monitoring costs include those costs associated with sampling and analyzing the influent and effluent streams (both soil vapor and groundwater). The sampling schedule and analytical methods used are specified by the CRWQCB and are site specific.

Prior to 1991, all treated groundwater was discharged to a nearby storm drainage channel. This is deemed a consumptive use of the extracted groundwater and Lockheed is charged \$197 per acre foot for treated water discharge in this manner. Beginning in early 1991, Lockheed began a pilot program of injected the treated groundwater back into the aquifer which has significantly reduced the cost associated with water discharge. The injection program was allowed by the CRWQCB due to the fact that the system produces treated water with VOC concentrations that are below drinking water standards. All costs associated with water discharge are unique to the site.

As seen in the Table 3, labor and material costs increased for 1991. This was due to a one time expense of approximately \$100,000 required for heat exchanger repairs. The unit was damaged by corrosion caused by the effects of inorganics in the water stream. Future AWD systems have vigorous inorganic chemistry effect evaluations performed so that the necessary design precautions can be made.

Labor and material costs also increased in 1991 due to modifications required to handle a new source of steam. Initially, steam was supplied to the system by Lockheed's existing boilers. When these were decommissioned, the system was connected to a new steam supply.

FIGURE 1



## SUMMARY

The Integrated AQUADETOX/Soil Vapor Extraction system is effectively and economically removing VOCs from the Lockheed Burbank site. Current contaminant levels in the water are less than 1/3 of what they were when treatment was started and the soil VOCs are about 5% of the initial levels.

Both the EPA and the State of California confirm up to 99.99% removal efficiencies for the AQUADETOX vacuum steam stripper and up to 99.9% removal efficiencies for the SVE system.

The system can provide cleanup with zero air emissions. Drinking water standards are achievable with a single tower, even with very high contaminant levels. The system is completely automated and requires very little operator attention.

AQUADETOX® A trademark of The Dow Chemical Company

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<sup>1</sup> AWD Technologies Integrated AQUADETOX/SVE Technology Applications Analysis Report, EPA/540/A, United States Environmental Protection Agency, Oct. 1991.

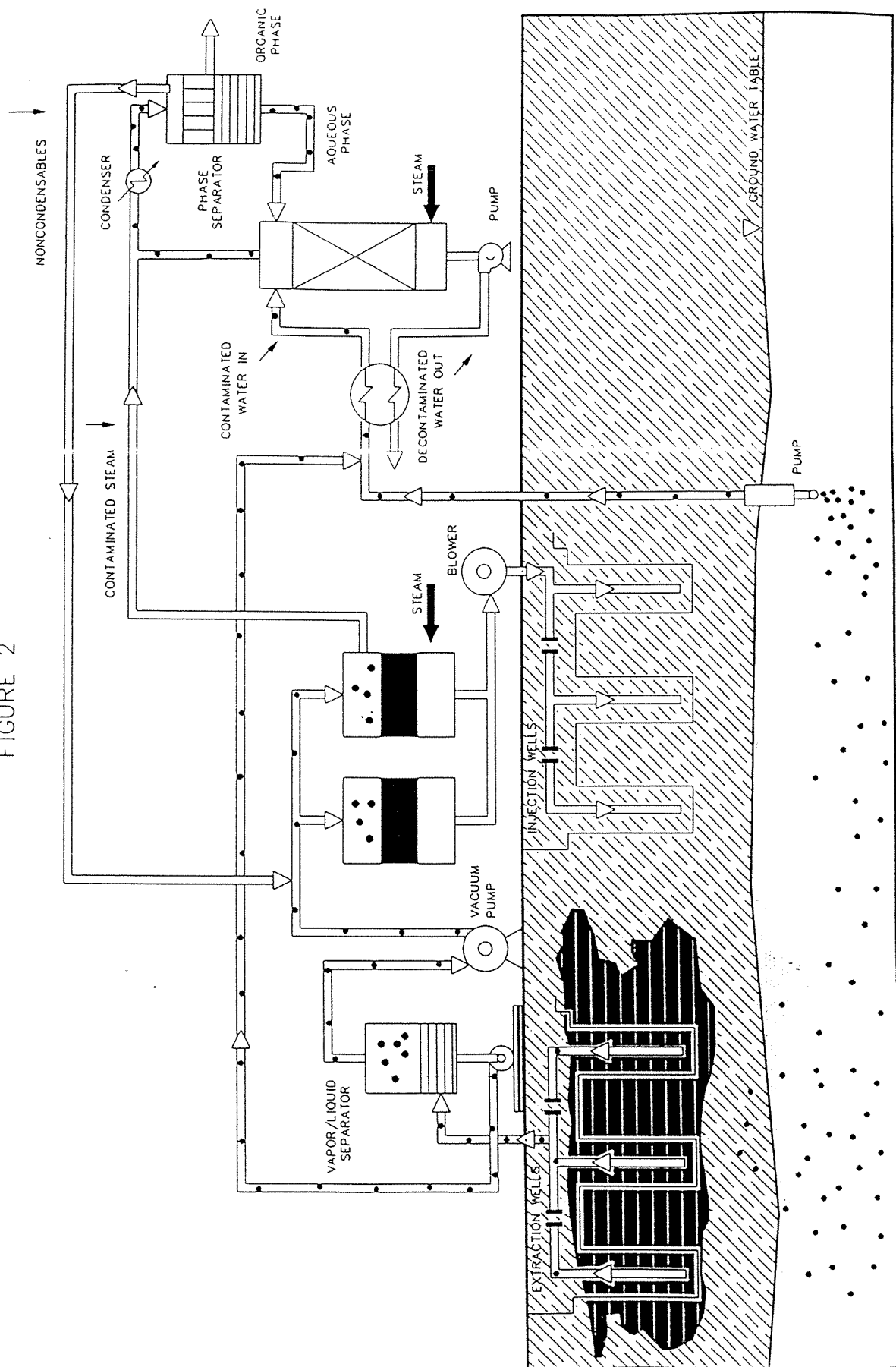
<sup>2</sup> AQUADETOX/SVE Integrated System for Groundwater and Soil Contaminated with Volatile Organic Compounds in Burbank, California, Staff Report, State of California, Dept. of Health Services, Toxic Substances Control Program, Alternative Technology Division, June, 1991.

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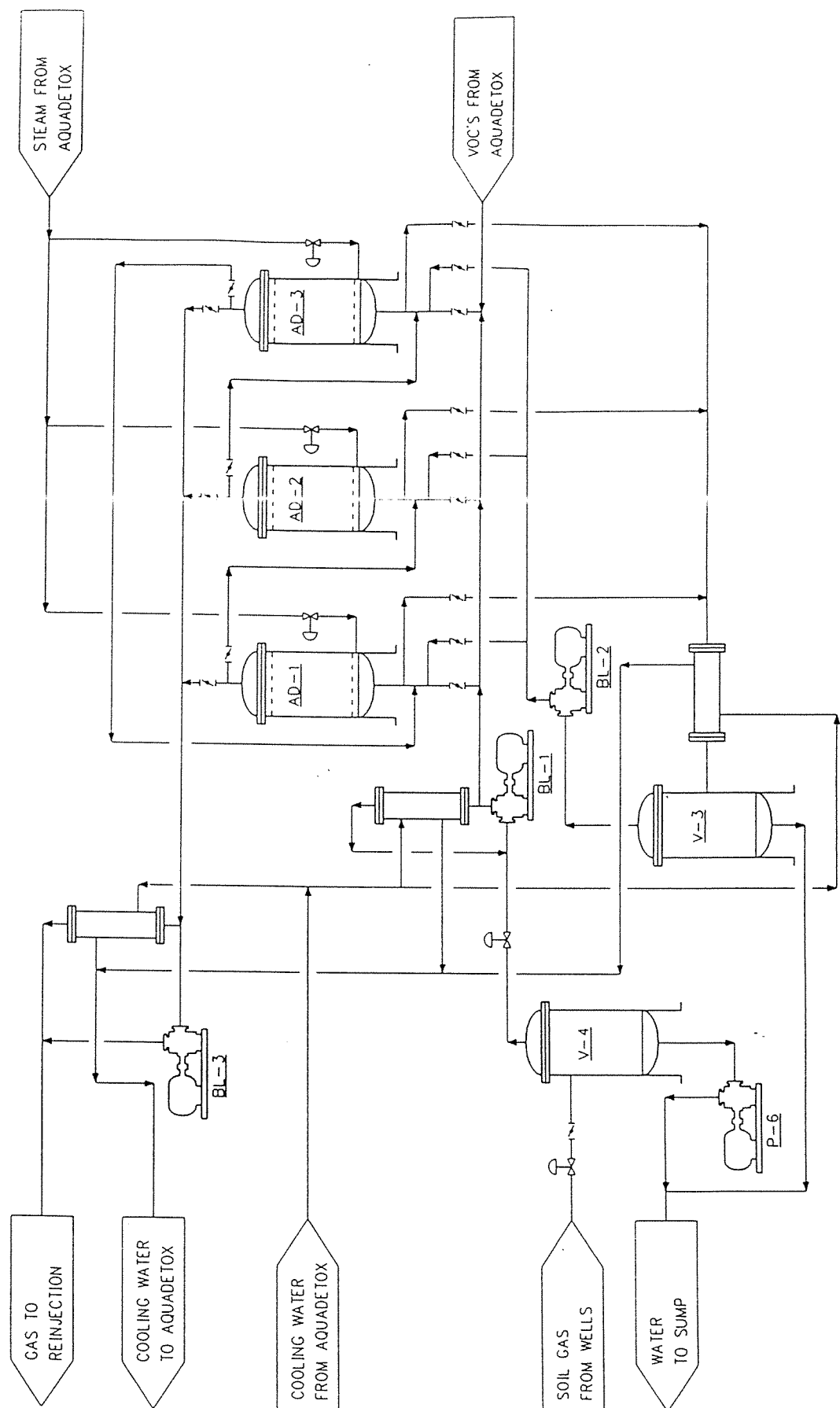
Hornsby, Robert G., AWD Technologies, Inc. and Jensen, David J., Lockheed Engineering and Sciences Company, "Zero Air Emissions Groundwater and Soil Remediation Using the AWD Integrated System", 1991.

FIGURE 2



[illegible]

FIGURE 4



VES FLOW DIAGRAM

Figure 5

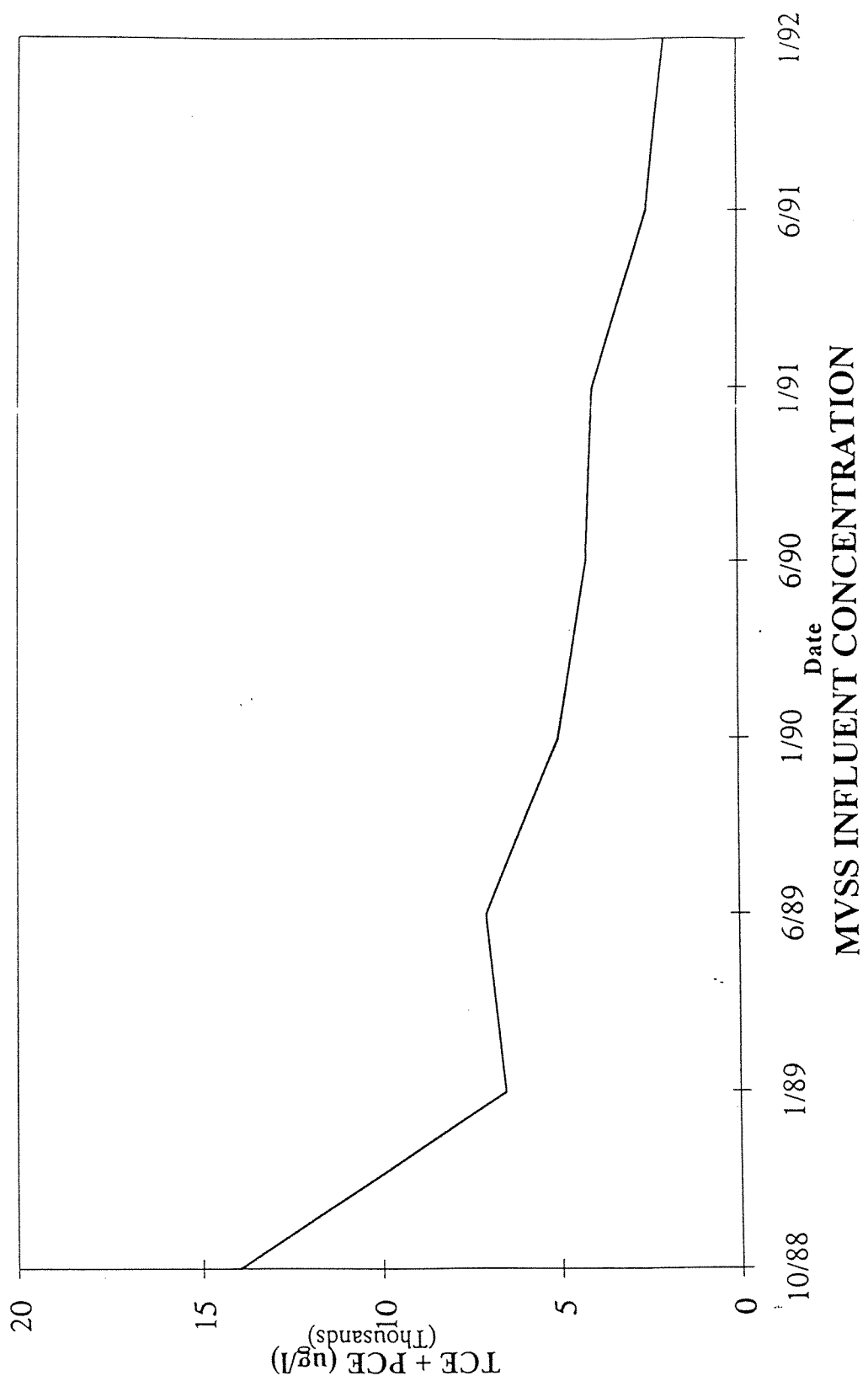


Figure 6

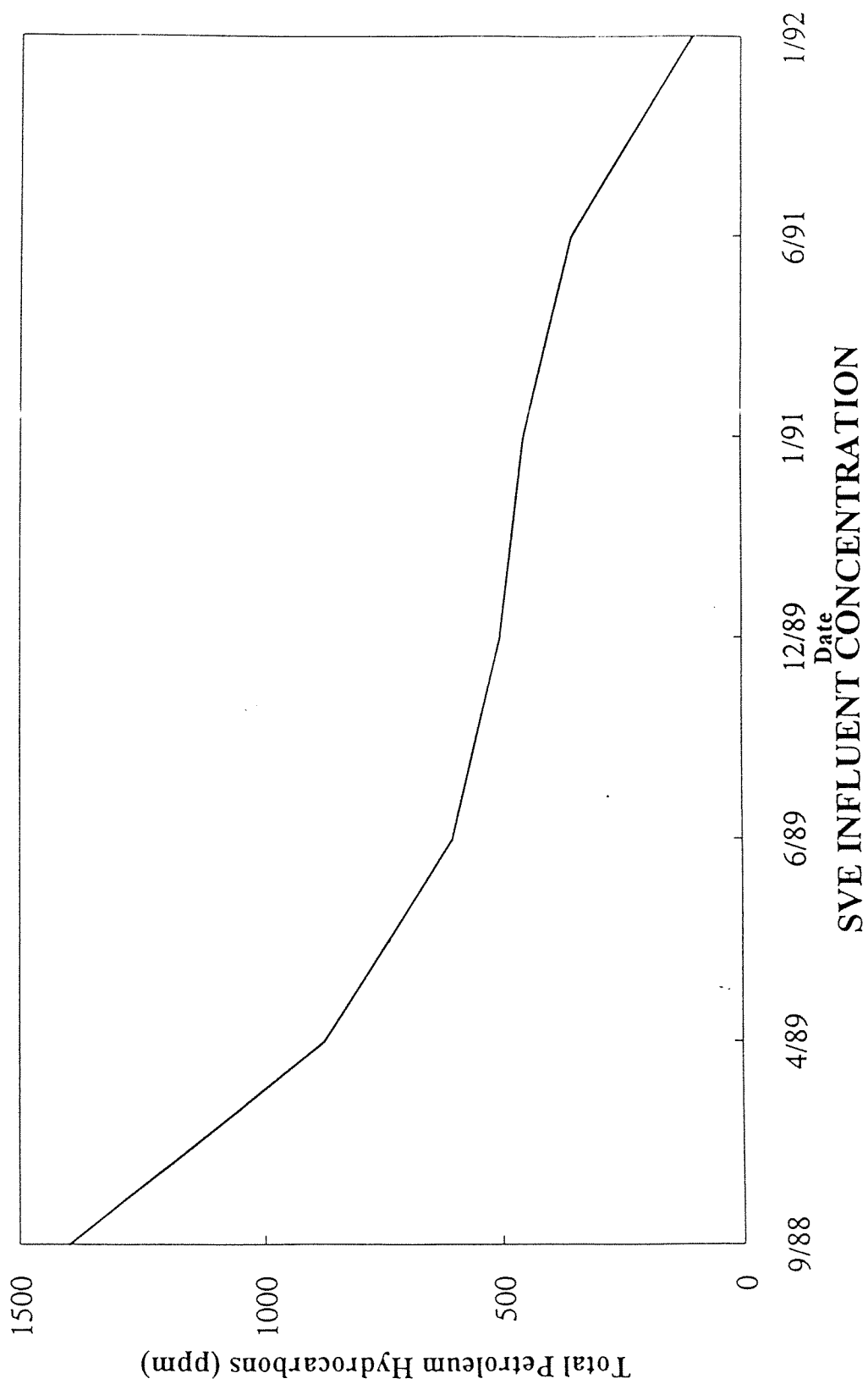


TABLE 1

# STRIPPABLE EPA-DESIGNATED PRIORITY POLLUTANTS

<i>Volatiles</i>	<i>Base/Neutral</i>	<i>Pesticides</i>
acrolein	acenaphthene	aldrin
acrylonitrile	acenaphthylene	alpha-BHC*
benzene	anthracene	beta-BHC*
bromoform	benzidine	delta-BHC*
carbon tetrachloride	benzo(a)anthracene	chlordan
chlorobenzene	benzo(a)pyrene	4,4-DDT
chlorodibromomethane	3,4-benzofluoranthene	4,4-DDE
chloroethane	benzo(ghi)perylene	4,4-DDD
2-chloroethylvinyl ether	benzo(k)fluoranthene	dieldrin
chloroform	bis (2-chloroethoxy) methane	alpha-endosulfan*
dichlorobromomethane	bis (2-chloroethyl) ether	beta-endosulfan*
1,1-dichloroethane	bis (2-chloroisopropyl) ether	endosulfan sulfate*
1,2-dichloroethane	bis (2-ethylhexyl) phthalate	endrin aldehyde*
1,1-dichloroethylene	4-bromophenyl phenyl ether*	heptachlor
1,2-dichloropropane	butylbenzyl phthalate	heptachlor epoxide
1,3-dichloropropylene	2-chloronaphthalene	PCB-1242*
ethylbenzene	4-chlorophenyl phenyl ether	PCB-1254*
methyl bromide	chrysene	PCB-1221*
methyl chloride	1,2-dichlorobenzene	PCB-1232*
methylene chloride	1,3-dichlorobenzene	PCB-1248*
1,1,2,2-tetrachloroethane	1,4-dichlorobenzene	PCB-1260*
tetrachloroethylene	3,3-dichlorobenzidine*	PCB-1016*
toluene	di-n-butyl phthalate	toxaphene
1,2-trans-dichloroethylene	2,4-dinitrotoluene	
1,1,1-trichloroethane	2,6-dinitrotoluene	
1,1,2-trichloroethane	di-n-octyl phthalate	
trichloroethylene	1,2-diphenylhydrazine (as azobenzene)*	
vinyl chloride	fluoranthene	
	fluorene	
<i>Acid Compounds</i>	hexachlorobenzene	
2-chlorophenol	hexachlorobutadiene	
2,4-dichlorophenol	hexachlorocyclopentadiene	
2,4-dimethylphenol	hexachloroethane*	
p-chloro-m-cresol*	indeno(1,2,2-cd)pyrene*	
pentachlorophenol	isophorone	
2,4,6-trichlorophenol	naphthalene	
	nitrobenzene	
	N-nitrosodimethylamine*	
	N-nitrosodi-n-propylamine*	
	N-nitrosodiphenylamine*	
	phenanthrene	
	pyrene	
	1,2,4-trichlorobenzene	

\* Needs further pilot study to  
determine treatability

**TABLE 2**  
**INTEGRATED SYSTEM AT LOCKHEED-BURBANK**  
**DESIGN CRITERIA AND PERFORMANCE RESULTS**

<b>AQUADETOX</b>					
Design Contaminants	Design Feed Water Concentration (ppb)	Actual (11/88) Influent Concentrations (ppb)	Design Effluent Concentration (ppb)	Actual Effluent Concentration (ppb)	
Trichloroethylene	3,300.0	2,200	4.5	< 1	
Toluene	180.0	< 100	9.5	< 1	
Tetrachloroethylene	7,650.0	11,000	3.5	< 1	
Trans-1,2-dichloroethylene	19.5	< 100	15.0	< 1	
Chloroform	30.0	< 100	N/A	< 1	
1,1-dichloroethane	18.0	< 100	5.5	< 1	
1,2-dichloroethane	4.5	< 100	0.8	< 1	
Carbon tetrachloride	7.5	< 100	N/A	< 1	
Benzene	30.0	< 100	0.65	< 1	
1,1,2-trichloroethane	34.5	< 100	N/A	< 1	
Ethylbenzene	255.0	< 100	N/A	< 1	

<b>SVE</b>		
Contaminants	Actual (9/89) Extraction Gas (ppb)	Actual (9/89) Reinjection Gas (ppb)
Total Hydrocarbons	450,000	2,000
Tetrachloroethylene	420,000	365
Trichloroethylene	8,000	60

TABLE 3  
INTEGRATED MVSS/SVE  
SYSTEM OPERATING COSTS

<u>Cost Item</u>	<u>Annual Cost</u>	
	<u>1990</u>	<u>1991</u>
Labor	\$ 114,300	\$ 164,900
Materials	95,500	161,400
Power	41,900	32,500
Steam	194,000	184,500
Monitoring	106,800	59,500
Water Discharge	<u>232,200</u>	<u>69,700</u>
Totals	\$ 784,700	\$ 672,500

## **VII. MISCELLANEOUS**

***Environmental Issues Facing Building and Real Property Owners --  
"We've Gotta Get Out of This Place"***

*Carie Goodman McKinney  
Margaret Menicucci  
Kelly, Hart & Hallman  
Austin, Texas*

***Environmental Issues Facing Small Business -- "Down in the Boondocks"***

*Dick O'Neil  
Davidson, Troilo & Booth  
San Antonio, Texas*

***Texas New Ethics Rules -- "Turn Out the Lights . . . the Party's Over"***

*Mark Smith  
Brown McCarroll & Oaks Hartline  
Austin, Texas*

***Agency Enforcement -- "Ain't Too Proud to Beg"***

*Terrell Hunt  
Bracewell & Patterson  
Houston, Texas*

***Pesticide Regulation -- "Wipeout"***

*Geoff Connor  
Assistant Commissioner of Legal Affairs & General Counsel  
Texas Department of Agriculture  
Houston, Texas*

**ENVIRONMENTAL ISSUES**  
**FACING COMMERCIAL BUILDING OWNERS**

***"We've Gotta Get Out of This Place"***

**By**

**Margaret M. Menicucci  
Carie Goodman McKinney  
Kelly, Hart & Hallman  
Austin, Texas**

**4th Annual Texas  
Environmental Superconference**

**"In the Groove"  
August 6 & 7, 1992**

## I. INTRODUCTION

Owners of commercial buildings are subject to a variety of regulatory responsibilities and common law liabilities that arise during the day to day management of the building. This paper addresses various responsibilities and liabilities that may affect a commercial building owner separate from the purchase and sale of the building. The paper addresses responsibilities and liabilities related to Superfund, asbestos, PCBs, lead, indoor air pollution, and radon. It does not cover issues related to OSHA hazard communication requirements, SARA Title III reporting requirements, underground storage tanks, or threats from contamination of neighboring properties.

## II. SUPERFUND LIABILITY

Of all environmental laws, the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act<sup>1</sup> ("CERCLA" and "SARA" or "Superfund"), creates the potential for greatest liability to a building owner. Under Superfund, liability is imposed retroactively regardless of fault, based on the relationship of so-called potentially responsible parties ("PRPs") to contaminated property such as a building in which there has been a release or threatened release of a hazardous substance. Because Superfund liability is joint and several, the government can sue any PRP for the entire cost of remediation and damages, leaving that PRP to seek contribution from others. Superfund provides for sanctions for failure to comply with reporting requirements or with agency orders, but liabilities for investigation and remediation of the facility are a PRP's most serious costs.

In the Superfund context, the term "facility" includes a building and any site where a hazardous substance has been deposited, stored, disposed of, placed or otherwise come to be located.<sup>2</sup> Clearly, this definition includes land disposal sites, but, for the purposes of this article, facility will mean the actual building and adjacent land. The term hazardous substance is any substance designated under other specified environmental statutes, including, for example, hazardous wastes under the Resource Conservation and Recovery Act.<sup>3</sup>

Superfund litigation involving PRP's may be brought by the government or by private parties. The key distinction between governmental and private party litigants relates to the ability of a PRP to contract away liability. Most courts hold that section 107(e) allows parties to allocate Superfund liabilities among themselves but renders ineffective any

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<sup>1</sup> 42 U.S.C.A. §§ 9601-9657 (1992)

<sup>2</sup> 42 U.S.C.A. § 9601(9).

<sup>3</sup> Under the federal Superfund program, the definition of hazardous substance expressly excludes petroleum and natural gas and related substances. 42 U.S.C.A. § 9601(14). Some state Superfund programs do apply to petroleum products, *e.g.*, Texas.

agreement to transfer such liabilities with respect to the government.<sup>4</sup> There is some case law, however, that suggests that this provision is intended only to allow the transfer of liability from a PRP to a third party, *e.g.*, an insurer, but not to another PRP.<sup>5</sup> This interpretation strains logic.

The government can issue an order requiring a PRP to take action on any site posing a threat.<sup>6</sup> Willful violations or failure or refusal to comply with a governmental order can lead to penalties of up to \$25,000 per day.<sup>7</sup> In the alternative, EPA may clean the site itself and seek costs under section 107(a) and punitive damages under section 107(c)(3) of three times the remediation cost if a party failed to comply without sufficient cause.<sup>8</sup> EPA also may seek an injunction against the parties under section 106.<sup>9</sup> The Act provides for the establishment of a hazardous waste trust fund or "Superfund" to pay for cleanup of sites posing a threat to human health or the environment.<sup>10</sup> The government, and, under limited circumstances, private parties may take advantage of the fund.<sup>11</sup>

Though private parties may request reimbursement from the fund, as a practical matter, private parties who incur response costs are more likely to recover their costs from other PRP's. Private parties may seek recovery against a PRP either in a suit for contribution, brought by a PRP under sections 107(a)(3) and 113(f), or in a private cause of action under section 107(a)(4)(B), brought by any person who has incurred response cause.<sup>12</sup>

#### A. LIABILITY AS A PRP

PRPs under Superfund include: (1) the present owner or operator of a facility; (2) the owner or operator of the facility at the time of disposal of hazardous substances; (3) any person who arranged for disposal or treatment, or who arranged with a transporter for

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<sup>4</sup> 42 U.S.C.A. § 9607(e). *See, e.g., Jones-Hamilton Co. v. Kop-Coat, Inc.*, 750 F.Supp. 1022 (N.D. Cal. 1990).

<sup>5</sup> *See, e.g., AM Int'l Inc. v. Int'l Forging Equip. Corp.*, 743 F. Supp. 525 (N.D. Ohio 1990).

<sup>6</sup> 42 U.S.C.A. § 9606(a).

<sup>7</sup> 42 U.S.C.A. § 9606(b).

<sup>8</sup> 42 U.S.C.A. § 9607(a) and (c)(3).

<sup>9</sup> 42 U.S.C.A. § 9606(a).

<sup>10</sup> 42 U.S.C.A. § 9611.

<sup>11</sup> 42 U.S.C.A. § 9611(a) and (b).

<sup>12</sup> 42 U.S.C.A. § 9607(a)(3) and (4)(B) and § 9613(f).

transport for disposal or treatment of hazardous substances at a facility; and (4) any person who accepted hazardous substances for transport to disposal or treatment facilities selected by that person.<sup>13</sup> Building owners have exposure to Superfund liability as past or present owners, operators, and on rare occasion, arrangers.<sup>14</sup>

## 1. OWNER LIABILITY

Present owners of contaminated sites may be PRPs irrespective of whether the contamination was placed on-site prior to their acquisition,<sup>15</sup> ownership *per se* suffices.<sup>16</sup> Past ownership of the facility at the time of disposal gives rise to liability as well.<sup>17</sup> Interim ownership of a facility, generally will not create liability, even if disposal occurred prior to ownership.<sup>18</sup> However, the Fourth Circuit Court of Appeals recently held an owner liable for response costs resulting from leaking underground storage tanks when the prior owner held legal title to the property for only four hours.<sup>19</sup> The court had a two-part basis for its holding. First, the court stated the duration of ownership may be relevant regarding allocation of costs but not regarding a determination of liability. Second, the court interpreted the word "disposal" to include passive migration of a hazardous substance, or leaking from the underground storage tank.<sup>20</sup> The court reasoned that this interpretation was consistent with the intent of Superfund because the requirement of active conduct "rewards indifference to environmental hazards and discourages voluntary efforts at waste cleanup. . .".<sup>21</sup> The court did not need to make this holding to prevent interim owners from disclosing or taking action on releases of which they are aware. This situation is

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<sup>13</sup> 42 U.S.C.A. § 9607(a)(1-4).

<sup>14</sup> See CP Holdings Inc. v. Goldberg-Zoino & Assoc., Inc., 769 F.2d 432 (D.N.H. 1991) and Sanford St. Local Dev. Corp. v. Textron Inc., 768 F. Supp. 1218 (W.D. Mich. 1991).

<sup>15</sup> 42 U.S.C.A. § 59607(a)(1).

<sup>16</sup> New York v. Shore Realty Corp., 759 F.2d 1032, 1044 (2d Cir. 1985).

<sup>17</sup> Idaho v. Bunker Hill Co., 635 F. Supp. 665, 671 (D.Id. 1986).

<sup>18</sup> Cadillac Fairview/California Inc. V. Dow Chem. Co., 21 Env't Rep. Cas. 1108, 1113 (D. Cal. 1984), *rev'd on other grounds*, 840 F.2d 691 (9th Cir. 1988); In re Reo Trucks, Inc., 115 B.R. 559 (W.D. Mich. 1990) (party that acquired land and transferred it within one day was a conduit rather than on owner subject to Superfund liability); *but see* United States v. Carolawn, 849 F.2d. at 1573 (court refused summary judgment to interim owner who held title for one hour, due to a question of fact whether new owner was merely another form of the final owner.)

<sup>19</sup> Nurad, Inc. v. Hooper & Sons Co., 1992 WL 113360 (4th Cir.).

<sup>20</sup> *Id.* at \*5. For a contrary holding see Ecodyne Corp. v. Sharpe, 718 F. Supp. 1454 (N.D. Cal. 1989); Cadillac Fairview, *supra* note 18.

<sup>21</sup> Nurad, WL 113360 at 17.

already penalized in Superfund, because an interim owner who obtains and fails to disclose to the purchaser actual knowledge of a release or threatened release will be held liable as a present owner.<sup>22</sup>

Thus, owner liability may accrue without the necessity for any action on the part of the owner-PRP. This is of greatest concern to building owners when a tenant is engaged in activities involving the production, use, or storage of hazardous substances.

**a. On-site Conditions**

The first concern to building owners is the presence of hazardous substances in the building or on the property at the time the property is acquired. These conditions could give rise to Superfund liability or liability under similar programs dealing specifically with PCBs, asbestos, or underground storage tanks. Contamination may result from disposal activities on the property or from the placement of hazardous substances on the property, such as the storage of PCB containing materials, pesticides or industrial chemicals. Methods of minimizing exposure to liability based on on-site conditions are discussed below.

**b. Hazardous Substances Placed On-site by Tenants.**

In a number of cases, courts have held lessors, whose lessees created contamination, liable as owners.<sup>23</sup> Liability is predicated on current ownership or ownership at the time of disposal. The building owner need not be involved in the management or operation of the lessee to be liable.<sup>24</sup> Under Superfund, the government may hold the lessor and the lessee jointly and severally liable for response costs.<sup>25</sup> In contribution actions by third parties, however, the site owner's degree of responsibility will be factored into the recovery determination.<sup>26</sup> To minimize the threat of liability, a lessor should delineate the responsibilities of the parties in the lease contract.

In its July 6, 1989 guidance on landowner liability under Superfund, EPA stated in a footnote that the government has taken the position that "owner" for the purposes of

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<sup>22</sup> 42 U.S.C.A. § 9601(35)(c).

<sup>23</sup> New York v. Shore Realty, Inc., 759 F.2d 1045 (owner responsible for unauthorized tenants); Versatile Metals, Inc. v. Union Corp., 693 F. Supp. 1563 (E.D. Pa 1988) (owner and tenant jointly and severally liable); United States v. Argent, 21 Env't Rep Cas. (BNA) 1354, 1355 (D.N.M. 1984) (owners responsible regardless of connection to tenant's business.)

<sup>24</sup> Argent, 21 Env't Rep. Cas. (BNA) at 1355.

<sup>25</sup> See, Versatile Metals, Inc., 693 F.Supp. 1563.

<sup>26</sup> SCRDI, 653 F.Supp. 984; see also Weyerhaeuser Corp. v. Koppers Co., 771 F.Supp. 1420 (D.Md. 1991).

Superfund liability includes the lessee.<sup>27</sup> The cases cited for that proposition, however, do not support such broad interpretation. In United States v. Northern Plating Co.,<sup>28</sup> for example, lessee was held liable as an operator of the site, at which it operated a metal electroplating facility. In SCRDI,<sup>29</sup> the court held the lessee liable as an owner because it acted in a quasi-ownership capacity, subleasing a portion of the property for waste disposal activities and maintaining control and responsibility for the use of that property. The court viewed the lessee as essentially standing in the shoes of the property owner and held the lessee liable as an operator, transporter, and arranger. Analogously a lessee conceivably could be held liable as an owner if the lease was of such a duration as to constitute ownership, e.g., a 99-year lease.

A lessor may recover from a lessee who created the on-site contamination,<sup>30</sup> provided the lessee is solvent and the parties have not agreed otherwise. In Rodenbeck v. Marathon Petroleum Co.,<sup>31</sup> the court upheld lease provisions that released the petroleum company from liability for contamination of the gas station operator's property, stating that the parties could allocate liability between themselves. Because of the contractual relationship of the lease, the lessor may not successfully assert the statutory "third party defense" if the act or omission which caused the contamination is that of its lessee. The lessor will be unable to take advantage of the statutory "innocent landowner defense" if the contamination occurred during ownership because the "innocent landowner defense" requires that the contamination have occurred prior to acquisition.

## 2. OPERATOR LIABILITY

Courts broadly construe the term "operator" to apply to a variety of persons who directly or indirectly are involved in the waste management activities of a facility. Courts have focused on the degree of control exercised over a facility in construing the term "operator"<sup>32</sup> and have extended operator liability to corporate officers and shareholders.

A key issue, which has arisen in cases involving shareholder and lender liability, but is equally relevant to lessor liability is whether operator liability is triggered by the power

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<sup>27</sup> See Reich, June 6, 1989 memorandum "EPA Guidance on Landowner Liability Under Section 107(a)(1) and *De Minimis* Settlements Under Section 122(g)(1)(B) of CERCLA, and Settlement with Prospective Purchasers of Contaminated Property".

<sup>28</sup> 670 F. Supp. 742 (W.D. Mich. 1987).

<sup>29</sup> 653 F. Supp. 984.

<sup>30</sup> Caldwell v. Gurley Ref. Co., 755 F.2d. 645 (8th Cir. 1985).

<sup>31</sup> 742 F.Supp. 1448 (N.D. Ind. 1990).

<sup>32</sup> Ametek Inc. v. Pioneer Salt & Chem. Co., 709 F. Supp. 556 (E.D. Pa. 1988).

to control, or by the actual exercise of that control. In State of Idaho v. Bunker Hill Co.,<sup>33</sup> the court suggested the owner's ability to prevent and abate damage could give rise to liability. Similarly, in Nurad, Inc. v. Hooper and Sons Co.,<sup>34</sup> the court used the "authority to control" the facility standard in determining that certain lessees were not operators under Superfund when underground storage tanks on the leased property leaked hazardous substances.<sup>35</sup> In Rockwell Int'l Corp. v. IU Int'l Corp.,<sup>36</sup> the court took the contrary position, stating that the mere ability to exercise control is insufficient for liability, the entity must actually exercise control. Building owners that manage the disposal of wastes for the tenants could be subject to liability as an operator. Again, this liability could be allocated to the lessee by a lease provision such as an indemnity. However, the lease provision will only protect the building owner to the extent the lessee is solvent.

### 3. ARRANGER LIABILITY

Any person who arranged for disposal or treatment or who arranged with a transporter for disposal or treatment of hazardous substances is liable under Superfund as an "arranger."<sup>37</sup> Liability is imposed even if the transporter took substances to a site the generator did not select.<sup>38</sup> In the context of arranger liability, the facility usually is a site where hazardous substances were taken for treatment or disposal rather than a building. Therefore, to incur liability the building owner likely would be the "generator" of the hazardous substances. The building owner could be a generator if, for instance, the owner has asbestos or asbestos containing materials removed from the building and sent off-site for disposal, has PCB containing materials removed from the building and sent off-site for disposal, or is using and arranging for disposal of hazardous substances such as solvents, industrial chemicals or pesticides.

In two cases, courts found former owners of buildings liable as arrangers for the disposal of hazardous substances that were contained in those structures. In Sanford St. Local Dev. Corp. v. Textron Inc.,<sup>39</sup> the court denied summary judgment on the issue of Superfund liability, holding the extremely discounted sale of a foundry, which contained PCB transformers, could cause the seller to be liable as an arranger. Although the seller argued

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<sup>33</sup> 635 F. Supp. 655 (D.Id. 1986).

<sup>34</sup> 1992 WL 113360 *supra* n. 19

<sup>35</sup> *Id.* at \*3.

<sup>36</sup> 702 F. Supp. 1384 (N.D. Ill. 1988).

<sup>37</sup> 42 U.S.C.A. § 9607(a)(3).

<sup>38</sup> See United States v. Ward, 618 F. Supp. 884 (E.D.N.C. 1985).

<sup>39</sup> 768 F. Supp. 1218 (W.D. Mich. 1991).

that the transformers were leaking and that the purchase wanted them, the court held that a fact finder could determine that the seller - - as well as the purchaser who resold the building - - intended to arrange for the disposal of the transformers through the sale of the property.

In CP Holdings Inc. v. Goldberg-Zoino & Assoc., Inc.,<sup>40</sup> the plaintiffs purchased property and buildings thereon with plans for demolition of the buildings. After initiating the demolition work, the state enjoined the purchasers from further demolition following an inspection of the buildings revealing the presence of asbestos on-site. The purchasers were notified that under state law and Superfund they were responsible for cleanup of the asbestos. The purchasers sued the sellers to recover costs associated with the asbestos removal and cleanup. The court found that the buildings were a "facility" under Superfund, that the former owner of the property had knowledge of the purchaser's plans to demolish the buildings when the owner sold the buildings. The court determined that the sale of the buildings containing asbestos, with knowledge of demolition constituted arranging for the disposal of hazardous substances. These cases represent an unusual theory of arranger liability, and though they have not been followed, present potential liability for building owners.

## **B. THIRD PARTY DEFENSE**

Superfund provides certain statutory defenses such as act of God, act of war and an act or omission of a third party or any combination of these causes.<sup>41</sup> Of these defenses, the most viable for a PRP is the third party defense. PRP's seeking to take advantage of this defense, however, have not had a high rate of success.

To take advantage of the third party defense, a PRP must establish:

- (a) The release or threat of release and resulting damages were caused solely by a third party;
- (b) The third party was not:
  - 1. the PRP's employee;
  - 2. the PRP's agent; or
  - 3. one whose act or omission occurred in connection with a contractual relationship with the PRP;

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<sup>40</sup> 769 F.2d 432 (D.N.H. 1991).

<sup>41</sup> 42 U.S.C.A. § 9607(b).

- (c) The PRP exercised due care with respect to the hazardous substance taking into consideration the characteristics of the material in light of all relevant facts and circumstances; and
- (d) The PRP took precautions against foreseeable acts or omissions where any such third party and the consequences that can foreseeably result from such acts or omissions.

Of these elements of proof, the most difficult have been sole causation, as a matter of fact, and the lack of a contractual relationship, as a matter of both fact and law.

The pertinent language concerning the lack of a contractual relationship is unclear. Arguably this provision applies only if the contractual relationship existed at the time the release occurred. Stated alternatively, the third party defense should not be vitiated by a contract if the act or omission causing the release did not occur in connection with any contractual relationship.

Unfortunately from the PRP's perspective, courts generally choose not to focus on the nuances of that provision and hold PRP's liable if there is any contractual relationship with the third party.<sup>42</sup> In Westwood Pharmaceuticals, Inc. v. Nat'l Fuel Gas Distrib. Corp.,<sup>43</sup> however, the court considered the issue and suggested that the appropriate test is whether the PRP exercised sufficient control over the third party so that the PRP could be linked by the contract to the acts or omissions that resulted in a release of threat or release. Applying these rules, the lease contract between the building owner and the lessee who has released hazardous substances on the property, by most courts standards, may be sufficient to vitiate the owner's third party defense. Under Westwood II, the lease would be reviewed to determine if the owner had sufficient control over the lessee to be linked to the lessee's actions. Sufficient control, likely will be the actual provisions of the lease.

To ameliorate the harsh effects of the contractual bar, Congress amended Superfund to add the so-called innocent-landowner defense-a subset of the third party defense. SARA

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<sup>42</sup> See, e.g., Washington v. Time Oil Co., 687 F. Supp. (W.D. Wash. 1988). In this case, Time Oil purchased land that had been sub-leased to a third party. The court denied Time Oil affirmative defense that it was innocent landowner by finding the contractual relationship between Time Oil and the sub-lessee of the property; and United States v. Hooker Chem. & Plastics Corp., 680 F. Supp. 546 (W.D. N.Y. 1988). Hooker owned property for 5 years, then conveyed it to the Board of Education of the City of Niagara. The Board of Education conveyed it to the City of Niagara 6 years later. Hooker asserted the third party defense, arguing that subsequent owners caused the contamination of property by grading and excavating it. The court denied the defense, holding the Hooker had direct and indirect contractual relationship with the subsequent owners.

<sup>43</sup> 737 F. Supp. 1272 (W.D. N.Y. 1990) ("Westwood I") and 767 F. Supp. 456 (W.D. N.Y. 1991) ("Westwood II").

added to Superfund a new section 101(35)(A)<sup>44</sup> that clarified that the term "contractual relationship" in section 107(b)(3)<sup>45</sup> includes instruments transferring title or possession to real property, but added an exemption. This exemption applies if the real property on which the facility is located was acquired by the PRP after the disposal or placement of the hazardous substance and one of the following conditions is satisfied: (1) at the time of acquisition, the PRP did not know and had no reason to know that any hazardous substance was disposed of at the facility; (2) the PRP is a governmental entity which involuntarily or through the exercise of eminent domain acquired the property; or (3) the PRP acquired the facility by inheritance or bequest.<sup>46</sup>

The legislative history of SARA indicates that the duty to inquire to qualify as an innocent purchaser is to be judged at the time of acquisition. Purchasers are to be held to a high standard regarding inspection and must have made a reasonable inquiry into all circumstances in light of best business and land transfer principles. Those engaged in commercial transaction are to be held to a higher standard than those engaged in private or residential transactions.<sup>47</sup> As a consequence, there is a strong incentive for prospective purchasers to make a reasonable investigation so that they may take advantage of the innocent landowner defense in section 107(b)(3) if subsequently they should discover that the property is contaminated.

The innocent-landowner provision and the requirement of due diligence do not apply when the PRP is not in privity of contract with the person responsible for the contamination. In other words, subsequent purchasers need show only that the release was solely caused by a third party, that they exercised due care with respect to the materials, and that they took precautions against foreseeable acts.<sup>48</sup> As noted, if, during ownership, a property owner obtained actual knowledge of the release or threatened release of hazardous substance at the facility and subsequently transferred ownership without disclosing that knowledge, that person is treated as a PRP and the third party defense is not available.<sup>49</sup>

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<sup>44</sup> 42 U.S.C.A. § 9601(35)(A).

<sup>45</sup> 42 U.S.C.A. § 9601(35)(A)-(C).

<sup>46</sup> 42 U.S.C.A. § 9601(35)(B).

<sup>47</sup> H.R. CONF. REP. NO. 962, 99th Cong., 2d Sess. 186-88, reprinted in 1986 U.S. CODE CONG. & ADMIN. NEWS 3279-81.

<sup>48</sup> See Westwood I and II, *supra*. But see U.S. v. Pacific Hide & Fur Depot, Inc., 716 F. Supp. 1341 (D. Id. 1989) (the court suggests any contract involving real property triggers the innocent purchaser requirements.)

<sup>49</sup> 42 U.S.C.A. § 9601(35)(C).

## C. REDUCING EXPOSURE TO LIABILITY

### 1. ENVIRONMENTAL AUDIT

To reduce exposure to liability arising from on-site conditions, and to be in a position to take advantage of the third party defense as an innocent purchaser, a potential owner should perform an environmental audit of the building and adjacent land.<sup>50</sup> Audits generally focus on conditions on-site and may extend to conditions on adjacent properties. These audits are performed in phases: Phase I, an on-site investigation and review of pertinent documents, and Phase II, actual testing of soils, groundwater, surface water, or building components. The Phase I investigation may involve review of company and agency documents, historical aerial photographs, title reports identifying prior owners and environmental liens, and literature surveys, such as a computer-assisted search of current periodicals. The on-site investigation includes a walk-through and visual inspection looking for evidence of potential concerns, such as insulation suggesting the presence of asbestos, or mechanical equipment suggesting the presence of PCBs.<sup>51</sup>

An environmental audit report should not only identify environmental concerns, it should quantify the probability of their occurrence and discuss the range of costs associated with addressing each potential concern. The report should identify the need for additional investigation and the types of investigation that might be useful or necessary to better quantify liabilities. Ideally the environmental audit should address all significant concerns while, at the same time, remain cost-effective. The person designing the audit must focus on the nature of the transaction and the party for whom the investigation is being performed. Having performed an environmental audit, the purchaser should structure the transaction to allocate potential liability arising from known and unknown conditions on the property. The transaction can include representations and warranties as to the conditions on-site and indemnification for liability arising from third party causes of action.

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<sup>50</sup> The doctrine of *caveat emptor* or "buyer beware" is not generally a bar to a Superfund action. Therefore, if the purchaser failed to conduct an environmental audit, it may nonetheless pursue the seller for contribution. However, factors pertinent to the doctrine of *caveat emptor* could be considered in mitigating the amount due in a contribution action. See Philadelphia Elec. Co. v. Hercules, Inc., 762 F. 2d 303, (3d Cir.), *cert. denied*, 106 S. Ct. 384 (1985); Smith Land & Improvement Corp. v. Celotex Corp., 851 F. 2d 86 (3d Cir. 1988), *cert. denied*, 109 S. Ct. 837 (1989). "As is" clauses have been given similar effect by the courts: they do not bar a Superfund claim, but steps taken or not taken by a purchaser may be relevant in apportioning liability. See e.g., Int'l Clinical Laboratories, Inc. v. Stevens, 710 F. Supp. 466 (E.D. N.Y. 1989); Mardan Corp. v. C.G.C. Music Ltd., 804 F.2d 1454 (9th Cir. 1986).

<sup>51</sup> See e.g., Consulting Engineers Council of Metropolitan Washington, Guidelines for Environmental Sites (1989).

As noted above, although there is case law to the contrary,<sup>52</sup> the better reasoned view is that parties to a contract can allocate or transfer Superfund liabilities between themselves.<sup>53</sup> The intent to allocate liabilities, however, must be clear. For example, in Mardan Corp. v. C.G.C. Music Ltd.,<sup>54</sup> the purchaser of a manufacturing facility and related property brought an action against a seller seeking recovery for costs incurred in cleaning up a waste disposal site. The court construed provisions of the contract between the parties and concluded that the release barred the purchaser's private right of action under Superfund despite the asserted mutual mistake of fact concerning the necessity for cleanup.<sup>55</sup>

Most courts find Superfund to be no bar to environmental indemnifications.<sup>56</sup> A number of courts have considered such provisions. In Southland Corp. v. Ashland Oil, Inc.,<sup>57</sup> the court held that the indemnification provision in the contract was effective and provided a viable, alternative basis for recovery.<sup>58</sup> The court also held that the provision did not limit recovery to situations involving formal lawsuits.<sup>59</sup> The court contrasted that provision to the provision in issue in Jones v. Sun Carriers Inc.,<sup>60</sup> in which the indemnification provision was triggered by a formal demand. In Channel Master Satellite Sys., Inc. v. JFD Elec. Corp.,<sup>61</sup> also involving Superfund cleanup claims, the contract contained an indemnification running from the purchaser to the seller, but in relation only to violations of law, meaning violations of state or local law. Because the cleanup under Superfund was voluntary and involved no violation and because Superfund is a federal law, the court held the indemnification provision inapplicable.<sup>62</sup>

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<sup>52</sup> See, e.g., AM Int'l. Inc. v. Int'l. Forging Equip. Corp., 743 F. Supp. 525 (N.D. Ohio 1990); Int'l Clinical Laboratories Inc., 710 F. Supp. 466.

<sup>53</sup> See, e.g., Niecko v. Emro Marketing Co., 769 F. Supp. 973 (E.D. Mich. 1991).

<sup>54</sup> 804 F.2d 1454 (9th Cir. 1986).

<sup>55</sup> *Id.* at 1461-63. See also, Mobay Corp. v. Allied-Signal, Inc., 761 F. Supp. 345 (E.D. Mich. 1991); Southland Corp. v. Ashland Oil, Inc., 696 F. Supp. 994 (D. N.J. 1988) (cases holding that to preclude recovery of response costs, an express provision in the contract must allocate these risks to one party.)

<sup>56</sup> See, e.g., Jones-Hamilton Co., 750 F. Supp. 1022.

<sup>57</sup> 696 F. Supp. 994 (D.N.J. 1988).

<sup>58</sup> *Id.* at 1003-04. See also Jones-Hamilton Co., 750 F. Supp. 1022.

<sup>59</sup> *Id.* at 1000.

<sup>60</sup> 856 F.2d 1091, 1093 (8th Cir. 1988).

<sup>61</sup> 702 F. Supp. 1229, 1230-32 (E.D. N.C. 1988).

<sup>62</sup> *Id.* at 1232.

## **2. LEASE PROVISIONS**

The lease should clearly identify those activities that are prohibited on the property and apportion liability for environmental concerns arising from authorized and unauthorized activities of the lessee. In addition to allocating liabilities, the building owner must consider provisions in the lease that will protect the owner from the unauthorized acts of the lessees.

The lessor may include a covenant in the lease that the lessee, its agents, and other persons present on the property, will operate in compliance with all applicable environmental laws. This covenant would be accompanied by an indemnification provision in case the lessee breaches the covenant. It is important to note that Superfund liability can arise independent of violation of any laws.<sup>63</sup> As a consequence, a covenant to comply within environmental laws may not be breached by the presence of on-site contamination triggering Superfund liabilities. Another useful covenant addresses notice of an environmental problem or litigation. This puts the building owner on immediate notice of a problem, allowing the owner to take appropriate action. Failure to provide notice also would be linked to an indemnification provision. Finally, the lessor should consider reserving an ongoing right to inspect the building. Such a provision would grant the lessor and its agents irrevocable license and authorization, upon reasonable notice, to enter and inspect the property, and to perform tests the lessor determines necessary to protect the property.

## **III. ASBESTOS**

Asbestos is commonly occurring material that building owners must be aware of because its presence may subject the owner to certain regulatory requirements as well as common law liabilities. Federal and state regulations governing asbestos, only apply to building owners engaged in renovation or demolition activities. Although there are few regulatory requirements, a building owner may be subject to common law tort actions or breach of contract actions. Building owners, in turn however, may have a cause of action against the asbestos manufacturer for certain damages.

### **A. BACKGROUND**

Before the late 1970's asbestos was used in a variety of building materials, especially insulation, fireproofing and soundproofing. Its physical properties, including high thermal and electrical resistivity and tensile strength, made it well suited for these purposes. The United States Environmental Protection Agency ("EPA") has estimated that asbestos is present in 20 percent of the public and commercial buildings in the United States.<sup>64</sup>

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<sup>63</sup> 42 U.S.C.A. § 9607.

<sup>64</sup> U.S. Environmental Protection Agency, "EPA Study of Asbestos-Containing Materials in Public Buildings: A Report to Congress," February, 1988 at 10 ("Report to Congress").

Asbestos-containing materials can be found in ceiling and floor tiles, wall board, duct work, pipe insulation, fireproofing textiles, and materials used in high heat areas. Asbestos is commonly used in boiler or furnace rooms as insulation for the boiler, furnace, and related piping, ceilings and walls.

Any material containing more than 1 percent asbestos is considered to be an asbestos-containing material and is regulated as such.<sup>65</sup> The danger with asbestos is due to inhalation, therefore applicable regulations apply to conditions which may disturb asbestos-containing materials thus creating dust that can be inhaled. The regulations refer to "friable" asbestos which means any material containing 1 percent or more asbestos that can be crumbled, pulverized, or reduced to a powder by hand pressure.<sup>66</sup>

## **B. REGULATORY RESPONSIBILITIES**

Federal and state requirements that address asbestos in commercial buildings relate to renovation, demolition and removal activities in buildings containing asbestos-containing materials. Owners of commercial buildings are not required to remove or encapsulate asbestos present in their buildings, but, due to liabilities that may arise under common law theories and financial liabilities associated with the presence of asbestos, an owner may choose to take affirmative action regarding asbestos. Owners of commercial buildings have only limited monitoring and notification responsibilities under current laws, but additional requirements are on the horizon.

Under federal regulations the owner of a building being demolished or renovated and the contractor doing the work are responsible for assuring that the work is in compliance with the regulatory requirements.<sup>67</sup> Under state law specific requirements currently apply only to the person doing the asbestos related work, however, proposed regulations would expand this to include the building owner.<sup>68</sup> Therefore, when entering into a contract for demolition or remodeling work, a building owner should assure that the contractor is familiar with the regulatory requirements regarding licensing, notification, emission controls, worker safety, and waste handling and disposal. These assurances should be made by contract. The contract should assign responsibility for notification and proper disposal to the contractor. The building owner, however, must assure that these requirements are followed because under state and federal law, both the owner and the contractor can be held liable for violation of these provisions, even though the building owner may have a cause of action against the contractor for breach of contract.

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<sup>65</sup> 40 C.F.R. § 61.141.

<sup>66</sup> 40 C.F.R. § 61.141.

<sup>67</sup> See 40 C.F.R. § 61.145.

<sup>68</sup> 25 T.A.C. § 289.141(a). See also 17 Tex. Reg. 3125, proposed 25 T.A.C. § 295.34(a).

## 1. Federal Requirements

The EPA and the Occupational Safety and Health Administration ("OSHA") have enacted regulations to prevent unnecessary exposure to asbestos in schools, public buildings and the workplace. The EPA has promulgated regulations under the Clean Air Act that apply to abatement activities in commercial buildings and under the Toxic Substances Control Act ("TSCA") that apply to schools. The regulations promulgated by OSHA regulate employee exposure in the workplace in industries generally and in the construction industry specifically.

### a. NESHAP

National Emission Standards for Hazardous Air Pollutants ("NESHAP"), promulgated under the Clean Air Act, impose standards for demolition and renovation activities in commercial buildings.<sup>69</sup> The NESHAP for asbestos applies to any "institutional, commercial, public, industrial, or residential building (containing 5 or more dwelling units)."<sup>70</sup> The "owner or operator of a demolition or renovation activity" is subject to notification requirements and procedures for controlling emissions of asbestos.<sup>71</sup> The "owner or operator of a demolition or renovation activity" includes any person who owns, leases, operates, controls or supervises the facility being demolished or renovated or the entity doing the work.<sup>72</sup>

Notification requirements depend on the type of work and the amount of asbestos-containing material involved. Before beginning demolition or renovation activities, EPA requires advance written notification as follows:

- a. At least 10 days before any demolition activity regardless of the amount of asbestos-containing material involved.
- b. At least 10 days before any renovation activity that would disturb asbestos-containing material involving at least 260 linear feet, 160 square feet of facility components, or 35 cubic feet of asbestos material if the length or area cannot be determined.
- c. At least 10 days before the end of the calendar year for planned renovation operation involving individual nonscheduled operations, if the combined

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<sup>69</sup> 40 C.F.R. Part 61, Subpart M.

<sup>70</sup> 40 C.F.R. § 61.141.

<sup>71</sup> 40 C.F.R. § 61.145.

<sup>72</sup> 40 C.F.R. § 61.141.

amount of asbestos-containing material to be disturbed during a calendar year is at least 260 linear feet, 160 square feet of facility components, or 35 cubic feet if asbestos material if the length or area cannot be determined.

- d. As early as possible before, but not later than the following day if the demolition is ordered by the state or local government or if the renovation is due to an emergency and involves 260 linear feet, 160 square feet of facility components, or 35 cubic feet if asbestos material if the length or area cannot be determined.<sup>73</sup>

The owner is required to notify EPA by telephone followed by written notice before the original start date if the start date specified in the original notification changes.<sup>74</sup> The notification must include specific information on the location and type of work to be done, the test methods used to determine the presence of asbestos-containing materials and the amount of material involved.<sup>75</sup> In addition, the notice must identify the owner of the facility, the asbestos contractor, the waste disposal site and the transporter to be used. The notification must contain a certification that at least one person trained according to EPA requirements will supervise the work.<sup>76</sup>

An owner that is subject to the notification requirements outlined above also must follow certain procedures for asbestos emission control.<sup>77</sup> These procedures vary depending on the type of material involved, the work being done, and the particular conditions of the site.<sup>78</sup> Before hiring an asbestos contractor or allowing facility personnel to do the work, the owner should assure that the supervising personnel are familiar with these requirements and that all of the requirements are followed.

Finally, the owner of a facility from which asbestos-containing material is removed must assure that the material is transported and disposed of in accordance with EPA regulations. The waste must be wet and sealed before transport in marked vehicles and disposed of at a site operated in accordance with the standards set forth in 40 C.F.R. § 61.154 or an EPA-approved site that converts asbestos materials into asbestos-free

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<sup>73</sup> See 40 C.F.R. § 61.145(a), (b)(1), and (b)(3).

<sup>74</sup> Id.

<sup>75</sup> Id.

<sup>76</sup> See 40 C.F.R. § 61.145(b)(4).

<sup>77</sup> See 40 C.F.R. § 61.15(c).

<sup>78</sup> Id.

materials.<sup>79</sup> All shipments of asbestos-containing wastes must be manifested and a copy retained for at least two years.

**b. AHERA**

The Asbestos Hazard Emergency Response Act ("AHERA") of 1986, 15 U.S.C. 2641 et seq., promulgated under TSCA, required the EPA to promulgate regulations to direct abatement of asbestos in school buildings; however, it only required a study of the extent of danger to human health posed by asbestos in public and commercial buildings. EPA's study was published in early 1988 and did not recommend laws or regulations relating to inspection or abatement of asbestos in public buildings.<sup>80</sup>

Regulations promulgated under AHERA regulate asbestos inspection and identification in all elementary and secondary, public and private schools.<sup>81</sup> These regulations require schools to inspect for the presence of asbestos-containing materials and notify parents, teachers and staff about the presence of such materials, assure that all custodial and maintenance staff are trained in accordance with EPA, state and OSHA regulations, and inform short-term workers of the location of asbestos-containing material if the workers may come in contact with those materials.<sup>82</sup> If friable asbestos is identified in the building, the school officials are required to select and implement appropriate response actions from those listed in 40 C.F.R. § 763.90. Finally, schools are required to implement an operations, maintenance and repair ("O&M") program whenever any friable asbestos material is present or assumed to be present in a building it controls.<sup>83</sup>

Although there has been a great deal of discussion in the industry and in Congress regarding asbestos exposure in public buildings and the workplace, EPA has not proposed any regulations requiring inspection, notification, or abatement activities in public buildings.<sup>84</sup> In July 1990, however, EPA published what is known as the "Green Book"

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<sup>79</sup> See 40 C.F.R. § 61.150.

<sup>80</sup> See U.S. Environmental Protection Agency, "EPA Study of Asbestos-Containing Materials in Public Buildings: A Report to Congress," (February, 1988).

<sup>81</sup> 40 C.F.R. Part 763, Subpart E.

<sup>82</sup> 40 C.F.R. § 763.84.

<sup>83</sup> 40 C.F.R. § 763.91.

<sup>84</sup> See Penny L. Parker, "Asbestos and PCBs: Dealing with On-Site Conditions," (October 31 and November 1, 1991) at 9, 10; Roy Lee Beller, "Asbestos in the Work Place: Effect on Landlord/Tenant Relations," (1990) at B9-B11.

suggesting that, in lieu of removal, building owners should implement a "management in place" or O&M program.<sup>85</sup>

### c. OSHA

OSHA has adopted regulations that regulate employee exposure to asbestos in the workplace for industry in general and the construction industry specifically.<sup>86</sup> It is important to note that OSHA regulations apply to employees and are the responsibility of the employer, not the building owner. If, however, a building owner directly hires maintenance employees, the building owner will be required to comply with OSHA regulations.

The OSHA rules governing construction activities apply only to private sector employees engaged in demolition, asbestos abatement, renovation, emergency clean-up and transportation and disposal. State and local employees, exempt from the OSHA standards, are governed by 40 C.F.R. § 763.120, which establishes standards similar to the OSHA standards. The rules are triggered when asbestos concentrations around construction sites exceed certain threshold levels.<sup>87</sup> The construction standard imposes special work practice and respirator requirements and a PEL of 0.1 fiber per cubic centimeter.<sup>88</sup>

The regulations applicable to industry in general apply to employees in buildings where asbestos products have been installed.<sup>89</sup> EPA, however, has never promulgated guidelines specific to office worker exposure and, therefore, monitoring under OSHA is rarely done unless friable asbestos problems are known to exist in a building. The general industry standard establishes a permissible exposure limit ("PEL") of 0.2 fibers per cubic centimeter, and imposes monitoring and notification requirements.

OSHA is currently involved in rulemaking that would affect the general industry standards for asbestos. OSHA has proposed reducing the permissible exposure limit for asbestos from 0.2 fibers per cubic centimeter of air to 0.1 fibers per cubic centimeter, expanding notification requirements for asbestos removal jobs, and refining exemptions from fiber control technology requirements.<sup>90</sup> OSHA is considering requiring inspection of

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<sup>85</sup> See EPA, "Managing Asbestos in Place: A Building Owners's Guide to Operations and Maintenance Programs for Asbestos-Containing Materials," July, 1990 (Publ. 20T-2003).

<sup>86</sup> 29 C.F.R. §§ 1910.1001 and 1926.56.

<sup>87</sup> 29 C.F.R. § 1926.58(b), (c), and (f).

<sup>88</sup> 29 C.F.R. § 1926.58.

<sup>89</sup> 51 Fed. Reg. 22677 (June 10, 1986).

<sup>90</sup> 19 Occupational Safety and Health Reporter ("OSHR") 293 (1989).

buildings for asbestos-containing materials as a means of protecting workers who might not otherwise be aware of the presence of asbestos. This proposal is based on recent studies that indicate that though building occupants in general are not at great risk for asbestos exposure, custodial and maintenance workers face a higher risk.<sup>91</sup>

## **2. Texas Regulations**

The state of Texas implements federal regulations concerning asbestos through the Texas Air Control Board ("TACB") and the Texas Department of Health ("TDH"). The TACB has been delegated authority to enforce the federal NESHAP standards and the TDH enforces the AHERA standards as they apply to schools. Texas has also established its own asbestos standards under the Texas Asbestos Health Protection Act.<sup>92</sup> In contrast to the federal standards, the Texas standards apply specifically to asbestos contractors as opposed to building owners and contractors.<sup>93</sup> The Texas regulations apply to building owners only in that the owner is required to hire a licensed contractor to do asbestos-related work and is responsible for disposal of the material.<sup>94</sup>

The Texas Asbestos Health Protection Act regulates the removal or encapsulation of asbestos in buildings open to the public.<sup>95</sup> The act and regulations require that all abatement or demolition contractors be licensed.<sup>96</sup> The licensing standards require that all employees be registered, and that the licensee be familiar with and adhere to all EPA and state standards regarding asbestos-related work.<sup>97</sup> The licensee is also required to complete training and keep complete records of each asbestos activity or operation engaged in.<sup>98</sup> The licensing and registration requirements, however, do not apply to activities involving resilient floor covering material provided any removal of such material is performed in accordance with work practices published by the resilient floor covering industry.<sup>99</sup> The licensed contractor is required to notify the TDH at least ten days before

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<sup>91</sup> 22 OSHR 140 (June 24, 1992).

<sup>92</sup> Tex. Rev. Civ. Stat. Ann. art 4477-3a (Vernon 1991).

<sup>93</sup> 25 T.A.C. § 289.141(a).

<sup>94</sup> 25 T.A.C. § 289.141.

<sup>95</sup> Tex. Rev. Civ. Stat. Ann. art. 4477-3a, § 2(11) (Vernon 19--); 25 T.A.C. § 289.141(b).

<sup>96</sup> Tex. Rev. Civ. Stat. Ann. art. 4477-3a (Vernon 1991); 25 T.A.C. § 289.143(a).

<sup>97</sup> 25 T.A.C. § 289.144.

<sup>98</sup> Id.

<sup>99</sup> Tex. Rev. Civ. Stat. Ann. art. 4477-3a, § 15A (Vernon 1991).

beginning abatement activities except in the case of emergencies when notification is required within 48 hours of beginning the work.<sup>100</sup>

On May 1, 1992, the TDH proposed revisions to the rules governing asbestos related work. The proposal adopts the federal NESHAP and OSHA regulations for the presence condition disturbance and disposal of asbestos-containing materials in the building including activities of lessees and others that affect asbestos.<sup>101</sup> The proposed regulations also would require the building owner to inform construction, maintenance, installation and repair workers of the presence and location of any asbestos-containing materials.<sup>102</sup> The building owners would be required to remove any asbestos-containing material that would be disturbed by such activities.<sup>103</sup> The proposal sets forth licensing requirements for various types of asbestos related work including abatement, air monitoring, O&M and transporting.<sup>104</sup> Finally, under the proposal, TDH may inspect facilities and require the building owner to perform an asbestos survey or institute an O&M program.<sup>105</sup>

### C. COMMON LAW LIABILITIES

Owners or former owners of commercial buildings containing asbestos have been the target of law suits filed by current owners, tenants, and employees. In addition to these possible legal liabilities, there also is financial liability associated with owning an asbestos-containing building which may cause a building owner to decide to remove asbestos-containing materials even though there is no requirement to do so.

To date, owners of commercial buildings have not been held liable for asbestos-related personal injury suits filed by tenants or employees of asbestos-containing buildings.<sup>106</sup> There are, however, a variety of theories under which tenants could seek damages from landlords because of the presence of asbestos-containing materials. These include contractual liability arising out of the implied warranty of suitability, the covenant of peaceful and quiet enjoyment, the duty to repair, the theory of constructive eviction and breach of warranty under the Texas Deceptive Trade Practices Act. Each of these theories

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<sup>100</sup> 25 T.A.C. § 289.147.

<sup>101</sup> Id. (proposed 25 T.A.C. §§ 295.33 and 295.34(a)).

<sup>102</sup> Id.

<sup>103</sup> Id.

<sup>104</sup> Id. (proposed 25 T.A.C. §§ 295.43 and 295.56).

<sup>105</sup> Id. (proposed 25 T.A.C. § 295.34(g) and (h))

<sup>106</sup> Beller, supra at B-13.

is discussed in Roy F. Beller's article, "Asbestos in the Workplace: Effect on Landlord/Tenant Relations," (1990) and will not be elaborated on in this paper.

Owners of commercial buildings may also face liability after they sell the building. Former owners of asbestos-contaminated buildings have been the target of law suits brought by current owners with different degrees of success. In California, the Ninth Circuit held that the former owner of an office tower, Metropolitan Life, had no duty to disclose its economic motivation in selling the asbestos-contaminated property because buyers were well aware that asbestos was present and did not rely on the advice of the seller.<sup>107</sup> In Colorado, however, a jury awarded \$6.75 million in compensatory damages and over \$2.4 million in punitive damages against a bank for failure to disclose the presence of asbestos in a building it sold to plaintiffs.<sup>108</sup>

A similar suit is proceeding in Austin where the current owner has sued the former owner and its realtor asking for \$40 million in damages.<sup>109</sup> After purchasing the building, the new owners discovered asbestos in various materials throughout the building and have accused the former owner and its realtor of fraud and negligence because they knew the building contained asbestos-containing material and failed to disclose this knowledge.. The owners claim that the presence of the asbestos has decreased the market value of the building and has inhibited the owners' ability to lease the building. The owners are suing for \$5 million in decreased market value, lost rents of \$10 million, abatement costs totaling \$12 million, \$3 million in increased interest and other finance costs, plus exemplary damages totaling \$10 million, and court costs for third party claims.<sup>110</sup>

Former owners have been held liable for the costs of asbestos abatement under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"). In 3550 Stevens Creek v. Barclays Bank of California, the Ninth Circuit Court of Appeals refused to grant recovery rights under CERCLA against a prior owner of property for asbestos removal costs.<sup>111</sup> A New Hampshire District court, however, has carved out a significant exception to this CERCLA exclusion. The court in CP Holdings Inc. v. Goldberg-Zoino & Associates Inc. held that the sale of a building with asbestos, with the

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<sup>107</sup> 3250 Wilshire Blvd. Building v. W.R. Grace & Co., 933 F.2d 1016 (9th Cir.)

<sup>108</sup> Bank Western Federal Savings Bank v. Western Office Partnerships, Ltd., No. 86-CV-13417, Dist. Ct., City of Denver.

<sup>109</sup> Jefferson Associations Ltd. and F.B. Goldman v. Prudential Ins. Co. of North America & John Brazier, No. 441712, Tex. Dist Ct., Travis Co.

<sup>110</sup> Id.

<sup>111</sup> 915 F.2d 1355 (9th Cir. 1990) (cert. denied May 13, 1991)

knowledge that it was to be demolished, constituted "arranging" for disposal and subjected the former owner to CERCLA liability.<sup>112</sup>

A building owner may have a cause of action against the asbestos manufacturer to recover costs of abatement or other damages suffered as a result of the presence of asbestos-containing material. In some states, building owner claims against the manufacturer of asbestos-containing material have been allowed as long as the injuries complained of are not purely economic loss for which the sole remedy is the Uniform Commercial Code.<sup>113</sup> The Wisconsin State Supreme Court has joined several other state courts in confirming that building owners may recover asbestos removal costs from manufacturers under tort theories, even though economic damage alone is alleged.<sup>114</sup>

#### D. REDUCING LIABILITY

Although there are few regulations applicable to building owners and the courts to date have been hesitant to impose liability on building owners, for financial and safety reasons many building owners are choosing voluntarily to remove asbestos from commercial buildings. EPA has never issued threshold exposure levels and there is medical evidence that there is no "safe" level of exposure; therefore, building owners may be subject to tort liability if a person were to be injured by exposure to asbestos in the building.<sup>115</sup> In addition to safety concerns, a building owner also faces financial concerns. Many commercial lenders refuse to loan funds on properties containing any asbestos-containing materials and the resale value of the building may be significantly affected by the presence of asbestos. In addition, large tenants often refuse to rent space that contains asbestos materials. A building owner should consider all of these factors in deciding whether to remove all of the asbestos from a commercial building.

If the owner chooses not to remove the material, the owner should seriously consider instituting an O&M program for the building as long as asbestos-containing materials are present. Such a program will help prevent the release of asbestos fibers into the building and will protect maintenance and custodial personnel from asbestos exposure, thus protecting the building owner from some liability. As stated earlier, proposed regulation in Texas would require such a program if the TDH noted a problem.

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<sup>112</sup> 769 F.2d 432 (D.N.H. 1991)

<sup>113</sup> See Security Homestead Assoc. v. W.R. Grace & Co., 743 F.Supp. 456 (E.D. La. 1990), T.H.S. Northstar Associates, Limited Partnership v. W.R. Grace & Co., 767 F.Supp. 969 (Minn. 1991).

<sup>114</sup> Northridge Co. v. W.R. Grace & Co., Wis. Sup. Ct., Nos. 90-1406, June 24, 1991, 19 Prod. Safety & Lab. Rprt. 788 (June 1991).

<sup>115</sup> See Levins, "Building Maintenance Workers and the 'Safe Asbestos' Lobby: A Hazardous Mix," Industrial Hygiene News 34 (November 1990).

## IV. PCBs

The federal Toxic Substances Control Act ("TSCA")<sup>116</sup> prohibits the manufacture processing, distribution in commerce or use of polychlorinated biphenyls commonly known as PCBs, other than in a totally enclosed manner, unless specifically exempted by regulation. The regulations promulgated under TSCA set forth marking and reporting requirements for items containing PCBs that are still in use.<sup>117</sup> This section will discuss places where PCBs are found, and the regulatory requirements affecting building owners with regard to PCBs.

### A. BACKGROUND

PCBs are regulated because the chemical and toxicological properties of PCBs are believed to pose significant risks to public health and the environment. PCBs may be contained in dielectric fluid -- either manufactured PCB fluid or contaminated mineral oil - in electrical equipment, heat transfer and hydraulic systems, and mining equipment manufactured from the 1930's through the late 1970's. PCB fluids were used because of their heat resistant qualities. PCB chemical mixtures range in consistency from heavy oil-like liquids to waxy solids.

The primary danger from PCBs affecting a commercial building owner is from fire where PCBs can be converted into dioxin. Dioxin has been characterized as the most toxic substance known to man. Exposure of electrical equipment in commercial buildings to fire or other excessive heat can convert PCBs to dioxin which are then released through the ventilation system resulting in the contamination of an entire building.

In 1982 San Francisco's One Market Plaza had a fire that included the transformer vault area of the building. The smoke from the vault was pulled into the buildings ventilation system contaminating the first seven floors of the building with PCBs and dioxin. Decontamination efforts were extensive including removal of much of the duct work, carpets, and furnishings. Total clean up costs were reported to be greater than \$20 million.<sup>118</sup> In addition clean up operations can take years, resulting in loss of use of the building and associated lost rents.

### B. REGULATORY RESPONSIBILITIES

TSCA and regulations promulgated pursuant to TSCA regulate the manufacture, use and disposal of PCBs and items containing PCBs. TSCA prohibits the manufacture of PCBs

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<sup>116</sup> 15 U.S.C.A. §§ 2601-2671.

<sup>117</sup> 40 C.F.R. Part 761.

<sup>118</sup> See Maskowitz, J. S., "Environmental Liability and Real Property Transactions: Law and Practice" 16-17 (1989); Parker, *supra*, at 4 & 5.

and the use of PCBs except in a "totally enclosed manner."<sup>119</sup> The use of PCBs and PCB items has been progressively restricted over a period of years and by October 1, 1993, all remaining PCB transformers in use in or near commercial buildings must be removed from service.<sup>120</sup>

The use and servicing of certain PCB items for the remainder of their useful lives are two of the activities that are expressly authorized under the federal regulations, provided certain conditions are satisfied. These conditions vary according to the type and size of the PCB item but can include: (1) identification and marking of the PCB items and, in some cases, marking of the areas in which the items are located; (2) registration of the item with the local fire department; (3) registration with the owner of the building and nearby buildings; (4) quarterly inspections; (5) maintenance of records regarding those inspections; and (6) compliance with requirements relating to the storage, removal, transportation, and disposal of PCB items.<sup>121</sup>

If items containing PCBs are removed from a building the owner is responsible for their disposal. The PCB disposal regulations are set forth in 40 C.F.R. section 761.60. In general, the disposal regulations are limited to PCBs and PCB items with concentrations of 50 parts per million ("ppm") and above.<sup>122</sup> Material with PCB levels below 50 ppm may be regulated if the original PCB material contained PCBs in a concentration above 50 ppm. PCBs generally must be disposed of in an incinerator that complies with standards set forth in 40 C.F.R. section 761.70 unless the material falls into one of five exceptions.<sup>123</sup> If the material falls into an exception alternate disposal methods may be available. These methods include chemical waste landfill, high efficiency boiler, a method approved by the EPA Regional Administrator, or an approved method of destruction equivalent to incineration.<sup>124</sup> In June 1991, EPA published an Advanced Notice for Proposed Rule Making regarding PCB disposal.<sup>125</sup> EPA is proposing amendment of the regulations for PCB disposal to address alternative methods of disposal, classes of PCB materials not originally considered, and requirements for existing classes of PCB materials.<sup>126</sup>

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<sup>119</sup> 40 C.F.R. § 761.20.

<sup>120</sup> 40 C.F.R. § 761.30(1)(iv)(D).

<sup>121</sup> See 40 C.F.R. Part 761.

<sup>122</sup> 40 C.F.R. § 761.60(a).

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> See 56 Fed. Reg. 26738 (June 10, 1991).

<sup>126</sup> *Id.*

### C. LIABILITIES

A building owner is exposed to the greatest risk of liability arising from PCBs under CERCLA. CERCLA does not cover PCBs that are wholly enclosed in finished products as these items fall under the consumer products exclusion.<sup>127</sup> However, once PCBs leak into the environment CERCLA applies. In fact, PCBs have been the subject of some of the most notorious CERCLA cleanups.<sup>128</sup> The owner of a building from which PCBs are removed and disposed of or otherwise allowed to enter the environment may be liable for all CERCLA cleanup costs, which can be significant.

### V. LEAD

Recently there has been a great deal of discussion regarding exposure to lead because recent studies indicate that lead may be toxic at much lower exposure levels than previously recognized.<sup>129</sup> Building occupants may be exposed to lead found in such things as brass and bronze plumbing fittings and fixtures, lead solder used to join pipes carrying drinking water, and lead in paints. EPA is considering regulations that will require the phase-out of these uses of lead.<sup>130</sup> There are few regulatory requirements applicable to building owners, but especially with all of the recent focus on lead toxicity a building owner may face liability under common law tort and contract theories.

EPA has recently promulgated new National Primary Drinking Water Regulations ("NPDWR") for lead.<sup>131</sup> The standards establish a maximum contaminant level goal ("MCLG") of 0 for lead.<sup>132</sup> An MCLG is not enforceable but is exactly what the name implies, a goal. The NPDWR for lead does not establish an enforceable concentration but instead sets forth a treatment technique and notification requirements. The treatment technique includes corrosion control treatment, source water treatment and lead service line replacement.<sup>133</sup>

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<sup>127</sup> See Vernon Village Inc. v. Gottier, 755 F.Supp. 142 (D.Conn. 1990).

<sup>128</sup> See United States v. Hardage, 750 F.Supp. 1460 (W.D. Okla. 1990); In re Acushnet River & New Bedford Harbor, 722 F.Supp. 893 (D. Mass 1989).

<sup>129</sup> See 56 Fed. Reg. 22096, 22097 (May 13, 1991) (Comprehensive Review of Lead in the Environment under TSCA).

<sup>130</sup> *Id.*

<sup>131</sup> 56 Fed. Reg. 26460 (June 7, 1991).

<sup>132</sup> 40 C.F.R. § 141.51.

<sup>133</sup> 40 C.F.R. Part 141 Subpart I.

These standards do not apply to a building owner unless the building owner qualifies as a community water system or a non-transient, non-community water system.<sup>134</sup> To qualify under these categories the building owner must supply water to fifteen connections or twenty-five residents for sixty days a year.<sup>135</sup> Even if the building owner falls within this definition the following exemptions may apply. A public water supplier is exempt from the regulations if it (1) only distributes and stores the water, and is not involved in collection and treatment, (2) obtains water from another public water supplier subject to the regulations, (3) does not sell the water and (4) is not a common carrier.<sup>136</sup>

The new NPDWRs establish action levels based on the results of samples taken at the consumer tap. For lead the action level is exceeded if the concentration of lead is more than ten percent of tap water samples is greater than 0.015 ppm. If this level is exceeded the system is required to implement source water treatment to decrease lead concentrations. All water systems are required to install and operate corrosion control treatment designed to alter the corrosive properties of the water placed in the distribution system. The goal of corrosion control treatment is to decrease the amount of lead that leaches into the water due to the presence of lead solder or lead containing materials in the water pipes that are part of the system and that are in individual buildings. Any system that exceeds the action level after source treatment and corrosion control is required to identify and replace lead service lines and implement certain public education requirements.<sup>137</sup>

## **VI. INDOOR AIR QUALITY**

### **A. BACKGROUND**

Indoor air quality has become the focus of research, litigation, proposed legislation, and a request for public comments and information by the Occupational Safety and Health Administration ("OSHA").<sup>138</sup> Indoor air quality problems have been associated with employee illnesses and chronic symptoms such as headaches, fatigue, eye irritation, respiratory irritations, nausea and muscle pain.<sup>139</sup> These general symptoms diminish or subside when the employee leaves the building, giving rise to the name "sick building syndrome." This syndrome has been linked to increases in absenteeism and decreases in

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<sup>134</sup> 40 C.F.R. § 141.80.

<sup>135</sup> 40 C.F.R. § 141.3.

<sup>136</sup> 40 C.F.R. § 141.3.

<sup>137</sup> 40 C.F.R. § 141.80.

<sup>138</sup> 56 Fed. Reg. 47892 (Sept. 20, 1991).

<sup>139</sup> Building Air Quality: A Guide for Building Owners and Facility Managers, United States National Institute for Occupational Safety and Health, (December 1991 - Cincinnati, Ohio).

worker productivity.<sup>140</sup> Building-related illnesses such as Legionnaire's disease and respiratory allergies, are traceable to a condition in the building such as mold infestation and microbial growth in cooling towers, air handling systems and water damaged furnishings.<sup>141</sup> These illnesses are rare, but present significant liability to the building owner when the maintenance of areas that breed these illnesses is within the owner's control. Currently environmental tobacco smoke as an indoor air quality issue dominates public debate, litigation and legislation. This paper will discuss environmental tobacco smoke only to the extent that it gives rise to building design and ventilation requirements.

Indoor air quality problems may come from several sources: equipment such as heating, ventilation, and air conditioning ("HVAC") systems and other office equipment such as printers and copiers; the presence of chemicals in furniture and building components including paint, carpet glue, solvents, and varnishes; pesticide application; excess microorganisms such as mold and mildew resulting from water leaks and water damaged carpets and furnishings; particulates from asbestos and asbestos containing materials; soil gases such as radon, or emissions from leaking underground storage tanks; and contaminants from the ambient air introduced into the office environment.<sup>142</sup> In the past ten years, the National Institute of Occupational Safety and Health ("NIOSH") has conducted approximately five hundred Health Hazard Evaluations for indoor air quality and has encountered problems from the following sources: inadequate ventilation (52%); contamination from inside the building (17%); contamination from outside the building (11%); microbiological contamination (5%); contamination from building materials and furnishings (3%) and unknown sources (12%).<sup>143</sup> Although these problems may arise in any building, those buildings constructed during the 1970's in the context of the energy crisis, may have more indoor air quality problems. During that time, buildings were constructed to reduce operational energy costs, and often were tightly sealed, equipped with ventilation systems minimizing the use of outdoor air, and constructed with lower ceilings that concentrate pollutants in a particular area.<sup>144</sup>

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<sup>140</sup> "Sick Days [associated with sick building syndrome] Taken by More Than One-Fourth of Office Workers in Four Cities, Survey Finds" *Toxics Law Reporter*, p. 15, June 3, 1992; "Eight Sick Building Symptoms Reported at Relatively High Rates in Campus Survey" *Occupational Safety & Health Reporter*, p. 63, June 10, 1992.

<sup>141</sup> 56 Fed. Reg. 47892 (Sept. 20, 1991); *see also* Krauss, G., "Unsolved Mysteries: What Building Owners and Property Managers should Know About Indoor Air Quality," 3 *Real Estate/Environmental Liability News*, No. 10, p. 11, March 13, 1992.

<sup>142</sup> Building Air Quality: A Guide for Building Owners and Facility Managers, United States National Institute for Occupational Safety and Health, (December 1991 - Cincinnati, Ohio).

<sup>143</sup> 56 Fed. Reg. 47892.

<sup>144</sup> *Id.*; *see also* Krauss, G., "Unsolved Mysteries: What Building Owners and Property Managers should Know About Indoor Air Quality," 3 *Real Estate/Environmental Liability News*, No. 10, p. 11, March 13, 1992.

Building owners face potential liability for indoor air quality problems by being sued under common law theories of negligence, breach of contract or express warranty, and negligent infliction of emotional distress.<sup>145</sup> The costs of damages to people and property is unquantifiable in these cases. The mere incidence of litigation places the building owner in an unfavorable light and could lead to additional claims from other parties. Presently building owners must comply with specific air quality regulations controlling individual contaminants such as asbestos and formaldehyde. Comprehensive regulation of indoor air quality, imposing requirements to modify or inspect and maintain ventilation systems, and to conduct air monitoring and other reporting activities, are on the horizon. These laws and regulations could create significant costs of compliance and present potential liability for non-compliance.

## B. COMMON LAW CAUSES OF ACTION

Building owners have been sued for damages allegedly related to poor indoor air quality, based on theories of negligence. In Dreesen v. W. W. Henry Co., et. al.,<sup>146</sup> plaintiffs, employees of a commercial tenant, sued the building owner for damages related to exposure to chemical substances when new carpeting was installed in their office. In response to employee complaints, the tenant had arranged for three different inspections of the air quality of the office, one after the new carpet had been removed due to complaints of odors and discomfort, and two after a replacement carpet had been laid in the office. The first study, conducted by an independent inspection organization, while there was no carpet in the office area, detected a slight amount of formaldehyde in the air. The following studies conducted by OSHA and the Kansas Department of Health respectively, found that there were no air contaminants in the office in excess of OSHA standards. The Kansas Department of Health reported however, that there was evidence of a ventilation problem in the building that could require modification of the HVAC system. The plaintiffs alleged several negligence theories: negligent construction of the building; negligent failure to maintain and repair the HVAC system; negligent failure to detect the defective ventilation; and negligent misrepresentation as to the building's safety. The plaintiff's abandoned all claims against the building owner except the claim for negligent failure to maintain the HVAC system. The building owner won summary judgment on this theory because the lease had assigned the duty to maintain the HVAC system to the tenant.<sup>147</sup>

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<sup>145</sup> Dreesen v. W.W. Henry Co., et. al., 1990 WL 198818 (D. Kan.) (unpublished) (negligent construction of the building and negligent failure to maintain the HVAC system); Wright v. McDonald's Corp., 1991 WL 258838 (E.D. Pa.) (unpublished) (failure to discover and remove carbon monoxide and nitrogen and negligent infliction of emotional distress.)

<sup>146</sup> 1990 WL 198818 (D. Kan.) (unpublished).

<sup>147</sup> *Id.* at \*8.

If an employee of a lessee brings a negligence cause of action against a building owner, relating to indoor air quality, the employee must show that the building owner breached a duty to the employee. In Texas, employees of tenants may be considered business invitees.<sup>148</sup> The employee must allege that the building owner knows or by exercise of reasonable care should discover the dangerous conditions, should expect that the employees will not discover or realize the dangerous condition and protect themselves from it, and that the building owner actually failed to exercise reasonable care to protect the employees.<sup>149</sup> The owner's breach of this duty must be the cause of the employee's injury. To the extent that the owner has control of the HVAC system, or is responsible for leaks or the installation of furnishings, there may be exposure to liability if these are cared for improperly.

Claims for breach of contract or an express warranty arise from lease provisions that discuss ventilation rates, temperature settings and maintenance obligations. In Texas, there is an implied warranty that commercial leased premises are suitable for the purpose for which they are leased. Davidow v. Inwood N. Prof. Group.<sup>150</sup> This warranty means that there are no latent defects in the leased property that are vital to the use of the premises for their intended commercial purpose, and that the facilities will remain in suitable condition. The lessee's obligation to pay rent is mutually dependant on the lessor's implied warranty of suitability.<sup>151</sup> Breach of this warranty can lead to withholding rent payments, damages for loss of use, relocation expenses, and attorney's fees. Furthermore, a finding that the building is unsuitable due to indoor air quality problems could give rise to potential liability in tort to individual tenants.

## C. REGULATORY LIABILITY

### 1. FEDERAL LEGISLATION

In 1991, the Indoor Air Quality Act<sup>152</sup> was introduced into both the House and the Senate. Previously such acts have been introduced and have not passed. Senate bill 455 was unanimously approved by the Senate in November of 1991. The House bill, HR 1066,

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<sup>148</sup> Boyer v. Scruggs, 806 S.W. 2d 941, 944 (Tex. App. - Corpus Christi 1991, no writ).

<sup>149</sup> *Id.* at 495.

<sup>150</sup> 747 S.W. 2d 373, 377 (Tex. 1988).

<sup>151</sup> *Id.*

<sup>152</sup> S. 455 and HR 1066, 102d Cong., 1st Sess. (1991)

however, was rejected by the House Science, Space & Technology Committee last year and was returned to the Environment Subcommittee.<sup>153</sup> The Act set forth the following goals:

1. Develop a comprehensive research and development program concerning the seriousness and extent of indoor air contamination, its human effects, and methods of reducing human exposure to contaminants;
2. Coordinate existing authorities to assure effective application of federal authority to reduce human exposure to indoor air contaminants;
3. Coordinate reports to congress of Indoor Air Quality and to provide for assessments of indoor air contaminants in specific buildings by NIOSH;
4. To provide support to state governments to demonstrate and develop indoor air quality management strategies, assessments and response programs; and
5. To make accessible, data, guidance, training, education, information and technical assistance on indoor air quality to the public and private sector.<sup>154</sup>

In addition to these goals, the Senate bill requires the EPA to develop a list of indoor air contaminants that may occur or are known to occur in indoor air at levels that reasonably may be expected to have an adverse affect on human health. At a minimum, this list must include: benzene, biological contaminants, carbon monoxide, formaldehyde, lead, methylene chloride, nitrogen oxide, particulate matter, asbestos, polycyclic aromatic hydrocarbons and radon.<sup>155</sup>

The House bill proposes ventilation standards for public or commercial buildings. For any public or commercial building permitted for construction or for significant renovation after the effective date of the regulations, the bill requires that, buildings have, maintain and operate an HVAC system designed to provide a minimum of 20 cubic feet per minute of outdoor air per occupant to all occupied space in the building, and a minimum of sixty cubic feet per minute of outdoor air per smoking occupant to rooms where smoking is permitted. Existing buildings would be required to comply with all applicable HVAC related building codes.<sup>156</sup>

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<sup>153</sup> "Indoor Air - House Bill Appears Doomed This Session," Environmental Policy Alert, Special Report, p. 6-7, February 5, 1992.

<sup>154</sup> Indoor Air Quality Act, sec. 3, SB 455, 102d Cong., 1st Sess. (1991)

<sup>155</sup> *Id.* section 7.

<sup>156</sup> Krauss, G., "Unsolved Mysteries" p. 10.

## 2. FEDERAL REGULATION

OSHA has solicited comments and information related to indoor air quality in occupational environments.<sup>157</sup> Specifically, OSHA requested information on the definition of and the health effects attributable to poor indoor air quality; ventilation systems performance; protocols for assessing indoor air quality; mitigation methods; building maintenance programs; and the potential content of regulations, if OSHA determines that regulatory action is appropriate and feasible to control health problems related to poor indoor air quality.<sup>158</sup> In addition, OSHA sought specific information on environmental tobacco smoke, radon and bioaerosols. The Agency received over 1,100 responses from industries, individuals and unions. The AFL-CIO and other affiliated unions requested that the agency promulgate a broad indoor air quality rule that would address ventilation standards, require written smoking policies and outline steps for rectifying indoor air complaints.<sup>159</sup> Certain industrial respondents recommended a "building systems approach"<sup>160</sup> focusing on the design operations and maintenance of building ventilation systems, rather than OSHA promulgation a separate set of rules for office buildings in addition to existing standards, i.e. permissible exposure limits for asbestos and formaldehyde.<sup>161</sup>

## 3. STATE LEGISLATION AND REGULATION

A few states have enacted statutes authorizing the development on non-binding guidelines and standards for indoor air quality and encouraging publicly owned buildings to take the lead in improving indoor air quality for new construction and renovation projects.<sup>162</sup> In Oregon, if the state agency responsible for indoor air quality finds it necessary to establish indoor air pollution standards, the state has identified a list of pollutants that must fall within that program. These include: particulate matter, aldehydes, radon, carbon monoxide, carbon dioxide, ozone and water vapor.<sup>163</sup>

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<sup>157</sup> 56 Fed. Reg. 47892.

<sup>158</sup> 56 Fed. Reg. 47892.

<sup>159</sup> "Nearly 1,200 Comments Submitted to OSHA Indoor Air Information Request" Occupational Safety & Health Reporter, p. 1517 (April 15, 1992).

<sup>160</sup> Id.

<sup>161</sup> Get cites for PELs. Asbestos 21 CFR § 1926.58?

<sup>162</sup> See Cal. Health & Safety Code Ann. art 9.5, § 426.10; Ore. Rev. Stat. § § 433.521 and 433.526; and Wash. Rev. Code Ann. § § 70.162.005 and 70.162.020.

<sup>163</sup> Ore. Rev. Stat. § 433.521.

The Washington Department of Labor and Industries has drafted a proposed comprehensive rule to control indoor air contaminants in non-industrial work environments. The draft established a "state occupational health standard" for indoor air quality in non-industrial work environments.<sup>164</sup> The rule sets forth the following requirements for building owners:

1. Provide documentation of the design, operation, and maintenance of the building HVAC system upon the request of the state.
2. Maintain and operate the HVAC system according to specific temperature, humidity, and ventilation requirements.
3. Designate an individual responsible for HVAC maintenance and cause the regular inspection, maintenance, and repair of the system.
4. Control specific air contaminants such as environmental tobacco smoke, vehicle exhausts, dust, biological air contaminants, cleaning and workplace chemicals, and pesticides.
5. Evaluate and investigate indoor air quality complaints, including detailed inspections of a building to identify the source of contamination.
6. Evaluate HVAC systems during remodeling projects and follow a specified work plan to avoid degradation of indoor air during remodeling. This includes advance notice to building employees of remodeling projects.<sup>165</sup>

The state is soliciting comments on this draft, which can include concerns about the economic effects of the regulation on small businesses.<sup>166</sup> This proposal is an indication of the type and extent of regulation that may develop on a state by state basis.

#### **D. PREVENTIVE MEASURES**

For detailed descriptions of preventive and maintenance activities as well as thorough recordkeeping, NIOSH has published a guide titled "Building Air Quality: A Guide for Building Owners and Facility Managers PB92-145374Y, December 1991." This documents suggests that the building owner develop an "Indoor Air Quality" profile of the building.

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<sup>164</sup> Indoor Air Quality for Non-Industrial Work Environments, Part L-1, revised draft proposal, July 10, 1992.

<sup>165</sup> *Id.*

<sup>166</sup> "Washington State to Propose First Comprehensive Law to Improve Indoor Air" 13 Inside E.P.A., Weekly Report, No. 16, p. 1, 7-8 (April 17, 1992).

Developing this profile involves three steps: (1) collecting and reviewing existing records; (2) conducting a walk through inspection of the building; and (3) collecting detailed information where necessary. When collecting and reviewing existing records the building owner should evaluate among other things, commissioning reports (when the building was first contracted), operating manuals regarding the HVAC system and other equipment, plans of remodeled areas and maintenance records. When conducting a walk thorough inspection of the building, information should be obtained about airflow patterns, including blocked airflow, storage and use of chemicals, dirty or unsanitary conditions, visible fungal growth, areas of high humidity and potential for soil gas entry. The collection of detailed information will focus on the HVAC system operation and maintenance, pollutant pathways and building occupancy.

The indoor air quality profile or an occupant's complaint may reveal an actual indoor air quality problem. To mitigate the problem the building owner should identify and remove or reduce the source. Improved ventilation may resolve the problem if the source cannot be removed. Finally, the building owner may consider air cleaning technologies. The building owner's strategy for reducing liability related to indoor air quality is not complete without a program of effective communication with occupants. Effective communication requires clarifying the responsibilities of building maintenance personnel and lessees and promptly responding to complaints and concerns of occupants.

## VII. RADON

Radon, a byproduct of decaying elemental radium in soil, escapes into the atmosphere as a vapor. In outdoor air, radon is diluted and presents minimal health risks, but in an enclosed space such as an office building, radon can accumulate and has been associated with increased risk of lung cancer. In fact, radon is presently considered the second leading cause of lung cancer in the country. Radon, like other indoor air contaminants, may give rise to toxic tort liability for building owners. Therefore, when conducting environmental audits and compliance audits of a building, an investigation for radon should be considered if the building is in a region that poses a risk of radon contamination. Radon is not a major concern in Texas. The Texas Bureau of Radiation Control has surveyed Texas and found the highest concentrations of radon in the Big Bend area. These concentrations were up to ten times less than concentrations in the northeastern portion of the United States.

Subchapter III of the Toxic Substances Control Act, addresses Indoor Radon Abatement.<sup>167</sup> These provisions were passed with the goal of reducing levels of radon in indoor air to that of the ambient outdoor air. To achieve this goal Congress authorized EPA to develop information on the health risks associated with various levels of radon, the cost and technological feasibility of reducing radon in new and existing buildings and the

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<sup>167</sup> 15 U.S.C.A. §§ 2661-2671.

levels of radon in outdoor air in various regions of the country.<sup>168</sup> Regarding radon in non-public buildings, these provisions charge the EPA with developing model constructions standards and techniques for controlling radon levels in new buildings.<sup>169</sup>

Senate Bill 792, introduced in the first session of Congress, reauthorizes the Indoor Radon Abatement Act of 1988, adding a specific provision charging EPA to study radon in the workplace.<sup>170</sup> The purpose of the study is to characterize the extent of radon contamination in work places, and in high-risk areas, undertake diagnostic and remedial efforts. The Reauthorization Act also provides for civil penalties and citizens suits, for violations of the Act. This Act passed the Senate without revisions and is presently under review by the House Energy and Commerce Committee. It is not expected that the Act will leave this Committee during this session because of the activity on the Reauthorization of the Resource Conservation and Recovery Act.

In its comprehensive request for information on indoor air issues, OSHA focuses on radon in addition to environmental tobacco smoke.<sup>171</sup> This suggests that radon may be subject to comprehensive indoor air regulation by OSHA.

## VIII. CONCLUSION

Environmental liability for building owners are unique because they arise primarily from on-site conditions and interaction with lessees and occupants. Ongoing preventative measures that enhance the building owner's knowledge of the facility, such as environmental audits, operations and maintenance programs, as well as well crafted lease provisions are the best strategy for minimizing and avoiding liability.

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<sup>168</sup> 15 U.S.C.A. § 2663.

<sup>169</sup> 15 U.S.C.A. § 2664.

<sup>170</sup> S.B. 792, 102d Congress, 1st Sess. (1991)

<sup>171</sup> Fed.Reg. 47892 (Sept. 20, 1991).



**APPLICABILITY AND SCOPE OF LOBBYIST  
REGISTRATION REQUIREMENTS  
UNDER THE NEW TEXAS ETHICS RULES**

**By**

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**APPLICABILITY AND SCOPE OF LOBBYIST  
REGISTRATION REQUIREMENTS  
UNDER THE NEW TEXAS ETHICS RULES**

**I. INTRODUCTION**

Senate Bill No. 1 ("S.B. 1"), which became fully effective on January 1, 1992, effectuated a sweeping overhaul of Texas' ethics laws and created a new state agency, the Texas Ethics Commission, to administer and enforce those laws. Specifically, S.B. 1:

- Enacted the Ethics Commission enabling statute (art. 6252-9d.1, Tex. Rev. Civ. Stat.)
- Amended the Lobby Control Act (Chap. 305, Tex. Gov't. Code)
- Amended the standards of conduct/financial disclosure law governing state officers and employees (art. 6252-9b, Tex. Rev. Civ. Stat.)
- Amended the official bribery/gift criminal statutes (§§ 36.01, 36.02, 36.07, 36.08 and 36.10, Tex. Penal Code)
- Amended the political funds law (Title 15, Tex. Elec. Code)
- Enacted restrictions on lodging and meal reimbursements with public funds (art. 6823b, Tex. Rev. Civ. Stat.)
- Amended the financial disclosure law governing county or district officers and county employees (Chap. 159, Tex. Local Gov't. Code)

Although all of the statutory changes wrote by S.B. 1 are quite significant, the one change that has proven to be a source of particular concern and confusion is S.B. 1's expansion of the scope of the Lobby Control Act to include those not engaged in "traditional" lobbying activities. Consequently, this paper focuses upon the extent to which private sector individuals and entities who do not engage in "traditional" lobbyist activities may nonetheless be required to register as lobbyists, by virtue of their interaction with members and employees of the executive and legislative branches of government. A brief history of Texas lobbyist registration law is provided, followed by a discussion of the requisite elements of, and finally, the exceptions to, the lobbyist registration test, and how each has been interpreted and/or applied by the Texas Ethics Commission through its rules, and advisory opinions.

## II. LEGISLATIVE HISTORY

Prior to 1957, Texas had no laws in place governing the registration of lobbyists. Since 1957, however, seven pieces of legislation affecting the regulation of lobbying and lobbyists in Texas have been passed. These are:

- 55th Legislature - Chapter 9 (1957)
- 63rd Legislature - Chapter 422 (1973)
- 64th Legislature - Chapter 550 (1975)
- 68th Legislature - Chapter 618 (1983)
- 69th Legislature - Chapter 479 (1985)
- 70th Legislature - Chapter 432 (1987)
- 72nd Legislature - Chapter 304 (1991)

Of these enactments, four are of particular significance: the 1957 legislation because it first established lobbyist regulation; the 1973 legislation because it first required detailed disclosure of lobbyist communications and of certain lobby expenditures; the 1983 "Lobbyists and Lobbying Regulation Act" because direct communication with state agencies regarding administrative processes was included in the law for the first time; and the 1991 enactment of S.B. 1, because it greatly increased the scope and applicability of lobby registration and reporting requirements, and because it represents the current state of the law governing lobbyist registration. Viewed together, these four enactments (cumulatively referred to hereafter as the "Lobby Control Act") evidence a trend of increasingly aggressive legislative response to public concerns over the influence and effect of lobby activity on state legislative and administrative processes.

Prior to the passage of S.B. 1 by the 72nd Legislature, the Lobby Control Act required those who communicated directly with members of the legislative or executive branch for the purpose of influencing legislation or administrative action to register as lobbyists, provided that they both expended money and received compensation or reimbursement in connection with such activity. Due to this dual expenditure/compensation requirement, the inclusion of administrative lobbying within the ambit of the Lobby Control Act prior to S.B. 1 was of little significance to the vast majority of the individuals and entities whose business activities required communication with members and employees of the executive and legislative branches. Although such individuals may have received compensation or reimbursement in some fashion for engaging in communications with executive and legislative branch personnel to influence administrative action or legislation, most did not engage in traditional legislative lobby activity, and hence, had little if any occasion to make the types of lobby expenditures necessary to satisfy the expenditure threshold of the pre-S.B. 1 lobbyist registration test.

With the enactment of S.B. 1, the dual "expenditure/compensation" requirement of the lobbyist registration test was converted to an "either/or" requirement, under which either

lobby expenditures made or compensation/reimbursement received for direct communication with members of the legislative or executive branch could trigger the obligation to register. This statutory change sent shockwaves throughout the state because the revised lobby registration test could be read to require registration by virtually anyone who interacted, even on an occasional basis, with executive and legislative personnel. Because the legislative intent underlying the change was not clearly discernable from the S.B. 1 legislative history, and a new state agency charged with administering and enforcing Texas ethics laws had been created which had no "track-history," considerable uncertainty existed as to how broadly or narrowly the lobbyist registration test would be applied, and exactly which types of communications with members of the executive and legislative branch would trigger registration. In recent months, however, the Texas Ethic Commission has adopted substantive rules and issued Ethics Advisory Opinions that to a large extent allay any fears that S.B.1 will be interpreted and administered in a fashion that will require registration by vast numbers of individuals and entities that do not engage in "traditional" lobby activities, as will be seen below.

### **III. THE LOBBYIST REGISTRATION TEST (§ 305.003(a), TEX. GOV'T CODE)**

Tex, Gov't Code § 305.003(a) requires a person to register as a lobbyist if he communicates directly with a member of the legislative or executive branch to influence legislation or administrative action, and for purposes of doing so does either of the following during a calendar quarter:

- makes total expenditures of an amount determined by Commission rule, but not less than \$200 (excluding personal expenses for travel, food, lodging, or membership dues) on reportable lobbying expenditures;<sup>1</sup> or
- receives compensation or reimbursement of more than an amount determined by Commission rule but not less than \$200 (excluding reimbursement for personal travel, food, lodging, or membership dues).

S.B. 1 charges the Commission with fixing the Expenditure and Compensation/Reimbursement thresholds in amounts that are reasonable, are in the public interest, and further the purposes of the reporting or registration law involved. (S.B. 1, § 1.11(c)). The amount currently fixed by Commission rule for both the Expenditure and Compensation/Reimbursement thresholds is "more than \$200 in a calendar quarter" (Rules 40.1 and 40.3(a)(2)).

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<sup>1</sup> Transportation, lodging, food, beverages, entertainment, gifts, awards, mementos, and expenditures made for the attendance of members of the legislative or executive branch at political fund-raisers or charity events (§ 305.006(b) Gov't Code).

The Commission is further required to adjust those threshold amounts upward annually to the nearest multiple of \$10 in accordance with a percentage increase for the previous year in the Consumer Price Index for Urban Consumers, as published by the Bureau of Labor Statistics of the United States Department of Labor (S.B. 1 § 1.11(d)). Thus, the current threshold amounts will be increased by some increment next January.

#### **IV. DEFINITION OF SPECIFIC ELEMENTS OF THE REGISTRATION TEST**

Many of the constituent elements of the lobbyist registration test are defined by statute (see § 305.002, Tex. Gov't Code). Those that are have generally been defined in very broad terms. Definitions of each element of the test, together with discussion of how each element has been or may be construed by the Commission, follows below. A thorough understanding of each element is essential, since only qualifying expenditures or compensation/reimbursement associated with communications that meet each constituent element of the test count toward the determination of whether registration is required.

##### **A. Definition of "Person"**

The statutory definition of "person" includes corporations, associations, firms, partnerships, committees, clubs, organizations and groups of persons who voluntarily act in concert (§ 305.002(8)).

NOTE: In Atty. Gen. Op. H-583 (1975), the test for whether a group was "voluntarily acting in concert", for purposes of the above definition, was found to be whether the action ... "has been planned, arranged, adjusted, agreed upon and settled between parties acting together in pursuance of some design or in accordance with some scheme." (Id. at 3).

The definition of "person" in § 305.002(8) of the Lobby Control Act clearly leaves no room for argument that a particular type of entity or group is exempt from the registration test on the basis that it falls outside of the definition of a "person".

##### **B. Definition of "Direct Communication"**

"Communicate directly" is statutorily defined as contact in person or by telephone, telegraph, or letter (§ 305.002(2)).

NOTE: Although this definition does not embrace all possible communications media, it is sufficiently comprehensive to cover the forms of communication that one would normally utilize to make direct contact with legislative or executive branch personnel.

Ethics Advisory Opinion No. 4, noting the broad statutory definition of "communicate directly", holds that the provision of free family passes to recreational facilities to executive or legislative branch personnel would constitute direct communication since, in order to transfer the passes, contact would have to be made in some way.

Communication through a third party, however, does not constitute direct communication. Tex. Gov't Code § 305.004(4) specifically exempts from registration any person whose only activity to influence legislation or administrative action is to compensate or reimburse a registered lobbyist to communicate directly on the person's behalf.

Ethics Advisory Opinion No. 43 holds that ... "A person who does not communicate with a member of the legislative or executive branch is not required to register, even if that person is compensated to perform work for someone else who communicates with members of the legislative or executive branch to influence legislation or administrative action."

**C. Definition of "Members of the Executive or Legislative Branch"**

The statutory definition of "member of the executive branch" includes an officer, officer-elect, candidate for, or employee of any state agency, department or office in the executive branch (§ 305.002(4)).

The statutory definition of "member of the legislative branch" includes a member, member-elect, candidate for, or officer of the legislature or of a legislative committee, or an employee of the legislature (§ 305.002(7)).

**D. Definition of "Influence"**

The phrase "to influence" as used in § 305.003 is not statutorily defined. In the absence of a statutory definition, terms are intended to have their ordinary meaning. Board of Ins. Comm'rs v. Guardian Life Ins. Co., 142 Tex. 630, 180 S.W.2d 906, 909 (1944).

NOTE: The Commission has made it quite clear that whether a particular communication is for the purpose of "influencing" administrative action is a question of fact. (See Ethics Advisory Opinion No. 5). Thus, caution should be used in relying upon an Ethics Advisory Opinion in concluding that a communication is not intended to "influence" legislation or administrative action in a specific factual circumstance. Although it is a defense to prosecution or the

imposition of a civil penalty that a person reasonably relied on an advisory opinion relating to a fact situation that is substantially similar to the fact situation in which the person is involved (S.B. 1, § 1.30(a)), it is not a defense to personal embarrassment.

In Ethics Advisory Opinion No. 4, the Commission broadly interpreted the "influence" requirement. In that opinion, the provision of free recreational passes to executive and legislative branch personnel by an association of owners of recreational facilities for the stated purposes of generating "goodwill," and in the hope that their use "will give legislators an insight into some of the problems and services which are dealt with by the industry," was deemed to be for the purpose of influencing legislation or administrative action, since "...Goodwill and legislative insight into industry problems are of value, of course, only because of the possibility that members of the executive branch or the legislature may take action in regard to the industry."

On the other hand, Commission Rules 40.5 and 40.7 provide that, for purposes of the compensation threshold, certain enumerated activities, some of which arguably could be viewed as occurring for the purpose of influencing legislation or administrative action, do not constitute activities to influence legislative or administrative action.

Given the present lack of certainty as to how broadly or narrowly the influence requirement will be interpreted in future advisory opinions, one is advised to assume that communications are for the purpose of "influencing" administrative or legislative action unless the communication falls within one of the statutory or Rule 40.5 or 40.7 exemptions discussed in detail later in this paper under Sections V. and VI.

**E. Definition of "Legislation or Administrative Action"**

"Legislation" includes any matter pending in either house of the Legislature, any matter that may be the subject of action by either house or by a legislative committee, and any matter pending in a constitutional convention or that may be the subject of action by a constitutional convention (§ 305.002(6)).

The statutory definition of "administrative action" includes rulemaking, licensing, or any other matter that may be the subject of action by a state agency, including the proposal, consideration, or approval of the matter (§ 305.002(1)).

NOTE: The Commission has adopted a rule which excludes from the definition of "administrative action" any actions which only affect the operations of the agency itself, such as the purchasing decisions of the state agency. (Rule 40.5(c)). This rule is consistent with a prior interpretation of "administrative action" in Lobby Law Opinion No. 3 (1984), which concluded that "administrative action" for purposes of the 1983 version of the Lobby Control Act does not include the purchase of computer-equipment software products and services, and maintenance services.

**F. Definition of "Expenditure"**

"Expenditure" is statutorily defined as a payment, distribution, loan, advance, reimbursement, deposit, or gift of money or anything of value, including a contract, promise, or agreement, whether or not legally enforceable, to make an expenditure. (§ 305.002(5) Tex. Gov't Code).

NOTE: To date, the Commission has made no attempt by rule to narrow this very broad definition, or to exclude particular times of expenditures from the calculation of the expenditures threshold that are not already excluded by statute, and no indication has been received that they intend to do so in the future. However, the Lobby Control Act specifically limits the types of expenditures that can trigger registration.

For purposes of the "expenditures" threshold, the following types of expenditures do not count (§ 305.003(a)(1), Tex. Gov't Code):

- A person's own travel, food or lodging expenses, or the person's own membership dues, that are incurred to engage in lobby activity.
- Any expenditure that does not fall into one of the following reporting categories (§ 305.006(b), Tex. Gov't Code, and Ethics Advisory Opinion No. 3):
  - 1) Transportation and lodging;
  - 2) food and beverages;
  - 3) entertainment;
  - 4) gifts, other than awards and mementos;
  - 5) awards and mementos; and
  - 6) expenditures made for the attendance of members of the legislative or executive branch at political fund-raisers or charity events.

Thus, for instance, money spent on a chart for a presentation before a state agency would not count toward the expenditures threshold (see State Ethics Advisory Opinion 1984-4).

**G. Definition of "Compensation"**

The term "Compensation" is statutorily defined to mean money, service, facility, or other thing of value or financial benefit that is received or is to be received in return for or in connection with services rendered or to be rendered (§ 305.002(3), Tex. Gov't Code).

For purposes of determining whether the compensation/reimbursement threshold has been triggered, do not count the following:

- Compensation or reimbursement for the person's own travel, food or lodging expenses, or the person's own membership dues (§ 305.003(a)(2), Tex. Gov't Code).
- Compensation or reimbursement for any activity that has been specifically exempted from the registration requirement by statute or by Commission Rules 40.5 or 40.7. These exempt activities are discussed in detail in the sections of this paper which follow.
- Any portion of compensation or reimbursement received that is non-lobby-related. Commission Rule 40.3(e) authorizes the allocation, on a reasonable basis, of any compensation or reimbursement that is received for a combination of lobby-related and non-lobby-related activities.

The following types of compensation or reimbursement must be counted for purposes of calculating the compensation threshold:

- Amounts received to prepare for any direct communication that has occurred (Rule 40.3(a)(2)(b)).

NOTE: "Preparation" is interpreted broadly by the Commission, and includes such activities as holding strategy sessions, reviewing and analyzing legislative or executive actions, conducting research, and advising the client on such matters (Rule 40.11(a)).

If preparation is undertaken, but no communication actually results, that preparation time is not counted (see Ethics Advisory Opinion No. 43).

- Prorated salary for time spent on lobby-related activity, even if no compensation or reimbursement is received for that activity other than salary (§ 305.003(b), Tex. Gov't Code).

## V. STATUTORY REGISTRATION EXEMPTIONS

Chapter 305 of the Tex. Gov't Code contains nine narrow exceptions to the registration requirement. The Lobby Control Act does not require a person to register where:

- The only communication by the person is as an attorney of record or pro se in a "docketed case" pending before a state agency, his appearance is a matter of public record through pleadings or other written documents, and he does not exceed the spending threshold for reportable lobbying expenses (§ 305.003(c)).

NOTE: This is a new statutory exemption not contained in prior versions of the Lobby Control Act. Rule 40.5(a) discussed in Section VI of this paper substantially expands upon the scope of this narrow exemption.

The meaning of the phrase "docketed case" is subject to debate. Does it include a "contested case" at an agency such as the Texas Water Commission, where docket numbers are not utilized?

- The person is a member of the judicial, legislative, or executive branch of state government or an officer or employee of a political subdivision of the state, and the spending threshold for reportable lobbying expenses is not exceeded (§ 305.002(b)).

NOTE: In prior versions of the Lobby Control Act members of the judicial, legislative or executive branch were entirely exempt from registration, but with the change from the dual "Expenditure/Compensation" test to the "either/or" test, this change in language works no substantive change.

- The person owns directly or indirectly, publishes, or is employed by a newspaper or other news medium that opposes or promotes legislation or

administrative action and the person does not otherwise engage in activities that would require registration (§ 305.004(1)).

- The person's only lobbying activity consists of compensating or reimbursing a registered lobbyist to act on his behalf (§ 305.004(4)).
- The person's only communication is an appearance before or testimony in a legislative or agency hearing and the person receives no special or extra compensation for the appearance other than actual expenses incurred in attending the hearing (§ 305.004(2)).

NOTE: The phrase "special or extra" compensation is not defined in the statute, giving rise to the as yet unanswered question of whether appearance or testimony in a legislative hearing or agency rulemaking hearing by an attorney or expert witness that is paid an hourly rate would fail to meet the "no special or extra compensation" requirement.

- The person's only activity is encouraging members, employees, or stockholders of the entity that compensates him to communicate with a member of the legislative or executive branch (§ 305.004(3)).
- The only activity is attending an event also attended by a member of the legislative or executive branch if a business entity, labor union, or association pays for the event (§ 305.004(5)).
- The compensation that would trigger registration is reimbursement for expenses and foregone wages to attend the event identified immediately above (§ 305.004(6)).
- The person is a lobbyist for a political party and his or her expenditures and compensation together do not exceed \$5,000 per year (§ 305.004(7)).

NOTE: This is a new exemption not previously contained in prior versions of the Lobby Control Act.

## **VI. EXEMPT ACTIVITIES UNDER THE COMMISSION'S RULES**

The Commission rules implementing and interpreting the Lobby Registration Act clarify and in some instances actually appear to expand the types of activities that do not trigger lobbyist registration. The exemptions contained in the Commission's rules, when read together with recent Ethics Advisory Opinions, evidence clear Commission intent to minimize the impact of the S.B. 1 registration test on individuals and entities who do not meet the Expenditures test, but who might arguably trigger the

Compensation/Reimbursement threshold by virtue of their communications with executive or legislative branch officers and personnel. None of the exceptions, however, apply for purposes of determining whether the Expenditures threshold has been exceeded. The net effect of the exceptions contained in the Commission's rules is to exempt from registration the vast majority of those who do not engage in what would generally be considered to be "traditional" lobby activity.

**A. The "Incidental Activity" Exemption**

A person is not required to register if the person's direct communications to influence legislation or administrative action constitute only an incidental portion of the activities and duties for which the person receives compensation (Rule 40.3(c)).

NOTE: Such communications constitute an incidental portion of one's activities and duties if no more than 5% of one's compensated time during a calendar quarter time is spent in direct communication and in preparing for such communication (Rule 40.3(d)). Assuming a 40-hour work week, this represents approximately three days per calendar quarter.

This exemption, which is predicated on the Commission's perception of S.B. 1 legislative intent, eliminates the need for most people who have only infrequent communications with legislative and executive branch personnel to register.

**B. Exemptions for Specific Activities**

Under Commission rules, the following activities do not constitute direct communication to influence legislation or administrative action for purposes of triggering the Compensation/Reimbursement threshold:

- Testimony or appearance in a public hearing or other communication made by the party, or a party's representative of record in a proceeding of an adjudicative nature of the type authorized by or subject to the Administrative Procedure and Texas Register Act (APTRA) Tex. Rev. Civ. Stat. Ann. art. 6252-13a (Vernon Supp. 1992) (Rule 40.5(a)).

NOTE: Given the language of this exemption, uncertainty initially existed as to whether an expert witness would qualify for this exemption. However, on June 4, 1992, the Commission issued Ethics Advisory Opinion No. 20, which holds that the

exemption applies to paid testimony by any person in a proceeding of an adjudicatory nature of the type authorized by or subject to APTRA.

This exemption does not appear to apply to paid appearances or testimony by an attorney or expert witnesses in an agency rulemaking proceeding. Such proceedings, although of a type authorized by APTRA, are not generally accepted as being "adjudicatory" in nature. Nor does the exemption purport to apply to legislative hearings.

This exception does apply to proceedings not subject to APTRA, if the proceeding is of a type authorized by APTRA, or if, for instance, agency rules require that the rule of evidence sets forth in APTRA apply (see Ethics Advisory Opinion No. 5).

- The mere preparation and submission of an application or other written document providing information required by law, including statute, rule, regulation, order, or subpoena (Rule 40.7(a)(1)).

NOTE: Ethics Advisory Opinion No. 14 confirms that the filing of a permit application with a regulatory agency falls within this exception. Similarly, Ethics Advisory Opinion No. 15 provides that the filing of an application and the provision of information in connection therewith does not require registration.

- Direct communication solely for the purpose of obtaining information if no attempt is made to influence the action of a member of the legislative or executive branch; examples include an inquiry as to when a particular matter has been set for hearing or the location of the hearing or as to what is an agency's official interpretation of a statutory provision (Rule 40.7(a)(2)).

NOTE: Ethics Advisory Opinion No. 5 reiterates that a straightforward request for information falls within this exemption.

- Providing merely clerical assistance in producing direct communication to influence legislation or administrative action, such as typing or hand-delivering a letter or other document (Rule 40.7(a)(3)).

NOTE: Ethics Advisory Opinion No. 16 reiterates that clerical assistance does not trigger registration.

- Appearing, submitting public written comments, or testifying at a hearing before a member of the legislative or executive branch in conjunction with official proceedings or rulemaking procedures if the person does not receive special or extra compensation for the preparation, appearance, submission, or testimony other than actual expenses incurred for the preparation, appearance, submission, or testimony (Rule 40.7(a)(4)).

NOTE: The phrase "special or extra" compensation has not been defined by the Commission, and a question remains as to whether this exemption would embrace attorneys or witnesses that are paid an hourly rate for their services. It does, however, clearly embrace in-house personnel.

- Direct communication to the legal representative of a state agency whether concerning litigation in which the agency is a party or concerning adjudicative proceedings of the agency (Rule 40.7(a)(5)).

NOTE: Ethics Advisory Opinion No. 5, issued on April 23, 1992, confirms that a lawyer who would not otherwise trigger the Compensation/Reimbursement threshold does not do so by representation of a taxpayer in litigation to which the Comptroller's Office is a party, and consequent communication about the matter with the Comptroller's legal representative.

- Direct communication to the appointing authority made by a person in his or her capacity as a member of an advisory committee or task force appointed by a member or an entity of the legislative or executive branch (Rule 40.7(a)(6)).
- The activities listed in Government Code, § 305.004 and § 305.003(c), whether or not such activities constitute the sole activities or the person to influence legislation or administrative action (Rule 40.7(a)(7)).

NOTE: These activities are set out in Section V of this paper.

- Direct communications for the purpose of compliance with existing laws, administrative rules, policies, and procedures, when there is no attempt to change or seek exceptions to such rules, policies, or procedures (Rule 40.7(a)(8)).

NOTE: In Ethics Advisory Opinion No. 14, the Commission held that this exception applies to negotiations with regulatory

agencies regarding permits so long as the negotiations are intended to show that the applicant can meet agency standards of general applicability. However, the exception does not apply if the negotiations are directed at changing agency standards or at seeking waiver of agency standards, unless the waiver sought was available to any entity that satisfied established standards.

In Ethics Advisory Opinion Nos. 15 and 16, the Commission again emphasized that this exception would apply to discussions or negotiations intended to persuade a member of the executive branch that an applicant did in fact meet agency standards of general applicability.

- Direct communications in connection with an audit, inspection, or government investigation to determine compliance with existing laws, regulations, and policies (Rule 40.7(a)(9)).

NOTE: Ethics Advisory Opinion No. 15 holds that this exemption embraces, in the context of a bank examination, responses to questions from bank examiners, discussions regarding loan quality, and the provision of information intended to persuade the agency should take certain action in regard to a bank charter application or notice of change in control.

- Direct communication involving a request to a person who is a member of the executive branch for a written opinion interpreting law, regulation, rule, policy, practice or procedure administered by the agency or office of which that person is a member (Rule 40.7(a)(10)).

NOTE: Ethics Advisory Opinion No. 5 provides that a lawyer who requests a written response from the Comptroller's Office in regard to a question about a client's tax status, and supports his position by citing case law, statutory law, and other law that is favorable to his legal argument would fall within this exemption.

- Direct communication to provide information in response to a specific request for the information from a member of the legislative or executive branch that are unsolicited or otherwise not a subterfuge from compliance with the requirements of these laws (Rule 40.7(a)(11)).

## VII. CONCLUSION

The Lobby Control Act, as amended by S.B. 1, is a matter to be taken quite seriously by those who have occasion in their business dealings to communicate with members of the legislative and executive branches regarding legislation and/or administrative action. To avoid the potential for civil and/or criminal penalties, it is incumbent upon each such entity or individual to maintain records of all activities that fall within the ambit of the lobbyist registration test, so that registration will be timely undertaken, if and when required. If in doubt as to whether a particular activity applies toward the Expenditures or Compensation/Reimbursement thresholds, always err on the side of caution and assume that it does, or alternatively, seek out expert advice.

Based upon the previous analysis of the requisite elements of the lobbyist registration test, the exceptions thereto contained in the statute and Commission rules, and the advisory opinions issued to date by this Commission, it should be apparent that the vast bulk of the activity undertaken by these individuals who interact regularly with legislative and executive branch personnel, but who do not have occasion to make reportable lobby-related expenditures, should fall within one or more of the current exemptions to the registration requirement. Those activities that do not, very well may not exceed 5% of one's compensated time per calendar quarter, in which case, registration is not necessary. Consequently, while increased awareness of the nature of one's interactions with legislative and executive branch personnel is essential, for most panic is unwarranted.

For purposes of assisting the reader in determining whether his or her activities may be such as to require registration, a registration checklist is appended to this paper, together with answers to commonly asked questions, selected Ethics Advisory Opinions relevant to registration issues, and a copy of the current version of Chapter 305 of the Texas Government Code governing the registration of lobbyists.

**CHECKLIST FOR DETERMINING WHETHER TO REGISTER**

CHECKLIST  
FOR DETERMINING WHETHER  
YOU MUST REGISTER AS A LOBBYIST

QUESTION	Yes	No
1. Do you have direct communications with (i) state legislators, (ii) state legislative staff members, (iii) statewide elected or appointed officials (except judges), or (iv) employees of state agencies?		
If <b>yes</b> , go to next question. If <b>no</b> , you do not have to register as a lobbyist.		
2. Are any of these communications for the purpose of attempting to influence legislative or administrative action, as opposed to merely soliciting or providing information?		
If <b>yes</b> , go to Question 3. If <b>no</b> , you do not have to register as a lobbyist.		
3. Do you spend more than \$200 in a calendar quarter (exclusive of your own expenses) on transportation, lodging, food, beverages, entertainment, gifts, awards, mementos or attendance at fundraisers to communicate directly with any of the individuals listed in Question 1 to influence legislation or administrative action?		
If <b>yes</b> , you are probably required to register as a lobbyist. Ask for clarification of the applicability of the registration requirement to your circumstance. If <b>no</b> , go to Question 4.		
4. Are you a member of the judicial, legislative, or executive branch of state government or an officer or employee of a political subdivision of the state?		
If <b>yes</b> , you do not have to register as a lobbyist. If <b>no</b> , go to Question 5.		
5. Do you spend 5% or more of your compensated time during a calendar quarter on (i) making the direct communications described in Question 2, and (ii) preparing for those communications, including such activities as holding strategy sessions, reviewing and analyzing legislative or executive actions, conducting research, drafting letters and memoranda, or advising a client on such matters?		
If <b>yes</b> , go to Question 6. If <b>no</b> , you do not have to register as a lobbyist.		

QUESTION		Yes	No
6.	Does any of the compensated time referenced in Question 5 involve any of the following? (Answer yes or no for each activity.)		
	• the mere preparation and/or submission of an application or other written document providing information required by law, statute, rule, regulation, or subpoena?		
	• communication for the <u>sole</u> purpose of obtaining information?		
	• providing merely clerical assistance in producing direct communication to influence legislation or administrative action?		
	• appearing, submitting public written comments, or testifying at a hearing before legislative or agency personnel, where you receive no special or extra compensation for doing so?		
	• communication with the legal representative of a state agency whether concerning litigation in which the agency is a party or concerning adjudicative proceedings of the agency?		
	• communication with the appointing authority as a member of an advisory committee or task force appointed by legislative or agency personnel?		
	• communication for the sole purpose of compliance with existing laws, rules, policies, or procedures, with no attempt made to change or seek an exception to them?		
	• communications with legislative or agency personnel in connection with an audit, inspection or government investigation to determine compliance with existing laws, regulations, or policies?		
	• making a request to legislative or agency personnel for a written opinion interpreting the law administered by the agency or office of which that person is a member?		

QUESTION	Yes	No
<ul style="list-style-type: none"> <li>• providing information in response to a specific request for the information from agency or legislative personnel that is unsolicited or otherwise not a subterfuge from compliance with the requirements of the ethics law?</li> </ul>		
<ul style="list-style-type: none"> <li>• testimony or appearance in a public hearing or other communication made as the party or the party's representative of record, or as a paid witness, in an adjudicative proceeding of the type authorized by or subject to APTRA?</li> </ul>		
<ul style="list-style-type: none"> <li>• communication in the capacity of an owner, publisher or employee of a newspaper, or any other regularly published periodical, a radio station, a television station, a wire service, or any other news medium that in the ordinary course of business disseminates, news, letters to the editors, editorial or other comment, or paid advertisements that directly or indirectly oppose or promote legislation or administrative action?</li> </ul>		
<ul style="list-style-type: none"> <li>• encouraging or soliciting members, employees, or stockholders of the entity that reimburses, employs, or retains you, to communicate directly with legislative or agency personnel to influence legislation or administrative action?</li> </ul>		
<ul style="list-style-type: none"> <li>• attendance at a meeting or entertainment event attended by agency or legislative personnel where the total cost of the meeting or entertainment event is paid by a business entity, union?</li> </ul>		
<ul style="list-style-type: none"> <li>• communication with legislative or agency personnel on behalf of a political party concerning legislation or administration, where your expenditures and compensation together do not exceed \$5,000 per year?</li> </ul>		
<p>If you answered <b>yes</b> to any of the activities listed in Question 6, go to Question 7. If <b>no</b>, you must register as a lobbyist.</p>		
<p>7. If you exclude all of the time you spent on the various activities for which you answered "yes" in Question 6, would your answer to Question 5 still be yes?</p>		
<p>If <b>yes</b>, you must register as a lobbyist. If <b>no</b>, you do not have to register as a lobbyist.</p>		

**SELECTED QUESTIONS AND ANSWERS  
REGARDING REGISTRATION**

SELECTED QUESTIONS AND ANSWERS  
PERTAINING TO REGISTRATION  
UNDER THE TEXAS NEW ETHICS RULES

APPLICABILITY OF LOBBYIST REGISTRATION REQUIREMENT

- Q. I PREPARE REPORTS FOR MY SUPERVISOR ON STATE REGULATIONS. HOWEVER, I NEVER TALK TO THE AGENCY MYSELF. AM I REQUIRED TO REGISTER AS A LOBBYIST?**
- A.** No. No matter how much time you spend on such activities, if you do not actually communicate with state employees yourself, you are not required to register as a lobbyist.
- Q. OCCASIONALLY I HAVE TO CALL A STATE AGENCY TO OBTAIN INFORMATION. AM I REQUIRED TO REGISTER AS A LOBBYIST?**
- A.** No. A communication which simply solicits information, or which is in connection with some other clerical or ministerial act and does not attempt to influence legislative or administrative action, does not meet the lobbyist registration test.
- Q. A PROVISION OF LAW REQUIRES OUR DEPARTMENT TO MAKE REPORTS OR PROVIDE INFORMATION TO STATE AGENCIES. I AM RESPONSIBLE FOR THIS DUTY. CAN THIS ACTIVITY TRIGGER THE REGISTRATION REQUIREMENT?**
- A.** No, so long as your communications are limited to simply making the required report and you do not attempt in those communications to influence administrative action, other than to demonstrate, for instance, compliance with the existing laws or agency rules and regulations.
- Q. ARE LAWYERS EXEMPT FROM THE LOBBYIST REGISTRATION LAW?**
- A.** Not necessarily. The only statutory exemption expressly for lawyers is an exemption for direct communications made while representing a party as the attorney of record in a docketed case before a state agency. Lawyers can, of course, avail themselves of any other exemptions that may apply in any given circumstance.
- Q. ARE PERSONS WHO HAVE CONTACT WITH STATE AGENCIES CONCERNING BUSINESS DONE BY THE STATE REQUIRED TO REGISTER AS LOBBYISTS?**
- A.** No, so long as such communications are in connection with activities that solely affect the internal operations of the agency itself, such as the purchasing decisions of the state agency.

- Q. OUR FACILITY IS SUBJECT TO INSPECTION BY A STATE AGENCY, AND/OR OUR RECORDS ARE SUBJECT TO STATE AUDIT. ARE ALL COMMUNICATIONS WITH STATE EMPLOYEES IN CONNECTION WITH THESE ACTIVITIES EXEMPT FROM THE NEW LOBBYING LAW?
- A. Not necessarily. However, in most instances such communications will be. See Rule 40.7(a)(8).
- Q. OCCASIONALLY, OUR DEPARTMENT SUBMITS PUBLIC WRITTEN COMMENTS ON PROPOSED RULES PROMULGATED BY A STATE AGENCY. ARE WE REQUIRED TO REGISTER AS LOBBYISTS?
- A. No. The submission of public written comments or public testimony in an official rulemaking procedure does not trigger the registration requirement, provided that no special or extra compensation is received for doing so.
- Q. DOES THE NEW LOBBYING LAW COVER CONTACTS WITH LOCAL GOVERNMENTS AND AGENCIES SUCH AS CITIES, COUNTIES, LOCAL TAX DISTRICTS, OR MUNICIPAL UTILITY DISTRICTS?
- A. No. Only the communications with the state legislative and executive branches are covered by the law. Communications with local governmental units, or with members of the judiciary, do not trigger registration under the Lobby Registration Act. Be aware, however, that some municipalities may regulate lobby activities on the local level.
- Q. AT MY EMPLOYER'S REQUEST, I AM A MEMBER OF A TRADE ASSOCIATION COMMITTEE WHICH LOBBIES STATE AGENCIES AND/OR THE STATE LEGISLATURE ON ISSUES AFFECTING THE TRADE ASSOCIATION AND ITS MEMBER COMPANIES. AM I REQUIRED TO REGISTER AS A LOBBYIST?
- A. Possibly. Lobby activities for a trade association should be aggregated with lobby activities conducted directly for your employer to determine if the 5% threshold is satisfied.
- Q. SEVERAL OF MY EMPLOYEES MAY HAVE TO REGISTER AS LOBBYISTS. CAN I DISTRIBUTE OUR WORK LOAD TO MINIMIZE THE REGISTRATION BURDEN? FOR EXAMPLE, CAN I DESIGNATE ONE OR TWO EMPLOYEES TO HAVE RESPONSIBILITY FOR ALL AGENCY COMMUNICATIONS?
- A. Yes. There is a provision on the lobbyist registration form for reporting "lobbyist assistants." These are people who work with a registered lobbyist, but who do not themselves engage in direct communication to influence legislative or administrative

action. The names of such people must be reported, but they are to required to file as lobbyists themselves or pay the registration fee. There is no problem with arranging work responsibilities in order to minimize the number of persons who have to register as lobbyists.

Q. IF I SPEND 3% OF MY COMPENSATED TIME PER CALENDAR QUARTER COMMUNICATING DIRECTLY WITH MEMBERS OF THE LEGISLATIVE OR EXECUTIVE BRANCH TO INFLUENCE LEGISLATION OR ADMINISTRATIVE ACTION, AND 3% OF MY TIME ASSISTING OTHERS IN UNRELATED COMMUNICATIONS, MUST I REGISTER?

A. No. To trigger registration, you must yourself engage in direct communication and preparation for that direct communication for more than 5% of your compensated time during a calendar quarter.

Q. IF I COMMUNICATE DIRECTLY FOR THE PURPOSE OF COMPLIANCE WITH EXISTING LAWS, RULES, POLICIES OR PROCEDURES, AND I MAKE NO ATTEMPT TO SEEK CHANGES OR EXCEPTIONS, BUT I DO ATTEMPT TO PERSUADE THE AGENCY OF THE CORRECTNESS OF MY INTERPRETATION OF THOSE RULES, POLICIES OR PROCEDURES, CAN THAT ACTIVITY TRIGGER THE REGISTRATION REQUIREMENT?

A. No. See Rule 40.7(a)(8) and Ethics Advisory Opinion Nos. 5, 14, 15 and 16.

Q. IN THE CONTEXT OF AN ADJUDICATIVE PROCEEDING, ARE ALL COMMUNICATIONS BY A PARTY OR ITS REPRESENTATIVE OF RECORD THAT RELATE TO THAT PROCEEDING EXEMPT COMMUNICATIONS, REGARDLESS OF WHETHER THE COMMUNICATIONS ARE A MATTER OF RECORD?

A. Most likely, yes. It appears that the Commission's intent in adopting the language of Rule 10.5(a) was to exempt not only communications of record, but communications not of record as well, so long as they are made by a party or its representative of record in an adjudicative proceeding of the kind authorized by APTRA.

Q. AS A CONSULTANT, I AM FREQUENTLY EMPLOYED TO NEGOTIATE PERMIT TERMS WITH REGULATORY AGENCIES. WILL THAT ACTIVITY TRIGGER THE REGISTRATION REQUIREMENT?

A. Probably not. The Rule 40.7(8) exemption applies to negotiations between consultants and agency staff about permits, as long as the negotiations are intended to show that the applicant does or can meet agency standards of general applicability, and are not directed at changing agency standards or at seeking

waivers, unless such a waiver was available to any entity that satisfied established standards. See Ethics Advisory Opinion No. 14.

**Q. IS A TESTIFYING EXPERT IN A CONTESTED CASE REQUIRED TO REGISTER?**

A. No, so long as the testimony is in a proceeding of an adjudicative nature, of the type authorized by or subject to APTRA.

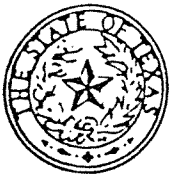
**Q. DOES A RULEMAKING PROCEEDING CONSTITUTE AN ADJUDICATIVE PROCEEDING OF THE KIND AUTHORIZED BY APTRA FOR PURPOSES OF THE EXEMPTION FOR COMMUNICATIONS MADE BY A PARTY OR ITS REPRESENTATIVE OF RECORD IN AN ADJUDICATIVE PROCEEDING?**

A. The better view is that it does not. An adjudicative proceeding is generally viewed as one that adheres to judicial or quasi-judicial process, and rulemaking proceedings adhere to legislative rather than judicial process. Furthermore, APTRA defines a contested case, as opposed to a rulemaking proceeding, as one where the agency's determination is made after an opportunity for adjudicative hearing.

**Q. DOES THE 5% COMPENSATION THRESHOLD APPLY TO A FULL YEAR'S CONTACT OR TO EACH CALENDAR QUARTER?**

A. The 5% threshold applies to each quarter (approximately 25 hours). If a person has no communication for two quarters, but his/her preparation for and communication in the third quarter takes 70 hours, he/she will have to register because only 25 hours would fall below the compensation threshold for that quarter.

**SELECTED ETHICS ADVISORY OPINIONS**



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## ETHICS ADVISORY OPINION NO. 3

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April 23, 1992

*Whether certain activities trigger lobby registration requirements. (AOR-2)*

The Texas Ethics Commission has been asked to consider whether a judge must register with the commission as a lobbyist in a number of different situations. The first step in determining whether an individual must register as a lobbyist is to determine whether he meets either a compensation or reimbursement threshold or an expenditure threshold. Gov't Code § 305.003. We note at the outset that although an individual's status as a judge would be relevant in determining whether he fit within an exception to the registration requirement, it is not a factor in determining whether he has met one of the thresholds. *See id.* § 305.003(b); Tex. Ethics Comm'n, 17 Tex. Reg. 357 (1992) (emergency rule to be codified at title 1, section 10.1, of the Texas Administrative Code). Thus, our discussion of the thresholds is not specific to someone who is a judge, but would apply to any individual.

In order to meet the expenditure threshold, a person must expend more than \$200 in a calendar quarter on lobby activities described in section 305.006(b) to communicate directly with one or more members of the legislative or executive branch. That communication must be to influence legislation or administrative action. The relevant expenditures are expenditures for

- (1) transportation and lodging;
- (2) food and beverages;
- (3) entertainment;
- (4) gifts, other than awards and mementos;
- (5) awards and mementos; and
- (6) expenditures made for the attendance of members of the legislative or executive branch at political fund-raisers or charity events.

*Id.* § 305.006. Excluded from the calculation are the potential registrant's own travel, food, lodging expenses, or membership dues. *Id.* § 305.003(a)(1). Because the request letter refers to no expenses other than the judge's own travel and lodging expenses, we assume that no other expenditures would be made in relation to communications with members of the executive or legislative branch. In such circumstances, a person does not meet the expenditure threshold under chapter 305 of the Government Code.<sup>1</sup>

In order to meet the compensation or reimbursement threshold a person must receive more than \$200 in compensation or reimbursement in a calendar quarter to communicate directly with one or more members of the legislative or executive branch, and that communication must be to influence legislation or administrative action. Gov't Code § 305.003(a); Tex. Ethics Comm'n, 17 Tex. Reg. 357-58 (1992) (emergency rules to be codified at title 1, sections 10.1 and 10.3, of the Texas Administrative Code).

In regard to the compensation threshold, the request letter states that the judge in question would receive no compensation but might receive reimbursement for travel and lodging. Reimbursement for travel or lodging is not to be considered in determining whether a potential registrant has reached the compensation threshold. Thus, the circumstances described do not require registration under the compensation threshold.

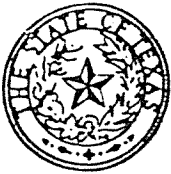
In summary, if a person meets neither the expenditure threshold nor the compensation threshold under chapter 305 of the Government Code, that person is not required to register as a lobbyist, regardless of the content of his communications with members of the the legislative or executive branch.

### SUMMARY

A person who communicates with a member of the executive or legislative branch of state government is not required to register as a lobbyist under chapter 305 of the Government Code if the person makes no expenditures other than expenditures for his own travel and lodging and receives no compensation other than reimbursement for his own travel and lodging.

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<sup>1</sup>Because the judge does not meet either registration threshold in the situation described, it is not necessary to consider the application of section 305.003(b), which states that the compensation threshold is not applicable to an officer of a political subdivision of the state, or the application of title 1, section 10.1, of the Texas Administrative Code (emergency rule published at 17 Tex. Reg. 357), which indicates that the expenditure threshold is not applicable to an officer or employee of a governmental entity.



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James Marston  
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## ETHICS ADVISORY OPINION NO. 4

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April 23, 1992

*Whether an association of owners of recreational facilities may provide free family passes to legislators and certain members of the executive branch.*  
(AOR-3)

The Texas Ethics Commission has been asked to consider whether the provisions of Senate Bill 1 would prohibit an association of owners of recreational facilities from providing legislators and certain members of the executive branch free family passes to recreational facilities. This request raises questions about the application of chapter 305 of the Government Code, which governs the registration of lobbyists.

Chapter 305 requires registration with the Ethics Commission by a person who meets either an expenditure or a compensation threshold in regard to direct communications with members of the legislative or executive branch "to influence legislation or administrative action." *Id.* § 305.003(a). "Person," for purposes of chapter 305, includes an association. *Id.* § 305.002(8). Thus, the registration requirement would be applicable to the association in question if the association, through its agents, communicates directly with one or more members of the legislative or executive branch; if the communication is for the purpose of influencing legislation or administrative action; and if the association meets either the compensation or expenditure threshold.

The first question is whether the association would communicate directly with the legislators and members of the executive branch by providing them free passes. To "communicate directly with" is defined broadly to mean "contact in person or by telephone, telegraph, or letter." *Id.* § 305.002(2). In order to transfer the passes, the association would have to make contact in some way with members of the legislative and executive branches. Thus, the transfer of the passes would be direct communication for purposes of chapter 305.

The second question is whether the direct communication would be for the purpose of influencing legislation or administrative action. "Administrative action" includes any matter that

*may be* the subject of action by a state agency. *Id.* § 305.002(1). "Legislation" includes any matter that *may be* the subject of action by either house of the legislature. *Id.* § 305.002(6). The requestor describes the purpose of the communication as follows: "Aside from goodwill, the main reason that the pass is given is the hope that its use will give Legislators an insight into some of the problems and services which are dealt with by the . . . industry." Goodwill and legislative insight into industry problems are of value, of course, only because of the possibility that members of the executive branch or the legislature may take action in regard to the industry. We must conclude, therefore, that the passes would be for the purpose of influencing legislation or administrative action.

The final issue in regard to the registration requirement is whether the association would meet the compensation or expenditure threshold. A person meets the expenditure threshold if he or she expends more than \$200 in a calendar quarter on lobbying activities. *Id.* § 305.003; *see also id.* § 305.006(b). An expenditure includes a gift of anything of value. *Id.* § 305.002(5). Although the requestor does not state the value<sup>1</sup> of a family pass, the total value of passes for each member of the legislature and some members of the executive branch would likely exceed \$200 in a calendar quarter. If so, the association would be required to register under chapter 305.

Lobbying expenditures must be reported in the following categories: (1) transportation and lodging; (2) food and beverages; (3) entertainment; (4) gifts, other than awards and mementos; (5) awards and mementos; and (6) expenditures made for the attendance of members of the legislative or executive branch at political fund-raisers or charity events. *Id.* § 305.006(b). A pass for use of a recreation facility would be reportable as "entertainment." The association would be required to list the pass as an expenditure for entertainment for the benefit of a member or members of the legislative branch. *Id.* If the value of the pass exceeded \$50, the association would have to report the name of the legislator or legislators benefitted, the value of the pass, and the date and place the pass was transferred. *Id.* § 305.0061(b). The legislature has not required that individual legislators disclose the transfer of gifts from lobbyists on their personal financial statements. *See* V.T.C.S art. 6252-9b, § 4(7)(C).

A registrant may make lobbying expenditures for entertainment only if the registrant is present at the entertainment event. *Id.* §§ 305.006(f), 305.024(a)(7). Thus, the association may provide the free passes to members of the legislative and executive branches only if the registrant is present each time a member of the legislative or executive branch uses the pass. *See also id.* § 305.024(a)(4) (an expenditure or series of expenditures for entertainment for any one member of the legislative or executive branch may not exceed \$500 in a calendar year).

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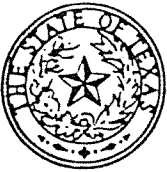
<sup>1</sup>The value of such a pass, for purposes of chapter 305, would be the cost to the general public of such a pass.

### SUMMARY

An association's transfer of a free pass for use of recreational facilities would be a direct communication for purposes of chapter 305 of the Government Code.

Such a transfer for the purpose of generating goodwill among members of the legislative and executive branches and for the purpose of giving legislators insight into industry problems would be to influence administrative or executive action.

The transfer of such a pass would be reportable as "entertainment." Thus, an association may provide such a pass only if the registrant is present each time the pass is used.



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## ETHICS ADVISORY OPINION NO. 5

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April 23, 1992

*Whether certain activities of a lawyer in representing a client before the Office of the Comptroller of Public Accounts and in tax refund suits against the state require the lawyer to register as a lobbyist. (AOR-6)*

The Texas Ethics Commission has been asked to consider if four specified activities require a lawyer to register under chapter 305 of the Government Code. In one situation, the lawyer represents a taxpayer in a hearing before the Office of the Comptroller of Public Accounts. In the second situation, the lawyer represents a taxpayer in a suit against the state for tax refunds. In the third situation, the lawyer makes inquiries of the Comptroller's Office on behalf of the lawyer's clients. In the fourth situation, the lawyer requests a written response and refers the Comptroller's Office to statutory, case law, and other law in support of a legal argument.

Under chapter 305 of the Government Code a person must register as a lobbyist if that person expends more than \$200 in a calendar quarter on certain activities to communicate directly with members of the legislative or executive branch to influence legislation or administrative action. See Gov't Code §§ 305.003(a)(1) (expenditure threshold), 305.006(b) (listing types of expenditures that must be reported). Registration is also required if a person receives compensation or reimbursement of more than \$200 in a calendar quarter, excluding reimbursement for certain types of expenses, to communicate directly with members of the legislative or executive branch to influence legislation or administrative action. *Id.* § 305.003(a)(2) (compensation threshold).

We assume the lawyer in each described situation has met the compensation or reimbursement registration threshold. This advisory opinion will focus on the lawyer's communications and activities in each situation to determine if they would require the lawyer to register with the commission as a lobbyist.

### Question No. 1 - Taxpayer Hearings

The first question is whether a lawyer who represents a taxpayer in a hearing before the Office of the Comptroller of Public Accounts on a redetermination petition or claim for refund must register as a lobbyist. The first issue is whether the representation would be a direct communication "with a member of the legislative or executive branch to influence legislation or administrative action." Gov't Code § 305.003(a)(2). The Office of the Comptroller of Public Accounts is part of the executive branch for purposes of chapter 305 of the Government Code. *Id.* § 305.002(4). Therefore, representation of a client before the Comptroller's Office is a direct communication with a member of the executive branch. Because the attorney is attempting to obtain a favorable result for the client, the attorney's representation of a taxpayer in a hearing before the Comptroller's Office for redetermination or refund is a communication to influence administrative action.

The next step is to determine whether the lawyer's representation is within an exception to the registration requirements.<sup>1</sup> Certain types of legal representation are excepted<sup>2</sup> under title 1, section 10.5(a), of the Texas Administrative Code, which provides:

For purposes of the compensation threshold of the Government Code, § 305.003(a)(2), direct communication to influence administrative action does not include testimony or appearance in a public hearing or other communication made by the party, or a party's representative of record, in a proceeding of an adjudicative nature of the type authorized by or subject to the Administrative Procedure and Texas Register Act (Texas Revised Civil Statutes, Article 6252-13a) (APTRA). Examples of these exclusions include appearances and communications by a representative of record in a *contested case* where the appearance is documented as part of the public record for that particular *contested case*, whether or not the proceeding is subject to APTRA.<sup>3</sup>

Tex. Ethics Comm'n, 17 Tex. Reg. 358 (1992) (emergency rule to be codified at title 1, section 10.5(a), of the Texas Administrative Code) (emphasis added). The comptroller has adopted rules providing that the rules of evidence set forth in APTRA apply to requests for

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<sup>1</sup>Government Code section 305.003(c) provides an exemption, under certain circumstances, for a person who is an attorney of record or pro se. This exemption would not apply in the situations being considered by this opinion.

<sup>2</sup>It would be possible for an attorney to be engaging in several different types of activities, each of which individually would fall under an exception, and not have to be registered as a lobbyist.

<sup>3</sup>An appearance could be documented even though the hearing is closed to the public.

redeterminations and refunds. 34 T.A.C. §§ 1.3, 1.4, 1.22. Thus, representation of a client in a request for refund or redetermination is a proceeding within the exception set out above.

In summary, a lawyer who is compensated or reimbursed more than \$200 in a calendar quarter for representing a taxpayer in a redetermination or refund hearing before the Office of the Comptroller of Public Accounts is not engaging in a type of activity that would require registration as a lobbyist.

### Question No. 2 - Suits against the State

The second question is whether a lawyer who represents a taxpayer in a tax refund suit is engaging in the type of activity or communication that would require registration as a lobbyist.

Since the lawyer in this situation is representing a client in a lawsuit that involves a state agency, the lawyer's communications with the legal representatives of that agency would likely be attempts to influence administrative action. Someone who meets the compensation or reimbursement threshold for lobby registration and who makes "direct communication to the legal representative of a state agency" about litigation to which the agency is a party is not engaged in activity that would require registration. Tex. Ethics Comm'n, 17 Tex. Reg. 358 (1992) (emergency rule to be codified at title 1, section 10.7(a)(5), of the Texas Administrative Code). This exception does not apply to someone who meets the expenditure threshold for lobby registration. *Id.* (emergency rule to be codified at title 1, section 10.7(a), of the Texas Administrative Code). Thus a lawyer who meets the compensation or reimbursement threshold representing a taxpayer in litigation to which the Comptroller's Office is a party can communicate about the litigation to the legal representative of the Comptroller's Office without being required to register as a lobbyist.

### Question No. 3 - Inquiries

The third question is whether a lawyer who contacts the Comptroller's Office to make inquiries on behalf of a client is engaging in the type of activity or communication that would require registration as a lobbyist. The issue is whether contacting the Comptroller's Office to make inquiries on behalf of a client is direct communication with a member of the executive branch to influence administrative action. Gov't Code § 305.003(a)(2).

Since the Comptroller's Office is part of the executive branch, inquiries directed to that office would be direct communication with a member of the executive branch. A straightforward request for information, such as the attorney's request on behalf of his client for the agency's official interpretation of a statute, does not, however, trigger the registration requirement since it is not communication to influence administrative action. Tex. Ethics Comm'n, 17 Tex. Reg. 358 (1992) (emergency rule to be codified at title 1, section 10.7(a)(2),

of the Texas Administrative Code). Again, this rule is applicable only to those who meet the compensation or reimbursement threshold for registration. It is not applicable to those who would be required to register because they had met the expenditure requirements. *Id.* (emergency rule to be codified at title 1, section 10.7(a), of the Texas Administrative Code). The lawyer would have to register as a lobbyist if he is communicating to influence administrative action and otherwise meets the requirements of Government Code section 305.003. Whether a particular communication is to influence administrative action is a question of fact.

#### Question No. 4 - Supporting a Legal Position

In the fourth situation, the lawyer requests a written response from the Comptroller's Office in regard to a question about a client's tax status. The lawyer supports his position by citing case law, statutory law, and other law that is favorable to his legal argument. This communication would be a request for a written opinion interpreting the law as it applies to the lawyer's client, with the lawyer directing the Comptroller's Office to take note of law that could be applicable to the taxpayer's situation. The communication would be exempt activity under title 1, section 10.7(a)(10), of the Texas Administrative Code. Tex. Ethics Comm'n, 17 Tex. Reg. 358 (1992) (emergency rule).

#### SUMMARY

A lawyer who has met the compensation or reimbursement threshold and who represents a taxpayer in a hearing before the Office of the Comptroller of Public Accounts for redetermination or refund is not engaging in an activity or communication that would require the lawyer to register as a lobbyist.

A lawyer who has met the compensation or reimbursement threshold and who communicates with the legal representative of a state agency concerning litigation to which the agency is a party is not engaging in activity or communication that requires registration as a lobbyist.

A lawyer who has met the compensation or reimbursement threshold and who makes a request for information is not engaging in activity or communication that would require the lawyer to register.

A lawyer who has met the compensation or reimbursement threshold and who requests a written opinion from the agency, which cites statutory and other law in support of a particular

viewpoint, is not thereby engaging in activity or communication that would require the lawyer to register.



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## ETHICS ADVISORY OPINION NO. 14

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June 4, 1992

*Applicability of the lobby statute to negotiations between consultants and regulatory agencies in regard to permits. (AOR-31)*

The Texas Ethics Commission has been asked about the application of chapter 305 of the Government Code to certain consultants. The consultants in question work with businesses to help them obtain permits from agencies such as the Air Control Board, the Water Commission, and the Department of Health. The consultants' activities include: (1) filing applications for permits, (2) negotiating about the terms of permits, (3) negotiating about the manner in which to abate a permit violation, and (4) discussing the best available technology for a certain operation.

Under chapter 305 a person is required to register with the Ethics Commission if he receives more than \$200 in compensation to communicate directly with members of the executive branch of state government to influence administrative action. Gov't Code § 305.003(a)(2). See generally Ethics Advisory Opinion No. 3 (1992) (regarding registration as a lobbyist). The commission has adopted rules providing, for purposes of the compensation threshold, that certain activities are not communications to influence legislation or administrative action and are not required to be reported on registration forms or activity reports. Tex. Ethics Comm'n, 17 Tex. Reg. 358 (emergency rule to be codified at title 1, section 10.7, of the Texas Administrative Code).<sup>1</sup> One such activity is "the mere preparation and submission of an application or other written document providing information required by law, including statute, rule, regulation, order, or subpoena." *Id.* (rule 10.7(a)(1)). Thus the filing of an application for a permit would

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<sup>1</sup>The rules of the Ethics Commission that were proposed for codification at chapter 10 of title 1 of the Texas Administrative Code actually should have been proposed for codification at chapter 40 of that title. For purposes of this opinion, we have cited the rules as published.

not require registration under chapter 305.

Another type of excepted activity is "direct communications for the purpose of compliance with existing laws, administrative rules, policies, and procedures, when there is no attempt to change or seek exceptions to such rules, policies, or procedures." *Id.* (rule 10.7(a)(8)). This exception would apply to negotiations about permits as long as the negotiations were intended to show that the person or entity seeking the permit does or can meet agency standards of general applicability. If the negotiations are directed at changing agency standards or at seeking waivers of agency standards,<sup>2</sup> the exception would not apply. Whether any particular negotiation or discussion would exceed the scope of the exception set out in section 10.7(a)(8) of the commission's rules is a fact question to be determined on a case-by-case basis.<sup>3</sup>

The requestor has also asked about the application of chapter 305 to a compensated consultant who negotiates with the Workers' Compensation Commission for approval of an employer's safety program. The same standard would be applicable here. As long as the negotiations were about whether the program satisfied existing standards of general applicability, the negotiation would be within the exception set out in section 10.7(a)(8) of the rules.

### SUMMARY

Applying for a permit with a regulatory agency is excepted from the application of the lobby statute, chapter 305 of the Government Code. Negotiations with regulatory agencies in regard to permits are excepted from the application of the lobby statute as long as the negotiations are in regard to whether an applicant does in fact meet existing agency standards of general application.

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<sup>2</sup>The registration and reporting requirements of the lobby statute would not apply if an entity sought a waiver that was available to any entity that satisfied established requirements.

<sup>3</sup>The registration and reporting requirements of the lobby statute would apply to any *expenditures*, as described in section 305.006(b), for the benefit of members of the executive branch made in connection with such activity.



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## ETHICS ADVISORY OPINION NO. 15

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June 4, 1992

*Application of chapter 305 of the Government Code to certain communications between industry regulators and banking officers or employees. (AOR-19)*

The Texas Ethics Commission has been asked to respond to several questions about the application of chapter 305 of the Government Code to bank officers and employees. The first question is whether a bank officer or employee must register as a lobbyist under chapter 305 if he responds to questions from bank examiners and engages in discussions regarding loan quality. The second question is whether a bank officer or employee would be engaging in lobbying activity if he submitted to the Banking Department of Texas a charter application or a notice of change in control and provided information intended to persuade the agency that the agency should take certain action in regard to the application or notice.

Under chapter 305 a person is required to register with the Ethics Commission if he receives more than \$200 in compensation to communicate directly with members of the executive branch of state government to influence administrative action. Gov't Code § 305.003(a)(2). *See generally* Ethics Advisory Opinion No. 3 (1992) (regarding registration as a lobbyist). This commission has adopted rules providing, for purposes of the compensation threshold, that certain activities are not communications to influence legislation or administrative action and are not required to be reported on registration forms or activity reports. Tex. Ethics Comm'n, 17 Tex. Reg. 358 (emergency rule to be codified at title 1, section 10.7, of the Texas Administrative Code).<sup>1</sup> One such activity is "the mere preparation and submission of an application or other written document providing information required by law, including statute, rule, regulation,

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<sup>1</sup>The rules of the Ethics Commission that were proposed for codification at chapter 10 of title 1 of the Texas Administrative Code actually should have been proposed for codification at chapter 40 of that title. For purposes of this opinion, we have cited to the rules as published.

order, or subpoena." *Id.* (rule 10.7(a)(1)).<sup>2</sup> Therefore, the filing of an application and the provision of information does not require registration with the Ethics Commission and does not have to be reported to the Ethics Commission.

Another type of excepted activity is "direct communications for the purpose of compliance with existing laws, administrative rules, policies, and procedures, when there is no attempt to change or seek exceptions to such rules, policies, or procedures." *Id.* (rule 10.7(a)(8)). There is a similar exception for "direct communications in connection with an audit, inspection, or government investigation to determine compliance with existing laws, regulations, and policies." *Id.* (rule 10.7(a)(9)). These exceptions apply to discussions and negotiations about loans or applications as long as the negotiations are intended to show that a bank does or can meet agency standards of general applicability. If the negotiations are directed at changing agency standards or at seeking waivers of agency standards,<sup>3</sup> the exceptions set out in section 10.7 of the commission's rules do not apply. *See generally* Ethics Advisory Opinion No. 14 (1992) (considering application of lobby statute to negotiations about permits issued by regulatory agency). Whether any particular negotiation or discussion would exceed the scope of the exception set out in section 10.7(a)(8) of the rules is a fact question to be determined on a case-by-case basis.

### SUMMARY

The registration and reporting requirements of chapter 305 of the Government Code are not applicable, in the context of a bank examination, to responses to questions from bank examiners and discussions regarding loan quality. Nor are those requirements applicable to the submission of a charter application to the Banking Department of Texas or the submission of a notice of change in control. Further, those requirements do not apply to the provision of information intended to persuade the agency that the agency should take certain action in regard to the application or notice, as long as the information is intended to show compliance with standards of general applicability.

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<sup>2</sup>The registration and reporting requirements of the lobby statute would apply to any *expenditures*, as described in section 305.006(b), for the benefit of members of the executive branch made in connection with such activity.

<sup>3</sup>The registration and reporting requirements of the lobby statute would not apply if an entity sought a waiver that was available to any entity that satisfied established requirements.



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## ETHICS ADVISORY OPINION NO. 16

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June 4, 1992

*Whether certain activities relating to the filing of a trademark application would be considered lobbying. (AOR-14)*

The Texas Ethics Commission has been asked to consider whether a law firm's activities in regard to the filing of a trademark application with the Secretary of State's Office would be within the scope of chapter 305 of the Government Code, which regulates lobby activity. The requestor first notes that no individual lawyer, paralegal, or secretary associated with the firm spends more than five percent of his or her time on work involving state trademark applications. The commission has adopted the following rule in this regard:

For purposes of [the compensation threshold of the lobby statute and commission rules] a person is not required to register if direct communication to influence legislation or administrative action constitutes only an incidental portion of the activities and duties for which the person receives compensation.

Tex. Ethics Comm'n, 17 Tex. Reg. 358 (1992) (emergency rule to be codified at title 1, section 10.3(c), of the Texas Administrative Code).<sup>1</sup> The commission has also adopted a rule stating that "direct communication" constitutes an "incidental" portion of one's activities and duties if "no more than 5.0% of one's compensated time during a calendar quarter constitutes time spent in direct communication and in preparing for such communication." *Id.* (rule 10.3(d)). It is important to bear in mind, however, that a calculation under this provision would have to include any compensated time for any type of lobby activity by an individual, not just lobby activity in regard to a particular type of issue.

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<sup>1</sup>The rules of the Ethics Commission that were proposed for codification at chapter 10 of title 1 of the Texas Administrative Code actually should have been proposed for codification at chapter 40 of that title. For purposes of this opinion, we have cited to the rules as published.

The requestor also refers to the work of clerical staff. In this regard we note that the commission has adopted a rule excepting from the registration and reporting requirements of the lobby statute the provision of "merely clerical assistance in producing direct communication to influence legislation or administrative action, such as typing or hand-delivering a letter or other document." *Id.* (rule 10.7(a)(3)).

In regard to the filing of a trademark application, the requestor states that the secretary of state sometimes rejects an application on the basis that the trademark is "confusingly similar" to an already registered trademark.<sup>2</sup> A lawyer may want to discuss with an employee of the Secretary of State's Office the specific basis for the rejection. As indicated above, this commission has adopted rules excepting certain types of communication from the registration and reporting requirements of the lobby statute. *Id.* (rule 10.7). One excepted activity is "direct communications for the purpose of compliance with existing laws, administrative rules, policies, and procedures, when there is no attempt to change or seek exceptions to such rules, policies, or procedures." *Id.* (rule 10.7(a)(8)). This exception would apply to discussions or negotiations intended to persuade a member of the executive branch that an applicant does in fact meet agency standards of general applicability. *See generally* Ethics Advisory Opinions Nos. 15, 14 (1992). The secretary of state is directed by statute to reject an application for registration of a trademark that is likely to cause confusion with an already registered trademark. Bus & Com. Code § 16.08(a)(6). A discussion about whether a proposed trademark is in fact confusingly similar to an existing trademark would not be an attempt to change or seek exceptions to a rule.<sup>3</sup> Rather, it would be a discussion about whether an applicant did in fact meet a statutory standard. Such a discussion would not, by itself, be activity covered by the lobby statute.

### SUMMARY

A person is not required to register under chapter 305 of the Government Code if direct communication and preparation to influence administrative action constitute no more than five percent of the person's compensated time during a calendar quarter. The registration and reporting requirements of chapter 305 do not apply to the provision of "merely clerical assistance in producing direct communication" to influence administrative action. The registration and reporting requirements of chapter 305 do not apply to a discussion between a lawyer and a member of the executive branch about whether a proposed trademark was in fact confusingly similar to an already existing trademark.

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<sup>2</sup>A mark is not registrable if it "is likely to cause confusion or mistake, or to deceive, because when applied to the applicant's goods or services, it resembles another person's unabandoned mark registered in this state." Bus. & Com. Code § 16.08(a)(6).

<sup>3</sup>The registration and reporting requirements of the lobby statute would apply to any *expenditures*, as described in section 305.006(b), for the benefit of members of the executive branch made in connection with such activity.





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## ETHICS ADVISORY OPINION NO. 20

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June 4, 1992

*Whether an expert witness who is paid to testify during a contested, public hearing before an administrative agency is required to register as a lobbyist under chapter 305 of the Government Code. (AOR-18)*

The Texas Ethics Commission has been asked whether an expert witness who is paid to testify during a contested, public hearing before an administrative agency is required to register as a lobbyist under chapter 305 of the Government Code. Under chapter 305 a person is required to register with the Ethics Commission if he receives more than \$200 in compensation to communicate directly with members of the executive branch of state government to influence administrative action. Gov't Code § 305.003(a)(2). Testimony before an administrative agency acting in an adjudicative capacity is communication with members of the executive branch to influence administrative action. This commission has, however, adopted an emergency rule under chapter 305 that provides in part as follows:

For purposes of the compensation threshold of the Government Code, §305.003(a)(2), direct communication to influence administrative action does not include testimony or appearance in a public hearing or other communication made by the party, or a party's representative of record, in a proceeding of an adjudicative nature of the type authorized by or subject to the Administrative Procedure and Texas Register Act.

Tex. Ethics Comm'n, 17 Tex. Reg. 358 (1992) (to be codified at title 1, section 10.5(a), of the Texas Administrative Code).<sup>1</sup>

The question raised is whether that exception applies to any testimony in a proceeding of the type described or whether it applies only to testimony of a party or a party's representative. The reference to testimony would serve little purpose, however, if it applied only to a party or a party's representative. A party would generally not receive compensation for testimony, and the party's representative of record (the party's lawyer) would generally not give testimony. Rather, non-party witnesses would typically be the persons receiving compensation for testimony. Therefore the exception should apply to the testimony of paid witnesses, and exempt such paid testimony from the compensation threshold of the lobby statute.

### SUMMARY

Ethics Commission rule 10.5 exempts from the compensation threshold of the lobby statute paid testimony by any person in a proceeding of an adjudicative nature of the type authorized by or subject to the Administrative Procedure and Texas Register Act, article 6252-13a, V.T.C.S.

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<sup>1</sup>The rules of the Ethics Commission that were proposed for codification at chapter 10 of title 1 of the Texas Administrative Code actually should have been proposed for codification at chapter 40 of that title. For purposes of this opinion, we have cited to the rules as published.



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## ETHICS ADVISORY OPINION NO. 39

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July 24, 1992

*Time frame in which a person must register as a lobbyist once he has engaged in activity requiring registration. (AOR-50)*

The Texas Ethics Commission has been asked about the application of the lobby registration requirements to a situation in which a person enters into a contract to act as a political consultant. The person receives a set fee monthly, and the contract calls on the person to be available for lobbying activity if needed. As yet, no need for lobbying activity has arisen.

Under chapter 305 of the Government Code a person is required to register as a lobbyist if he receives more than \$200 in a calendar quarter to communicate directly with members of the legislative or executive branch to influence legislation or administrative action. Gov't Code § 305.003(a)(2); Tex. Ethics Comm'n, 17 Tex. Reg. 4444 (1992) (to be codified at title 1, section 40.3(a)(2), of the Texas Administrative Code). A person is required to register "not later than the fifth day after the date on which the person or the person's employee makes the first direct communication with a member of the legislative or executive branch that requires the person's registration." Gov't Code § 305.005(e). Therefore the person in question need not register until that time.

### SUMMARY

A person who receives compensation for communicating directly with members of the legislative or executive branch to influence legislation or administrative action is required to register not later than the fifth day after the date on which the person or the person's employee makes the first direct communication that gives rise to the registration requirement.



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## ETHICS ADVISORY OPINION NO. 43

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July 24, 1992

*Lobby registration requirements of corporation employees who research and analyze proposals concerning matters to be considered by the legislature.  
(AOR-65)*

The Texas Ethics Commission has been asked to consider a situation in which employees of a corporation spend a great deal of time researching and analyzing proposals in regard to a matter to be considered by the legislature. The employees then make contact with various members of the executive and legislative branches. In regard to this situation, the requestor asks the following:

The specific question raised in this request concerns the scope of the definition of "lobby activities." Are the internal activities described above included within the definition of "lobby activities" under §305 of the Texas Government Code and §10.11 of the emergency rules promulgated by the Texas Ethics Commission? Are they included within the definition even if they do not ultimately result in a direct communication to influence the action of a state administrative agency or the legislature?

Chapter 305 of the Government Code requires a person to register with the Ethics Commission if the person

receives compensation or reimbursement, not including reimbursement for the person's own travel, food, or lodging expenses or the person's own membership dues, of more than an amount determined by commission rule but not less than \$200 in a calendar quarter from another person to communicate directly with a

member of the legislative or executive branch to influence legislation or administrative action.

Gov't Code § 305.003(a)(2); *see id.* § 305.002(2) (defining the phrase "communicates directly with" or any variation of that phrase to mean "contact in person or by telephone, telegraph, or letter"); Tex. Ethics Comm'n, 17 Tex. Reg. 4444 (1992) (to be codified at title 1, section 40.3(a)(2), of the Texas Administrative Code) (setting compensation threshold at "more than \$200").<sup>1</sup> A person who does not communicate with a member of the legislative or executive branch is not required to register as a lobbyist, even if that person is compensated to perform work for someone else who communicates with members of the legislative or executive branch to influence legislation or administrative action.

Once a person communicates directly with a member of the legislative or executive branch to influence legislation or administrative action, however, the time that person spends on activities such as conducting research to prepare for the communication is included in calculating whether the registration threshold has been met and in calculating the amount of compensation that must be reported. Tex. Ethics Comm'n, 17 Tex. Reg. 4445 (1992) (to be codified at title 1, section 40.11(a), of the Texas Administrative Code).<sup>2</sup>

### SUMMARY

A person who does not communicate with a member of the legislative or executive branch is not required to register as a lobbyist, even if that person is compensated to perform work for someone else who communicates with members of the legislative or executive branch to influence legislation or administrative action. If a person communicates directly with a member of the legislative or executive branch to influence legislation or administrative action, however, the time that person spends on activities such as conducting research to prepare for the communication is included in calculating whether the registration threshold has been met and in calculating the amount of compensation that must be reported.

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<sup>1</sup>A person must also register if the person makes more than \$200 in a calendar quarter in expenditures in connection with lobby activity. Gov't Code § 305.003(a)(1); Tex. Ethics Comm'n, 17 Tex. Reg. 4444 (1992) (to be codified at title 1, section 40.1, of the Texas Administrative Code). The requestor describes no such expenditures.

<sup>2</sup>A person who prepares another person to communicate to influence legislative or administrative action may have to be identified on the latter's registration. Gov't Code § 305.005(f)(5); Tex. Ethics Comm'n, 17 Tex. Reg. 4445 (1992) (to be codified at title 1, section 40.9, of the Texas Administrative Code).

**LOBBY CONTROL ACT**

# **REGISTRATION OF LOBBYISTS**

## **Chapter 305 of the Texas Government Code**



*Published by the Texas Ethics Commission  
January 1992*

## CHAPTER 305 TEXAS GOVERNMENT CODE

### SUBCHAPTER A. REGISTRATION

**Section 305.001. POLICY.** The operation of responsible democratic government requires that the people be afforded the fullest opportunity to petition their government for the redress of grievances and to express freely their opinions on legislation, pending executive actions, and current issues to individual members of the legislature, legislative committees, state agencies, and members of the executive branch. To preserve and maintain the integrity of the legislative and administrative processes, it is necessary to disclose publicly and regularly the identity, expenditures, and activities of certain persons who, by direct communication with government officers, engage in efforts to persuade members of the legislative or executive branch to take specific actions.

#### **Section 305.0011. CODE OF CONDUCT.**

(a) A registrant shall decline proffered employment if the exercise of the registrant's independent judgment on behalf of a client will be or is likely to be adversely affected by the acceptance of the employment, except as provided by Subsection (c).

(b) A registrant may not continue multiple employment if the exercise of the registrant's independent judgment on behalf of a client will be or is likely to be adversely affected by his representation of another client, except as provided by Subsection (c).

(c) A registrant may represent multiple clients in situations covered by Subsection (a) or (b) only with the consent of the clients after full disclosure of the possible effects of that representation on the registrant's professional judgment.

(d) If a registrant is required to decline employment or to withdraw from employment under this section, a partner or other person associated with that registrant may not accept or continue that employment.

(e) The commission may adopt rules for the implementation of this section consistent with this chapter, the Code of Professional Responsibility, and the common law of agency.

**Section 305.002. DEFINITIONS.** In this chapter:

(1) "Administrative action" means rulemaking, licensing, or any other matter that may be the subject of action by a state agency, including the proposal, consideration, or approval of the matter.

(2) "Communicates directly with" or any variation of the phrase means contact in person or by telephone, telegraph, or letter.

(3) "Compensation" means money, service, facility, or other thing of value or financial benefit that is received or is to be received in return for or in connection with services rendered or to be rendered.

(4) "Member of the executive branch" means an officer, officer-elect, candidate for, or employee of any state agency, department, or office in the executive branch of state government.

(5) "Expenditure" means a payment, distribution, loan, advance, reimbursement, deposit, or gift of money or any thing of value and includes a contract, promise, or agreement, whether or not legally enforceable, to make an expenditure.

(6) "Legislation" means:

(A) a bill, resolution, amendment, nomination, or other matter pending in either house of the legislature;

(B) any matter that is or may be the subject of action by either house or by a legislative committee, including the introduction, consideration, passage, defeat, approval, or veto of the matter; or

## CHAPTER 305 TEXAS GOVERNMENT CODE

(C) any matter pending in a constitutional convention or that may be the subject of action by a constitutional convention.

(7) "Member of the legislative branch" means a member, member-elect, candidate for, or officer of the legislature or of a legislative committee, or an employee of the legislature.

(8) "Person" means an individual, corporation, association, firm, partnership, committee, club, organization, or group of persons who are voluntarily acting in concert.

(9) "Registrant" means a person required to register under Section 305.003.

(10) "Commission" means the Texas Ethics Commission.

(11) "Immediate family" means a spouse or dependent child.

### **Section 305.003. PERSONS REQUIRED TO REGISTER.**

(a) A person must register with the commission under this chapter if the person:

(1) makes a total expenditure of an amount determined by commission rule but not less than \$200 in a calendar quarter, not including the person's own travel, food, or lodging expenses or the person's own membership dues, on activities described in Section 305.006(b) to communicate directly with one or more members of the legislative or executive branch to influence legislation or administrative action; or

(2) receives compensation or reimbursement, not including reimbursement for the person's own travel, food, or lodging expenses or the person's own membership dues, of more than an amount determined by commission rule but not less than \$200 in a calendar quarter from another person to communicate directly with a member of the legislative or executive branch to influence legislation or administrative action.

(b) Subsection (a)(2) requires a person to register if the person, as part of his regular employment, has communicated directly with a member of the legislative or executive branch to influence legislation or administrative action on behalf of the person by whom he is compensated or reimbursed, whether or not the person receives any compensation for the communication in addition to the salary for that regular employment. However, Subsection (a)(2) does not require a member of the judicial, legislative, or executive branch of state government or an officer or employee of a political subdivision of the state to register.

(c) A person who communicates directly with a member of the executive branch to influence administrative action is not required to register under Subsection (a)(2) if the person is an attorney of record or pro se, the person enters his appearance in a public record through pleadings or other written documents in a docketed case pending before a state agency, and that communication is the only activity that would otherwise require the person to register.

**Section 305.004. EXCEPTIONS.** The following persons are not required to register under this chapter:

(1) a person who owns, publishes, or is employed by a newspaper, any other regularly published periodical, a radio station, a television station, a wire service, or any other bona fide news medium that in the ordinary course of business disseminates news, letters to the editors, editorial or other comment, or paid advertisements that directly or indirectly oppose or promote legislation or administrative action, if the person does not engage in further or other activities that require registration under this chapter and does not represent another person in connection with influencing legislation or administrative action;

(2) a person whose only direct communication with a member of the legislative or executive branch to influence legislation or administrative action is an appearance before or

## CHAPTER 305 TEXAS GOVERNMENT CODE

testimony to one or more members of the legislative or executive branch in a hearing conducted by or on behalf of either the legislative or the executive branch and who does not receive special or extra compensation for the appearance other than actual expenses incurred in attending the hearing;

(3) a person whose only activity is to encourage or solicit members, employees, or stockholders of an entity by whom the person is reimbursed, employed, or retained to communicate directly with members of the legislative or executive branch to influence legislation or administrative action;

(4) a person whose only activity to influence legislation or administrative action is to compensate or reimburse an individual registrant to act in the person's behalf to communicate directly with a member of the legislative or executive branch to influence legislation or administrative action;

(5) a person whose only activity to influence legislation or administrative action is attendance at a meeting or entertainment event attended by a member of the legislative or executive branch if the total cost of the meeting or entertainment event is paid by a business entity, union, or association;

(6) a person whose only compensation subject to Section 305.003(a)(2) consists of reimbursement for any wages not earned due to attendance at a meeting or entertainment event, travel to and from the meeting or entertainment event, admission to the meeting or entertainment event, and any food and beverage consumed at the meeting or entertainment event if the meeting or entertainment event is attended by a member of the legislative or executive branch and if the total cost of the meeting or entertainment event is paid by a business entity, union, or association; and

(7) a person who communicates directly with a member of the legislative or executive branch on behalf of a political party concerning

legislation or administrative action, and whose expenditures and compensation, as described in Section 305.003, combined do not exceed \$5,000 a calendar year.

### Section 305.005. REGISTRATION.

(a) Each person required to register under this chapter shall file a registration form with the commission on a form prescribed by the commission and shall submit a registration fee.

(b) A registration filed under this chapter expires at midnight, December 31, of each year unless the registrant submits a registration renewal form to the commission on a form prescribed by the commission and submits the registration renewal fee. The registrant may file the registration renewal form and the fee anytime in December of the year in which the registration expires.

(c) The registration fee and registration renewal fee are:

(1) \$100 for a registrant employed by an organization exempt from federal income tax under Section 501(c)(3) or 501(c)(4), Internal Revenue Code of 1986; or

(2) \$300 for any other registrant.

(d) Fees collected under this section shall be deposited in the state ethics fund.

(e) A person required to register under this chapter who has not registered or whose registration has expired shall file the registration form and submit the registration fee not later than the fifth day after the date on which the person or the person's employee makes the first direct communication with a member of the legislative or executive branch that requires the person's registration.

(f) The registration must be written and verified and must contain:

## CHAPTER 305 TEXAS GOVERNMENT CODE

(1) the registrant's full name and address;

(2) the registrant's normal business, business phone number, and business address;

(3) the full name and address of each person:

(A) who reimburses, retains, or employs the registrant to communicate directly with a member of the legislative or executive branch to influence legislation or administrative action; and

(B) on whose behalf the registrant has communicated directly with a member of the legislative or executive branch to influence legislation or administrative action;

(4) the subject matter and, if applicable, the bill number, docket number, or other legislative or administrative designation of the legislation or administrative action that is the subject of the registrant's direct communication with a member of the legislative or executive branch;

(5) for each person employed or retained by the registrant for the purpose of assisting in direct communication with a member of the legislative or executive branch to influence legislation or administrative action:

(A) the full name, business address, occupation, and date of employment or retention of the person by the registrant; and

(B) the subject matter and, if applicable, the bill number, docket number, or other administrative designation of the legislation or administrative action to which the person's activities reportable under this section were related; and

(6) the amount of compensation or reimbursement paid by each person who reimburses, retains, or employs the registrant for the purpose of communicating directly with a

member of the legislative or executive branch or on whose behalf the registrant communicates directly with a member of the legislative or executive branch.

(g) Compensation or reimbursement required to be reported under Subsection (f)(6) shall be reported in the following categories unless reported as an exact amount:

(1) less than \$10,000;

(2) at least \$10,000 but less than \$25,000;

(3) at least \$25,000 but less than \$50,000;

(4) at least \$50,000 but less than \$100,000;

(5) at least \$100,000 but less than \$150,000;

(6) at least \$150,000 but less than \$200,000; and

(7) \$200,000 or more.

(h) If a registrant's activities are done on behalf of the members of a group or organization, including a business, trade, or consumer interest association but excluding a corporation, the registration form must include:

(1) a statement of the number of members in the group;

(2) the name of each person in the group or organization who determines the policy of the group or organization relating to influencing legislative or administrative action;

(3) a full description of the methods by which the registrant develops and makes decisions about positions on policy; and

(4) a list of those persons making a grant or contribution, in addition to or instead of dues or fees, that exceeds \$250 per year.

## CHAPTER 305 TEXAS GOVERNMENT CODE

(i) If a registrant's activities are done on behalf of a corporation the shares of which are not publicly traded, the registration form must include:

(1) the number of shareholders in the corporation;

(2) the name and address of each officer or member of the board of directors; and

(3) the name of each person owning 10 percent or more shares of the corporation.

(j) If the person described by Subsection (f)(3) is a business entity engaged in the representation of clients for the purpose of influencing legislation or administrative action, the registrant shall give the information required by that subdivision for each client on whose behalf the registrant communicated directly with a member of the legislative or executive branch.

(k) If there is a change in the information required to be reported by a registrant under this section, the registrant shall file an amended statement reflecting the change with the commission not later than the date on which the next report is due under Section 305.007.

### Section 305.0051. LISTING OF PUBLIC OFFICERS AND EMPLOYEES.

(a) Except as provided by Subsection (b), the commission by rule may require an officer or employee of a political subdivision or other governmental entity created under the Texas Constitution or laws of this state who communicates directly with a member of the legislative or executive branch concerning legislation or administrative action, other than routine matters, to file with the commission the officer's or employee's name, the name of the entity represented, the subject matter of the communication, and other information the commission considers relevant.

(b) The commission may not require a member of the legislative branch to file with the commission under this section.

### Section 305.006. ACTIVITIES REPORT.

(a) Each registrant shall file with the commission a written, verified report on a form prescribed by the commission concerning the activities described by this section.

(b) The report must contain the total expenditures under a category listed in this subsection that the registrant made to communicate directly with a member of the legislative or executive branch to influence legislation or administrative action. The report must also include expenditures for the direct communications under a category listed in this subsection that other people made on the registrant's behalf if the expenditures were made with the registrant's consent or were ratified by the registrant. The expenditures must be reported in the following categories:

(1) transportation and lodging;

(2) food and beverages;

(3) entertainment;

(4) gifts, other than awards and mementos;

(5) awards and mementos; and

(6) expenditures made for the attendance of members of the legislative or executive branch at political fund-raisers or charity events.

(c) The report must also list the total expenditures made by the registrant or by others on the registrant's behalf and with the registrant's consent or ratification for broadcast or print advertisements, direct mailings, and other mass media communications if:

(1) the communications are made to a person other than a member, employee, or

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stockholder of an entity that reimburses, retains, or employs the registrant; and

(2) the communications support or oppose or encourage another to support or oppose pending legislation or administrative action.

(d) The report must also contain a list of the specific categories of subject matters about which the registrant, any person the registrant retains or employs to appear on the registrant's behalf, or any other person appearing on the registrant's behalf communicated directly with a member of the legislative or executive branch. The list must include the number or other designation assigned to the legislation or administrative action, if known.

(e) A registrant who reports an expenditure under one category provided by Subsection (b) may not report the same expenditure under another category of Subsection (b).

(f) An expenditure described by Subsection (b)(1), (2), (3), or (6) may not be made or accepted unless the registrant is present at the event.

### Section 305.0061. DETAILED REPORTS.

(a) If a registrant or a person on the registrant's behalf and with the registrant's consent or ratification makes expenditures that exceed \$50 a day for transportation or lodging for a member of the legislative or executive branch, the registrant shall also state the following on the report filed under Section 305.006:

(1) the name of the member of the legislative or executive branch in whose behalf the expenditure is made;

(2) the place and date of the transportation or lodging; and

(3) the purpose of the transportation or lodging.

(b) If a registrant or a person on the registrant's behalf and with the registrant's consent or ratification makes expenditures that exceed \$50 a day for food and beverages for a member of the legislative or executive branch or makes expenditures that exceed \$50 a day for entertainment for a member of the legislative or executive branch or for the immediate family of a member of the legislative or executive branch, the registrant shall also state the following on the report filed under Section 305.006:

(1) the name of the member of the legislative or executive branch in whose behalf the expenditure is made;

(2) the place and date of the expenditure; and

(3) the amount of the expenditure by the appropriate category of the amount, as determined by the commission.

(c) If a registrant or a person on the registrant's behalf and with the registrant's consent or ratification gives to a member of the legislative or executive branch a gift or an award or memento, the value of which exceeds \$50 per gift, award, or memento, the registrant shall also state the following on the report filed under Section 305.006:

(1) the name of the member of the legislative or executive branch in whose behalf the expenditure is made;

(2) a general description of the gift, award, or memento; and

(3) the amount of the expenditure by the appropriate category of the amount, as determined by the commission.

(d) If a registrant or a person on the registrant's behalf and with the registrant's consent or ratification makes expenditures for the attendance of a member of the legislative or executive branch at a political fund-raiser or charity event, the registrant shall also state the

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following on the report filed under Section 305.006:

(1) the name of the member of the legislative or executive branch in whose behalf the expenditure is made;

(2) the name of the charity or the name of the candidate or officeholder for whom the political fund-raiser was held, as applicable; and

(3) the date of the fund-raiser or event.

(e) If a registrant or a person on the registrant's behalf and with the registrant's consent or ratification makes an expenditure for a gift, award, or memento for a member of the legislative or executive branch in conjunction with an expenditure for the attendance of that member at a political fund-raiser or charity event, the registrant shall report the expenditure for the gift, award, or memento under Subsection (c), if required, and not under Subsection (d).

(f) If a registrant or a person on the registrant's behalf with the registrant's consent or ratification makes an expenditure described by Section 305.006(b)(1), (2), or (3) to communicate directly with more than one member of the legislative or executive branch to influence legislation or administrative action and if the registrant cannot reasonably determine the amount that is directly attributable to a member, the registrant shall apportion the expenditure made by that registrant according to the number of persons in attendance. The registrant shall report as required by Subsection (a), (b), or (c) if the expenditure for each person exceeds the amount provided under Subsection (a), (b), or (c).

### Section 305.0062. EXPENDITURES ATTRIBUTABLE TO GROUPS.

(a) The report filed under Section 305.006 must also contain the total expenditures described by Section 305.006(b) that are directly attributable to members of the legislative or

executive branch and those that are directly attributable to the registrant. The expenditures must be stated in only one of the following categories:

(1) state senators;

(2) state representatives;

(3) elected or appointed state officers, other than those described by Subdivision (1) or (2);

(4) legislative agency employees;

(5) executive agency employees;

(6) the immediate family of a member of the legislative or executive branch;

(7) the registrant; and

(8) events to which all legislators are invited.

(b) For purposes of Subsection (a), an expenditure is directly attributable to the person who consumed the food or beverage, to the person for whom admission, transportation, or lodging expenses were paid, or to the person to whom the gift, award, or memento was given.

(c) All expenditures made by a registrant or a person on the registrant's behalf and with the registrant's consent or ratification that benefit members of the immediate family of members of the legislative or executive branch shall be aggregated and reported under Subsection (a)(6).

(d) If a registrant cannot reasonably determine the amount of an expenditure under Section 305.006(b) that is directly attributable to a member of the legislative or executive branch or to the registrant as required by Subsection (a), the registrant shall apportion the expenditure made by that registrant or by others on the registrant's behalf and with the registrant's consent or ratification according to the total number of persons in attendance.

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However, if an expenditure is for an event to which all legislators are invited, the registrant shall report the expenditure under Subsection (a)(8) and not under any other subdivision of that subsection or any other provision of this chapter.

### **Section 305.0063. MODIFIED REPORTING.**

(a) A person required to register under this chapter may, when filing the registration form or registration renewal form, elect to file an activities report under this section instead of Section 305.006 if the person does not intend to make expenditures reportable under Section 305.006(b) of more than \$1,000 during a calendar year, not including the person's own travel, food, or lodging expenses or the person's own membership dues.

(b) To be entitled to file reports under this section, the registrant must file with the registration form or registration renewal form a written declaration of intent not to exceed \$1,000 in expenditures during each calendar year in which that registration or registration renewal is effective.

(c) A registrant filing under this section shall annually file the report required by Section 305.006. The report must be filed not later than January 10 and must cover the activities occurring during the previous calendar year.

(d) A registrant who exceeds \$1,000 in expenditures shall file monthly reports as required by Section 305.007. The first report filed after exceeding \$1,000 covers the period beginning January 1 through the date on which the next reporting period ends.

### **Section 305.007. FILING DATES FOR SUPPLEMENTAL REPORTS.**

(a) The registrant must file the report required by Section 305.006 between the 1st and 10th day of each month. The report must cover the activities occurring during the previous month.

(b) A person who made expenditures on the registrant's behalf that are required to be reported under Section 305.006 or a person who has other information that is required to be reported by the registrant under this chapter shall provide a full, verified account of the expenditures to the registrant not later than the seventh day before the date on which the registrant's report is due.

### **Section 305.008. TERMINATION NOTICE.**

(a) A person who ceases to engage in activities requiring registration under this chapter shall file a written, verified statement with the [commission] acknowledging the termination of activities. The notice is effective immediately.

(b) A person who files a notice of termination under this section must file the reports required by Section 305.006 for any reporting period during which the person was registered.

### **Section 305.009. MAINTENANCE OF REPORTS.**

(a) All reports filed under this chapter are public records and shall be made available for public inspection during regular business hours.

(b) The [commission] shall:

(1) design and provide appropriate forms, covering only the items required to be disclosed under this chapter, to be used for the registration and reporting of required information;

(2) maintain registrations and reports in a separate alphabetical file;

(3) remove registrations and reports from the files after five years from the date of filing; and

(4) maintain a deputy available to receive registrations and reports and make the

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registrations and reports available to the public for inspection.

(c) The commission shall retain a report filed under this chapter for at least four years after the date the report is filed.

(d) A registrant shall keep any records necessary to the reports required under this chapter for at least four years after the date the report is filed.

**Section 305.010. TIMELINESS OF FILING REGISTRATIONS AND REPORTS.** A registration or report filed by first-class United States mail or by common or contract carrier is timely if:

(1) it is properly addressed with postage or handling charges prepaid; and

(2) it bears a post office cancellation mark or a receipt mark from a common or contract carrier indicating a time within the applicable filing period or before the applicable filing deadline, or if the person required to file furnishes satisfactory proof that it was deposited in the mail or with a common or contract carrier within that period or before that deadline.

**Section 305.011. LIST OF REGISTRANTS AND EMPLOYERS.**

(a) Not later than February 1 of each odd-numbered year, the commission shall prepare a list of the names of registrants and shall indicate by each registrant's name each employer or concern employing the registrant.

(b) In addition to the list required under Subsection (a), the commission shall prepare a list of the names of any employer or concern employing a registrant and shall indicate each registrant compensated by the employer or concern.

(c) The commission shall send the lists prepared under this section to each member of the legislature. During a regular legislative

session, the [commission] shall send a monthly update of the lists to each member of the legislature and to any person required to file under Chapter 421, Acts of the 63rd Legislature, Regular Session, 1973 (Article 6252-9b, Vernon's Texas Civil Statutes), who requests one.

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Sections 305.012-305.020 reserved for expansion

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### SUBCHAPTER B. PROHIBITED ACTIVITIES

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**Section 305.021. FALSE COMMUNICATIONS.** A person, for the purpose of influencing legislation or administrative action, may not:

(1) knowingly or willfully make a false statement or misrepresentation of the facts to a member of the legislative or executive branch; or

(2) cause a copy of a document the person knows to contain a false statement to be received by a member of the legislative or executive branch without notifying the member in writing of the truth.

**Section 305.022. CONTINGENT FEES.**

(a) A person may not retain or employ another person to influence legislation or administrative action for compensation that is totally or partially contingent on the passage or defeat of any legislation, the governor's approval or veto of any legislation, or the outcome of any administrative action.

(b) A person may not accept any employment or render any service to influence legislation or administrative action for compensation contingent on the passage or defeat of any legislation, the governor's approval or veto of any legislation, or the outcome of any administrative action.

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(c) For purposes of this section, a sales commission payable to an employee of a vendor of a product is not considered compensation contingent on the outcome of administrative action.

(d) This section does not prohibit the payment or acceptance of contingent fees:

- (1) expressly authorized by other law; or
- (2) for legal representation before state administrative agencies in contested hearings or similar adversarial proceedings prescribed by law or administrative rules.

**Section 305.023. ADMISSION TO FLOORS.** A person who is registered or required to be registered under this chapter may not go on the floor of either house of the legislature while that house is in session unless invited by that house.

### **Section 305.024. RESTRICTIONS ON EXPENDITURES.**

(a) Except as provided by Section 305.025, a person registered under Section 305.005 or a person on the registrant's behalf and with the registrant's consent or ratification may not offer, confer, or agree to confer to a member of the legislative or executive branch:

- (1) a loan, including the guarantee or endorsement of a loan;
- (2) a gift of cash or a negotiable instrument as described by Section 3.104, Business & Commerce Code;
- (3) an expenditure for transportation and lodging;
- (4) an expenditure or series of expenditures for entertainment that in the aggregate exceed \$500 in a calendar year;

(5) an expenditure or series of expenditures for gifts that in the aggregate exceed \$500 in a calendar year;

(6) an expenditure for an award or memento that exceeds \$500; or

(7) an expenditure described by Section 305.006(b)(1), (2), (3), or (6) unless the registrant is present at the event.

(b) Except as provided by Section 305.025, a member of the legislative or executive branch may not solicit, accept, or agree to accept from a person registered under Section 305.005 or from a person on the registrant's behalf and with the registrant's consent or ratification an item listed in Subsection (a).

**Section 305.025. EXCEPTIONS.** Section 305.024 does not prohibit:

(1) a loan in the due course of business from a corporation or other business entity that is legally engaged in the business of lending money and that has conducted that business continuously for more than one year before the loan is made;

(2) a loan or guarantee of a loan or a gift made or given by a person related within the second degree by affinity or consanguinity to the member of the legislative or executive branch;

(3) necessary expenditures for transportation and lodging when the purpose of the travel is to explore matters directly related to the duties of a member of the legislative or executive branch, such as fact-finding trips, but not including attendance at merely ceremonial events or pleasure trips;

(4) necessary expenditures for transportation and lodging provided in connection with a conference or similar event in which the member renders services, such as addressing an audience or engaging in a

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seminar, to the extent that those services are more than merely perfunctory; or

(5) a political contribution as defined by Section 251.001, Election Code.

### **Section 305.026. PROHIBITION ON USE OF CERTAIN PUBLIC FUNDS.**

(a) Public funds available to a political subdivision may not be used to compensate or reimburse the expenses over \$50 of any person for the purpose of communicating directly with a member of the legislative branch to influence legislation, unless the person being compensated or reimbursed resides in the district of the member with whom the person communicates or files a written statement with the [commission] that includes the person's name, the amount of compensation or reimbursement, and the name of the affected political subdivision.

(b) In this section, "political subdivision" includes:

(1) a municipality;

(2) a county; and

(3) a special district created under the constitution or laws of this state, including:

(A) a school district;

(B) a junior college district;

(C) a water district;

(D) a hospital district;

(E) a municipal utility district;

(F) a metropolitan transit authority;

and

(G) any other governmental entity that embraces a geographic area within a definite boundary and exists for the purpose of

discharging functions of government and possesses authority for subordinate self-government through officers selected by it.

(c) This section does not apply to a person who is registered under this chapter, to a person who holds an elective or appointive public office, or to a full-time employee of the affected political subdivision.

(d) This section does not prohibit a political subdivision from making an expenditure of public funds to a statewide association with a minimum membership of at least 25 percent of eligible political subdivisions that contract with or employ a registrant for the purpose of communicating directly with a member of the legislative branch to influence legislation.

### **Section 305.027. REQUIRED DISCLOSURE ON LEGISLATIVE ADVERTISING.**

(a) A person commits an offense if the person knowingly enters into a contract or other agreement to print, publish, or broadcast legislative advertising that does not indicate in the advertising:

(1) that it is legislative advertising;

(2) the full name of the individual who personally entered into the contract or agreement with the printer, publisher, or broadcaster and the name of the person, if any, that the individual represents; and

(3) in the case of advertising that is printed or published, the address of the individual who personally entered into the agreement with the printer or publisher and the address of the person, if any, that the individual represents.

(b) It is an exception to the application of Subsection (a) to a broadcaster, printer, or publisher of legislative advertising or to an agent or employee of the broadcaster, printer, or publisher that:

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(1) the person entering into the contract or agreement with the broadcaster, printer, or publisher is not the actual sponsor of the advertising but is the sponsor's professional advertising agent conducting business in this state; or

(2) the advertising is procured by the actual sponsor of the legislative advertising and, before the performance of the contract or agreement, the sponsor is given written notice as provided by Subsection (d).

(c) A professional advertising agent conducting business in this state who seeks to procure the broadcasting, printing, or publication of legislative advertising on behalf of the sponsor of the advertising commits an offense if the agent enters into a contract or agreement for the broadcasting, printing, or publication of legislative advertising and does not, before the performance of the contract or agreement, give the sponsor written notice as provided by Subsection (d).

(d) The notice required by Subsections (b) and (c) must be substantially as follows:

Section 305.027, Government Code, requires legislative advertising to disclose certain information. A person who knowingly enters into a contract or other agreement to print, publish, or broadcast legislative advertising that does not contain the information required under that section commits an offense that is a Class A misdemeanor.

(e) In this section, "legislative advertising" means a communication that supports, opposes, or proposes legislation and that:

(1) in return for consideration, is published in a newspaper, magazine, or other periodical or is broadcast by radio or television; or

(2) appears in a pamphlet, circular, flier, billboard or other sign, bumper sticker, button, or similar form of written communication.

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Sections 305.028-305.030 reserved for expansion

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### SUBCHAPTER C. SANCTIONS

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#### Section 305.031. CRIMINAL PENALTIES.

(a) A person commits an offense if the person intentionally or knowingly violates a provision of this chapter other than Section 305.022. An offense under this subsection is a Class A misdemeanor.

(b) A person commits an offense if the person intentionally or knowingly violates Section 305.022. An offense under this subsection is a felony of the third degree.

(c) This chapter does not affect the criminal responsibility of a person under the state laws relating to perjury.

(d) This section does not prohibit the commission from imposing a civil penalty for a violation:

Section 305.032. CIVIL PENALTY FOR FAILURE TO REGISTER. In addition to the criminal penalties prescribed by Section 305.031, a person who receives compensation or reimbursement or makes an expenditure for engaging in direct communication to influence legislation or administrative action and who fails to file a registration form or activities report required to be filed under this chapter shall pay a civil penalty in an amount determined by commission rule, but not to exceed an amount equal to three times the compensation, reimbursement, or expenditure.

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### **Section 305.033. CIVIL PENALTY FOR LATE FILING.**

(a) The commission shall determine from any available evidence whether a registration or report required to be filed with the commission under this chapter is late. A registration filed without the fee required by Section 305.005 is considered to be late. On making a determination that a required registration or report is late, the commission shall immediately mail a notice of the determination to the person responsible for the filing, to the commission, and to the appropriate attorney for the state.

(b) If a registration or report is determined to be late, the person responsible for the filing is liable to the state for payment of a civil penalty in an amount determined by commission rule, but not to exceed \$100 for each day that the registration or report is late.

(c) If a registration or report is more than 30 days late, the [commission] shall issue a warning of liability by registered mail to the person responsible for the filing. If the penalty is not paid before the 10th day after the date on which the warning is received, the person is liable for a penalty in an amount determined by commission rule, but not to exceed \$10,000.

(d) A penalty paid voluntarily under this section shall be deposited in the state treasury to the credit of the General Revenue Fund.

(e) This section is in addition to any other available sanctions for late filings of registrations or reports.

### **Section 305.034. FAILURE TO FILE ALL REQUIRED FORMS.**

(a) The [commission] shall determine whether all persons registered under this chapter have filed all required forms, statements, and reports.

(b) Whenever the [commission] determines that a person has failed to file any required

form, statement, or report as required by this chapter, the [commission] shall send a written statement of this finding to the person involved. Notice to the person involved must be sent by certified mail.

(c) If the person fails to file the form, statement, or report as required by this chapter before the 21st day after the date on which the notice was sent, the [commission] shall file a sworn complaint of the violation with the appropriate prosecuting attorney.

### **Section 305.035. ENFORCEMENT.**

(a) The commission, the attorney general, or any county or district attorney may enforce this chapter.

(b) On the application of any citizen of this state, a district court in Travis County may issue an injunction to enforce this chapter.

(c) A person may file with the appropriate prosecuting attorney or with the commission a written, sworn statement alleging a violation of this chapter.

**Section 305.036. VENUE.** An offense under this chapter, including perjury may be prosecuted in Travis County or in any other county in which it may be prosecuted under the Code of Criminal Procedure, 1965.



# **CIVIL AND CRIMINAL ENVIRONMENTAL ENFORCEMENT IN TEXAS**

**TERRELL E. HUNT<sup>1</sup>**

**BRACEWELL & PATTERSON  
HOUSTON, TEXAS**

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**TEXAS ENVIRONMENTAL SUPER CONFERENCE: 1992**

**Four Seasons Hotel  
Austin, Texas**

**August 6-7, 1992**

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# CIVIL AND CRIMINAL ENVIRONMENTAL ENFORCEMENT IN TEXAS

by

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## I. INTRODUCTION AND OVERVIEW

In its first years the "decade of the environment" has lived up to its billing, as environmental issues have increasingly commanded the attention of industry, government, news media and the public alike. Many observers accurately predicted that environmental matters would replace the cold war as the global theme of the 1990's. Nothing symbolizes this more than the U.N. Conference on the Environment and Development (Earth Summit) held just last June in Rio de Janeiro.

Environmental matters continue to capture the attention of Texans, with the ongoing consolidation of the State's environmental protection functions; the challenge to the constitutionality of administrative penalties in *Texas Association of Business v. Texas Air Control Board* still pending (as of June, 1992) before the Texas Supreme Court; the recent expansion of criminal penalties under Senate Bill No. 2, and the continued lobbying for a state environmental crimes bill; the increased regulatory activity related to the implementation of the 1990 Clean Air Act Amendments; and unparalleled citizen activism associated with local solid and hazardous wastes permitting and facility siting issues.

The complex web of laws and regulations governing environmental releases are, for the most part, currently enforced in Texas by EPA and six State agencies: the Texas Water Commission ("TWC"), the Texas Air Control Board ("TACB"), the Texas Railroad Commission, the Texas Parks & Wildlife Commission, the Texas Department of Agriculture and the General Land Office. Defining the jurisdiction of these respective agencies is a complicated undertaking. A single environmental mishap may trigger the reporting standards, clean-up requirements and enforcement scrutiny of a number of State agencies.

This paper reviews the 1991 environmental enforcement activity in Texas of EPA, TWC and the TACB. It notes important 1992 enforcement priorities, and outlines key enforcement trends, policies and processes. This paper also outlines the functions of the other Texas environmental regulatory agencies, and discusses the enforcement roles of the Texas Attorney General's Office and local District and County prosecuting attorneys.

## II. A LOOK BACK: 1991 STATE AND FEDERAL ENFORCEMENT RESULTS

### A. OVERVIEW

In most areas, the recent pattern of yearly increases in federal and state enforcement activity--number of enforcement actions, dollars of civil penalties/criminal fines assessed, months of jail time sentenced and served--continued in 1991. Such yearly records reflect several factors. First, and perhaps most obvious, the agencies' enforcement programs are continuously improving. Each year of operation provides additional experience, increased enforcement resources, more talented and knowledgeable technicians, inspectors and agency lawyers, and improved coordination among the respective enforcement entities, the agencies, the Department of Justice ("DOJ"), the State Attorney General's office, and District and County Attorneys. Second, the statutes and regulations that direct agency enforcement are constantly amended to strengthen existing<sup>2</sup> or add new enforcement sanctions.<sup>3</sup> Finally, supporting legislation such as the Federal Sentencing Guidelines have strengthened the punch of available sanctions.

### B. FISCAL 1991 EPA ENFORCEMENT RESULTS

EPA reported record enforcement statistics in its 1991 Fiscal Year End Report<sup>4</sup>. The report delivers EPA Administrator William K. Reilly's message of deterrence to potential violators and reinforces the Agency's commitment "to a vigorous and effective environmental enforcement program, now and into the future."<sup>5</sup> The report also illustrates the relative youth of the Agency and the recent explosion in enforcement activity. For example, over the past three years EPA:

- Referred to DOJ over 44 percent of all criminal referrals and 28 percent of all civil referrals in EPA history;

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<sup>2</sup> For example, the 1990 Clean Air Act Amendments significantly improved the Act's administrative provisions. Recently, EPA applied for the first time its new administrative penalty authority, filing charges of clean air violations on May 22, 1992 against 52 firms (26 states and Puerto Rico) and seeking total anticipated penalties in excess of \$4 million. The new streamlined administrative penalty enforcement authority allows EPA to conclude cases sooner by bypassing the judicial court system, thereby recovering penalties and achieving air pollution control benefits much more quickly than before. For a detailed look at the Amendments' effect on the Act's enforcement provisions, see Terrell E. Hunt, *Regulatory Influences which Shaped the Clean Air Act Amendments: Sharpening The Clean Air Enforcement Ax*, The Journal of Environmental Permitting, Summer 1992, p. 405.

<sup>3</sup> Examples of added enforcement provisions are the 1990 Clean Air Act Amendment's bounty and field citation provisions.

<sup>4</sup> United States Environmental Protection Agency, *FY 1991 Accomplishments Report*, April 1992, at p. 1-1.

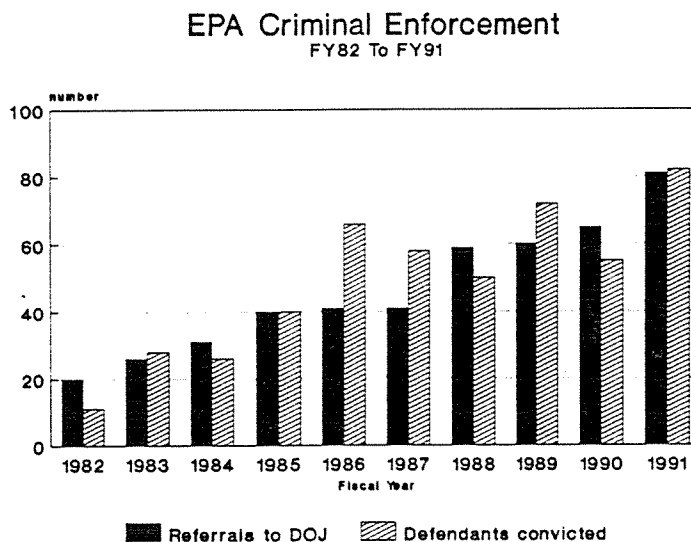
<sup>5</sup> *Id.* at p. 1-2.

- Obtained 50 percent of EPA's total guilty verdicts or pleas, resulting in over 65 percent of all months of jail time ordered in EPA history; and
- Assessed more than 67 percent of all criminal fines and 53 percent of all civil penalties assessed in EPA history.

Even to the casual observer, these statistics indicate that at the federal level tough environmental enforcement is here to stay.

### 1. Criminal Enforcement

In 1991, EPA's criminal program established records for the number of criminal referrals to DOJ (81)<sup>6</sup>; the number of defendants charged (104)<sup>7</sup>; and the months of jail time to which defendants were sentenced (963 months)<sup>8</sup>. Forty-eight criminal cases were concluded during the year resulting in the conviction of 82 defendants. Twenty-eight of the defendants convicted were sentenced to incarceration.



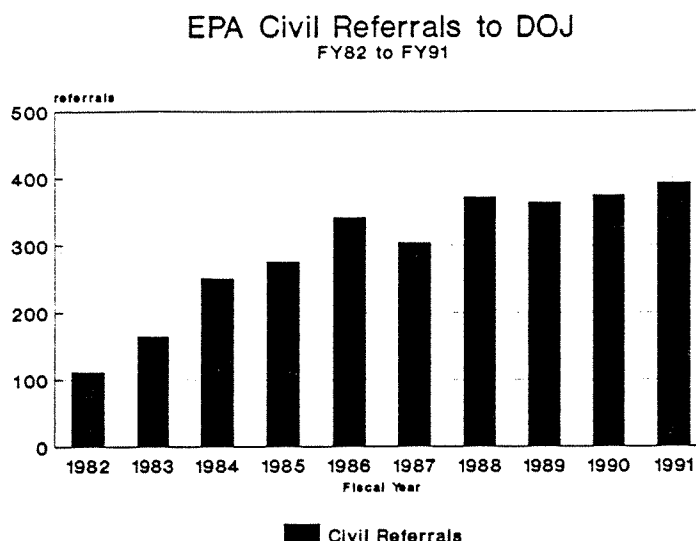
<sup>6</sup> The previous record was 65 in 1990.

<sup>7</sup> The previous record was 100 in 1990.

<sup>8</sup> The previous record was 745 months in 1990.

## 2. Civil Judicial Enforcement

EPA maintains an aggressive civil judicial enforcement program. In 1991, the Agency referred 393 new cases to DOJ, the highest total ever referred in one year.<sup>9</sup>



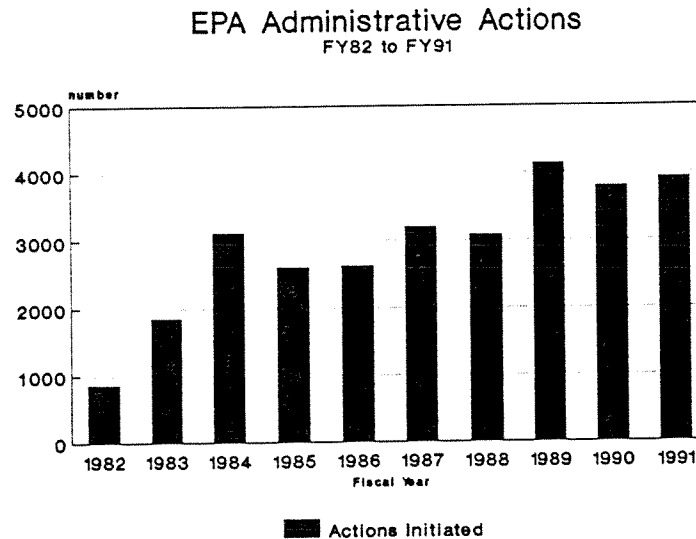
## 3. Administrative Enforcement

EPA posted its second highest annual total for administrative enforcement in 1991 with a total of 3,925 actions. The Agency record of 4,136 actions was set in 1989. The totals for 1991 demonstrate that while judicial actions (both civil and criminal) are crucial to EPA's overall success, and are generally regarded as the chief indicator of the success of Agency enforcement efforts, other indicators should be evaluated to assess EPA's overall effectiveness in enforcing environmental laws and regulations. Congress has expanded EPA's authority recently to use administrative mechanisms to address violations and compel regulated facilities to achieve com-

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<sup>9</sup> EPA has not claimed a record since the counting methods were changed in 1991. Under the old counting method, the Agency would have had 366 referrals, a figure slightly below the previous referral record of 375 in 1990. Under the new counting approach, EPA estimates that the 375 civil cases referred to DOJ in 1990 would have totaled 406. United States Environmental Protection Agency, *FY 1991 Accomplishments Report*, April 1992, at p. 3-1.

pliance.<sup>10</sup> The 1991 figures indicate that all EPA programs continue to make widespread use of the full range of available sanctions.<sup>11</sup>



#### 4. EPA Enforcement Activity in Texas

The following EPA data summarizes national and Texas enforcement activity under federal environmental laws by type of enforcement action.<sup>12</sup> Approximately 15% of all administrative actions brought by EPA were brought in Texas. Less than 3% of EPA's civil judicial referrals and nearly 13% of all criminal referrals were brought in Texas.

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<sup>10</sup> See *supra* note 2.

<sup>11</sup> United States Environmental Protection Agency, *FY 1991 Accomplishments Report*, April 1992, at p. 3-3.

<sup>12</sup> United States Environmental Protection Agency, *FY 1991 State-by-State Enforcement Data*, p. 1 and 47, (forthcoming July 1992).

## NATIONAL

	<u>Administrative Actions</u>			<u>Civil Referrals</u>			<u>Criminal Referrals</u>
	<u>EPA</u>	<u>States</u>	<u>Total</u>	<u>EPA</u>	<u>States</u>	<u>Total</u>	<u>EPA</u>
Clean Air Act	214	1,687	1,901	76	190	266	8
Clean Water Act	1,626	1,284	2,910	78	119	197	28
Wetlands	119	--	119	11	--	11	2
UIC-Class I	124	538	662	3	22	25	0
PWS	308	1,358	1,666	2	156	158	0
RCRA	364	1,495	1,859	34	57	91	36
TSCA	422	N/A	422	12	N/A	12	3
EPRCA	179	N/A	179	2	N/A	2	0
FIFRA	300	3,245	3,545	1	N/A	1	2
Totals:	<u>3,656</u>	<u>9,607</u>	<u>13,263</u>	<u>219</u>	<u>544</u>	<u>763</u>	<u>79</u>

## TEXAS

	<u>Administrative Actions</u>			<u>Civil Referrals</u>			<u>Criminal Referrals</u>
	<u>EPA</u>	<u>Texas</u>	<u>Total</u>	<u>EPA</u>	<u>Texas</u>	<u>Total</u>	<u>EPA</u>
Clean Air Act	5	54	59	1	0	1	0
Clean Water Act	427	0	427	2	0	2	1
UIC-Class I	0	5	5	0	0	0	0
PWC	28	0	28	1	40	41	0
RCRA	22	90	112	1	0	1	7
TSCA	22	N/A	22	0	N/A	0	1
EPRCA	17	N/A	17	0	N/A	0	0
FIFRA	21	195	216	0	N/A	0	1
Totals:	<u>542</u>	<u>344</u>	<u>886</u>	<u>5</u>	<u>40</u>	<u>45</u>	<u>10</u>

## 5. Key Enforcement Actions in Texas<sup>13</sup>

State of Texas v. Dynagen, Inc. Dynagen, Inc., a subsidiary of General Tire Company, operates a rubber plant located in Odessa, Texas. The Texas Attorney General's office filed suit against Dynagen, Inc. in December 1989, on behalf of the TACB. The TACB had reported more than 70 air emission violations including unauthorized styrene and butadiene emissions, known carcinogens, against the company over the preceding two-years after receiving numerous complaints from local residents. The case was settled in September 1991, with the company agreeing to pay penalties of \$1.4 million in cash and to spend more than \$12 million to install state-of-the-art equipment. This was the largest penalty assessed under the Texas Clean Air Act.

State of Texas v. International Paper Corp. During 1987, International Paper Corporation (IPC) in Nacagdoches, Texas, started production of wafer board under a TACB permit that allowed 280 tons per year (TPY) of VOC (methylene diphenylisocyanate) emissions from the resins used to bond the wafer board. TACB stack tests determined that the actual emission rate was approximately 1,000 TPY, making IPC subject to the Prevention of Significant Deterioration (PSD) standards requiring Best Available Control Technology (BACT) control equipment. IPC entered into an order with TACB in 1988. However, it was subsequently determined that BACT (a wet electrostatic precipitator on the veneer dryers) was not in use at the facility. On March 6, 1991, EPA staff met with the company to discuss their violations and urged them to resolve the situation with TACB. Subsequently, IPC entered into negotiations with TACB and agreed to use the BACT and pay \$350,000 in administrative penalties. EPA reviewed and concurred with TACB's enforcement penalty.

U.S. v. Brio Task Force (S.D. Texas). On April 4, 1991, the U.S. District Court for the Southern District of Texas entered a consent decree between the United States and parties who have agreed to conduct remedial action at the Brio Superfund Site. The court also entered an order which denied petitions from a citizen group and two utility districts that desired to change the proposed consent decree, indicating that, in proceeding with this settlement, EPA "adequately represented the interests" of these parties. The intervenors' concerns centered around objections to the remedy (onsite incineration) and a belief that potential health risks were inadequately evaluated. The intervenors have appealed the District Court's decision to the Court of Appeals for the Fifth Circuit; however, there is no stay of the District Court's decision. Consequently, entry of the consent decree has paved the way for EPA to begin a long delayed remedial process which will save the government an estimated \$60 million and eliminate a potential threat to human health and the environment.

In the Matter of Chemical Reclamation Services, Texas; Treatment One a Division of SET Environmental Inc., Texas; Rollins Environmental Services,

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<sup>13</sup> Abstracted from EPA's 1991 Enforcement Accomplishments Report.

Texas; Hydrocarbon Recyclers Inc., Oklahoma. In the first such actions taken by EPA, these four companies were cited in early 1991 in administrative enforcement actions for importing hazardous waste from facilities in Mexico without the required notifications to EPA. The hazardous waste regulations under RCRA require that before importing hazardous waste, a company must submit a written notification to EPA at least four weeks in advance of the date the hazardous waste is expected to arrive at the U.S. facility.

In the Matter of Formosa Plastics, Inc., Point Comfort, Texas. An order imposing the largest civil penalty yet assessed under RCRA was entered into with Formosa Plastics Corporation, Point Comfort, Texas, on February 27, 1991. On October 11, 1990, EPA Region VI had issued a RCRA § 3008(a) complaint against this facility for several RCRA violations, including failure to submit a RCRA permit application, develop a waste analysis plan, make a hazardous waste determination, maintain leakproof containers, develop a closure plan, and demonstrate financial assurance. Under the agreed final order, Formosa Plastics agreed to pay a cash penalty of \$3,375,000, set up a \$1,000,000 trust fund to benefit the environment, and implement a program of pollution prevention projects and environmental audits. Formosa Plastics was also issued a RCRA agreed corrective action order on February 27, 1991. Under this corrective action order, Formosa Plastics will investigate the type and extent of soil and groundwater contamination at the facility and will develop and implement a remedial action plan.

### **III. TEXAS ENVIRONMENTAL REGULATORY SCHEME**

In general, the Texas environmental regulatory scheme focuses on regulating discharges of pollutants into the air, surface and groundwater and land. Because the Texas regulatory agencies predated most of the modern environmental statutes, the environmental jurisdiction of the State's agencies is a patchwork which reflects the respective agency's historical responsibilities, bureaucratic and political jurisdiction and public mandate. Attachment "A" to this paper provides a general summary of this jurisdictional scheme.

#### **A. ENFORCEMENT REMEDIES AVAILABLE TO TEXAS ENVIRONMENTAL REGULATORY AGENCIES**

Three principal remedies are available to State environmental regulatory agencies in responding to actual (or potential) violations of statutory provisions over which they have jurisdiction, or of their rules, permits or orders:<sup>14</sup>

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<sup>14</sup> See, e.g., TWC's enforcement authority codified in Subchapter D of Chapter 26 and Subchapter F of Chapter 27 of the Texas Water Code and Subchapter G of the TSWDA.

- **Civil Judicial Enforcement.** Initiation of a civil suit for civil penalties and/or injunctive relief;<sup>15</sup> referral to the Attorney General for suit on behalf of the State of Texas for civil penalties and/or injunctive relief;<sup>16</sup>
- **Administrative Proceedings.** Initiation of an administrative proceeding for the imposition of administrative penalties and remedial obligations;<sup>17</sup> or
- **Criminal Prosecution.** Referral to the local District or County Attorney for criminal prosecution.<sup>18</sup>

### 1. **Choice of Enforcement Remedy**

A substantial degree of discretion is exercised in determining which remedy to use and how it should be applied. For example, the TWC does not employ any formal "Level of Action" policy in choosing between civil, administrative and criminal remedies. Instead, they consider several factors, viewed in light of the "experience of the Agency collectively applied," in determining the appropriate remedy in a particular enforcement case.<sup>19</sup> Other Texas environmental regulatory agencies generally employ similar procedures. Some of the factors considered by Texas agencies in choosing the appropriate remedy are set forth below.

**Factors Suggesting Civil Enforcement.** The following considerations generally warrant civil judicial action:

- **Immediate and Irreparable Harm:** Immediate need to stop or prevent conduct to avoid irreparable injury, loss, or damage to the environment or human health;<sup>20</sup>

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<sup>15</sup> See, e.g., Tex. Water Code Ann. § 26.123(b) (Vernon 1988).

<sup>16</sup> See, e.g., Texas Water Code Ann. § 26.123(e); Tex. Health & Safety Code Ann. §§ 351.222-361.224.

<sup>17</sup> See, e.g., Tex. Water Code Ann. § 26.136; Texas Health & Safety Code Ann. §§ 361.251.

<sup>18</sup> See, e.g., Tex. Water Code Ann. § 26.212; Tex. Health & Safety Code Ann. §§ 361.221.

<sup>19</sup> Conversations with Ms. Mary Ruth Holder, Director, Legal Division, Texas Water Commission and Mr. Kevin McCalla, Senior Attorney, Texas Water Commission, July 28, 1992.

<sup>20</sup> The standard legal tests (immediate injury, irreparable harm, likelihood of success) apply in seeking a temporary injunction, temporary mandatory injunction or temporary restraining order under Texas environmental laws. The doctrine of "balancing the equities," however, is not a mandatory element of actions for injunctive relief under the Texas Water Code or the Texas Clean Air Act. *State v. Texas Pet Foods, Inc.*, 591 S.W.2d 800 (Tex. 1979).

- **Court Supervision:** Need to monitor defendant's conduct over an extended period (*e.g.* implementation of a complex remedial action plan); and
- **Deterrence:** Need to "make an example" of defendant to deter violations by others.
- **Judicially-Imposed Penalties.** Suits seeking injunctive relief usually also call for civil penalties where the defendant has violated or is in violation of an applicable environmental statute, rule, permit or order.<sup>21</sup>

**Factors Suggesting Administrative Enforcement.** Administrative enforcement actions are the backbone of environmental enforcement at both the federal and state levels, constituting over 90 percent of all actions. Administrative actions are appropriate where:

- **"Routine" Violations:** Violations of a technical or administrative nature, or those that do not present an imminent or significant risk of harm to health or the environment, may be handled through administrative proceedings, where an injunction to prevent irreparable harm is not needed.
- **Corrective Actions:** For corrective actions that are short-term in nature, or that involve particular pollution control or monitoring equipment, the issuance of administrative orders provides a more efficient mechanism to implement the chosen remedy.
- **Deterrence:** In many instances, the speed with which penalties may be imposed administratively provides a greater deterrent impact than more lengthy judicial proceedings.

**Factors Suggesting Criminal Enforcement.** Because such a wide range of actions (or failures to act) could potentially trigger criminal liability under environmental laws, prosecutors have broad discretion in determining which matters to prosecute. The decision comprises a complex balancing of a number of goals: the need to get the attention of a specific individual or corporate defendants; the need to punish unacceptable conduct which may have put innocent people at risk; the need to send a message within a particular industry, sector or geographic area; a desire to be seen championing the interests of the public in the highly visible environmental arena; and, above all, the likelihood of a successful prosecution.

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<sup>21</sup> Penalties aggregate quickly, as the respective penalty provisions call for penalties of up to: \$10,000 per day for each act of violation of the Texas Water Code; \$5,000 per day for each day and each act of noncompliance for injection well violations; and \$25,000 per day per for TSWDA violations. Tex. Water Code Ann. §§ 26.213, 27.101 (Vernon 1988); Tex. Health & Safety Code Ann. § 361.221 (Vernon 1991).

The decision to pursue a criminal prosecution will generally involve consideration of the following criteria:<sup>22</sup>

- **Knowledge.** Evidence that the violator knowingly, intentionally, or willfully violated the statute, regulation, order or permit. That is, the violation was not merely the result of accident or mistake;
- **Seriousness.** Criminal actions should be reserved for the most serious (in terms of duration, toxicity and culpability) types of environmental misconduct. This consideration will be judged by reviewing the extent of environmental harm or hazard to human health that resulted from or was threatened by the violation, as well as the extent of culpability of the individuals, company or executives involved;
- **Deterrence.** Enforcement authorities must consider the need to deter other criminal conduct, either by the violator being prosecuted (specific deterrence) or by other regulated entities (general deterrence); and
- **Compliance History.** While a history of noncompliance is not requisite for pursuing criminal sanctions, criminal prosecution is a more appropriate remedy against repeat violators.

#### **B. TEXAS WATER COMMISSION**

The TWC has regulatory authority over the State's water resources and solid and hazardous waste management.<sup>23</sup> Additionally, in March of 1992, the TWC obtained jurisdiction for management of municipal solid waste, drinking water hygiene and radioactive waste disposal from the Texas Department of Health in the first step of State agency consolidation mandated by Senate Bill No. 2.<sup>24</sup> In September, 1992, the Board of Irrigators and the Water Well Drillers Board will be folded into the TWC. Finally, in September, 1993, the TACB will merge with the TWC and the expanded agency will be renamed the Texas Natural Resources Conservation Commission.<sup>25</sup>

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<sup>22</sup> In addition, where there is a need to enjoin or mitigate on-going environmental harm, enforcement authorities may initiate parallel proceedings: civil judicial action for injunctive relief and criminal proceedings to achieve deterrence, punishment and other goals.

<sup>23</sup> Tex. Water Code Ann. § 5.013 (Vernon 1988).

<sup>24</sup> Act of July 12, 1991, 72d Leg., 1st C.S., ch. 3, 1991 Tex. Sess. Law Serv. 4 (Vernon).

<sup>25</sup> *Id.*

The TWC derives its authority from the Texas Water Code<sup>26</sup> and the Texas Solid Waste Disposal Act.<sup>27</sup> Federal laws enforced by the TWC include the Clean Water Act (water quality programs)<sup>28</sup>, Safe Drinking Water Act<sup>29</sup>, Resource Conservation and Recovery Act ("RCRA")<sup>30</sup>, Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA")<sup>31</sup> and the Hazardous and Solid Waste Amendments ("HSWA") of 1984<sup>32</sup>. EPA has delegated authority to the TWC for RCRA, HSWA, toxicity characteristic leaching procedure<sup>33</sup>, and underground injection control of industrial wastewater.

The TWC sets water quality standards for all State of Texas' waters.<sup>34</sup> Pursuant to this authority, the TWC has promulgated standards<sup>35</sup> to comply with the Clean Water Act<sup>36</sup> and to protect the quality of the State's surface waters. These standards, along with EPA's NPDES standards, are the basis for the TWC's water quality permitting program. The Texas Water Code prohibits discharges "into or adjacent to any waters in the state"<sup>37</sup> without a permit.

The Hazardous & Solid Waste Control Division of the TWC oversees all aspects of industrial and municipal hazardous and industrial non-hazardous waste management in Texas.<sup>38</sup> With the passage of Senate Bill No. 2, this Division also oversees the

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<sup>26</sup> Tex. Water Code Ann. (Vernon 1988).

<sup>27</sup> Tex. Health & Safety Code Ann., amended by Tex. Rev. Civ. Stat. Ann. (Vernon Supp. 1990).

<sup>28</sup> The TWC has not been delegated federal permitting authority for the National Pollutant Discharge Elimination System. Thus, wastewater dischargers must obtain permits from both EPA and the TWC. Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 *et seq.*

<sup>29</sup> 42 U.S.C. § 300f *et seq.*

<sup>30</sup> 42 U.S.C. § 6901 *et seq.*

<sup>31</sup> 42 U.S.C. § 9601 *et seq.*

<sup>32</sup> The 1984 Hazardous and Solid Waste Amendments, Pub. L. 86-616, (November 9, 1984).

<sup>33</sup> 31 Tex. Admin. Code 335.1, 40 C.F.R. 261.3.

<sup>34</sup> Federal Water Pollution Control Act, 33 U.S.C.A. § 1251 *et seq.*

<sup>35</sup> Tex. Water Comm'n, 31 Tex. Admin. Code §§ 307.1-307.10 (West Nov. 22, 1988) (Supplemental Surface Water Quality Standards).

<sup>36</sup> Tex. Water Code § 5.012 (Vernon 1988).

<sup>37</sup> Tex. Water Code § 26.121 (Vernon 1988).

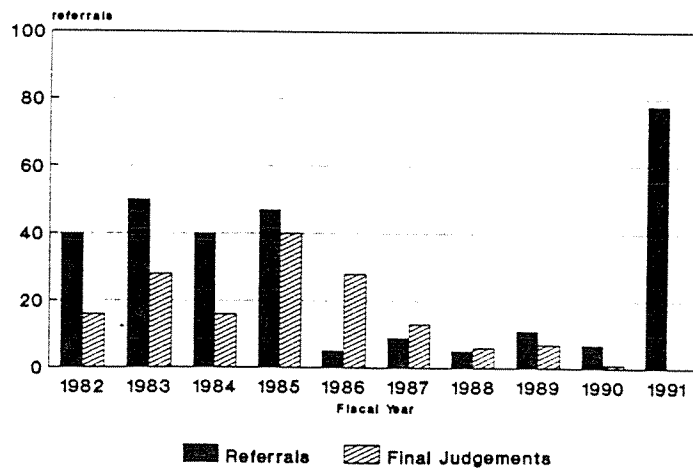
<sup>38</sup> Tex. Water Comm'n, 31 Tex. Admin. Code ch. 335 (West Nov. 22, 1988) (Industrial Solid Waste and Municipal Hazardous Waste).

State's Municipal Solid Waste program. These programs are mandated by the Texas Solid Waste Disposal Act<sup>39</sup> ("TSWDA") and by the Resource Conservation and Recovery Act<sup>40</sup> ("RCRA"). Hazardous and solid wastes are also regulated under the Injection Well Act.<sup>41</sup> The responsibilities of the Hazardous & Solid Waste Division include: review and processing of permit applications; enforcement actions; imposition of corrective action plans; monitoring, evaluation and restoration of groundwater; permitting of Class I injection wells; cleanup of abandoned hazardous waste sites.

## 1. Fiscal 1991 TWC Enforcement Results

a. TWC Referrals. The State Attorney General's Office reported a record 78 referrals from the TWC in 1991,<sup>42</sup> thereby ending the lull in TWC referrals that began when administrative enforcement powers were added to key State environmental statutes in 1985.

TWC Referrals to State Attorney General  
Civil & Criminal



Data as of 3/92; 1990 Data not complete

<sup>39</sup> Tex. Health & Safety Code Ann. ch. 361 (Vernon 1991).

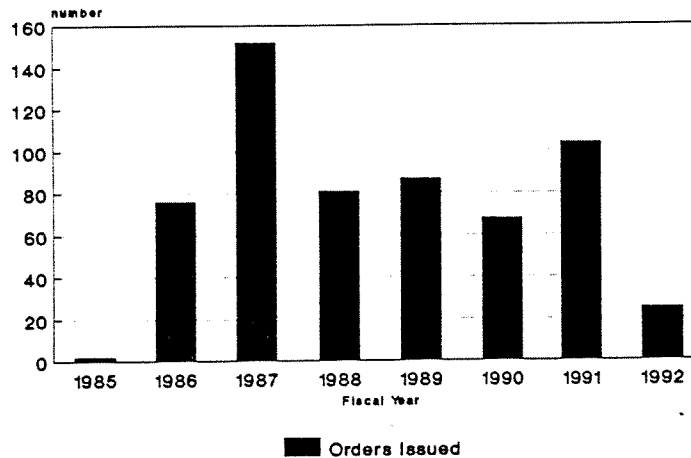
<sup>40</sup> 42 U.S.C.A. §§ 6901-6992.

<sup>41</sup> Tex. Water Code Ann. ch. 27 (Vernon 1988 & Supp. 1990).

<sup>42</sup> 1991 information from Ms. Diane Reed in the State Attorney General's Office, Environmental Protection Division. Other data compiled from: *Texas Waterfront Magazine*, Texas Water Commission's Office of Public Information; and TWC Interoffice Memorandum from Enforcement Branch to former Chairman Buck Wynne entitled: "Attorney General Case Update, TWC Administrative Order Statistics."

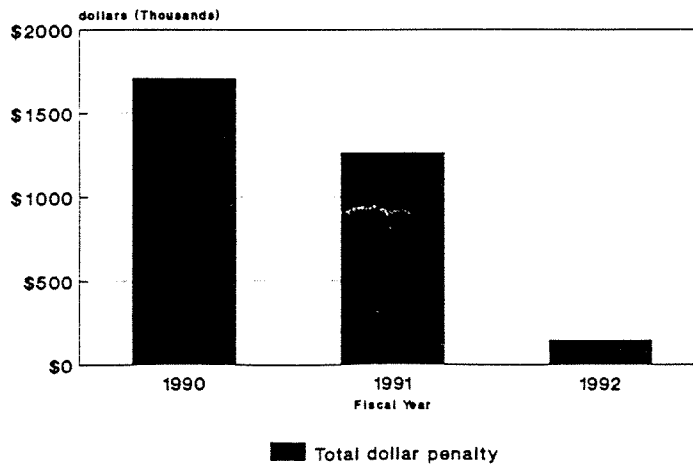
b. TWC Administrative Orders. The TWC issued 104 orders in 1991, its second highest total ever for administrative orders issued. Those orders resulted in total dollar fines of \$1,263,565.<sup>43</sup>

**TWC Administrative Orders**  
Water Quality and H&SW



Data as of November 9, 1991.

**TWC Administrative Penalty Dollars**  
Total Calculated Penalty



Data as of November 9, 1991

<sup>43</sup> Data provided by Mr. Hank Smith at the TWC.

c. **Texas Water Commission Accomplishments.** In addition to these specific 1991 enforcement actions, the TWC notes the following recent accomplishments:<sup>44</sup>

- **Hazardous Waste and Water Remediation.** In addition to the seven-fold increase in penalties, the TWC has obtained commitments from Texas industries to spend over \$180 million in environmental clean-up activities;
- **Underground Storage Tanks.** TWC has established a model Petroleum Storage Tank Program -- buttressed by the new \$70 MM Underground Storage Tank ("UST") remediation fund -- to clean up 15,000 leaking USTs;
- **Water Quality Standards.** TWC has tightened its water quality standards, placing stricter limitations on industrial and municipal discharges into State surface waters;
- **Waste Reduction.** TWC has outlined a tough waste reduction program designed to cut hazardous waste generation in Texas by 50% by 1995;
- **New Technology.** TWC is encouraging new remediation technology, such as the bioremediation process<sup>45</sup> used to abate the 1990 coastal oil spills;
- **Delegation of Federal Programs.** TWC achieved delegation of federal hazardous and solid waste programs, making Texas the first "heavy-industry" state to meet or exceed all federal regulatory, administrative and enforcement standards;
- **Hazardous Waste Enforcement Program.** TWC required the clean-up of over 1,000 hazardous waste contaminated areas in Texas through an aggressive Hazardous Waste Enforcement Program;
- **Municipal Pollution.** TWC established a Municipal Pollution Abatement Program to address run-off pollution in urban areas.

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<sup>44</sup> Source of this data is an interoffice memorandum to former TWC Chairman Buck Wynne entitled "Enforcement Actions--TWC Brag Sheet."

<sup>45</sup> In response to the June, 1990 discharge by the Mega Borg of 4 million gallons of light Angolan crude oil, the TWC and Texas General Land Office (TGLO) conducted a field demonstration of the effectiveness of naturally occurring microorganisms in open water bioremediation. The U.S. Coast Guard applied 210 pounds of Alpha BioSea process microbes which was developed by Alpha Twenty-One Corporation of Midland, Texas. The TWC/TGLO report indicated impressive visual success in reducing the spilled oil at the surface, and in the water column. Weather and control conditions limited the extent to which the cleanup could provide rigorous scientific data on the effectiveness of "at sea" bioremediation. Mega Borg Oil Spill, Texas General Land Office, Texas Water Commission (July, 1990).

## **2. Administrative Proceedings, Penalties and Enforcement Process**

Before 1985, all environmental enforcement actions were brought in state court. In 1985, however, the legislature amended the Texas Clean Air Act, the Texas Water Code, and the TSWDA to authorize the TWC and TACB to assess administrative penalties and issue administrative orders against polluters. The TWC may assess an administrative penalty not to exceed \$10,000 per day for violations of the Water Code, TSWDA or a TWC rule, order or permit.<sup>46</sup> Each day that a violation continues may be considered a separate violation for purposes of penalty assessment.<sup>47</sup>

In determining the amount of an administrative penalty the TWC considers:

- The **nature, circumstances, extent, duration and gravity** of the prohibited acts with special emphasis on the hazard or potential hazard created to the health or safety of the public (Section 26.136(c)(1);
- The **impact** of a violation on a receiving stream or underground water reservoir; on the property owners along or water users of a receiving stream or underground water reservoir (Section 26.136(c)(2);
- The **history** and extent of previous violations (Section 26.136(c)(3)(A);
- The **degree of culpability**, including whether the violation was attributable to technical problems and whether it could have been anticipated or avoided (Section 26.136(c)(3)(B);
- The **demonstrated good faith**, including actions to minimize the impact or correct the cause of the violation (Section 26.136(c)(3)(C);
- Any **economic benefit** gained by the alleged violator (Section 26.136(c)(3)(D);
- The **amount necessary to deter** future violations (Section 26.136(c)(3)(E); and,
- Any **other matters** that justice may require (Section 26.136(c)(4).

As with choosing among enforcement remedies, the TWC staff does not adhere to a rigid policy in determining the amount of a particular administrative penalty. However, under Texas case law, the Agency is required to weigh the factors described above and calculate a specific penalty. It may not simply assess

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<sup>46</sup> Tex. Water Code Ann. § 26.136 (Vernon 1988).

<sup>47</sup> *Id.* at § 26.136(b).

the statutory maximum.<sup>48</sup> In 1991, the legislature proposed, but did not pass, legislation requiring the TWC to specifically calculate the economic benefit of particular violations, with a view towards ensuring the elimination of any such benefit through penalties.<sup>49</sup> Economic benefits of violations include costs avoided through delay or non-compliance and any competitive advantages that a violator realizes due to such delayed or non-compliance. While the TWC is not currently required to specifically calculate the economic benefit of particular violations, it does have access to, and has used, EPA's Economic Benefits Model--a sophisticated computer program used by EPA to specifically calculate the economic benefit of violations.<sup>50</sup>

**a. Administrative Enforcement Procedure.**

If, after examination of the facts, the TWC's Executive Director concludes that a violation has occurred, a Preliminary Report is issued stating the facts supporting the conclusion that a violation has occurred and recommending the appropriate enforcement response.<sup>51</sup> Within ten days after the issuance of a preliminary report, the Executive Director must provide a written Notice of Violation to the respondent informing him of the Report and the violations alleged therein.<sup>52</sup> The person charged with the violation has twenty days after notice is received to give the TWC written consent to the Executive Director's report, including the recommended administrative penalty and/or remedial action, or the alleged violator may make a written request for a hearing.<sup>53</sup> Hearings conducted are relatively informal proceedings before a TWC Hearings Examiner. Failure to either pay the assessed penalty or to post a supersedeas bond for judicial review of an adverse opinion of the Hearings Examiner, will likely result in the referral of the matter to the Attorney General for collection and specific enforcement.<sup>54</sup>

**b. Negotiating Penalty Reductions.**

While an opportunity exists for an administrative hearing, over 90 percent of all TWC enforcement matters are resolved through negotiated Agreed Orders. Such Agreed Orders impose a penalty and require specific corrective action. In

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<sup>48</sup> *Supra*, note 19.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> Tex. Water Code Ann. § 26.136(d) (Vernon 1988).

<sup>52</sup> *Id.* at § 26.136(e).

<sup>53</sup> *Id.* at § 26.136(f).

<sup>54</sup> *Id.* at § 26.136(k).

negotiating Agreed Orders, one important focus will be on reducing the assessed penalty. When negotiating penalty reductions, consider the following points:

- **Take Prompt and Responsible Corrective Action.** Limit and control any continuing health danger or environmental harm. Correct the "problem" by installing pollution abatement equipment, performing necessary monitoring, testing and/or characterization of soil and groundwater, and instituting management oversight. Document all such actions.
- **Take Concrete Steps to Return to Compliance.** If the nature of the noncompliance is reasonably clear, the violator should return to compliance while the enforcement action is still pending. This will demonstrate good faith and avoid long-term oversight.
- **Justify and Document the Reasons for Your Actions.** What the TWC calls a violation may arise from a reasonable good faith interpretation of the applicable standard. Furthermore, compliance with one agency's rules (OSHA) may lead to violation of another's rules. Rigorously assemble any interpretations, authorizations, or correspondence with federal, state or local agencies which authorize or justify the original action taken.
- **Assess the Strengths and Weaknesses of Your Case.** Before initiating settlement negotiations, evaluate, with counsel, the relative strength of your position, the likelihood of success of litigation, and the scope of potential liability should an adverse judgment be rendered. This assessment will analyze the likely impact on penalties of any special environmental projects (SEPs) appropriate to your case.
- **Cooperate with the Agency.** Allow entry and access to documents and samples. Communicate frequently with the Agency on substantive issues and follow up with information as requested.
- **Take the Initiative in Settlement Discussions.** Be full of proposals and ideas. Agree to initiate environmental auditing if not currently in place, or evaluate and upgrade existing audit programs. Propose projects which give the Agency what it wants. For example, propose SEPs which go beyond mere compliance and include specific potential pollution prevention or reduction projects, restore impacted ecosystems, educate the public or industry and provide other quantifiable benefits to the government.
- **Don't Be Too Anxious to Settle or Afraid to go to Trial.** While the government may occasionally want to litigate a significant issue or use a case to "send a message," most cases do not raise issues of first impression and, thus, are not good messengers for the government. There is a strong likelihood that the agency will view trial as an unproductive drain on resources and, since lawyers are frequently young and

inexperienced, a daunting safari into uncharted territory. Use the threat (or reality) of litigation to soften the government's resistance to your settlement proposals. This can be done by the aggressive use of motion practice (*e.g.*, motions to dismiss, motions for a more definitive statement, motions regarding discovery, experts, and confidentiality claims) discovery, or pre-hearing conferences. As the process unfolds, the government will give more weight to legitimate defenses, become weary of the legalistic battle, and begin to listen to reasonable settlement proposals.

In negotiating Agreed Orders, the TWC generally follows policies employed by EPA. EPA penalty guidance provides considerable flexibility for negotiators to reduce penalties in exchange for pollution prevention or environmentally beneficial projects:

- **Pollution Prevention Projects.** Pollution prevention "source reduction" projects reduce or eliminate the creation of pollutants through (i) increased efficiency in the use of raw materials, energy, water, or other resources; or (ii) protection of natural resources by conservation. Such projects may include process enhancements, conservation techniques and changes in management practices.
- **Pollution Reduction Projects.** Pollution reduction projects lower emissions or discharges below allowable limits. Examples include projects that reduce discharges through more effective end-of-pipe or stack removal technologies, improved operation and maintenance, or recycling of residuals at the end of the pipe.
- **Environmental Restoration Projects.** An environmental restoration project is a project that goes beyond repairing the damage done to the environment caused by the violation.
- **Environmental Auditing Projects.** Environmental auditing that represents "general good business practices" are not acceptable supplemental projects. However, projects designed to correct existing management practices whose deficiencies appear to be contributing to recurring or potential violations may be allowed to mitigate penalties.
- **Enforcement-Related Environmental Public Awareness Projects.** These projects include publications, broadcasts, or seminars which address the importance or means of complying with environmental laws. Permissible public awareness projects may include sponsoring industry-wide seminars that address correcting widespread or prevalent practices.<sup>55</sup>

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<sup>55</sup> In early 1991, EPA issued a new policy on the use of supplemental enforcement projects ("SEPs") in enforcement settlements. Under this guidance, EPA will consider supplemental enforcement projects  
(continued...)

**c. TWC Penalty Policies.**

In particular, the TWC views any economic benefit gained from the violation as a penalty floor.<sup>56</sup> In weighing the statutory mitigation factors described above, TWC considers penalty reductions of 10 to 15%. In a recent enforcement case involving Formosa Plastics (discussed previously), however, the TWC actually increased the penalty amount after settlement negotiations, because additional violations were discovered in the course of penalty negotiations. The TWC also considers additional reductions in penalties for commitments by violators to perform resource recovery and pollution prevention projects that go *beyond* regulatory compliance. Penalty reductions are not considered for actions that are required merely to achieve compliance, or which any prudent company would undertake as a part of its environmental management program. Generally, the imposition of penalties reduced in exchange for such projects is deferred pending the satisfactory performance of the particular resource recovery or pollution prevention projects.<sup>57</sup>

**3. Criminal Enforcement**

**a. Solid and Hazardous Waste.** The TSWDA, in addition to civil and administrative penalties, allows the imposition of criminal penalties against any person (including corporations) that *knowingly* performs (or causes to be performed) the following acts:<sup>58</sup>

- **Transports** a hazardous waste to any location that does not have a permit (Section 361.221(a)(1));
- **Stores, processes or disposes** any hazardous waste without a permit or in knowing violation of any material condition thereof (Section 361.221(a)(2));

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<sup>55</sup> (...continued)

as a reduction of some portion of the penalty if nexus exists between the original violation and the project; the project furthers the Agency's statutory mandates to cleanup the environment and deter violations of the environmental laws by payment of substantial monetary penalty; and violations are corrected through actions to **ensure future compliance**. "Policy on the Use of Supplemental Enforcement Projects in EPA Settlements," February 12, 1991, EPA Office of Enforcement.

<sup>56</sup> The material presented in this paragraph reflects conversations with the Director to the TWC's Legal Division. *Supra*, note 19.

<sup>57</sup> *Administrative Penalties*, Mary Ruth Holder, Director, Legal Division, Texas Water Commission (June, 1992).

<sup>58</sup> Texas Health & Safety Code Ann. § 361.221 (Vernon Supp. 1991) (emphasis added).

- **Omits material information** or makes any false material statement or representation in any application, label, manifest, record, report, permit, or other regulatory document (Section 361.221(a)(3));
- Generates, transports, stores, processes, or disposes of, or otherwise handles, any hazardous waste, and knowingly **destroys, alters, conceals,** or does not file any record, application, manifest, report or other regulatory document (Section 361.221(a)(4)); and,
- **Transports without a manifest** any hazardous waste (Section 361.221(a)(5)).

Violators are subject to fines up to \$50,000 for each act of violation and for each day of violation, and/or imprisonment of up to 5 years.<sup>59</sup> The TSWDA also contains criminal penalties for *knowingly endangering* another person while transporting, processing, storing, exporting, or disposing of hazardous waste.<sup>60</sup> Fines of up to \$250,000 and/or imprisonment for up to 15 years are possible.<sup>61</sup> Corporations are subject to fines of up to \$1,000,000.<sup>62</sup>

**b. Water Code Violations.** Section 26.2121 of the Texas Water Code, added by Senate Bill No. 2 effective September 1, 1991, establishes seven criminal offenses and corresponding sanctions for water-related discharges of wastes or pollutants.<sup>63</sup> Six of these offenses require intentional or knowing conduct; one offense, however, is a strict liability crime. Pursuant to Section 26.2121(g) of the Water Code, a person or corporation may be criminally liable for discharging or permitting the discharge of a waste or pollutant that causes or threatens to cause pollution of State waters.<sup>64</sup> The term "waters of the State" is broadly defined to include essentially all waters found in the State, including groundwater.

As prosecutors interpret Section 26.2121(g), any act or omission which contaminates (or threatens to contaminate) any surface or groundwater may constitute a criminal violation unless the waste or pollutant was discharged in compliance with a TWC rule, permit or order. The prosecutor is not required

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<sup>59</sup> *Id.* at § 361.221(b)(1). Note: Repeat offenders subject to \$100,000 for each day of violation and imprisonment up to 10 years.

<sup>60</sup> *Id.* at § 361.222 (emphasis added).

<sup>61</sup> *Id.* at § 361.222(b).

<sup>62</sup> *Id.* at § 361.222(c).

<sup>63</sup> Tex. Water Code Ann. § 26.2121 (Vernon Supp. 1992).

<sup>64</sup> *Id.* at § 26.2121(g).

to prove any culpable conduct or mental state.<sup>65</sup> All that must be shown is that an unpermitted discharge of a waste or pollutant into State waters was caused or permitted, and that water pollution resulted or was threatened. An offense under this section is punishable by a fine of not less than \$100 or more than \$10,000, and may be prosecuted without alleging intent.<sup>66</sup>

Senate Bill No. 2 established the following additional crimes under the Texas Water Code:

- Intentionally or knowingly discharging or permitting the discharge of a waste or pollutant that causes or threatens to cause water pollution (Section 26.2121(a));
- Intentionally or knowingly discharging or permitting the discharge of a waste or pollutant from a point source (Section 26.2121(d));
- Intentionally or knowingly tampering with modifying, or failing to use pollution control or monitoring devices (Section 26.2121(j));
- Intentionally or knowingly making a false material statement in, or omitting material information from an application, notice, record or report (Section 26.2121(m));
- Intentionally or knowingly failing to notify or report to the TWC as required by law (Section 26.2121(p)); and
- Intentionally or knowingly failing to pay a fee (Section 26.2121(s)).

Offenses under §§ 26.2121(a) and (d) are punishable (i) for an individual by fines of not less than \$1,000 or more than \$25,000 and/or confinement in jail not to exceed one year; (ii) for a corporation, by fines ranging from \$1,000 to \$50,000. §§ 26.2121(b) and (c). Offenses under §§ 26.2121(j), (m), and (p) are punishable (i) for an individual by fines of not less than \$500 or more than \$100,000 and/or confinement in jail not to exceed one year; (ii) for a corporation, by fines of not less than \$1,000 or more than \$250,000. §§ 26.2121(k), (l), (n), (o), (q), and (r). Offenses under § 26.2121(s) are punishable (i) for an individual by a fine not to exceed twice the amount of the required fee and/or confinement not to exceed 90 days; (ii) for a corporation, by a fine not to exceed twice the amount of the required fee. §§ 26.2121(t) and (u).

c. **Each Day A Separate Offense.** With respect to all of the criminal offenses set forth in § 26.2121, each day a violation occurs or continues constitutes a separate offense. § 26.2121(w).

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<sup>65</sup> *Id.* at § 26.2121(i).

<sup>66</sup> *Id.* at §§ 26.2121(h) and (i).

d. Enhancement Provisions. The maximum punishment for any offense under § 26.2121 for both fines and confinement may be doubled if it is shown that the defendant was previously convicted of an offense under § 26.2121. § 26.2121(v).

e. Affirmative Defense. It is an affirmative defense to prosecution under § 26.2121(g) that the defendant was an employee who was carrying out his or her normal activities and was acting under orders from his or her employer, unless the person charged was engaged in knowing and willful violations. § 26.2126.

#### 4. Criminal Endangerment.

Further, § 26.2125 establishes three criminal endangerment offenses, two of which require intentional or knowing conduct; the third requires reckless conduct.<sup>67</sup>

##### a. Knowing Endangerment.

The first offense requires an intentional or knowing discharge or permitting of discharge of a waste or pollutant which *knowingly* places another person in imminent danger of death or serious bodily injury. § 26.2125(a).<sup>68</sup> This is not an offense if the discharge is made in strict compliance with all required permits or with a valid order or rule. Offenses under this section are punishable for an individual by fines of not less than \$2,500 or more than \$250,000, and/or imprisonment not to exceed 10 years. § 26.2125(b). For non-individuals, the penalty for this offense is a fine of \$5,000 to \$500,000. § 26.2125(c). If this offense results in death or serious bodily injury to any person, an individual may be punished by a fine of \$5,000 to \$500,000 and/or imprisonment of 5 to 20 years. § 26.2125(d). A non-individual may be punished by a fine of \$10,000 to \$1,000,000. § 26.2125(e). It is clear from this section that the defendant is responsible only for the defendant's *actual awareness* or *actual belief possessed* regarding the placement of another person in imminent danger of death or serious bodily injury. Knowledge of another person may not be attributed to the defendant. But, evidence that the defendant took affirmative steps to be shielded from this information constitutes legitimate circumstantial evidence to prove defendant's actual knowledge. § 26.2125(f).

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<sup>67</sup> *Id.* at § 26.2125.

<sup>68</sup> Because of the additional knowledge requirement this offense is a "result-oriented" offense, requiring the State to prove that the defendant knew that his conduct would place a person in imminent danger of death or serious bodily injury. See discussion of air emission endangerment offenses, *infra* at pp. 29-31.

**b. Knowing Conduct Which Endangers.**

The second endangerment offense arises where a person acting intentionally or knowingly with respect to the person's conduct discharges or permits the discharge of a waste or pollutant which places any other person in imminent danger of death or serious bodily injury. The distinction between this offense and the first is that in the latter case, the defendant need not have any knowledge of the fact that the intentional or knowing discharge would in fact place another person in danger of death or injury. § 26.2125(g).<sup>69</sup> This offense is punishable for an individual by a fine of \$1,500 to \$150,000 and/or imprisonment not to exceed five years. § 26.2125(h). For a non-individual the offense is punishable by a fine of \$3,000 to \$300,000. § 26.2125(i). If death or injury actually results, the penalty for an individual is a fine of \$3,000 to \$300,000 and/or imprisonment for three to ten years, and for a non-individual is a fine of \$6,000 to \$600,000. § 26.2125(k).

**c. Reckless Conduct Which Endangers.**

The third offense occurs where the person acts *recklessly*, resulting in a discharge that places another person in imminent danger of death or serious injury. § 26.2125(l). This offense is punishable for an individual by a fine of \$1,000 to \$100,000 and/or confinement in jail up to one year, and for a non-individual by a fine of \$2,500 to \$250,000. §§ 26.2125(m) and (n). If this offense results in actual death or serious bodily injury to any person, an individual may be punished by a fine of \$2,000 to \$200,000 and/or confinement of one to five years. § 26.2125(o). A non-individual may be punished by a fine of \$5,000 to \$500,000. § 26.2125(p).

**d. Affirmative Defenses.**

Section 26.2125(q) establishes an affirmative defense to the endangerment violations based on the informed consent of persons endangered. § 26.2125(q). To assert this defense, the defendant must show (i) that the conduct charged was freely consented to by the person endangered; (ii) that the danger and conduct charged were reasonably foreseeable hazards of the person's occupation, business or profession, or medical treatment; and (iii) the endangered person was made aware of the risks prior to giving consent. § 26.2125(q). It is also an affirmative defense to prosecution under § 26.2125(l) that the defendant was an employee who was carrying out his or her normal duties and was acting under orders from his or her employer, unless the person charged was engaged in knowing or willful violations. § 26.2126.

As with the criminal offenses discussed above, each day a person engages in an endangerment offense equals a separate violation. § 26.2125(r).

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<sup>69</sup> Therefore, this is a "conduct-oriented" instead of a "result-oriented" offense. See discussion of air endangerment offenses, *infra*, pp. 29-31.

### C. TEXAS AIR CONTROL BOARD

The TACB was established in 1965 and derives its regulatory powers from the Texas Clean Air Act<sup>70</sup> ("TCAA") which empowers the Board to set air quality standards<sup>71</sup>; set limits on pollutants emitted to the ambient air<sup>72</sup>; require new sources of air emissions to use the best available control technology ("BACT")<sup>73</sup>; and assess penalties for violations of the Act and the rules and regulations of the Board.<sup>74</sup>

The TACB also implements and enforces asbestos emission and work practice standards governing facility demolition and renovation in Texas.<sup>75</sup> It has been delegated authority to enforce EPA's National Emissions Standards for Hazardous Air Pollutants ("NESHAPs"),<sup>76</sup> restrictions on asbestos-related demolition, removal of asbestos and emissions from disposal of asbestos wastes.

The TACB enforces primary and secondary National Ambient Air Quality Standards<sup>77</sup> ("NAAQS") according to the State Implementation Plan ("SIP") submitted to EPA.<sup>78</sup> The Prevention of Significant Deterioration ("PSD") program is designed to achieve and maintain compliance with the primary and secondary NAAQS.<sup>79</sup> The PSD program requires a review of construction or modification of a facility which might emit air pollutants, and a permit from the TACB before construction or modification of such a facility can begin.<sup>80</sup> Before a permit is issued by the TACB, it must be shown that the

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<sup>70</sup> *Id.* at §§ 382.001-381.115.

<sup>71</sup> *Id.* at § 382.011(a)(2).

<sup>72</sup> *Id.*

<sup>73</sup> *Id.* at § 382.051.

<sup>74</sup> *Id.* at § 382.082.

<sup>75</sup> 40 C.F.R. § 61.17.

<sup>76</sup> *Id.*

<sup>77</sup> The NAAQS apply to criteria pollutants: CO, Ozone, SO<sub>2</sub>, NO<sub>2</sub>, Lead, and particulate matter. Nonattainment status designations, under the Clean Air Act amendments of 1990 ("CAAA"), for CO, Ozone, Lead and particulate matter are promulgated in 56 Fed. Reg. 56694 (Nov. 6, 1991). Final adjustments to SO<sub>2</sub> nonattainment status designations are forthcoming by the end of 1992. Only one area is nonattainment for NO<sub>2</sub>--Los Angeles, CA.

<sup>78</sup> 40 C.F.R., Part 52, Subpart 55 (1989). Note: New Texas SIP submitted and approved 9/10/91, see 56 Fed. Reg. 46116.

<sup>79</sup> 42 U.S.C. § 7475.

<sup>80</sup> 40 C.F.R. § 52.21(b)(1)(i).

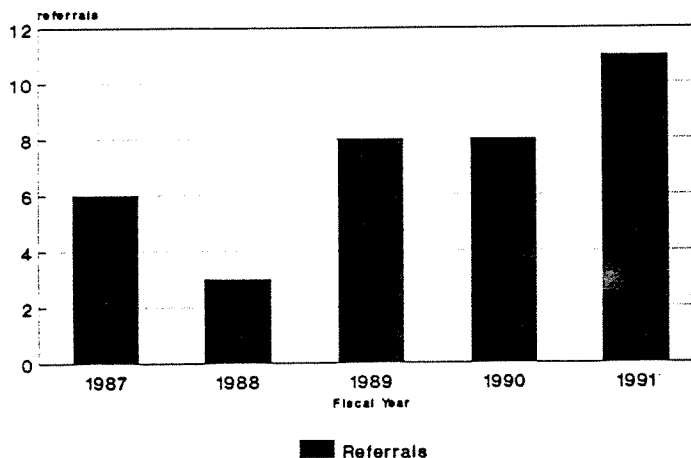
facility will comply with the requirements of NESHAPs,<sup>81</sup> PSD,<sup>82</sup> and the New Source Performance Standards ("NSPS").<sup>83</sup> NSPS are allowable levels of emissions for given categories of stationary sources.<sup>84</sup>

Unlike the TWC, the TACB has been delegated federal permitting authority.<sup>85</sup> Therefore, a non-exempt Texas source that emits pollutants into the air requires only a single state-issued permit.<sup>86</sup>

## 1. Fiscal 1991 TACB Enforcement Results

a. TACB Referrals. The TACB reported a record 11 referrals (civil and criminal) in 1991.<sup>87</sup> Referrals should continue to grow because of the TACB's more aggressive enforcement posture and the addition of new enforcement authorities to the TCAA by Senate Bill No. 2.

TACB Referrals to State Attorney General  
Civil & Criminal



<sup>81</sup> Tex. Air Control Board, 31 Tex. Admin. Code § 116.3(a)(5) (West Nov. 22, 1991) (Control of Air Pollution from Volatile Organic Compounds).

<sup>82</sup> *Id.* at § 116(3)(a)(13).

<sup>83</sup> *Id.* at § 116(3)(a)(4).

<sup>84</sup> 42 U.S.C.A. § 7411(1)(c).

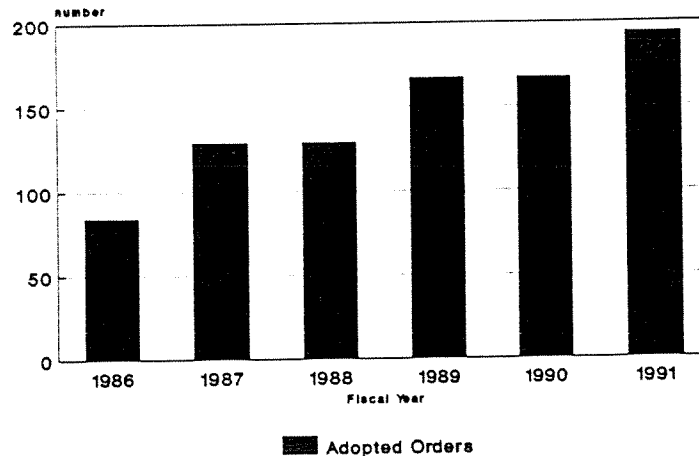
<sup>85</sup> Jim Morris, *EPA Pollution Study A Response to Birth Defects in Valley*, Houston Chronicle, May 22, 1992 at 35A. Formally Texas permits were reviewed at the Federal level.

<sup>86</sup> Currently there are 122 exemptions on the Standard Exemption List. The list is obtainable from the TACB, Austin, Texas.

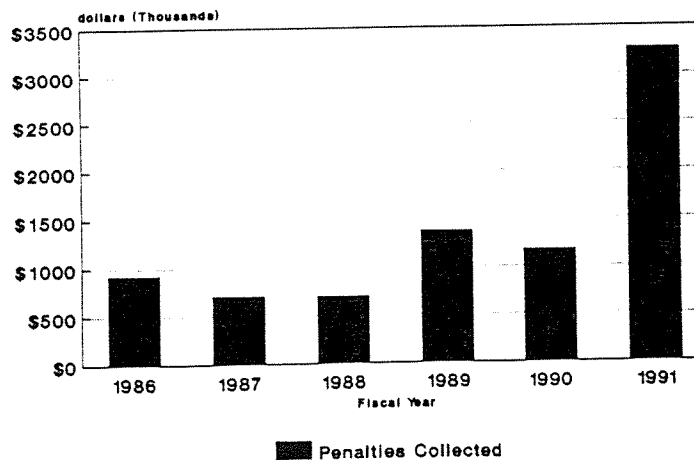
<sup>87</sup> Data from Mr. Rich Lee, TACB Compliance Officer for Region 10.

b. TACB Administrative Orders. The TACB entered a record 194 agreed administrative enforcement orders in 1991 resulting in the assessment of record penalties of \$3,269,922.<sup>88</sup>

**TACB Administrative Actions**  
Agreed Enforcement Orders Adopted



**TACB Administrative Penalties**  
Assessed & Collected



<sup>88</sup> Data from Ms. Beverly Hartsock and Mr. Dave Hendricks at the TACB.

## 2. TACB Enforcement

The TACB may bring administrative or civil enforcement actions whenever a provision of the Texas Clear Air Act or a TACB rule, order or permit has been violated.<sup>89</sup> Additionally, civil and criminal penalties may be imposed for Federal Clean Air Act NESHAPS violations.<sup>90</sup>

a. Administrative Enforcement. Since 1985, the TACB has been authorized to assess administrative penalties up to \$10,000 per day for each violation of the Texas Clear Air Act or a TACB rule, permit or order.<sup>91</sup> In determining an appropriate penalty, the TACB considers:

- **The seriousness of the violation**, including the nature, circumstances, extent, gravity and any health hazard associated with a violation;<sup>92</sup>
- **History** of previous violations;<sup>93</sup>
- Amount necessary to **deter** future violations;<sup>94</sup>
- **Efforts to correct** the violation;<sup>95</sup> and
- **Other matters** justice may require.<sup>96</sup>

Failure to pay an assessed penalty may result in the TACB calling for a compliance hearing or referring the case to the Attorney General for judicial enforcement. The number of enforcement orders with penalties have increased steadily since 1986 as have the penalty dollars assessed and collected.<sup>97</sup>

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<sup>89</sup> Tex. Health & Safety Code Ann. § 382.082 (Vernon 1991).

<sup>90</sup> 42 U.S.C.A. § 7413.

<sup>91</sup> Tex. Health & Safety Code Ann. § 382.088 (Vernon 1991).

<sup>92</sup> *Id.* at § 382.088(c)(1).

<sup>93</sup> *Id.* at § 382.088(c)(2).

<sup>94</sup> *Id.* at § 382.088(c)(3).

<sup>95</sup> *Id.* at § 382.088(c)(4).

<sup>96</sup> *Id.* at § 382.088(c)(5).

<sup>97</sup> Telephone interview with Jeanne Philquist, Enforcement Attorney with TACB, in Austin, Texas (5/27/91).

There is a feeling among the current Board and members of the public that the TACB has traditionally imposed generally light penalties. One may expect significantly increased fines and enforcement actions from the TACB, which expects to quadruple its enforcement branch over the next several years. One may also expect more criminal enforcement actions as a result of the more stringent sanctions added by Senate Bill No. 2 and the Federal Clean Air Act Amendments of 1990.<sup>98</sup>

b. Judicial Civil Enforcement. Lawsuits may be instituted by the TACB and brought by the Attorney General against any person (including corporations) that has violated, is violating or is threatening to violate a provision of the TCAA or of a TACB rule, order or permit. Civil penalties of up to \$25,000 per day per violation<sup>99</sup> may be coupled with injunctive relief to abate continuing violations and require corrective action.<sup>100</sup>

c. Enforcement of NESHAPS. Each act of noncompliance with NESHAPS requirements may result in civil penalties of up to \$25,000 per day per violation.<sup>101</sup> *Knowing* violations may result in criminal penalties of up to \$25,000 per day and/or up to one year of imprisonment.<sup>102</sup> Criminal fines of up to \$10,000 and/or imprisonment of up to six months may be enforced for *knowingly* making false statements, representations, or certifications of any required document under the federal CAA.<sup>103</sup>

d. Criminal Enforcement. Pursuant to Senate Bill No. 2, seven new criminal offenses for air pollution were added to the Health and Safety Code.<sup>104</sup> The two most significant of these offenses cover reckless endangerment and intentional or knowing endangerment. Section 382.091(a)(6) provides for criminal liability in instances where any individual or corporation recklessly (with respect to conduct) emits an air contaminant that places any person in imminent danger of death or serious bodily injury, unless the emission is made in strict compliance with Chapter 382 (Health and Safety Code) or a permit, rule,

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<sup>98</sup> Projected enforcement activity of the TACB provided by James E. Dodds of the Legal Division of the TACB, Austin, Texas, in a lecture given at South Texas College of Law (November 15, 1991).

<sup>99</sup> Tex. Health & Safety Code § 382.085 (Vernon 1991).

<sup>100</sup> *Id.* at § 382.084.

<sup>101</sup> 42 U.S.C.A. § 7413(b).

<sup>102</sup> *Id.* at § 7413(c)(1)(D) (emphasis added).

<sup>103</sup> *Id.* at § 7413(c)(2) (emphasis added).

<sup>104</sup> Tex. Health and Safety Code, § 382.091 (Vernon Supp. 1992).

variance or other order issued by the TACB.<sup>105</sup> Penalties for this offense consist of fines between \$1,000 and \$100,000 and/or imprisonment for one year for an individual, and fines between 2,500 and \$250,000 for a corporation.<sup>106</sup>

In defining the culpability (mental-state) element of this offense (under which the recklessness component is to be considered only "with respect to a person's conduct"), the legislature has made it clear that this is a "conduct-oriented" rather than a "result-oriented offense."<sup>107</sup> Therefore, "no proof is required that the defendant was aware of or was reckless about whether his conduct would place others in imminent danger of serious bodily injury or death, only that he recklessly engaged in conduct *the result of which* placed others in such danger."<sup>108</sup>

The second endangerment offense provides for the imposition of criminal penalties in cases where an individual or corporation intentionally or knowingly with respect to conduct, emits an air contaminant, with *knowledge* that the action is placing any other person in imminent danger of serious bodily injury or death, unless the emission is made in strict compliance with Chapter 382 or a permit, rule, variance or other order issued by the TACB.<sup>109</sup> The additional knowledge requirement for this offense, unlike the reckless endangerment offense, makes it a "result-oriented" offense.<sup>110</sup> Therefore, "not only must the State prove that the defendant emitted an air contaminant intentionally or knowingly, but the State must further show that when the defendant engaged in such conduct, he did so with knowledge that his conduct would place others in imminent danger of serious bodily injury or death."<sup>111</sup>

Penalties for this offense range from \$1,500 to \$150,000 in fines, and/or imprisonment for up to five years for an individual, and include fines of between \$3,000 and \$300,000 for corporations.<sup>112</sup>

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<sup>105</sup> *Id.* at § 382.091(a)(6).

<sup>106</sup> *Id.* at § 382.092(d).

<sup>107</sup> *Environmental Crimes in a Nutshell*, Durham, Phelps and Lynch, Assistant Attorney Generals, paper presented at 1992 Civil Law Seminar, Dallas (May, 1992), p.7 (hereinafter *Environmental Crimes*).

<sup>108</sup> *Id.* (Emphasis in original).

<sup>109</sup> Tex. Health and Safety Code, § 382.091(a)(7) (Vernon Supp. 1992).

<sup>110</sup> *Environmental Crimes*, *supra*, note 107.

<sup>111</sup> *Id.*

<sup>112</sup> Tex. Health and Safety Code § 382.092(e) (Vernon Supp. 1992).

e. **Affirmative Defenses.** Section 382.094(1) provides for an affirmative defense to the endangerment violations based on the informed consent of persons endangered.<sup>113</sup> To assert this defense, the defendant must show that (i) the conduct constituting endangerment was freely consented to; (ii) the danger and conduct were reasonably foreseeable hazards of an occupation, business, medical treatment or scientific experimentation; and (iii) the person endangered was made aware of the risks involved before giving consent.<sup>114</sup> It is also an affirmative defense under § 382.091(a)(6) that the person charged was (i) an employee; (ii) carrying out normal activities; and (iii) acting under orders from his employer, unless the person charged engaged in knowing or intentional violations.<sup>115</sup>

The remaining air pollution offenses added by Senate Bill No. 2 all require a showing that the conduct was engaged in intentionally or knowingly. They include: failing to obtain preconstruction or federal operating permits; failing to publish notice of intent to obtain such permits or to be covered by a standard exemption<sup>116</sup>; failure to pay required fees<sup>117</sup>; false statements to, or omission of information from, reports to the TACB (Section 382.091(a)(3)); failure to notify or file reports with the TACB as required (Section 382.091(a)(4)); and tampering with monitoring devices (Section 382.091(a)(5)). Penalties for these offenses vary widely depending on the offense. The false statements, failure to notify and tampering offenses provide for fines between \$500 and \$100,000 and/or prison sentences not to exceed one year for individuals, and fines between \$1,000 and \$250,000 for corporations.<sup>118</sup>

f. **Each Day A Separate Offense.** With respect to all of the criminal air pollution offenses, each day a violation occurs constitutes a separate offense (Section 382.091(b)). Further, pursuant to § 382.092(g), the maximum punishment for both fine and imprisonment may be doubled if it is shown at trial that the defendant was previously convicted of an offense under § 382.091.<sup>119</sup>

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<sup>113</sup> *Id.* at § 382.094(1).

<sup>114</sup> *Id.*

<sup>115</sup> *Id.* at § 382.094(2).

<sup>116</sup> *Id.* at §§ 382.0518(a), 382.054, 382.056(a), and 382.058(a).

<sup>117</sup> *Id.* at § 382.091(a)(2).

<sup>118</sup> *Id.* at § 382.092(c).

<sup>119</sup> *Id.* at § 382.092(g).

**g.     Key Enforcement Actions.**

**Frost Fuels Corporation . . . . . \$5,800.00**

The TACB assessed an administrative penalty of \$5,800 against this Tarrant County facility for operating a fuel storage and dispensing facility in a manner which *may* emit air contaminants without first obtaining a permit or qualifying for a standard exemption.

**Crown Central Petroleum Corporation . . . \$455,825.00**

The TACB assessed one of the largest administrative penalties ever against this Harris County Facility for modifying a fluid catalytic cracking unit without first obtaining a permit or qualifying for a standard exemption.

**D.     TEXAS RAILROAD COMMISSION**

**1.     Statutory Authority and Functions**

The Texas Railroad Commission ("RRC") is authorized by the Texas Natural Resource Code to administer and regulate the exploration, production and distribution of oil and gas in Texas.<sup>120</sup> The RRC also has jurisdiction over environmental matters arising from its responsibility to prevent pollution of the surface and subsurface water in the State from the effects of the exploration and production of oil and gas, as delegated by Texas Water Code § 26.131.<sup>121</sup> The RRC is also the state agency responsible for administering the Injection Well Act with respect to oil and gas waste.<sup>122</sup>

**2.     Enforcement**

The RRC is authorized to assess administrative penalties against violators of RRC rules governing oil and gas exploration and production and the transportation of gas and gas pipeline facilities.<sup>123</sup> Administrative penalties of up to \$10,000 per day per violation may be assessed.<sup>124</sup> Additionally, the RRC has

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<sup>120</sup> Tex. Nat. Res. Code Ann. § 81.051 *et seq.* (Vernon 1978).

<sup>121</sup> Tex. Water Code Ann. § 26.131 (Vernon 1988).

<sup>122</sup> *Id.* at § 27.031.

<sup>123</sup> Tex. Rev. Civ. Stat. Ann. art. 6053-2 (Vernon Supp. 1990).

<sup>124</sup> *Id.*

the authority to institute a civil suit for any violation of RRC rules,<sup>125</sup> imposing penalties up to \$1,000 per day per violation.<sup>126</sup>

Criminal penalties are available for *intentional* violations of RRC rules.<sup>127</sup> Criminal penalties include fines of up to \$25,000 and/or imprisonment of up to five years.<sup>128</sup> The RRC may also institute a civil suit in a district court for injunctive relief to prevent a continuing violation.<sup>129</sup>

## **E. TEXAS DEPARTMENT OF HEALTH**

As previously noted, substantially all of the environmental enforcement functions of the Department of Health have been transferred to the TWC pursuant to Senate Bill No. 2. The author expects enforcement of these programs to expand significantly reflecting TWC enforcement programs and policies.

## **F. TEXAS PARKS AND WILDLIFE DEPARTMENT**

### **1. Statutory Authority and Functions**

The Texas Parks and Wildlife Code designates The Texas Parks and Wildlife Department ("P&WD") as the State agency with primary responsibility for protecting the State's fish and wildlife resources.<sup>130</sup> Additionally, along with the TWC, the P&WD has been designated a State of Texas trustee for natural resources for purposes of CERCLA and the Clean Water Act.<sup>131</sup>

### **2. Enforcement**

The Resource Protection Division of the P&WD enforces the statutes protecting fish and wildlife resources by investigating fish kills and any type of pollution that may cause loss of fish or wildlife resources and taking the necessary action to identify the cause and party responsible for the fish kill or

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<sup>125</sup> *Id.* at art. 6053-1(C).

<sup>126</sup> *Id.*

<sup>127</sup> *Id.* (Emphasis added).

<sup>128</sup> Tex. Nat. Res. Code § 117.053 (Vernon Supp. 1990).

<sup>129</sup> *Id.* at § 117.052.

<sup>130</sup> Tex. Parks & Wild. Code Ann. § 12.001(a) (Vernon 1976).

<sup>131</sup> Letter to EPA Administrator William K. Reilly from former governor William P. Clements (Oct. 18, 1990) (Discussing State of Texas Trustees for Natural Resources).

pollution.<sup>132</sup> The P&WD estimates the monetary value of lost resources and seeks remuneration through suit in county or district court by the Attorney General on behalf of the State of Texas.<sup>133</sup>

The P&WD may enforce regulations restricting unauthorized discharges of waste or pollutants into or adjacent to waters of the State, as well as enforcing TWC rules, orders or permits regulating discharges when such violations affect aquatic life or wildlife of the State.<sup>134</sup>

P&WD actions have resulted in settlements of amounts up to \$146,000 for a sulfuric acid spill into the Medina River.<sup>135</sup> Settlements include the value of damage to fish and wildlife resources as well as the cost of the investigation by the P&WD.<sup>136</sup>

## G. TEXAS DEPARTMENT OF AGRICULTURE

### 1. Statutory Authority and Functions

The Texas Department of Agriculture ("TDA") is the State agency primarily charged with the regulation of pesticides and the development of the agriculture industry as well as related industries.<sup>137</sup> One of TDA's primary functions is to regulate the use of pesticides and herbicides pursuant to the Texas Pesticide Control Act ("TPCA")<sup>138</sup> and the Texas Herbicide Law.<sup>139</sup> Regulation is accomplished by the registration of specific chemical formulations, restricting the use of the most toxic products to certified applicators, labeling requirements regarding target pests, application methods, dosage rates, and the registration and licensing of manufacturers and applicators.

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<sup>132</sup> Tex. Park & Wild. Code Ann. § 12.0011(b) (Vernon 1976).

<sup>133</sup> *Id.*

<sup>134</sup> Tex. Water Code Ann. § 26.124(b) (Vernon 1991).

<sup>135</sup> Data obtained from Interoffice Memorandum entitled "History of Settled or Filed Cases" provided by David R. Sager Ph.D., Chief, Environmental Contaminants Branch, Resource Protection Div. of the Texas Parks & Wildlife Department.

<sup>136</sup> Tex. Water Code Ann. § 26.124(b) (Vernon 1991).

<sup>137</sup> Tex. Agric. Code Ann. § 12.001 *et seq.* (Vernon 1982 and Supp. 1990).

<sup>138</sup> TPCA § 76.004 (Supp. 1990); § 76.001 *et seq.* (Vernon 1982 & Supp. 1990); 4 Tex. Admin. Code § 7.1 *et seq.* (West 1989 & Supp. 1990-91).

<sup>139</sup> Texas Herbicide Law § 75.022 (Vernon 1982); Tex. Agric. Code Ann. § 75.001 *et seq.* (Vernon 1982 & Supp. 1990); 4 Tex. Admin. Code § 11.1 *et seq.* (West 1989 & Supp. 1990-91).

## **2.     Enforcement**

The TDA has authority to revoke, deny, cancel, suspend or modify pesticide registrations, permits and licenses for violations of the relevant acts. Additionally, penalties of up to \$1,000 per day may be levied for violations of the statutes and regulations.<sup>140</sup> The TPCA also classifies as misdemeanors and third-degree felonies certain specific violations of the Act.<sup>141</sup>

## **H.     THE GENERAL LAND OFFICE**

The General Land Office ("GLO") manages 20.5 million acres of State of Texas land. Various divisions of the GLO administer programs dealing with oil spills, coastal management plans, natural gas vehicles, recycling, beach erosion and household hazardous waste.<sup>142</sup>

## **I.     THE OFFICE OF THE ATTORNEY GENERAL**

### **1.     Overview**<sup>143</sup>

The Environmental Protection Division of the Attorney General's office represents the State's environmental and natural resource agencies in trial and appellate courts. The attorneys of this division process citizen complaints; prosecute violators of statutes and agency regulations seeking court penalties and remedial action; enforce laws such as the Texas Clean Air Act, Water Quality Act, and Solid Waste Disposal Act; defend Texas statutes and regulations against legal challenges; and provide legal counsel to client agencies.

The Attorney General is the lawyer for the people of Texas and is charged under the Texas Constitution to defend the laws and the State Constitution. The Attorney General, Dan Morales, emphasized a ten-point environmental program in his campaign. A key point in his program was his proposal that the Attorney General's office be given independent authority to prosecute environmental cases (civil and criminal) without waiting for an agency referral. Morales' commitment to strong environmental regulation is evidenced by his "intention . . . to put

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<sup>140</sup> TPCA § 76.156 (Supp. 1990).

<sup>141</sup> TPCA § 76.202 (Supp. 1990).

<sup>142</sup> See "Protecting our Heritage," Texas General Land Office.

<sup>143</sup> Quotes from this section gathered from miscellaneous press releases from the Attorney General's Office and from telephone interview with Nancy Lynch, head of the environmental protection division of the Texas Attorney General's Office, Austin, Texas (May 23, 1991).

muscle into environmental enforcement, to put an environmental cop on the industrial street corner and to put environmental prosecution laws on the books so we can hand down criminal indictments which stick."<sup>144</sup>

The Attorney General has also sought specific legislative authority to initiate prosecution for environmental crimes and independently impose environmental penalties. During the last legislative session, a bill was introduced which would have created a new section of environmental crimes in the State Penal Code and would have provided for civil and criminal penalties.<sup>145</sup> This bill and related bills were hailed by Attorney General Dan Morales as significant aids in "eliminating the poisoning of Texas."<sup>146</sup>

Despite heavy support by Morales and Governor Ann Richards, the Environmental Crimes Bill failed to pass the final hurdle in the May, 1991 legislative session. Nancy Lynch, head of the Attorney General's Environmental Protection Division, noted while there has been a "lack of criminal enforcement it will be a focus in the future."<sup>147</sup> "The eventual passage of an Environmental Crimes Bill should result in a significant increase in criminal enforcement,"<sup>148</sup> Ms. Lynch feels.

## 2. Innovative Enforcement Remedies<sup>149</sup>

Recently, several significant pre-existing but unconventional theories of environmental criminal liability and enforcement have been suggested for corporations and their high level managers. The bases for such criminal liability and enforcement/investigatory powers is found in the Texas Penal Code, the Texas Miscellaneous Corporation Laws, and the Texas Business Corporation Act, and are enforced by or through the Attorney General's Office.

a. Reporting Requirements, Document Reviews. Article 17A.09 of the Texas Penal Code requires a court to notify the Attorney General of the criminal conviction of a corporation, or of a high managerial agent of the

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<sup>144</sup> *Id.*

<sup>145</sup> HB 2237.

<sup>146</sup> Morales feels with eventual passage of the bill: "Polluters in Texas will be duly warned they had better clean up their act now. If they refuse, they will be forced to pay for the cleanup . . . if they still don't quit polluting, their right to do business will be suspended, and if even that fails to convince them, they will be put behind bars where they belong." See, *supra* note 143.

<sup>147</sup> See, *supra* note 143.

<sup>148</sup> *Id.*

<sup>149</sup> Discussion abstracted from *Criminal Penalties and Sanctions: Individual and Corporate*, Ken Oden, Travis County Attorney (May, 1991).

corporation, with respect to criminal offenses committed in the conduct of the corporation's business, when the conviction becomes final and nonappealable.<sup>150</sup> The notification is required to be in writing and must specify the name of the corporation, its registered agent and the corporation's registered address, or the high managerial agent's name and address, as the case may be. Additionally, the notification must include certified copies of the judgment and sentence, and the complaint, information or indictment upon which the judgment and sentence are based.<sup>151</sup>

The requirements of Article 17A.09 are significant in many respects given the type of information involved and the fact that the information is retained by the chief law enforcement officer of the State. These requirements take on even greater importance in light of the Attorney General's corporate dissolution powers discussed in b. below.

In addition to these reporting requirements, the Attorney General is authorized under the Texas Miscellaneous Corporation Laws to examine the books and records of any Texas corporation to the extent it deems such an investigation necessary.<sup>152</sup> Failure to comply with a proper request of the Attorney General, may subject the corporation and its officers to civil and criminal penalties, and the potential revocation of the corporation's charter. Officers are subject to criminal fines and imprisonment of not less than 30 days.<sup>153</sup>

**b. Corporate Death Penalty.** As noted above, one of the most significant ramifications of the requirement that corporate criminal violations (including environmental violations) be reported to the Attorney General is the Attorney General's power to dissolve the corporation. In instances where a corporation or a high managerial agent (with respect to the corporation's affairs) is convicted of a felony, the Attorney General is entitled upon making certain showings to obtain a court order dissolving the corporation.<sup>154</sup> The action to dissolve must be filed in the district court of the county where the corporation's registered office is located, or in a Travis County district court.

The district court is entitled to dissolve the corporation if the State establishes that: (i) the corporation, or a high managerial agent acting on behalf of the corporation, has engaged in a persistent course of felonious conduct; and

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<sup>150</sup> Tex. Penal Code Ann. art. 17A.09 (Vernon 1989).

<sup>151</sup> *Id.*

<sup>152</sup> Tex. Rev. Civ. Stat. Ann. art. 1302-5.01 et seq. (Vernon 1980).

<sup>153</sup> *Id.* at art. 1302-5.05.

<sup>154</sup> Tex. Bus. Corp. Act art 7.01 (Vernon 1980).

(ii) to prevent such future conduct, dissolution of the corporation is in the public interest.<sup>155</sup>

## **J. LOCAL GOVERNMENTAL ACTIVITIES; ENFORCEMENT AUTHORITY OF DISTRICT AND COUNTY ATTORNEYS**

Several Texas environmental statutes authorize local governments to enforce their provisions and to take other actions necessary to protect the environment. Two of the most significant examples of this authority are found in the Texas Water Code and the Texas Clean Air Act. Subject to certain limitations, each of these statutes provides for civil and criminal enforcement by local governments through their County or District Attorneys, without the participation of, or invitation of enforcement action by, the TWC or the TACB.

### **1. Texas Water Code**

Section 26.124 of the Texas Water Code authorizes local governments to institute suits to impose civil sanctions for violations of the Water Code "occurring within the jurisdiction of a local government, exclusive of its extraterritorial jurisdiction." Specifically, Section 26.124 provides that a local government "may have a suit instituted in a district court through its own attorney for injunctive relief or civil penalties or both...against the person who committed...the violation."<sup>156</sup>

This provision empowers local County Attorneys to exercise parallel enforcement authority with the TWC. Section 26.124 further provides, however, that in order for civil enforcement to be commenced by the County Attorney, such action must have been first authorized by the county's legislative body.<sup>157</sup> Additionally, at least one Texas court has held that enforcement authority of local governments must be exercised in a manner that promotes, but does not hinder or interfere with, the enforcement program of the principal state regulatory agency with jurisdiction.<sup>158</sup>

As noted above, a local government's enforcement powers under the Texas Water Code may be exercised only within its geographic area, exclusive of any extraterritorial jurisdiction that the local government may have. Of the various enforcement and

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<sup>155</sup> Tex. Bus. Corp. Act. art. 701(f) (Vernon 1980). It is important to note that this dissolution power applies only to corporate felonies, not misdemeanors, and that the persistent commission of felonies must be established for the remedy to be exercised. The majority of Texas environmental offenses would be classified as misdemeanors under the Texas Penal Code. However, certain of the endangerment environmental criminal offenses (discussed previously) would constitute felonies under the Penal Code.

<sup>156</sup> Tex. Water Code Ann. § 26.124 (Vernon 1988).

<sup>157</sup> *Id.*

<sup>158</sup> *Jackson County Vacuum Truck Services, Inc. v. Lavaca-Navidad River Authority*, 701 S.W.2d 12 (Tex. App.-Corpus Christi 1985).

investigatory powers granted to local governments under the Water Code, only those granted under Section 26.175 are not expressly limited to the local government's territorial jurisdiction. Section 26.175 enables local governments to enter into cooperative agreements with the TWC to perform water quality management inspections and certain enforcement functions.<sup>159</sup> Presumably, the jurisdictional authority of the local government in such arrangements would be addressed in the language of such cooperative agreements.

The Water Code provides local governments with several other enforcement/investigatory powers:

- Section 26.171 authorizes local governments to inspect **public water** in its area;
- Section 26.173 enables local governments to make written **recommendations** to the TWC regarding water quality standards for public water within its territorial jurisdiction;
- And, significantly, Section 26.174 empowers local governments to "**enter public and private property** within its territorial jurisdiction to make inspections and investigations of conditions relating to water quality."

## **2. Texas Clean Air Act (TCAA)**

The TCAA authorizes local governments to exercise the same kind of enforcement and investigatory powers as those granted under the Texas Water Code. Section 382.114 of the TCAA permits local government to bring enforcement actions for injunctive relief and the imposition of civil penalties within their jurisdiction.<sup>160</sup> As with the Water Code scheme, Section 382.115 of the TCAA grants local governments the authority to enter into cooperative agreements with the TACB to provide for the performance of air quality management, inspection and enforcement functions, and to provide technical and information exchange services.<sup>161</sup>

Other enforcement/investigatory powers granted to local governments under the TCAA are as follows:

- Section 382.112 authorizes local governments to make **recommendations** to the TACB concerning rules and regulations

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<sup>159</sup> Tex. Water Code Ann. § 26.175 (Vernon, 1988).

<sup>160</sup> Tex. Health and Safety Code § 382.114 (West 1992).

<sup>161</sup> *Id.* at § 382.115 (West 1992).

that affect an area within the local government's territorial jurisdiction;

- Also, significantly, Section 382.111 of the TCAA which grants local governments the power to "inspect the air and to enter public or private property in its territorial jurisdiction."<sup>162</sup>

### 3. Criminal Jurisdiction

In addition to their authority to seek civil judicial sanctions, District and County Attorneys are empowered to prosecute criminal violations of certain Texas environmental laws. District Attorneys represent the State in all criminal cases brought within their districts and in connection with all appeals of verdicts rendered in the district court.<sup>163</sup>

The jurisdiction of County Attorneys over criminal cases is limited to those over which the county court has jurisdiction. County Attorneys may initiate misdemeanor criminal cases without consulting with or obtaining a referral from the relevant environmental regulatory agency. However, County Attorneys must be specifically authorized by their respective legislative bodies to initiate judicial civil enforcement. As a general matter, felony cases are brought by District Attorneys. County Attorneys may, however, bring felony criminal cases pursuant to special agreement with the District Attorney; and County Attorneys may represent the State in criminal cases in the absence of the District Attorney's participation. Further, County Attorneys are required to represent the State in county court criminal case verdicts that are appealed, and are required to assist the relevant District Attorney in the prosecution of any case on behalf of the State in District Court.<sup>164</sup>

## IV. EPA'S ENFORCEMENT ACTIVITIES AS THEY EFFECT TEXAS

### A. REGION VI ENFORCEMENT PRIORITIES<sup>165</sup>

EPA's Regional Office in Dallas oversees the Federal and State environmental programs in Texas.<sup>166</sup> The overall goal of this office -- deemed Region VI by EPA --

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<sup>162</sup> *Id.* at § 382.111 (West 1992).

<sup>163</sup> Tex. Code Crim. Proc. Ann. art 2.01 (Vernon Supp. 1992).

<sup>164</sup> *Id.* at art. 2.02 (Vernon Supp. 1992).

<sup>165</sup> See FY 1990 EPA *Enforcement Accomplishments Report*, U.S. EPA (May, 1991) with respect to the discussion in Sections A, B and C.

<sup>166</sup> EPA's Dallas Regional Office has jurisdiction over activities in the states of Arkansas, Louisiana, New Mexico, Oklahoma and Texas.

is to achieve compliance through fully considered, decisive and effective state and federal enforcement. Region VI's enforcement program seeks to:

- Emphasize **environmentally significant** and precedent-setting cases;
- Assess penalties large enough to **remove the economic benefit** of non-compliance and deter future violations;
- Use leading-edge **enforcement techniques** to complement traditional activities; and
- **Leverage environmental protection** capability through state enforcement and state institution building.

#### **B. VOLUNTARY TOXICS RELEASE REDUCTION PROJECT**

In 1990, the Region initiated a special pilot enforcement project, the Toxic Release Reduction Project, designed to obtain voluntary reductions in the volume of toxic chemicals emitted from industrial sources. The project seeks to explore the possibility of reducing toxic emissions, insuring compliance with all regulatory provisions, and encouraging comprehensive multi-media risk assessments. A key feature of this effort is meetings between the Regional Administrator, State officials, and company executive officers leading to commitments for voluntary emissions reductions.

This EPA project seeks facility emission reductions through formal enforcement actions; review of existing permits; non-traditional methods, such as discussions between the Regional Administrator and facility executives to obtain voluntary facility-wide emission reductions; environmental awards for facilities which are in compliance with all regulations in an exemplary manner; and incentives to encourage facilities to report and correct violations.

#### **C. ENVIRONMENTAL AWARDS PROGRAM**

Through the Region's awards program, members of the regulated community that achieve exemplary compliance in all media are recognized by the Regional Administrator. This program has been well received in the regulated community and recognized on a national level.

#### **D. MULTI-MEDIA ENFORCEMENT<sup>167</sup>**

The Region is serious about multi-media inspections. Four such inspections were completed in 1991, each involving technical and enforcement personnel from all EPA programs and from the relevant State agencies. The inspections were designed to assure that targeted facilities were in compliance with all environmental statutes and were not

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<sup>167</sup> Discussion in D and E abstracted from FY 1991 EPA *Enforcement Accomplishments Report* (April 1992).

releasing unauthorized material to the environment through any regulated medium. In addition, each of these facilities was requested to and has submitted a voluntary Toxics Reduction Plan, proposing voluntary reductions in toxic releases. The compliance status of each of these facilities in the various media is either under review or negotiations have commenced with a view toward developing a compliance order. Toxic Reduction Plans are being carefully analyzed and will be approved after compliance status is determined for all media.

To plan for expanded multi-media enforcement activities in 1992, Region VI prepared a Multi-Media Enforcement Strategy which targets facilities for multi-media inspections based on environmental risk and on the likelihood of violations in more than one program. The strategy is intended to provide for several levels of multi-media inspections, including very intensive inspections involving personnel from all state and federal programs. The Region's 1992 strategy has also been provided to Texas and other States with a request that the states develop similar strategies in 1992 for 1993.

#### **E. U.S./MEXICO PROGRAM**

Region VI officials met with Mexico's Secretariat of Urban Development and Ecology (SEDUE), EPA's counterpart in Mexico, to begin work on an import/export database integrating existing EPA/SEDUE data. The database is to be used as a tool for coordinated enforcement of U.S.-Mexico regulations related to hazardous waste transport and management. The Region joined with SEDUE on seven cooperative visits to U.S. and Mexican maquiladora facilities to review compliance by those facilities with U.S. and Mexico hazardous waste requirements. The U.S. is particularly interested in compliance by maquiladoras, manufacturing plants located in Mexico which utilize U.S. raw materials and export final products to the U.S.

In December 1989, Presidents Salinas and Bush requested that their countries' respective environmental agencies draft an Integrated Border Environmental Plan (IBEP) to assure that the border environment would be protected. Region VI was the major author of the industrial source control and hazardous waste sections of this document.

In 1991, Region VI and SEDUE co-hosted the third annual Maquiladora Conference in Tijuana. The conference was attended by 700 participants. The principal purpose of the conference was to review implementation of the 1983 U.S./Mexico Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area. The Conference focused on the implementation of Annex III of the agreement, which concerns the transboundary shipment of hazardous wastes and materials. The conference addressed U.S. and Mexican regulations that govern the generation, transportation, treatment, storage and disposal of hazardous wastes generated by the maquiladoras and U.S. border facilities.

On September 11, 1991, EPA Region VI officials met with representatives of the U.S. parent companies of eight maquiladoras operating in the border region to discuss the impacts of the latest international environmental developments on their operations. EPA explained the status and direction of the proposed Integrated Border Environmental

Plan (IBEP), as well as U.S. initiatives planned for 1991 through 1994. Each company was asked to sign an environmental compliance pledge committing to make every effort to ensure that its operations in Mexico, as well as the operations of all maquiladora subsidiaries or other affiliates operating in Mexico, fully comply with Mexico's environmental laws. In addition, each company was requested to sign a compliance assessment pledge committing to the initiation of assessments of the compliance status of all of its operations in Mexico. Each company was also asked to submit to SEDUE, either a statement that its operations were in compliance with Mexico's environmental laws or a proposal to expeditiously come into compliance with Mexico's environmental laws, and was asked to submit to Region VI a confirmation that it had transmitted the results of the assessment to SEDUE.

## **V. A LOOK AHEAD: ENFORCEMENT PRIORITIES, INITIATIVES AND TRENDS**

In a world with limitless resources, environmental compliance would be easy. In the real world of scarce resources, sophisticated environmental managers must choose their course wisely. By reviewing the Agency's enforcement priorities and directives, the regulated community can direct resources towards areas presenting the highest potential enforcement liability.

### **A. EPA'S ENFORCEMENT PRIORITIES FOR FISCAL YEAR 1992**

In 1991, EPA began to implement its "Enforcement Four-Year Strategic Plan"<sup>168</sup> and the "Enforcement in the 1990s Project".<sup>169</sup> These guidance documents envision a smooth-running cooperative enforcement effort whereby federal, state and local governments and citizens groups combine resources to foster compliance in areas involving the most significant environmental and health risks.

EPA's 1992 enforcement initiatives include:

- **Targeting Violations and the "Cluster" Strategy.** Identification of target industries and pollutants. The enforcement strategy includes "clustering" individual cases for filing to achieve maximum deterrence through publicity and to improve efficiency in prosecuting and settling cases.
- **Criminal Enforcement.** Criminal enforcement will continue to expand as a result of the expanded felony sanctions in the environmental statutes, continued application of the Federal Sentencing Guidelines, increased training of and cooperation with state prosecutors, and the increased commitment of resources stemming from the Pollution Prosecution Act of 1990.

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<sup>168</sup> United States Environmental Protection Agency (Feb. 1991), Office of Enforcement.

<sup>169</sup> United States Environmental Protection Agency (Oct. 1991), Office of Enforcement.

- **Multi-Media Enforcement.** An increasing number of enforcement cases will allege violations under multiple statutes as separate enforcement programs coordinate their inspections bringing multiple media violation charges in a single action filed against the alleged violating facility or company.
- **Enforcement Program-by-Program Priorities.** To complement and add focus to these enforcement initiatives, each EPA program prepares (a) an annual set of enforcement priorities and (b) defines violations which constitute "significant non-compliance," ("SNC") in its respective program area. Inspection resources and casework are expected to be devoted first to violations in the priority areas. SNC violations are given management priority over less significant violations. EPA managers are evaluated against their success in bringing SNCs back into compliance. Members of the regulated community and their counsel are well served to know whether their activities fall within a priority area and whether a violation would be considered SNC. Further information is available from EPA's Office of Enforcement Policy, Washington, D.C. See Attachment B.
- **Special Environmental Crimes Strike Force in Houston.** In April, 1992, Ronald G. Woods, the U.S. Attorney for the Southern District of Texas, and Steven Wells, EPA Criminal Investigator Region VI, announced that EPA would establish a satellite office of EPA's Office of Criminal Investigations in Houston.<sup>170</sup> This special strike force will work with the U.S. Attorneys Office to investigate the activities of the gulf coast area chemicals, petrochemicals, reclamation recycling and hazardous waste management industries.

Perhaps one indication of this effort was the July 22 execution of a criminal search warrant at the Bethlehem Steel BethShip, Sabine Yard in Port Arthur. Approximately 40 federal and state investigators -- representing EPA, the FBI, U.S. Marshall's Service, U.S. Coast Guard, TWC and Beaumont Police Department -- entered the drydock facility looking for evidence that spent sand-blasting grit was being discharged from the facility without proper permits. The Affidavit in support of the search warrant indicated that material discharged from the Yard in the Sabine-Neches Waterway may have contained such toxic contaminants as barium, arsenic, mercury, benzene, selenium, methyl ethyl beytone, cadmium, lead, acetone, and toluene.

Within 24 hours of the execution of the search warrant, investigators had interviewed 170 current and prior employees, contractors and others at the facility, and had established a semi-permanent "command post" in a mobile home. This broad-scale operation may be a dramatic harbinger of expanded use of the criminal investigative techniques in Texas in the future.

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<sup>170</sup> Remarks by Ronald G. Woods at the 14th Annual Corporate Counsel Institute, April 23, 1992, Doubletree Hotel, Houston, Texas.

## **B. THE TEXAS CLEAN AIR STAR PROGRAM**

### **1. Overview**

At its March 12, 1992 meeting, the Texas Air Control Board established a special Clean Air STAR Task Force ("Task Force"). The Task Force was formed to propose to the Board a program that would encourage, acknowledge, and reward companies which go beyond the minimum standards of compliance with the Texas Clean Air Act.

### **2. Model for TACB STAR Program**

As conceived by the TACB, such a program would use as its model OSHA's Voluntary Protection Program known as the STAR Program. The OSHA STAR program is probably the most well known and successful regulatory self-policing program. The purpose of the OSHA STAR program is to emphasize, encourage and reward excellence in employer occupational safety and health programs. To qualify for participation in OSHA's STAR Program, companies must demonstrate, among other things, that they have (i) a compliance record which exceeds industry standards, (ii) had no willful violations, (iii) a comprehensive and integrated worker health and safety management program with an established training component, and (iv) a documented accountability system and a clear management commitment to long term industry leadership. Companies that believe they meet these participation criteria may apply to OSHA for acceptance into the STAR Program. Following an in-depth review of the application and an on-site inspection, OSHA approves or denies the application.

Companies that meet OSHA's criteria establish their own self-monitoring program, audit their daily operations, and correct any problems that arise. In return for these voluntary efforts, OSHA removes these sites from its routine inspection list. As originally conceived, OSHA also gave priority attention to processing variance requests. Participating companies are allowed to fly a STAR Program flag and use the STAR logo on company letterhead. Acceptance into OSHA's STAR Program is viewed as a significant honor and an endorsement of the company's worker protection programs.

### **3. Mission Statement**

The Task Force has developed the following Mission Statement which will guide its efforts in developing the Texas Clean Air STAR Program.

The mission of the Clean Air STAR Task Force is to develop a consensus-based proposal to the Texas Air Control Board for a Clean Air STAR Program, including qualifications and incentives for participation in the Program. The key objective of the STAR Program is to enhance the air quality in the State of Texas by encouraging facilities to voluntarily implement comprehensive air quality programs. The STAR Program will increase public awareness by formally recognizing and rewarding industry

leaders in air quality management. The STAR Program will also foster a cooperative attitude among regulatory agencies, the regulated community, and the citizens of Texas.

4. **Criteria for Participation in the TACB Clean Air STAR Program**

The Task Force is charged with establishing criteria for participation in the Clean Air STAR Program, procedures for the verification and review of applications, and the array of community relations and regulatory incentives which such a program could properly provide to both the participating companies and the TACB. At present, the Task Force is in the process of developing criteria for participation in the STAR Program for three categories or tiers of industry participants: (i) true industry leaders, (ii) firms striving to become industry leaders, and (iii) small businesses.

The preliminary criteria for true industry leaders would require:

- **Solid Compliance History and Performance Beyond Mere Compliance.** Companies must be in compliance and agree to take voluntary action *beyond* mere compliance such as: reducing emissions; taking action ahead of regulatory schedule; adopting recordkeeping and reporting systems beyond current requirements; adopting more stringent environmental standards for certain areas of concern.
- **Pollution Prevention Programs.** Participants may adopt programs that prevent or reduce pollution at the source; increase efficiency in the use of raw materials, energy, water, and other resources; protect natural resources by conservation; recycle.
- **Management Commitment.** Demonstrate a management commitment for continuous improvement of environmental practices.
- **Management Systems.** Establish a self-evaluation program to detect and correct all emissions problems.
- **Employee Participation.** Establish a mechanism to solicit and incorporate employee considerations.
- **Community Relations.** Maintain an affirmative relationship with neighbors and the broader community.

The participation criteria for firms striving to become industry leaders and for small businesses is currently being developed.

## 5. Benefits of Participating in the TACB Clean Air STAR Program

Companies participating in the STAR program can expect the following benefits:

- **Predictable Enforcement Response.** A predictable and carefully targeted enforcement response that may include a *presumption against enforcement* except for serious violations.
- **Inspection Targeting.** Less frequent facility inspections.
- **Accelerated Permit Review.** Streamlined permit process; expedited processing of permits or variance requests.
- **Good Community and Customer Relations.** Enhanced public relations associated with being recognized as an industry leader.
- **Improved Environmental Management.** Enhanced internal environmental management systems.
- **Unfettered Self-Policing.** Confidentiality protections with respect to self-evaluative information developed through the operation of the program.

## 6. Task Force Membership

The Clean Air STAR Task Force is co-chaired by a representative of the chemical industry and by a public interest representative. Membership includes representatives of industry, public interest and environmental groups, the TACB's compliance and enforcement staffs and the United States EPA's Region VI air program staff.<sup>171</sup>

## 7. Public Participation

The Task Force will hold periodic Task Force meetings, engage in public hearings or other information-gathering activities, and report periodically to the TACB's Enforcement Committee and to the full Board. As necessary to inform

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<sup>171</sup> Members of the STAR Task Force include the following: ENVIRONMENTAL/CITIZEN REPRESENTATIVES: Elizabeth Goreham (Sierra Club, Houston Chapter), Barbara Lowe\* (Galveston/Houston Association for Smog Prevention); INDUSTRY REPRESENTATIVES: Mary Barron (Mobil Oil), Walter Buchholtz (Exxon Chemicals & Texas Chemical Council), Samuel Chamberlain\* (Sterling Chemicals, Inc. & Texas Chemical Council), Warren Davis (Solvay Chemical Corp.), Terrell E. Hunt (Bracewell & Patterson), Dan Hunter (Phillips Petroleum), Neal Ritchey (Amoco Chemical); SMALL BUSINESS REPRESENTATIVES: Dan Bragg (Pollution Control, City of Houston), Phillip Costa (Dunham Environmental Services, Inc.); REGULATORY AGENCY REPRESENTATIVES: Debra Barber (TACB, Austin), Poly Isis (TACB Region 7, Houston), Willie Kelley (EPA Region VI). \* Co-chairs.

the public, it may publish issue or options papers, Task Force plans, or STAR Program proposals in the Texas Register.

All of the activities of the Task Force are open to the public. Any person wishing to be informed of the activities of the Task Force, receive notice of its periodic meetings, or review copies of the minutes of Task Force meeting, should contact Debra Barber, Director, Enforcement and Field Operations, TACB (Austin), 512/908-1864, or Poly Isis, Engineer, TACB Region 7 (Houston), 713/666-4964 (Extension 688).

## 8. Underlying Reasons for Considering Such A Program

### a. Overview.

For nearly two decades, environmental compliance has been compelled by coercion and punishment-centered policies.<sup>172</sup> These end-of-the-pipe-based methods of pollution control, motivated by technology-based regulations, may no longer be adequate for today's environmental challenges. While the traditional regulatory approach has fostered significant discharge and emissions reductions among major pollution sources, today's environmental protection programs focus on obtaining small increments of emissions reductions from a large number of sources, and creating innovative approaches to preventing pollution through regulatory incentives. Traditional regulatory approaches fall short because of government's limited resources for compliance monitoring and enforcement.<sup>173</sup>

Beyond this, to the regulated community, environmental rules are intimidating, complex and often difficult to understand. Regulatory programs which focus on enforcement may also discourage self-auditing, self-policing, and other well-intentioned internal initiatives<sup>174</sup>. Fear that information contained in internal audit reports may form a basis for civil or criminal enforcement action are frequently cited as reasons for *not* undertaking self-evaluations. As William

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<sup>172</sup> The premise underlying the traditional pollution control approach is that environmental compliance must be compelled. Enforcement is, therefore, based upon coercion and punishment - centered policies. Dana A. Rasmussen, *Enforcement in the U.S. Environmental Protection Agency: Balancing the Carrots and the Sticks*, 22 ENVTL. L. 333 (1992).

<sup>173</sup> William Reilly, *Taking Aim Toward 2000: Rethinking the Nation's Environmental Agenda*, 21 ENVTL. L. 1359 (1991). See also the Toxics Release Inventory (TRI) mandated by the Superfund Amendments and Reauthorization Act (SARA), 42 U.S.C. § 11,023 (1983).

<sup>174</sup> A recent survey of corporate general counsel conducted by the National Law Journal and Arthur Anderson revealed that the regulated community perceives self-evaluative compliance activities, including environmental auditing, to create unacceptable risk. The survey revealed that 37.4 percent of the responding lawyers reported that their corporations had never undertaken a formal study of environmental compliance. Beyond this, 16 percent said that they have altered these environmental self-audit procedures "because of concern with whether the violations they find could be used against them." *The National Law Journal*, p.56 (March 16, 1992).

Reilly states, traditional regulations and approaches to enforcement "can actually be counterproductive, serving only to inhibit innovation and to discourage regulated industries from going beyond minimum legal requirements."<sup>175</sup>

In light of the limited government resources and the limitations of punishment-centered approaches to compliance, it is apparent that regulators must balance traditional enforcement efforts with policies and programs which provide positive incentives for compliance. Recently, EPA and some state and local agencies have developed more cooperative and creative approaches to environmental protection.<sup>176</sup> These have included enforcement amnesty programs (*e.g.*, the TWC's UST Amnesty Program) and voluntary emissions reduction programs (Reilly's 33/50 Air Toxics Reduction Program). Such programs rely on incentives rather than coercion to motivate industry to achieve and maintain compliance, reduce pollution beyond allowable levels, and encourage corporate self-auditing and self-policing. These incentive-based programs afford broad flexibility to environmental managers, allowing them to achieve environmental goals in the most efficient manner applicable to their facility.

b. General Benefits to Government. The compliance incentive programs provide numerous benefits to the regulators. They:

- Expand the Government's Regulatory Coverage. Programs which resolve past violations are particularly beneficial (1) in regulatory contexts where compliance is hard to detect, and (2) where uncorrected violations could lead to exacerbated harm.
- Reallocate Compliance Resources. The presumption of compliance by participating firms allows the government to focus compliance monitoring activities on non-participating firms likely to be marginal operators.
- Validate Government Acceptance. Voluntary participation reinforces the government's ability to impact credibility upon the regulated community.
- Promote Cost-Effective Environmental Protection. Programs which give participants flexibility to determine how to achieve given results allow the market place to assure the most cost-effective means of achieving environmental goals.

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<sup>175</sup> Reilly, *supra* note 173.

<sup>176</sup> On a separate note, the trend in public support for environmental programs/protection has increased greatly over the past few years. Statistics from data developed by the Roper Organization for EPA include: support for environmentalism (85%); support for safe sex (83%); support for the Simpsons (74%) Dana A. Rasmussen, *supra* note 172 at n.19.

- **Expedite Environmental Results.** Voluntary programs may achieve significant environmental results more quickly "with a minimum of bureaucratic machinery, industrial burden, and taxpayer expense."<sup>177</sup>

c. **General Benefits to Industry.** A number of voluntary compliance programs have been attempted. Each program provides its own peculiar incentives and benefits. Such benefits may include expedited permit issuance, less frequent inspections, protections against penalty assessments, direct and symbolic recognition, tax credits, *etc.* Beyond these stated benefits, participating companies find that these programs:

- **Create Favorable Public Perception.** Participating companies establish a reputation of cooperation and interest in environmental protection with the community and the public at large.
- **Enhance Relationships with Regulatory Agencies.** Participation in special voluntary programs affords numerous opportunities for positive informal contact with regulators, which provides essential experience and better enables companies to engage in serious regulatory negotiations in the future.
- **Enhance Employee Commitment and Morale.** Compliance programs which encourage employee participation also serve to educate employees about the prevention process and enhance company morale.<sup>178</sup>
- **Provide Recognition of Strong Management Programs.** These programs facilitate management relations by recognizing well-managed programs.<sup>179</sup>
- **Facilitate Compliance with Future Regulations.** Companies which voluntarily reduce emissions are better able to meet the requirements of new environmental regulations.
- **Lower Public Exposure.** Industry-wide programs enable whole industries to move forward without putting one single company in a negative light.

## 9. **The EPA Environmental Excellence Program**

EPA plans to create a nationwide pollution prevention program tentatively called the "Environmental Excellence Program" ("EEP"), modeled loosely after OSHA's STAR

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<sup>177</sup> Reilly, *supra* note 173.

<sup>178</sup> James Chelius and Harry Stark, *OSHA's Voluntary Protection Program*, LAB. L.J. 167, 169 (1984).

<sup>179</sup> *Id.*

program.<sup>180</sup> In fact, on December 18, 1991, OSHA representatives met with EPA and Department of Energy (DOE) representatives to discuss the possibility of developing voluntary protection programs for their respective agencies. EPA's EEP would require direct cooperation with state and local agencies.

The basic notion underlying the initiative is to develop a program which encourages community involvement and provides incentives to motivate industries to go beyond mere compliance. The program is planned to create specific sub-programs for, (i) large, environmentally sound businesses, (ii) large businesses striving to become environmentally sound, and (iii) small businesses.

The development of this program is being spearheaded by the Office of the Administrator with significant participation by EPA's Office of Enforcement and Office of Pollution Prevention. While the participation criteria are still being developed, it is clear that companies participating in the EEP will be required to demonstrate a significant commitment to pollution prevention. The benefits from successful participation in the program could include: (i) reduced enforcement response to violations which are voluntarily discovered, reported, and corrected, (ii) expedited permit reviews and/or multi-media permits, and (iii) reduced frequency of inspections.

#### **10. The Texas Clean Air Star Program as a Pilot**

The TACB is presently working hand-in-hand with EPA to ensure that, insofar as it is feasible, the Texas program is consistent with any subsequently-developed federal Environmental Excellence Program. In fact, the TACB and EPA have discussed the possibility that EPA will also utilize the Texas Clean Air STAR Program as a model for the EPA program. Insofar as it is consistent with EPA's proposed program, EPA will use the TACB's experience in developing and implementing the Texas program to guide EPA's efforts.

### **C. OTHER TEXAS ENVIRONMENTAL ENFORCEMENT INITIATIVES**

#### **1. EPA's Gulf Coast Toxics Initiative**

This initiative involves comprehensive inspections of major industries located in the environmentally sensitive Gulf of Mexico region. EPA teams will use toxics release inventory reports, records of past violations, and other computerized environmental data to target facilities for inspections.<sup>181</sup> Other

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<sup>180</sup> Telephone interview with Donna Fletcher, Office of the EPA Administrator (May 27, 1992); personal interviews with Linda Glass, Office of the EPA Administrator, and Robert Van Heuvelen, EPA's Deputy Assistant Administrator for Civil Enforcement (May 29, 1992); personal interviews with Eric Schaffer and Charles Evans, Office of the EPA Administrator (June 17, 1992).

<sup>181</sup> Announced by EPA Regional Administrator Buck Wynne in a speech to the Houston Bar Association on March 13, 1992.

considerations include targeting sensitive ecosystem areas such as wetlands and coastal areas.

## **2. Clean Texas 2000**

Governor Richards launched this ambitious initiative in April 1992. The program is designed to aggressively promote voluntary pollution reduction to achieve the stated Clean Texas Goals:

- **Hazardous Waste and Toxics Reduction.** An overall reduction of 50 percent or more by the year 2000 in the release of toxics and/or the generation of hazardous pollutants in Texas from 1987 levels.
- **Recycle Texas.** A reduction in the disposal of solid waste in landfills by as much as 50-60 percent by the year 2000.
- **Texas Watch.** A set of volunteer activities that directly involves Texas citizens in pollution control through the collection of unused pesticides and household hazardous waste, groundwater protection activities, and citizen water quality monitoring.
- **Operation Paper Chase.** The Texas Water Commission will cut red tape and unnecessary levels of bureaucracy so that predictable, reliable, efficient and effective services may be provided to Texas businesses, local governments and citizens.
- **Public Education.** A comprehensive, broad-based, action-oriented public education campaign to increase environmental awareness among Texans and their participation in pollution control activities.
- **Environmental Awards Program.** Exemplary environmental accomplishments will be recognized through a set of annual, high-profile, public image enhancing awards.

Clean Texas 2000 suggests specific activities for business and industry to perform:

- Conduct an **environmental audit** to plan pollution prevention projects and to improve or maintain compliance.
- Prepare a **pollution prevention plan** to reduce the amount of hazardous waste generated and/or toxics released by a significant amount by the year 2000.
- Develop a plan of action to **reduce discharges** into waterways and to control non-point source pollution that rainfall washes from company properties into waterways.

- Establish water and energy conservation programs.
- Form a **citizen advisory committee** to establish a forum for interaction with the community.
- Participate in **Recycle Texas** by establishing a company recycling program for paper and other materials and by using manufacturing and office products made from recycled materials.
- Participate in **Texas Watch** by supporting community programs involving household chemical collection, groundwater protection, surface water quality monitoring, environmental education or other programs that benefit the local community and the Texas environment.
- Host **conferences and workshops** on environmental issues.
- Provide **expert speakers**, materials or in-kind services for school and community environmental education.
- Serve on city and state environmental **committees** and task forces.

### 3. Federal Clean Air Act Regulations

The State's ozone nonattainment areas<sup>182</sup> will begin to feel the effect of the 1990 CAA amendments as reformulated gasoline and employer trip reduction programs begin to take effect.

### 4. Texas Water Commission, Inter-Agency Initiatives/Trends

EPA, DOJ, TWC, TACB and the Attorney General's Office have formed a multi-media criminal enforcement task force, to facilitate more effective enforcement of state and federal environmental crimes.<sup>183</sup> The formation of this task force, together with additional and more severe criminal sanctions provided by Senate Bill No. 2, signals an ever-increasing emphasis in Texas on the effective use of criminal penalties for deterrence and retribution.

The TWC is also currently pursuing two other significant enforcement initiatives. The first of these involves streamlining the enforcement process in general in order to increase enforcement efficiency, thereby increasing the

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<sup>182</sup> El Paso, Dallas-Ft. Worth, Houston and Beaumont-Port Arthur.

<sup>183</sup> Conversations with Ms. Mary Ruth Holder, Director, Legal Division, Texas Water Commission and Mr. Kevin McCalla, Senior Attorney, Texas Water Commission, July 28, 1992.

number of enforcement cases.<sup>184</sup> In this regard, the TWC is currently considering the implementation of a field citation program to avoid the delays and inefficiencies associated with formal administrative and judicial enforcement; regulations implementing this program are expected soon.<sup>185</sup> The general emphasis of the TWC's efforts over the past several years has been permitting-water discharge permitting in particular. During the remainder of 1992 and 1993, the TWC is expected to shift its emphasis to enforcement, as evidenced by the criminal task force and field citation programs described above.<sup>186</sup>

In addition to these programs, the TWC is currently in the process of creating a prosecutorial arm of its legal division.<sup>187</sup> The TWC expects that having this capability will deter violators from attempting to gain concessions from TWC staff in settlement negotiations, by threatening a judicial hearing or appeal.<sup>188</sup> The Agency is currently recruiting seasoned trial lawyers from the Attorney General's Office, and from District Attorney offices throughout the State, to participate in this program.<sup>189</sup> This initiative, perhaps more than any other, portends a dramatic change in the TWC's attitude towards violators, signalling more aggressive settlement negotiations and more frequent and aggressive enforcement actions.

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<sup>184</sup> *Id.*

<sup>185</sup> *Administrative Penalties*, Mary Ruth Holder, Director, Legal Division, Texas Water Commission (June, 1992).

<sup>186</sup> *Supra*, note 183.

<sup>187</sup> *Id.*

<sup>188</sup> *Id.*

<sup>189</sup> *Id.*

**SUMMARY OF REGULATORY JURISDICTION  
OF THE TEXAS ENVIRONMENTAL AGENCIES**

**Texas Water Commission (TWC)**

- Hazardous & Industrial Solid Waste Regulation
- Surface & Groundwater Pollution Prevention
- Stormwater Permits
- Underground Injection Well Control
- Spill Response & Reporting
- Municipal Solid Waste Regulation - Senate Bill No. 2
- Enforcement

**Texas Air Control Board (TACB)**

- New Source Review ("NSR") & New Source Performance Standards ("NSPS")
- Air Emissions Permits
- State Implementation Plan ("SIP")
- Asbestos Demolition & Removal Authority Under National Emissions Standards for Hazardous Air Pollutants ("NESHAP")
- Enforcement

**Texas Department of Health**

- Asbestos Demolition & Removal as Delegated by the Asbestos Hazard Emergency Response Act ("AHERA")
- Enforcement

**Texas Railroad Commission**

- Oil & Gas Industry Exploration and Production Operations
- Surface & Subsurface Water Pollution Prevention
- Enforcement

### **Texas Department of Agriculture**

- Pesticide Registration
- Restricted Use Permits
- Certification of Applicators
- Regulation of Pesticide & Herbicide Use

### **Texas Parks & Wildlife Division**

- Fish & Wildlife Resource Protection
- Surface Water Pollution
- Enforcement

### **General Land Office**

- Texas Oil Spill Prevention and Response Act
- Coastal Management Plan
- Household Hazardous Waste Programs
- Recycling Programs
- Alternative Fuel/Fleet Programs

### **Attorney Generals Office**

- Civil Judicial Enforcement
- Representation, Defense of the State's Regulatory Agencies

**EPA 1991 PROGRAM PRIORITIES AND  
"SIGNIFICANT NON-COMPLIANCE" DEFINITIONS IN ALL  
ENVIRONMENTAL ENFORCEMENT PROGRAMS FOR 1991<sup>1</sup>**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PROGRAM  
[NPDES]**

**Program Priorities**

- Assure Municipal Compliance with National Municipal Policy with an emphasis on Compliance by completed POTW's with final effluent limits;
- Pretreatment Compliance, and continued enforcement against POTW's implementing all aspects of their approved pretreatment programs, including:
  - Implementation of domestic sewage study regulations
  - POTW actions to assure compliances by Industrial Users
  - EPA or State enforcement actions against IUs which violate categorical standards and POTW's with interference or pass-through problems;
  - Coordination between pretreatment and POTW programs;
- Implement Compliance Monitoring and Enforcement Strategy for Toxic Control with an emphasis on violations posing a significant threat to water quality;
- Enforcement of toxicity-based permit limitations;
- Criminal enforcement: Above areas, plus significant unpermitted discharges, knowing or negligent discharge to a POTW of toxic pollutants/HWs, fraudulent DMR reporting.

**Significant Non-Compliance Definitions [By Major Permittees]**

- Violation of interim or final effluent limits of a defined duration and magnitude;
- Violation of construction schedules;
- Violation of reporting requirements;
- Noncompliance with pretreatment implementation standards;
- Violation of a compliance schedule [short term/nonconstruction];

**WETLANDS PROTECTION PROGRAM**

**Program Priority:** Unpermitted Discharges

**Significant Non-Compliance Definitions:** None

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<sup>1</sup> James W. Strack, *EPA's Enforcement Priorities for 1991*, National Environmental Permitting Journal, February, 1991.

## **PUBLIC WATER SUPPLY PROGRAM [PWSS]**

### **Program Priorities**

- Compliance with national primary DW regulations regarding microbiological, turbidity, total trihalomethane, nitrate, and VOC;
- Noncompliance by community water systems with requirements set in past enforcement actions;
- Consideration of degree of contamination, risk population, risk acuteness.

### **Significant Non-Compliance Definitions**

- Violation of microbiological or turbidity MCL for four months per year;
- Violation of TTHM monitoring or reporting rule for 12 months;
- Violation of microbiologic or turbidity MCL or Major violation of microbiologic monitoring requirements for a combined total of 12 consecutive months;
- Exceeding MCL for any regulated inorganic, organic or radiological contaminant;
- Exceeding MCL for TTHM, for two or more annual averages;
- Failing to monitor for, or report any regulated inorganic, organic [except TTHM] or radiological contaminant;
- Violation of compliance schedule;
- Major violation of monitoring or reporting requirement.

## **UNDERGROUND INJECTION CONTROL PROGRAM [UIC]**

### **Program Priorities**

- Violations at deep HW and commercial disposal wells [Class I];
- Use of banned shallow disposal wells [Class IV];
- Hazardous Waste restrictions under HSWA;
- Implementation of a strategy for Class V wells
- Class IV wells that have been reclassified in the TCLP amendments to RCRA regulations.
- Criminal: false reporting, fraud, injections following prohibitions.

### **Significant Non-Compliance Definitions**

- Any violation by owner/operator of Class I, Class IV well;
- Following violations by owner/operator of Class II, III, V well;
  - Unauthorized Injection;
  - Operation without mechanical integrity;
  - Excessive injection pressure;
  - Unauthorized plugging and abandonment;
  - Violation of Federal/State enforcement order, consent agreement, judgment;

- Falsification of permit application, report, data request.

### **SUPERFUND PROGRAM**

#### **Program Priorities**

- Integrating enforcement and response programs by:
  - Commencing PRP searches early;
  - Issuing information requests and follow-up;
  - Negotiating RI/FSs and RD/RAs where PRPs exist;
  - Using negotiating deadlines to push PRP settlements;
  - Issuing AOs to legally liable/financially viable PRPs;
  - Referring cases to DOJ if PRPs not comply with AOs';
  - Lodging CDs of settlement on PRP cleanup is reached.
- Priorities for cost recovery include:
  - Remedial and removal actions over \$200,000;
  - Cases with statute of limitations problems;
  - Better identification and documentation of costs.

**Significant Non-Compliance Definitions: None**

### **HAZARDOUS WASTE MANAGEMENT PROGRAM [RCRA]**

#### **Program Priorities**

- Requirements in permits, closure plans, corrective actions and HSWA
- Compliance by commercial TSDs to further "off-site" policy to maintain CERCLA-eligible treatment/disposal capacity;
- Land disposal: surface impoundments, or in noncompliance with corrective action, post-closure, groundwater monitoring requirements;
- TSD facilities in violation of land disposal, corrective action requirements;
- Federal facility HW management.

#### **Significant Non-Compliance Definitions**

- Actual exposure [substantial likelihood] to HW;
- Chronic or recalcitrant violator;
- Deviation from permit, order, decree by missing deadlines; failing to perform work;
- Violation of RCRA or regulatory requirement.

### **UNDERGROUND STORAGE TANK PROGRAM [UST]**

#### **Program Priorities**

- Closure or upgrading of existing tanks;
- Installation and use of release detection systems;

- Enforcement corrective actions or use of LUST Trust Fund for eligible corrective actions.

**Significant Non-Compliance Definitions: None**

**PESTICIDES PROGRAM [FIFRA]**

**Program Priorities**

- Compliance with major pesticide regulatory actions: Cancellations; suspensions under Sec. 6; RUP designations; Sec. 3(c)(2)(b) suspensions;
- Enforcement of revised worker protection standards.

**Significant Non-Compliance Definitions**

- Any violation warranting penalty response;
- Further defined in state-by-state EPA enforcement agreement.

**TOXIC SUBSTANCES CONTROL PROGRAM [TSCA]**

**Program Priorities**

- Asbestos control: EPA/State compliance program plans under AHERA; asbestos in school inspections; compliance with ban/phase-out requirements; decentralization to States;
- PCB enforcement: compliance by permitted disposal sites; intermediate handlers/brokers; monitoring of cleanup of natural gas pipelines; compliance by PCB manifesting, storage, disposal sites; development of State enforcement infrastructures;
- Title III TRI [Sec. 313]: Assure required and accurate reporting; action against non-reporters; late reporters; blatant errors
- Criminal: fraudulent reporters.

**Significant Non-Compliance Definitions**

- Major PCB Violations; disposal, manufacturing; processing; distributions; use; storage; recordkeeping; marking;
- PCB contamination of surface water, groundwater, food, feeds;
- Test rule violations;
- PMN violations;
- Importation: Failure to certify compliance/not subject; falsification of certification report;
- Recordkeeping: Failure to submit, falsification, incomplete reporting;
- Any AHERA violation warranting administrative action.

## **AIR PROGRAM [CAA]**

### **Program Priorities**

- Implementation of programs to attain NAAQS for ozone, carbon monoxide and PM-10;
- Control of VOCs through NAAQS in ozone nonattainment areas;
- Correct SIP deficiencies regarding sulfur dioxide and lead;
- Enforce chlorofluorocarbon emission regulations;
- Reduce air toxics through compliance with NESHAPS [benzene, asbestos, arsenic, etc.], using contractor listing and other innovative techniques;
- Implementation of revised compliance strategy for asbestos under NESHAPS and of compliance monitoring strategy for non-transitory NESHAP sources;
- Control toxic emissions from automobiles and fuels by enforcing leads phase-down rules, fuel switching, price margin for unleaded gas, truth in fuel additives claims;
- Review State SIPs for enforceability; ability to achieve attainment for ozone;
- Enforce federal motor vehicle standards: pre-production certification, assembly line testing, selective audits, recalls; in-use operation and maintenance programs;

### **Significant Non-Compliance Definitions**

- Violation of any NESHAP [except asbestos];
- Violation of new source requirement: NS performance standards, PSD requirements; NSR permits;
- Class A source in violation of SIP in non-attainment area;
- Violation of Federal CD or AO;
- Class A federal facility violation.



## **TDA PESTICIDE AUTHORITY OUTLINE**

- I. Introduction
- II. Emergencies
  - A. Quarantines
  - B. Public Health
  - C. Specific Exemption
  - D. Crisis
  - E. Special Local Need
- III. Program Goals
  - A. Mission Statement
  - B. Economic Importance Of Wise Pesticide Usage
- IV. Training And Licensure
  - A. Training Courses
  - B. Types Of Licenses
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# PESTICIDE AUTHORITY

## INTRODUCTION

Farming continues to become an increasingly complex industry. The sheer economics of this industry, even on a small scale, require the farm operator to maximize yield through more efficient use of the land. In this regard there are a wide variety of chemical fertilizers, pesticides and herbicides that can be used to increase farming yield. The Texas Department of Agriculture recognizes the need to help the farming industry obtain the greatest possible benefits of these developments in chemistry. At the same time, the department takes very seriously its responsibility to protect the safety and welfare of individuals who could come into contact with or be exposed to these potentially hazardous chemicals.

The purpose of this paper is to explain the tools that are available to meet these objectives. The paper will first discuss the legal framework of pesticide regulation and will next explain the regulatory process. Enforcement procedures will be discussed and the paper will also address the options available to the department to deal with violations.

All products or devices making pesticidal claims must be registered. The Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) is the federal statute that regulates the registration and classification of pesticides. Extensive testing is required before they can be federally registered by EPA. After a pesticide has been registered, EPA can revoke the registration if it is found to pose an unreasonable health risk.

EPA has delegated the investigation and enforcement authority to the states. Each year EPA provides this department with funding to be used to enforce EPA regulations within the state.

## EMERGENCIES

Emergency situations frequently arise where a pesticide needs to be approved to control a particular pest, or else needs to be used on a crop that it is not otherwise authorized. Any interested party may petition the department for assistance in obtaining an emergency exemption. It is important to note that such exemptions are not shortcuts or ways to circumvent the overall registration process. The criteria used by TDA to recommend an emergency exemption requires a large amount of supporting documentation and is designed to provide only stop gap, short-term assistance in treating crops or acreage to control specific pests. One instance involves emergency exemptions to deal with emergency conditions that may not be anticipated. Under one section of the law, exemptions are utilized to address the following purposes: quarantines, public health, specific exemption and crisis. TDA aids producers by requesting an emergency

exemption from EPA. In the case of a crisis exemption TDA is authorized to approve a 15 day emergency exemption. Each has a specific time limit. TDA can apply to EPA under one of the other 3 categories to extend the exemption. Another section of the law entitled "special local need" registration permits use of a pesticide on a crop for which it is not otherwise to be used.

Commissioner Perry has, for example, issued a crisis exemption for the use of Permethrin to control fall armyworms in rice. Due to changes in planting schedules caused by the unusually wet and rainy conditions, farmers were unable to control this pest by the usual methods. Such flexibility in permitting the use of Permethrin could save Texas rice growers as much as \$9 million.

In other situations, TDA may request EPA approval for emergency use of certain insecticides. For example, in June 1991 TDA requested and obtained an emergency exemption because no insecticides were currently registered to effectively control leafminers on pepper plants. An estimated 30% increase in yield was expected by permitting the emergency use of the pesticide in question.

## PROGRAM GOALS

As mentioned earlier, two main parts of the department's mission in regulating pesticides are to encourage agricultural productivity and to protect the health and safety of Texas citizens.

The wise and careful use of pesticides is a necessary part of agricultural production. Texas' agriculture industry contributes over \$33 billion annually to the state's economy and employs 20 percent of the work force, according to official figures from 1989. Without available pesticides, Texas' farming industry would be exposed to economic risks. When considering the economic advantages associated with the careful use of pesticides, it is also important to balance concerns of farmers with concerns for community health and the environment. Pesticides are necessary, but the enforcement of regulations is also necessary to ensure that they are used safely and effectively.

## TRAINING AND LICENSURE

The department administers an extensive program for licensing and training. Each year the TDA approves some 370 courses and training seminars to provide the latest information for pesticide applicators. These courses are available throughout the year in every part of the state.

TDA licenses both commercial, non-commercial, and private applicators. As a general rule, such licenses are necessary in order for a person to apply state limited use and restricted use pesticides. Along with these licenses are strict record keeping requirements as well as liability insurance/bonding requirements for commercial applicators to provide protection for persons who may suffer damage or injury as a result of pesticide applications.

## ENFORCEMENT

Under a recent reorganization, the enforcement of pesticide and herbicide laws now falls under the Office of General Counsel. The primary statutory authority for this is found in Chapters 75, 76 and 125 of the Texas Agriculture Code. Chapter 75 relates to herbicides, Chapter 76 deals with pesticides, and Chapter 125 addresses the notification of agricultural laborers of the use of pesticides in the workplace.

Because of their inherent economic and environmental dangers, the TDA strictly regulates the sale and use of herbicides. The use of herbicides must be carefully controlled especially in areas where cotton, vegetable crops and other susceptible plants are grown. Pesticides also have the potential to cause significant health risks to humans, animals and property. The Right-to-Know program provides regulations concerning accessibility to information relating to hazardous chemicals. The program is designed to improve the health and safety of persons living and working in agricultural areas by providing information on pesticides to which they could be exposed. This program has been well received and is being used as a model for similar programs in other states.

The Texas Agriculture Code establishes the department as the lead agency for pesticide enforcement in Texas. The department is the prime investigative agency for the EPA. In that capacity the department registers pesticides for use in Texas, adopts lists of state limited-use pesticides, provides for training, certification and licensure of all classes of pesticide applicators, enforces pesticide laws and regulations governing the safe handling, use, storage, distribution, and disposal of pesticides.

## COMPLAINT/INVESTIGATION

Each year the pesticide section investigates an average of 450 complaints. The Department receives complaints from a variety of sources: EPA complaint and investigation referrals, referrals from other agencies as well as private citizens. Referrals are often received over the telephone although it is preferred that they be in writing. Once the complaint is received, it is immediately assigned a case worker and given to an investigator. The investigator will meet with the complainant, survey areas of suspected damage, take photos and pesticide residue samples and interview any witnesses to the incident. Respondents are also routinely contacted for their version of the event.

The completed case is then forwarded to Austin for a final decision. Senior pesticide staff then review the case and, along with General Counsel attorneys, determine what decision should initially be made regarding the case. Decisions range from advisory letters, notices of non-compliance (warning letters), and administrative penalties, as well as civil and criminal penalties. The nature of the vast majority of pesticide cases are such that warning letters are sufficient to achieve compliance. The department, however, is increasingly making use of its administrative penalty authority. Penalties range up to \$2000 per violation, or a maximum of \$4000 for all violations relating to a single incident. Referrals to the Attorney General's Office are reserved for only the most serious of violations or in situations where we are seeking injunctive relief. Although we have a \$2000/\$4000 cap on administrative penalties, we find these amounts to be sufficient and reasonable in most circumstances.

If an administrative penalty, or referral to the Attorney General's Office is proposed, the case is reviewed by a Pesticide Review Committee. This committee is composed of 12-14 members of the Pesticide, General Counsel and Right-To-Know sections. The Committee reviews the case for evidentiary quality and appropriateness of penalty. As part of the 1989 Sunset process, the legislature required TDA to establish formal penalty guidelines to use in assessing penalties. These guidelines use as a matrix the nature, circumstances and extent of the damage, if any, as well as the hazards and potential hazards to humans or the environment. The recommended penalties in a case are therefore derived from that table.

Once this committee decides on a recommendation it next goes to the General Counsel for final approval. Most recommendations are approved without adjustments; however, Counsel reserves the right to change the recommendation based upon an independent review of the file.

Notices of violation are then sent out after the cases are sent to General Counsel attorneys for prosecution. The respondents have 20 days to either pay the penalty or request a hearing.

Hearings are held in Austin before a department administrative law judge. Proposals for Decision normally are ready within 30 days of record closing. The chief administrative review officer at TDA is Deputy Commissioner Barry McBee. Mr. McBee acts as final decisionmaker and can affirm, modify or reject the proposal. Our appeals are governed by the Administrative Procedure and Texas Register Act and must be appealed to Travis County District Court.

## CONCLUSION

The goal of pesticide regulation at TDA is to achieve the proper balance between the safety of the environment and this state's citizens while at the same time providing Texas agriculture with the latest, safest and most cost effective methods to control pests. If this goal is achieved, we can continue to improve Texas' place in national and world markets.