

"Much Ado About Pollution"

Texas Environmental Super Conference

Co-sponsored by:

Texas and Central Texas
Hazardous Waste
Management Societies

Texas Water Pollution
Control Association

State Bar of Texas,
Environmental and Natural Resources Law
Section

Air & Waste Management
Association, Southwest Section

1990 TEXAS ENVIRONMENTAL SUPERCONFERENCE

Much Ado About Pollution

Four Seasons Hotel
Austin, Texas

THURSDAY, AUGUST 2, 1990

8:00 Registration

8:45 Welcoming Remarks - Jeff Civins

I. TOXIC TORT LITIGATION

"Such an injury would vex a saint."

Jeff Civins, Moderator
Vinson & Elkins

9:00-9:30 Legal Issues

Debra Baker
Participating Associate
Fulbright & Jaworski
Houston, Texas

9:30-10:00 Scientific Proof

Doug Diehl
President
ERM Southwest
Houston, Texas

10:00-10:15 Questions & Answers

II. LEAKING UNDERGROUND STORAGE TANKS

*"Lay her i' the earth; And from her fair and unpolluted
flesh May violets spring."*

10:15-10:40 Fund Recovery & Other Issues

Samita Mehta
Staff Attorney
Texas Water Commission
Austin, Texas

10:40-10:55 ---BREAK---

III. THE THIRD THIRD LAND BAN

"We have come to bury these wastes, not to appraise them."

10:55-11:20 Legal Ramifications & Other Issues

Sam Listiak
Special Counsel
Star Enterprises
Houston, Texas

IV. TOXICITY CHARACTERISTIC LEACHING PROCEDURE

"Double, double, toil and trouble, Fire burn and cauldron bubble."

11:20-11:45 TCLP: Adding to the Universe of Hazardous Waste

David L. Olschewsky
Manager
Entrix
Dallas, Texas

11:45-12:00 Questions & Answers

12:00-1:30 ---LUNCHEON---

V. SUPERFUND

"Things past redress are now with me past care."

Jeff Civins, Moderator
Vinson & Elkins

1:30-2:10 PRP Perspective

Molly Cagle
Partner
Vinson & Elkins
Austin, Texas

2:10-2:50 Agency Perspective

Mark Peycke
Section Chief, Office of Regional Counsel
SPA - Region VI

Carl Edlund
Branch Chief, Superfund Program
EPA - Region VI

2:50-3:00 Questions & Answers

VI. ENVIRONMENTAL DUE DILIGENCE -- Forgotten Issues
"Unbidden guests are often welcomest when they are gone."

Susan Ratz, Moderator
Rohm & Haas Texas

3:00-3:20 Wetlands

Sam Damico
President
S.A. Damico & Associates
Houston, Texas

3:20-3:40 Pesticides

Taryn McCain
Attorney
Brown, Maroney & Oaks Hartline
Austin, Texas

3:40-4:00 ---BREAK---

4:00-4:20 Indoor Air Pollution

C. Herndon Williams, PhD, CIH
Sr. Staff Scientist
Radian Corporation
Austin, Texas

4:20-4:40 Asbestos

Sharon D'Orsie, PhD, CIH
President
Eagle Environmental Health, Inc.
Houston, Texas

4:40-5:00 Questions & Answers

FRIDAY, AUGUST 3, 1990

VII. MAQUILADORA PLANTS--Environmental Concerns

"Reason, in itself confounded, saw division grow together."

Jacqueline Shields, PhD., Moderator
University of Texas Health Science Center

8:45-9:10 U.S. Perspective

Steven P. McDonald
Chair, Environmental Practice Group
Luce, Forward, Hamilton & Scripps
San Diego, California

9:10-9:35 Mexican Perspective

Allen Smith
President
Allen Smith & Associates
McAllen, Texas

9:35-9:45 Questions & Answers

VIII. AIR AND WATER TOXICS -- Federal Legislation and
State Initiatives

*"The quality of air and sea is strained by the droppeth
of the toxic rain from heaven upon the place beneath."*

Stephen Jenkins, Moderator
Director of Environment & Engineering
City of San Marcos
San Marcos, Texas

9:45-10:10 Air

Jess McAngus
Vice President
Pilko & Associates, Inc.
Houston, Texas

10:10-10:35 Water

C. Mike Moffitt
President
SeaCrest Environmental Services
Houston, Texas

10:35-10:45 Questions & Answers

10:45-11:00 ---BREAK---

IX. ENVIRONMENTAL LIABILITY

"By the pricking of my thumbs something wicked this way comes."

Cynthia Smiley, Moderator
Jones, Day, Reavis & Pogue

11:00-11:25 Individual Liability--Recent Developments

Frances E. Phillips
Partner
Gardere & Wynne
Dallas, Texas

11:25-11:50 Corporate Response

Russell Susag
Director, Environmental Regulatory Affairs
3M Corporation
St. Paul, Minnesota

11:50-12:00 Questions & Answers

12:00-1:30 ---LUNCH---

X. PROFESSIONAL AND ETHICAL RESPONSIBILITIES OF ENVIRONMENTAL
PROFESSIONAL--Roundtable

"The first thing we do, let's kill all the lawyers."

Elizabeth A. Hurst, Moderator
Partner
Jenkins & Gilchrist
Austin, Texas

1:30-2:30 Lawyers

J. D. Head
Partner
Ford, Ferraro, Fritz
& Byrne
Austin, Texas

Mark Jordan
Texas Water Commission-
Legal Division
Austin, Texas

Engineers and Scientists

Bob Jones
President
Jones & Neuse
Austin, Texas

John Black
Vice President
Manager, Texas Operations
Woodward-Clyde
Houston, Texas

XI. RESPONSE ACTION CONTRACTOR LIABILITY

*"We go to gain a little patch of ground,
That hath in it no profit but the name."*

Cynthia Smiley, Moderator
Jones, Day, Reavis & Pogue

2:30-3:00 Lt. Col. David F. Barton, USAF
Chief, Environmental Law
Office of the Staff Judge Advocate
Randolph Air Force Base, Texas

3:00-3:15 ---BREAK---

XII. EVERYTHING YOU WANTED TO KNOW, BUT WERE AFRAID TO ASK.

*"They asked one another the reason; no sooner knew the reason
but they sought the remedy."*

Pam Giblin, Moderator
Partner
Jones Day Reavis & Pogue
Austin, Texas

3:15-4:45 TWC John Vay
General Counsel
Texas Water Commission
Austin, Texas

TACB Steve Spaw
Executive Director
Texas Air Control Board
Austin, Texas

TDH Hector Mendieta
Director, Division of Solid Waste Management
Texas Department of Health
Austin, Texas

AG Brian Berwick
Assistant Attorney General, State of Texas
Environmental Protection Division
Austin, Texas

EPA Bennett Stokes
Regional Counsel
Environmental Protection Agency-Region VI
Dallas, Texas

4:45 ---SUNDAES---
"All's well that ends well."

Planning Committee

Jeff Civins, Co-Chair
Partner
Vinson & Elkins
Austin, Texas
Environmental and Natural
Resources Law Section of
the State Bar of Texas

Mary K. Sahs, Co-Chair
Hearings Examiner
Texas Water Commission
Austin, Texas
Environmental and Natural
Resources Law Section of
the State Bar of Texas

Susan Ratz
Solid Waste Specialist
Rohm & Haas Texas
Deer Park, Texas
Hazardous Waste
Management Society

Cynthia C. Smiley
Attorney
Jones, Day, Reavis & Pogue
Austin, Texas
Central Texas Hazardous Waste
Management Society

Jacqueline Shields, Ph.D.
Assistant Professor of
Environmental Science
UT Health Science Center
at San Antonio
Air and Waste Management
Association, Southwest Section

Richard F. Smullen, Jr.
Vice President
Pilko & Associates, Inc.
Houston, Texas
Texas Water Pollution
Control Assn.

I. TOXIC TORT LITIGATION

"Such an injury would vex a saint."

Legal Issues

Debra Baker
Fulbright & Jaworski
Houston, Texas

Scientific Proof of Causation in Toxic Tort Litigation

Douglas S. Diehl, P.E.
President
ERM-Southwest, Inc.

and

B.C. Robinson, D.V.M., Ph.D.
ERM-Southwest, Inc.
Houston, Texas

TEXAS ENVIRONMENTAL SUPERCONFERENCE

AUGUST 2-3, 1990

AUSTIN, TEXAS

TOXIC TORT LITIGATION

LEGAL ISSUES

BY:

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AUGUST 2-3, 1990
AUSTIN, TEXAS

TOXIC TORT LITIGATION
LEGAL ISSUES

BY:

DEBRA L. BAKER
FULBRIGHT & JAWORSKI
1301 MCKINNEY STREET, SUITE 5100
HOUSTON, TEXAS 77010-3095

I. INTRODUCTION.

Toxic tort litigation has evolved into a unique species of litigation, one which combines certain elements of traditional tort lawsuits along with more novel issues that have only recently been before the courts for consideration. Because of the increased federal and state regulation of the environmental area, environmental occurrences have become high-profile events. The litigation surrounding environmental issues has become increasingly more prevalent and complex and it is not unusual for multiple lawsuits to be filed in connection with the same environmental matter. Federal governmental agencies may bring actions under the environmental laws, state agencies may bring actions under the environmental laws, citizens may bring actions under the citizens suits provisions in various statutes, and private parties are increasingly riding on the coattails of the statutory violations that come to their attention by filing common law property damage and personal injury actions. Due to the increased reporting requirements imposed by law, plaintiffs in toxic tort lawsuits are also able to more easily obtain information and data from the public arena to fuel their lawsuits.

This paper sets forth various causes of action typically included in toxic tort lawsuits, identifies novel issues arising in connection with elements of proof, and notes various trends that are becoming apparent in the area of toxic tort litigation.

II. CAUSES OF ACTION.

A. Common-law Causes of Action.

Plaintiffs in toxic tort lawsuits brought under common law typically allege that their property has been damaged or that they have suffered personal injuries due to the presence of, or their exposure to, certain toxic substances. In property damage cases, typical allegations are that contamination has unlawfully been placed upon property or has migrated upon property, that the presence of contaminants has rendered property valueless, and that the nearby presence of a Superfund site or other facility containing contaminants has caused a diminution in value to neighboring property. In personal injury cases, plaintiffs typically allege that they have sustained personal injuries due to the presence of contamination, such as through drinking contaminated water, inhaling toxic fumes or being exposed to asbestos.

Private parties commonly allege a variety of complaints in their environmental property damage or personal injury actions, such as trespass, nuisance, negligence, strict liability in tort, use of ultrahazardous materials or activities, breach of warranty and/or contract, fraud, misrepresentation, commercial frustration, and others. See, e.g., Sterling v. Velsicol Chem. Corp., 647 F. Supp. 303, 311-20 (W.D. Tenn. 1986), modified, 855 F.2d 1188 (6th Cir. 1988); Tanglewood E. Homeowners v. Charles-Thomas, Inc., 849 F.2d 1568 (5th Cir. 1988); South Shore Bank v. Stewart Title Guar. Co., 688 F. Supp. 803 (D. Mass. 1988). Examples of these types of allegations can be seen when private landowners near the site sue for damage to their property due to potential migration (trespass) of wastes (alleging that their use is an ultrahazardous activity) from a waste site (caused by the defendant's alleged negligence). Plaintiffs commonly allege that the value of their property has been lessened or diminished due to its proximity to a waste site or other area of contamination and seek damages for the diminution of the property's value due to the defendant's alleged negligence. Persons who live near the Site or who may have visited the Site may bring actions against defendants for personal injuries due to their alleged exposure to materials on the Site caused by the defendants' alleged negligence.

B. Causes of Action Arising Out of Statutory Liability.

1. CERCLA provides a private right of action for response costs.

In addition to toxic tort litigation arising pursuant to common law causes of action, toxic tort lawsuits often arise in connection with environmental statutes. The Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act ("SARA"), 42 U.S.C. §§ 9601 et seq., provides for a private right of action against responsible parties if "response costs" are incurred.^{1/}

In addition to allowing the federal government to compel responsible parties to clean up releases or to reimburse the government's cleanup costs, CERCLA has been construed to permit private parties to bring actions against individuals who are deemed responsible for such releases. CERCLA § 107(a)(4)(B), 42 U.S.C. § 9607(a)(4)(B). Under § 107(a)(4)(B), "any other person" may seek reimbursement of necessary "response costs" which it has incurred either from: (1) the Superfund, CERCLA § 111(a)(2), 42 U.S.C. § 9611(a)(2), or (2) parties responsible for such a release so long as those

^{1/} CERCLA provides the federal government and the states with the authority to clean up hazardous waste sites. CERCLA, or the Superfund statute as it is commonly called, establishes a fund to pay for the cleanup (the "Superfund") and allows the government to seek reimbursement for fund expenditures from parties who are deemed to be responsible for the presence of the waste at the site. Parties who may be responsible for cleanup costs of hazardous substances under CERCLA include a current owner of property that contains hazardous substances, a person who owned the property or facility at the time hazardous substances were disposed or released thereon, a person who arranged for the disposal, treatment or transport of such substances at the facility and persons who transported such substances for treatment or disposal at a facility they selected. CERCLA §§ 107(a)(1-4), 42 U.S.C. §§ 9607(a)(1-4).

The phrase "response costs" is not defined in CERCLA. The closest that statute comes to defining "response costs" is to provide a definition of the word "response." The word "response" is defined in CERCLA to mean "remove, removal, remedy, and remedial action." CERCLA § 101(25). Section 101(23) defined "remove" and "removal" as both the actual cleanup and acts taken to "monitor, assess and evaluate" a hazardous waste release.

costs are "contingent with the national contingency plan."^{2/} For example, if the owner of the property containing hazardous substances has to clean up the property and incurs expenses that constitute response costs within the meaning of the statute, he may seek reimbursement from any of the other "responsible parties" who may be liable, such as the former owner in certain circumstances or persons who may have generated or transported the hazardous materials. CERCLA § 111(a)(2), 42 U.S.C. § 9611(a)(2).

2. CERCLA also allows private parties to file "citizen suit" actions.

CERCLA § 310 permits any person to file a civil action enforcing a standard, regulation, condition, requirement or order adopted under CERCLA, although it does not provide for the recovery of response costs or damages. CERCLA § 310, 42 U.S.C. § 9659. Remedies for a CERCLA violation under § 310 are limited to injunctive relief, civil penalties and recovery of litigation costs. Id. Accordingly, private parties may act as "private attorneys-general" in trying to enforce the law by bringing suit. However, because response costs or damages are not available to the private parties as part of the citizen suit, private parties are most likely to bring actions under § 107 to recover response costs as discussed above or under common law claims to recover damages.

If plaintiffs file lawsuits under CERCLA § 107, however, their recovery is limited only to their response costs -- generally their cleanup costs, medical monitoring, and costs for testing and analysis. Like the citizen suit provision, § 107 does not provide for the recovery of damages. One way in which plaintiffs have attempted to enlarge the limited recovery available under CERCLA is to include common law counts as part of their federal complaint under CERCLA and hope that the Court will exercise pendent jurisdiction to hear the state law claims. See, e.g., Cummings v. Texaco, et al., C.A. No. B-85-747 (E.D. Tex. 1986) (federal court dismissed CERCLA claims on basis that no response costs had been incurred by plaintiffs, but nevertheless retained jurisdiction over state common law claims allegedly arising in connection with CERCLA Site); Dedham Water Co. v. Cumberland Farms Dairy, Inc., 805 F.2d 1074, 1076,

^{2/} The National Contingency Plan ("NCP") is a federal regulation that sets forth a "roadmap" (i.e., the procedure) to cleanup actions by the government and private parties. See 40 C.F.R. §§ 300, et seq. In brief, it sets forth the methods pursuant to which site investigation, evaluation and cleanup must be undertaken.

n. 4 (1st Cir. 1986); New York v. Shore Realty Corp., 759 F.2d 1032, 1037 (2d Cir. 1985); Jersey City Redev. Auth. v. PPG Indus., 655 F. Supp. 1257, 1259 (D.N.J. 1987)(eleven state law counts contract, tort and statutory); City of Philadelphia v. Stepan Chemical Co., 544 F. Supp. 1135, 1139-40 (E.D. Pa. 1982)(court found that jurisdiction over state claims was pendent in complaint containing counts on numerous federal and state environmental statutes and common law theories); Walls v. Waste Resource Corp., 11 Chem. Waste Lit. Rep. 274, 279 (E.D. Tenn.)(court cited existence of concurrent state proceedings in refusing to exercise pendent jurisdiction). If the common law claims are heard, plaintiffs can potentially recover response costs and damages.

III. ISSUES IN ELEMENTS OF PROOF.

Because of the complex and unique nature of toxic tort lawsuits, novel issues concerning causation, timing and other elements of proof are now being raised with varying results from court to court. Certain of the areas in flux and/or which substantially differ from their traditional toxic tort roles are noted below.

A. Statutes of Limitations/When to Sue.

1. Environmental statutes may extend state statutes of limitations.

CERCLA § 309, as added by SARA § 203, 42 U.S.C. § 9658, amended state statutes of limitations for personal injuries and property damage arising from exposure to hazardous substances by providing that applicable state statutes may not begin to run until the plaintiff knew or should have known that the harm was caused by the hazardous substances involved. The requirement that the statute of limitations does not begin to run until the plaintiff knows of a causal connection differs from a traditional "discovery" statute of limitations that begins to run when the victim discovers his injury. Theoretically, a person exposed to toxic substances 20 years ago, who contracted cancer 10 years ago, and just now discovers that the injury and exposure may be related, may not be barred by limitations due to § 309.

2. Issues of when to sue and how to quantify damages arise due to the allegedly latent nature of certain injuries attributed to earlier exposures.

In the toxic tort arena, many of the injuries alleged are those that cannot be quantified or the existence of which

cannot be shown due to their alleged time delay from the time of exposure to the full manifestation of the disease. Others cannot be quantified because they arise from an alleged injury consisting of "fear" from increased risk of cancer in the future from a past or present exposure to toxic materials.

Courts are struggling with these unusual issues of when to bring a lawsuit for such injuries and how to define and prove the existence of what may be non-quantifiable injuries. The New Jersey Supreme Court in Ayers v. Township of Jackson, 106 N.J. 557, 525 A.2d 287 (1987) grappled with the issue of whether plaintiffs should sue presently for foreseeable future harm or whether they should sue later, noting conflicts with the "single controversy rule." The Court noted that:

The single controversy rule in New Jersey "requires that a party include in the action all related claims against an adversary and its failure to do so precludes the maintenance of a second action." Aetna Ins. Co. v. Gilchrist Bros., Inc., 85 N.J. 550, 556-57, 428 A.2d 1254 (1981). The doctrine may bar recovery where, as here, suit is instituted to recover damages to compensate for the immediate consequences of toxic pollution, but the initiation of additional litigation depends upon when, if ever, physical injuries threatened by the pollution are manifested [N]either the single controversy doctrine nor the statute of limitations, N.J.S.A. 2A:14-2, will preclude a timely-filed cause of action for damages prompted by the future "discovery" of a disease or injury related to the tortious conduct at issue in this litigation. The bar of the statute of limitations is avoided because, under New Jersey's discovery rule, the cause of action does not accrue until the victim is aware of the injury or disease and of the facts indicating that a third party is or may be responsible. Lynch v. Rubacky, supra, 85 N.J. at 70, 424 A.2d 1169. Moreover, the single controversy rule, intended "to avoid the delays and wasteful expense of the multiplicity of litigation which results from the splitting of a controversy," id. at 557 (quoting Ajamian v. Schlanger, 14 N.J. 483, 485, 103 A.2d 9, cert. denied, 348 U.S. 835, 75 S.Ct. 58, 99 L.Ed. 2d 659

(1954)), cannot sensibly be applied to a toxic-tort claim filed when disease is manifested years after the exposure, merely because the same plaintiff sued previously to recover for property damage or other injuries. In such a case, the rule is literally inapplicable since, . . . the second cause of action does not accrue until the disease is manifested; hence, it could not have been joined with the earlier claims.

See also, Scarborough v. Gelman Sciences, No. 88-35594-CE (Cir. Ct. Mich. 1990) (state court judge entered order that plaintiffs allegedly exposed to toxic wastes could not collect damages for their fear of contracting cancer or other diseases); Herber v. Johns-Manville Corp., 785 F.2d 79 (3d Cir. 1986) (worker exposed to asbestos could not assert a claim for enhanced risk of future cancer); Mink v. University of Chicago, 460 F. Supp. 713, 719 (N.D. Ill. 1978) (DES mothers may not recover for risk of cancer of reproductive tract abnormalities); Ayers v. Township of Jackson, 106 N. J. at 598, 525 A.2d at 308 (refusing to permit residents to recover for an unquantified enhanced risk of disease due to improper operation of landfill by defendant).

IV. INCREASED AVAILABILITY OF INFORMATION.

One of the major factors in the increase in toxic tort lawsuits may be the sudden availability to plaintiffs of public information and data on waste sites and facilities. This sudden wealth of available information is largely the result of federal and state-imposed reporting requirements of a variety of information, including the types of chemicals stored, used and/or disposed of in the workplace, the number of releases of certain chemicals, the methods of disposal of contaminants and a myriad of other information that plaintiffs previously would have had to obtain through lengthy and often costly discovery proceedings. Now that such information is at least theoretically available to the public at large, it should be even easier for toxic tort plaintiffs to find fuel for their lawsuits. In fact, some of the information required to be reported is almost certain to spur potential toxic tort plaintiffs into litigation. Examples of some of the available information and financial assistance most likely to provide fodder for plaintiffs in toxic tort suits is set forth below.

- A. CERCLA financial grants are potentially available to individuals who may be affected by a release.

CERCLA § 117(e) provides that groups of individuals who may be affected by a release or threatened release at an NPL ("National Priority List") facility are eligible to obtain grants for technical assistance from the President. Section 117(e) provides that "[s]uch grants may be used to obtain technical assistance in interpreting information with regard to the nature of the hazard, remedial investigation and feasibility study, record of decision, remedial design, selection and construction of remedial action, operation and maintenance, or removal action at such facility."

- B. The ATSDR was established pursuant to CERCLA to study and provide information on health-related issues regarding toxic substances.

The Agency for Toxic Substances and Disease Control ("ATSDR") was established pursuant to CERCLA § 104(i) and is authorized, among other things, to:

1. maintain a registry of serious diseases and illnesses and a national registry of persons exposed to toxic substances;
2. establish and maintain an inventory of literature, research, and studies on the health effects of toxic substances;
3. provide medical care and testing to exposed individuals in certain cases;
4. conduct surveys and screening programs to determine relationships between exposure to toxic substances and illness;
5. identify hazardous substances most commonly found at NPL sites and prepare toxicological profiles of each substance;
6. prepare health assessments for all NPL sites;
7. perform health assessments for releases on facilities where individuals or physicians provide information that individuals have been exposed to a hazardous substance, probably by a release.

Obviously, a wealth of information that would traditionally have been prepared by the plaintiff's lawyer as part of a toxic tort case is now available from a governmental agency. Plaintiffs can obtain the ATSDR's toxicological profiles for substances, determine which substances exist at an NPL site, and provide their experts with data, health assessments and studies performed by a governmental agency. The fact that the data is a product of a governmental agency may give it even more credence in the eyes of a jury and may be difficult to discredit from a defense perspective. Conversely, however, there are bound to be instances where increased availability of scientific information may also be of assistance to the defendants, such as when it can be shown that a particular constituent does not cause the disease complained of by the plaintiff. See Richardson v. Richardson-Merrell, Inc., 857 F.2d 823 (D.C. Cir. 1988); In re Bendectin Litig., 857 F.2d 290 (6th Cir. 1988).

C. Increased statutory disclosure requirements make a variety of information easily and inexpensively available to the public.

Information regarding hazardous materials on a company's premises has been rendered public with the advent of SARA's emergency response requirements, known as the "Emergency Planning and Right-to-Know Act of 1986" or "EPCRA." SARA § 301, 42 U.S.C. § 11001. EPCRA establishes an information system designed to provide information to the public about the nature and quantities of hazardous material present in communities. The EPCRA program is generally comprised of three reporting areas: emergency planning and notification, hazardous chemical reporting, and toxic chemical release reporting. 40 C.F.R. §§ 355, 370 and 372. For example, EPCRA requires any company that makes, uses, stores or disposes of hazardous materials to file Material Safety Data Sheets ("MSDS") on each material with state and county officials and local fire departments. SARA § 311, 42 U.S.C. § 11021. SARA §§ 312 and 313 require the annual submission of an emergency and hazardous chemical inventory form listing average amounts and locations of hazardous chemicals and toxic chemical release forms. SARA § 304 requires the disclosure of emergency releases. The State of Texas has also passed analogous toxic chemical release provisions in the Texas Toxic Chemical Release Reporting Act, Ch. 152, 1989 Tex. Sess. Law 529 (Vernon), which requires release information to be furnished to the Texas Water Commission.

CERCLA § 103 and § 8(e) of the Toxic Substances Control Act ("TSCA") require that potentially dangerous contamination be disclosed. In addition, the EPA and certain

state agencies have broad authority to issue detailed requests for information on any person who stores, treats, transports, handles, generates or disposes of hazardous wastes or substances pursuant to CERCLA § 104(e) and § 3007 of the Resource Conservation and Recovery Act ("RCRA"). Confidentiality is generally available only on a limited basis in certain circumstances. See 40 C.F.R. Part 2, Subpart B.

Such reporting requirements are likely to result in a complete and full response by the recipient because failure to do so may potentially result in a variety of criminal liability charges upon individuals, companies and officials, such as making false statements to a governmental agency, mail fraud, conspiracy, aiding and abetting, and obstruction of proceedings before a governmental agency. 18 U.S.C. §§ 1001, 1341, 371, 2 and 1505.

With such detailed information available to the public, toxic tort plaintiffs may potentially obtain more information through these public records than they could by using interrogatories, deposition and other tools of discovery. SARA § 322 offers limited protection to disclosing the specific chemical identity of a hazardous substance pursuant to a "trade secret" exemption if: (1) the information has not previously been disclosed, (2) it is not required to be disclosed under federal law, (3) disclosure is likely to cause substantial harm in a competitive position, and (4) the identity of the chemical is not readily discoverable through reverse engineering. However, the identity of the chemical must be divulged if necessary for health professionals to provide adequate treatment. SARA § 322(e), 323.

V. TRENDS IN TOXIC TORT LITIGATION.

A. Virtually all aspects of real estate transactions have been affected by the environmental laws.

Toxic tort litigation has evolved to encompass areas which historically would not have been affected by environmental considerations. The reach of the environmental laws and the associated toxic tort litigation has been extended to such unlikely parties as persons involved in real estate transactions and commercial lenders. The extension of toxic torts to heretofore uninvolved disciplines is addressed briefly below.

Transactions involving real estate have taken on an entirely new complexity due to the promulgation of environmental laws. Lawsuits are increasingly more prevalent

between buyers and sellers, lessors and lessees, and even lenders due to the presence of hazardous substances on the real property or structures that are the subject of the transactions. Although many of these lawsuits are brought as contract actions for breach of warranties, they may be viewed as hybrid toxic tort cases or the progeny of toxic tort cases due to the complex problems of proof, causation, toxicity, etc. raised by the fact that the presence of hazardous substance is at the heart of the action.

1. Asbestos and Real Estate Transactions. The presence of asbestos-containing materials in buildings has generated a myriad of lawsuits regarding responsibility for the presence of the asbestos or injuries associated therewith. Although present regulations do not regulate asbestos in commercial buildings where it is merely found "in place," demolition or renovation activities may disturb the asbestos and cause it to come under government regulation. Private lawsuits are also being filed by purchasers against sellers of buildings subsequently found to contain asbestos. Those lawsuits generally allege fraud or misrepresentation due to the seller's alleged failure to disclose the presence of asbestos prior to the culmination of the transaction.

a. Governmental Actions. Lawsuits pertaining to asbestos in buildings may be filed simultaneously by several different governmental agencies in certain circumstances. This may occur by having a state statute and a federal statute regulating the same area or may result from the overlapping jurisdiction of federal or state statutes. Federal asbestos programs are primarily administered by the EPA, the Occupational Safety and Health Administration ("OSHA"), and the Department of Transportation ("DOT"). Many states have also passed legislation relating to asbestos. Obviously, there is a high potential for dual regulation and/or lawsuits in connection with an alleged incident involving asbestos, with three federal agencies empowered to regulate asbestos. In addition, local government agencies have the authority to regulate asbestos in many states.

EPA's National Emission Standard for Hazardous Air Pollutants ("NESHAP") imposes notification and operational requirements upon owners and operators of certain demolition or renovation projects involving asbestos and regulates asbestos waste disposal. 40 C.F.R. §§ 61.145-61.147, 61.156. The Clean Air Act provides EPA with the power to impose up to \$25,000 per day for violations and the same amount for criminal violations and/or one year of imprisonment for knowing violations. Clean Air Act § 113(b), (c), 42 U.S.C. § 7413(b), (c). The DOT regulates the transportation of asbestos under the Hazardous

Materials Transportation Act of 1975. 49 U.S.C. app. §§ 1801-1812 (1982 and Supp. IV 1986). The DOT can seek civil penalties of up to \$10,000 per day and up to \$25,000 per day and/or five years' imprisonment for willful violations. OSHA has also promulgated standards governing asbestos exposure in the workplace, 40 C.F.R. §§ 61.140-156, and employers who fail to comply with OSHA's standards may be subject to civil and criminal penalties up to \$10,000 with the possibility of six months' imprisonment in certain instances.

b. Private Party Actions. In addition to the potential for heavy governmental regulation of asbestos, private actions involving asbestos are growing rapidly. Plaintiffs in lawsuits centering upon the presence of asbestos in commercial buildings are likely to be private building owners (purchasers), lessees of buildings containing asbestos-containing material and employees located in buildings containing asbestos-containing material. In addition to plaintiffs found in commercial buildings, plaintiffs may also be subdivision property owners who seek to hold all entities involved in the development of the subdivision liable for any damages sustained due to the presence of asbestos-containing materials. See Tanglewood East Homeowners v. Charles-Thomas, Inc., 849 F.2d 1568, (5th Cir. 1988)(where subdivision property owners sued all entities involved in developing subdivision because of alleged toxic waste that had accumulated on the site, been filled in and graded). Parties named as defendants are likely to include the seller of the building found to contain asbestos-containing material, contractors (such as general, heating and ventilating and others), architects, manufacturers of asbestos-containing products, sellers of real estate and real estate brokers.

Litigation regarding an owner's duty to inform a buyer of the presence of asbestos is also becoming more prevalent. Purchasers of buildings that are found to contain asbestos-containing materials have instituted lawsuits asserting that owners have at least a duty to inform prospective buyers of the existence of known asbestos and in some cases argue that owners even have a duty to discover whether the buildings contain asbestos. See, e.g., Kinsey v. Jones, CV-87-2959 (E.D.N.Y. Jan. 30, 1989); Bank Western Federal Savings Bank v. Western Office Partners Ltd., No. 87 Civ. 13,417 (Colo. Dist. Ct.; Denver, Feb. 8, 1989); 195 Broadway Co. v. 195 Broadway Corp., (N.Y. Sup. Ct. April 15, 1988).

In Jefferson Associates v. Prudential Ins. Co., No. 441, Tex. Dist. Ct. (Mealey's Asb. Rep., p. 17, Jan. 20, 1989), a Travis County jury awarded Jefferson Associates \$6.2

million in actual damages and \$14.3 million in exemplary damages on April 19, 1990, in a lawsuit associated with the presence of asbestos in a building. Jefferson Associates, which purchased an office building in Austin, Texas from Prudential, claimed that the defendants knew or should have known about the allegedly cancer-causing asbestos but did not disclose the information. Although the purchase contract included an "as is" provision, Jefferson argued that Prudential committed fraud with the sale. In Bank Western Federal Savings Bank, a Colorado court awarded \$6.75 million in actual and \$2.43 million in punitive damages against a bank after a jury found that it had misrepresented the extent of asbestos present in an office building it sold. The court found that the presence of asbestos was made known to the bank in 1982 when city officials informed them that their renovation work could not proceed without the removal of the asbestos pursuant to city ordinance.

In a case involving residential property, Kinsey v. Jones, No. CV-87-2959 (E.D.N.Y. Jan. 30, 1989), the New York District Court denied the sellers' motion for summary judgment and found they could be liable for misrepresentation where they failed to disclose the presence of asbestos to the purchasers of their home. The Court focused on the fact that the sellers did, in fact, have knowledge of the asbestos because of previous repairs to the interior walls. Kinsey at 168. The Court was also persuaded by the purchasers' justifiable reliance upon the sellers' statement that the walls were made of masonite and not asbestos. Kinsey at 169.

2. Contract actions arising out of the presence of contaminants on real estate. Common law claims of breach of warranty, fraud, misrepresentation, commercial frustration and similar causes of action are often made by subsequent purchasers of property that is later found to be contaminated. Subsequent purchasers typically allege that the seller misrepresented or fraudulently concealed the true condition of the property and may try to recover damages and/or rescind the contract. See, e.g., Brock v. Tarrant, 789 P.2d 112 (Wash. App. 1990) (purchasers brought action against vendors and real estate broker for rescission of sale or damages on home containing defective insulation); Wiegman & Rose v. NL Industries, et al., No. C-88-4817-FMS (N.D. Cal. April 18, 1990) (where "as is" clause in contract may preclude claim for breach of warranty when environmental contamination is found on property, such clause did not operate to release former owner from strict liability arising under a statutory cause of action created by CERCLA); Mardan Corp. v. C.G.C. Music, Ltd., 600 F. Supp. 1049, 1055 (D. Ariz. 1984) aff'd, 804 F.2d 1454 (9th Cir. 1986); International Clinical Laboratories, Inc. v.

Stevens, 710 F. Supp. 466, 469-470 (E.D.N.Y. 1989); Southland Corp. v. Ashland Oil, Inc., 696 F. Supp. 994, 1001 (D.N.J. 1988); Channel Master Satellite Systems, Inc. v. JFD Electronics Corp., 702 F. Supp. 1229, 1232 (E.D.N.C. 1988); In Re Sterling Steel Treating, Inc., 94 B.R. 924, 930 (Bankr. E.D. Mich. 1989); Amland Properties Corp. v. Aluminum Company of America, 711 F. Supp. 784, 803 n.20 (D.N.J. 1989); Cameron v. Martin Marietta Corp., No. 89-84-CIV-7 (E.D.N.C. Jan. 30, 1990) (purchasers brought suit against vendors after discovering chemical contamination of land and court found that presence of chemical contamination was not breach of contractual provision that there would be no restrictions, easement, zoning or other governmental regulation to prevent reasonable use of property nor was it an encumbrance that would breach warranty deed); In Re Schenck Tours, Inc., 69 B.R. 906 (Bankr. E.D.N.Y. 1987) (where court rejected claim of commercial frustration as basis for rescinding land purchase contract because buyer was deemed to have assumed environmental risk when buyer consciously and deliberately assumed risk of environmental problems); Wysong v. Czerwinski, et al., No. 89-2064-CH (Cir. Ct. Mich. March 28, 1990) (purchasers of termite-infested home filed suit against seller, realtor and exterminator for negligence, breach of contract and warranties and silent fraud).

B. The applicability of environmental liability to lenders has been potentially broadened.

Toxic tort lawsuits have had the unlikely result of imposing liability for hazardous substance cleanup costs upon lenders in certain circumstances. Under CERCLA, courts have considered whether banks that have foreclosed and/or held security interests in contaminated property could be liable under CERCLA § 107 as owners. CERCLA excludes from the definition of "owner or operator" any "person, who without participating in the management of a . . . facility, holds indicia of ownership primarily to protect his security interest in the . . . facility." CERCLA § 101(20)(A). Courts have been somewhat contradictory in their holdings regarding the liability of secured lenders and lenders who have foreclosed upon CERCLA facilities.

The most recent pronouncement on lender liability was decided on May 23, 1990 by the United States Court of Appeals for the Eleventh Circuit in United States v. Fleet Factors Corp., No. 89-8094 (11th Cir. May 23, 1990, available on LEXIS) and has arguably significantly broadened the applicability of CERCLA liability to lenders. In the Fleet Factors case, Fleet Factors had not even foreclosed upon the realty for which it held a deed of trust (although it had foreclosed upon certain inventory and equipment). Rather, the Eleventh Circuit found

the critical issue in determining Fleet Factors' liability to be "whether Fleet participated in management sufficiently to incur liability under the statute." Fleet Factors at 7. The Eleventh Circuit found that "a secured creditor will be liable if its involvement with the management of the facility is sufficiently broad to support the inference that it could affect hazardous waste disposal decisions if it so chose." Id. at 10. The Eleventh Circuit went so far as to state that it is not even necessary for the secured party to involve itself in the day-to-day operations of the facility to be liable, so long as there is an inference that it could affect hazardous waste disposal decisions. Id. See also United States v. Maryland Bank and Trust Co., 632 F. Supp. 573 (D. Md. 1986)(bank held legal title to waste site at time cleanup costs incurred and was an owner of property subject to CERCLA liability); Guidice v. BFG Electroplating and Manufacturing Co., Inc., 732 F. Supp. 566 (W.D. Pa. 1989)(Westlaw, Allfeds db)(lender which is the successful purchaser at a foreclosure sale should be liable to the same extent as any other purchaser would have been); United States v. Nicolet, Inc., 712 F. Supp. 1193 (E.D. Pa. 1989)(government's allegation that defendant mortgage holder had actively participated in the management of the facility was basis for court's denial of motion to dismiss); United States v. Fleet Factors Corp., 724 F. Supp. 955 (S.D. Ga. 1988)(lower court found that Fleet's activities prior to foreclosure did not rise to the level of participation in management sufficient to impose CERCLA liability, but facts alleged regarding cleanup and equipment removal activities precluded granting of summary judgment in favor of Fleet); Coastal Casting Service, Inc. v. Aron, No. H-86-4463 (S.D. Tex. April 8, 1988); United States v. Mirabile, 15 Env'tl. L. Rep. 20,994 (E.D. Pa. 1985)(to be liable, secured creditor must, at a minimum, participate in the day-to-day operational aspects of the site).

Various legislative solutions have been introduced to offer protection to lenders from hazardous waste cleanup liability. On April 25, 1989, Representative LaFalce introduced H.R. 2085 to provide protection from CERCLA liability for "innocent lenders" that acquire ownership or control of a property to realize on a security interest. Representative LaFalce revised his previous legislation by introducing H.R. 4494 on April 4, 1990, expanding the class of lenders and fiduciaries that would be exempt from CERCLA liability. Senator Garn also introduced S. 2319 on March 22, 1990, to amend the Federal Deposit Insurance Act and the Federal Credit Union Act to provide an exemption from CERCLA liability for a mortgage lender or depository institution that acquired property in a foreclosure sale, or which was serving in a fiduciary capacity.

C. The presence of underground storage tanks has resulted in a rapid increase in litigation.

Lawsuits arising out of the presence of underground storage tanks ("USTs") are another relatively new phenomenon which are accompanying the increased regulation over USTs found on both the federal and state level.

On the federal level, underground storage tanks are regulated by the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 et seq., as amended by the Hazardous and Solid Waste Amendments of 1984 ("HSWA"). The RCRA regulations address UST design, installation, operation, release detection, corrective action, closure and financial assurance in connection with tanks and impose various obligations upon owners and operators.

Tanks are also regulated on the state level pursuant to Chapter 26 of the Texas Water Code which provided the Texas Water Commission with the authority to establish a program to regulate underground storage tanks. The Texas Legislature adopted its UST program in 31 TAC §§ 334.1-334.13 regulating USTs and imposing various requirements upon UST owners and operators. Section 334.2 defines "operator" as "any person in control of or having responsibility for, the daily operation of an underground storage tank system." Section 334.2 also defines an "owner" as "any person who currently holds legal possession or ownership of a total or partial interest in the underground storage tank system."

Litigation involving tanks typically occurs when buyers of property discover leaking tanks that they did not know existed when they purchased the property. The question arises of who retained responsibility for such tanks -- the buyer or the seller -- and lawsuits may be filed because the remediation of leaking tanks may be quite expensive.

VI. CONCLUSION.

Toxic tort litigation has become a major and specialized area of litigation encompassing certain traditional tort considerations and spawning new and difficult issues of first impression for the courts. The increased availability of toxicological and chemical information and government studies of such chemicals' effects upon potential plaintiffs may have the effect of encouraging the filing of even more toxic tort suits in the future. In addition, environmental liability is consistently being imposed upon parties farther away from any contact with hazardous substances, such as lenders and parties

involved in real estate transactions. These trends illustrate the likelihood of a continued and burgeoning field of toxic tort litigation.

SCIENTIFIC PROOF OF CAUSATION IN TOXIC TORT LITIGATION

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INTRODUCTION

As attorneys, you are frequently called upon to deal with legal issues that involve the relationship between environmental or occupational exposure to a toxic chemical and an adverse health effect. In such cases you must attempt to prove or disprove that exposure to a chemical or mixture of chemicals has resulted in disease or injury. In certain tragic instances, the relationship between chemicals and health effects is readily apparent. The accidental release of a huge cloud of hydrofluoric acid in Texas City several years ago and the famous ammonia truck accident in Houston in the mid-1970s were dramatic and unequivocal examples of chemical exposure causing bodily harm.

But in many other cases of chemical exposure, if not the great majority, the issue of causation of a specific health effect by a specific chemical agent is obscure, complex, and difficult to demonstrate and quantify.

Those of us who live in the industrialized nations of the West are exposed daily to a wide array of potentially harmful chemicals at home or at work with few or no apparent ill effects. If each of these chemicals were to exert a fully harmful effect on us, few of us would be here today. A single disease may have numerous underlying causes. Its clinical course may be determined by a host of factors involving the individual's metabolism, genetics, and life style, as well as by exposure to an external agent, such as a hazardous chemical. Yet we not only survive, but flourish. It becomes evident that the cause-and-effect relationship between environmental and occupational chemicals and public health effects defies easy description.

So how do we in fact scientifically assess the public health effects of chemicals? To prove causation of toxic injury or disease by a chemical substance, three tiers of requirements must be satisfied.

THE FIRST TIER: PROOF OF EXPOSURE

The first tier of requirements involves proof of exposure. For a chemical to exert an effect, there obviously must be exposure to it. Exposures may occur in the workplace as a result of commercial

or industrial processes or at home or elsewhere through air, water, soil, and food. For exposure to take place, regardless of where it occurs, an exposure pathway must be shown to exist. An exposure pathway consists of the following components:

1. A source of the chemical. This might be an industrial waste impoundment filled with organic solvents and polynuclear aromatic hydrocarbons (PNAs), or a stack of drums containing arsenical herbicides sitting outside a warehouse.
2. A mechanism of release to the environment. This may take the form of release from the impoundment through a hole in the liner system or in the case of the arsenical herbicide, a rupture in one or more of the drums.
3. A means of transport through the environment. This process requires an environmental medium to transport the released substance. In the impoundment example, ground water could transport the chemicals away from the aquifer. In the case of the drums of herbicides, stormwater could convey the herbicides into the stormwater conveyance system and downstream into a water supply reservoir.
4. A receptor point at which exposure can occur. Receptor points can be in any number of places, such as the home where contaminated food or water may be consumed, the workplace where heavy metals are contacted on the skin, or a restaurant where secondary tobacco smoke may be inhaled. In our impoundment example, chemicals could be transported via shallow ground water into a drinking water aquifer where private wells could convey the water into a home. The herbicides could be washed downstream into a public water supply reservoir.
5. A specific route of exposure undertaken by a person. These are the means by which the individual actually takes in the chemical into the body. Routes of exposure include inhalation, eating, drinking, and dermal contact involving air, water, soil, or food that contains the chemical, or the actual chemical itself (as in occupational exposures).

For our impoundment example, the chemicals which were transported into a ground water supply and pumped into the home could then be inhaled while the residents took a shower, ingested via drinking and dermally contacted. The herbicide in a public water supply could likewise be inhaled, drunk or dermally contracted.

If any one of these components is missing, a complete exposure pathway does not exist. Without a person acting as a receptor for chemicals moving through a complete exposure pathway, there can be no exposure to that chemical. Exposure cannot occur through an incomplete pathway.

THE SECOND TIER: SUFFICIENCY OF EXPOSURE

The second tier of requirements to establish causation of toxic injury or disease involves proof of sufficient exposure. If there is exposure to the chemical, causation of adverse health effects by that chemical ultimately depends upon sufficient exposure to it. Sufficiency of exposure lies at the very heart of the evaluation of toxic effects by chemicals. Literally every one of the millions of chemicals known to man, whether natural or synthetic, whether simple or complex, can be harmful if we are exposed to them in a manner sufficient for them to exert harmful effects. Breathing pure oxygen for a long time can cause dangerous imbalances in blood electrolytes. Eating a large quantity of table salt can be lethal. Water can kill us if it enters the lungs.

As the sixteenth century Swiss physician Paracelsus said: "All substances are poisons; there is none which is not a poison. The right dose differentiates a poison and a remedy."

How then does the scientific concept of sufficient exposure apply to a toxic tort case? Sufficiency of exposure will depend on the following critical issues:

The health effect in question

First, you must identify the precise nature of the disease or injury in question. Concerning cancer, for example, to say a person "has cancer" is virtually a meaningless statement. Carcinogens usually have specific target organs, tissues, and cell types which must be carefully delineated in describing the disease. If a person "has cancer," is it lung cancer or skin cancer? If lung cancer, is it oat cell carcinoma or bronchogenic carcinoma? If skin cancer, is it basal cell carcinoma or squamous cell carcinoma? If it is leukemia, is it myeloid or lymphocytic leukemia? These differences in organ and cell type can have a tremendous impact on the chemical substance being implicated as the cause. Aminobiphenyl is known to produce tumors in the liver and urinary bladder, while benzene affects the bone marrow.

Specificity of effect is equally important in non-carcinogenic effects. For example, the use of oral contraceptives has been associated with stroke. There are, however, two different kinds of stroke: thrombotic stroke, in which the blood vessels become occluded with a blood clot and deprive the target tissue of blood, and hemorrhagic stroke, in which the blood vessels rupture, losing their vascular integrity. The long-term use of oral contraceptives in older women has been associated with thrombotic stroke, not hemorrhagic; oral contraceptives are believed in some cases to interfere with the blood clotting mechanisms, leading eventually to blood clots, or thromboses.

You should investigate additional aspects of non-carcinogenic effects. For instance, are they acute or chronic in nature? Do they involve alterations in enzyme action, genetics, metabolism or physical damage to tissues? Has reproduction or fetal development been affected? Clearly, these health effects must be precisely delineated.

Obviously, the precise diagnosis of the alleged health effect must be performed by competent medical personnel employing accepted diagnostic procedures. Reliance on anecdotal or self-diagnostic evidence can lead to misinterpretation and blatantly erroneous approaches to understanding the public health effects of chemicals.

The strength of the data base

Second, has the chemical been demonstrated by epidemiological or experimental data to be associated with the occurrence of the human health effect in question? This is a vast and complex field of investigation that we can touch upon only briefly here.

Our knowledge of the health effects of chemicals depends upon two primary sources: 1) epidemiology, which is the study of patterns of the occurrence of disease within human populations and of the factors that influence those patterns; and 2) experimental research, in which chemicals are administered to laboratory animals and their health effects evaluated and extrapolated to humans. Each of these sources has its inherent limitations and disadvantages, but each plays an important role in quantifying a chemical's health effects on human populations.

We have epidemiological data on the health effects of numerous industrial organic compounds and heavy metals. We know, for example, that ingestion of high levels of inorganic arsenic in drinking water has been associated with the occurrence of skin cancer, and that occupational exposure to vinyl chloride has been associated with increased incidence of angiosarcoma of the liver, a rare neoplasm.

But for many other substances, our only toxicological information comes from experimental data derived from studies on laboratory animals, such as rodents, rabbits, and primates. We don't have much epidemiological data on, for instance, benzo(a)pyrene, but the experimental data base on laboratory animals is fairly extensive. To establish causation of toxic effects by a chemical, there must be some foundation in either epidemiological or experimental data. It is important to note that mere statistical association between exposure to a chemical and an observed health effect is not adequate evidence of causation. Statistical associations can be readily demonstrated between exposures and effects even when they are only remotely and indirectly related.

Factors affecting toxicity

Third, as attorneys involved in a toxic tort case, you should have a thorough understanding of the factors that influence a chemical's toxicity. Chemical exposures are characterized according to dose, duration, chemical form of the substance, and route of administration. These four parameters are critical to the type of health effect that can be expected.

The amount of chemical to which someone is exposed is obviously important. The ingestion in your morning coffee of a small quantity of trichlorethylene, once used in the decaffeination process, would have no adverse health effects, whereas a brief but high occupational exposure to that chemical might have some transient effects on the central nervous system.

The duration and route of exposure are also significant. Chromium and cadmium are carcinogenic only when inhaled in sufficient amounts over long periods, but not with short term or dermal exposures. And the specific chemical form has a great influence on toxicity. This is especially true of the metals, many of which can exist in a large number of chemical species that have greatly varying degrees of toxicity.

You may, for instance, encounter a toxic tort case where it is alleged that someone has suffered ill effects from eating seafood caught near a plant that discharges arsenic to the water. Two factors would work against this claim. Arsenic, which can be toxic in the inorganic form, generally does not biomagnify in an aquatic food chain, and the arsenic that does accumulate in aquatic organisms is metabolized to a non-toxic, organic form. With mercury, however, the opposite occurs. A small quantity of elemental mercury, when ingested, is relatively harmless due to poor absorption in the gastrointestinal tract. But mercury does readily biomagnify throughout an aquatic food chain, and the organic mercury that accumulates in fish and shellfish is profoundly toxic to the human central nervous system.

Therefore, to establish causation of injury or disease by a specific chemical agent, you must be able to demonstrate that: the chemical has been shown to be associated with a particular health effect in humans, that the individual in question has been properly diagnosed as having the health effect, and that exposure to the chemical has in fact occurred in the magnitude, duration, and manner considered necessary to induce the health effect.

THE THIRD TIER: CONFRONTING THE UNANSWERED QUESTIONS

I realize that all of this sounds very neat and straightforward. But in reality, associating health effects with environmental or occupational chemical exposures to the point of scientific adequacy

is riddled with pitfalls. This brings us to our third and final tier of requirements.

Deficits in knowledge

We lack knowledge in large areas of physiology and cell biology involving the molecular behavior of toxic chemicals. There are constant problems with uncertainties in chemical transport and transformation, human exposure processes, confounding factors, multiple exposures to other chemicals, multiple causation for a given disease, and contradictory or inconclusive evidence. All these constantly militate against accurate and thorough understanding of the toxic effects of the majority of chemicals on humans. In your efforts to scientifically establish chemical causation of public health effects, these factors must be taken into account.

Measuring exposures

It is one thing to recognize that an environmental or occupational exposure has occurred; we must also realize that these exposures are extremely difficult to measure accurately. We may know that miners in Sweden showing high rates of lung cancer have been exposed to radium in the mine shaft, but quantifying their actual exposure is difficult if not impossible. We may know that a group of factory workers occasionally inhale ethylene dichloride vapors, but what is their actual intake? Adding to this difficulty is our lack of information for many chemicals on what environmental or biological transformations they undergo, how much can actually penetrate the body's natural defense mechanisms, and how long they persist in the environment. Without a fuller knowledge of these processes, it is difficult to evaluate or predict a chemical's health effect.

The problem of extrapolation

Perhaps the most contentious issue in modern toxicology is the necessity of extrapolating laboratory toxicity data from animals to humans. The ethics of modern society rightly prohibits experimentation on humans, except for voluntary pharmaceutical testing. But for science to determine toxic effects of chemicals, we must test them on animals; there is no escape from this dilemma. The genetic and physiological differences between humans and laboratory rodents are obviously enormous. To extrapolate a hazardous dose for humans from animal data often demands the application of crude and simplistic assumptions that have scant scientific basis. Animal data, however, are frequently the only foundation we have for making risk management decisions concerning chemicals. Yet because of this inherent problem we are often confronted with contradictory lines of evidence.

There is perhaps no more dramatic example of this than the evidence on dioxin, perhaps the most feared of all environmental contaminants. Dioxins are the most potent laboratory animal carcinogens known at the present time; they cause tumors at multiple sites in laboratory rodents when present in the diet at parts-per-trillion quantities. Because of its intense potency, dioxin evokes trepidation from the public and stringent regulation from state and federal agencies.

But the stubborn reality of dioxin is that it has never been shown to cause any health effects in humans other than a minor non-cancerous skin disorder known as chloracne, a condition caused by other chlorinated aromatic compounds such as PCBs. This is despite the fact that there have been several well-documented cases of substantial dioxin exposure that have been carefully studied.

The Center for Disease Control has not yielded conclusive data from its long-term studies on the effects of exposures by Viet Nam servicemen to Agent Orange, a dioxin-containing herbicide. Detailed studies of the famous explosion in Seveso, Italy in 1976, in which about a dozen pounds of dioxin were scattered over a small populated area, have revealed no serious health effects whatever to the people exposed.

Other aspects of experimental and epidemiological data create problems in establishing causation. Laboratory doses are frequently administered at high doses, compared to the typically low doses encountered by humans in environmental exposures. We often don't know the exact toxicokinetics of a given chemical, namely, how it is distributed in the body, what organs it acts upon or concentrates in, and how it is metabolized or converted into more harmful or less harmful derivative substances.

Confounding factors

In addition, factors known as confounding factors add to the uncertainty in understanding chemical causation of health effects in exposed human populations. These factors include such parameters as age, sex, family medical history, simultaneous exposure to other chemicals (medicines, occupational chemicals), general health of the individual, nutrition, personal habits (diet, smoking), and differences in individual susceptibilities. All these factors have a direct influence on the health effects of chemicals. Their significance is that the health effects due to the identical exposure to a given chemical agent may vary greatly from person to person.

Other Issues: multiple causation, complex mixtures

Many diseases, such as disorders of the skin, liver, and kidney, may have multiple causes, making it frequently difficult to

identify precisely a single causative agent. Environmental and occupational exposures often involve not just a purified compound, as with precise laboratory experiments, but complex and often unknown mixtures of many different substances. The difficulties presented by complex mixtures are outlined by the well-known case of "Yusho poisoning" in Japan in 1968 that involved a massive exposure to rice oil contaminated with PCBs. For years it was believed that the PCBs were the primary causative agent for the host of medical problems that followed for years afterward. It is now believed, however, that the true toxic component was not the PCBs but the dibenzofurans, which are common contaminants of PCBs. The implications of a situation like this for a toxic tort case are readily apparent. You must determine: what is the actual active component in a complex mixture? How much is present, and what was the exposure? These questions have no easy or even knowable answers.

Latent periods

Carcinogens often have very long latent periods, often running into decades, between exposure and the onset of effects. Furthermore, carcinogens often act in complex, interrelated ways on tissues. Certain agents, like bis(chloromethyl)ether, are strong and direct acting carcinogens that can exert their effect on a tissue in the absence of other chemicals. But other carcinogens are known as promoters. They can exert a carcinogenic effect only after a tissue has been preconditioned by exposure to a different carcinogen. Many carcinogens, including dioxins, are considered promoters. But assuming we can accurately quantitate the carcinogenic effect of an environmental carcinogen, how can we accurately know the conditions of the requisite first exposure?

Background exposures

We often speak of carcinogens as if they were some exotic substances that we encounter only rarely except in a laboratory or specialized industrial process. The fact is that carcinogens, as well as a host of other chemicals, are an intrinsic part of our daily existence. We are exposed to them in air, drinking water, and food virtually every day. We may be exposed to carcinogenic nitrosamines in bacon, trihalomethanes in chlorinated drinking water, aflatoxin in peanut butter, and polynuclear aromatic hydrocarbons in engine exhaust. Although these are well-documented carcinogens, we generally ingest them in relatively low, unmeasured, and presumably harmless levels. But many believe, especially within the EPA, that there is no threshold of exposure and therefore that all carcinogens exert an effect even at extremely low levels of intake. This is a highly debateable area of toxicology. But it brings more uncertainty to the issue of the causes of cancer. All these multiple exposures that we are faced with every day, along with the high background rate of cancer in

this country -- namely, one person in four develops some form of cancer in the U.S.-- adds additional difficulty to detecting small incremental increases in cancer occurrence within a small population exposed to an environmental or occupational carcinogen.

Conclusion

All this is not to say that we know nothing about the toxic effects of chemicals or that serious public health effects have not resulted from chemical exposure. Through advances in physiological modeling and molecular toxicology our understanding of the health effects of chemicals continues to grow. Many chemicals and their health effects are well-characterized and documented, and the health and safety regulations governing their use are generally well justified.

But in the rarefied area of toxic tort cases, the scientific proof of chemical causation of health effects, while readily demonstrable in many cases, is extremely difficult, if not impossible, in many others. As attorneys involved in such cases, you have a tremendous challenge to understand the complex, multifaceted nature of the impact of chemicals on public health.

In closing, a sense of perspective may be helpful. A landmark 1981 study carried out for the U. S. National Cancer Institute showed that 65 per cent of cancer in this country could be attributed to two predominant factors -- smoking and diet. The chemicals frequently involved in toxic tort action, industrial chemicals and environmental pollutants, accounted for less than three per cent.

II. LEAKING UNDERGROUND STORAGE TANKS

"Lay her i' the earth; And from her fair and unpolluted flesh May violets spring."

Fund Recovery & Other Issues

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LEAKING UNDERGROUND (and Aboveground) STORAGE TANKS

I. THE PST PROGRAM AT THE TEXAS WATER COMMISSION: Background

The Petroleum Storage Tank Division and the current program had their origins in a series of state and federal legislative acts which became law in the years between 1984 and 1989. One of the first congressional measures taken was found in the Hazardous and Solid Waste Amendments of 1984 ("HSWA") which amended the Resource Conservation and Recovery Act ("RCRA," 42 USC 6901, et seq.). HSWA required that state and federal inventories be made of the underground storage tank populations in the United States. See: RCRA 9002, codified as 42 USC 6991a. Pursuant to this act, the governors of each state designated agencies to take the inventory of tanks and maintain the records. The Texas Department of Water Resources, predecessor agency to the Texas Water Commission, received the designation for the State of Texas.

The program on the federal level began to take shape with the passage of the Superfund Amendment and Reauthorization Act of 1986 or "SARA." In addition to its focus on the Superfund Program, SARA established a regulatory program for underground storage tanks. See: RCRA 9003, 42 USC 6991b. In 1987, the Governor signed Senate Bill 779 into law (Acts, 1987, 70th Legislature, Regular Session Ch. 277, eff. Sept. 1, 1987, codified as 26.341 et seq., Texas Water Code). Senate Bill 779 directed the Texas Water

Commission ("TWC") and the federal statutes directed the Environmental Protection Agency ("EPA") to establish regulatory programs in the state and federal arenas, respectively, which are similar. Both the state and federal programs were to focus on two broad areas: (1) prevention; and (2) corrective action.

The EPA promulgated rules to implement the federal program in 1988 and early 1989. These rules are found at 40 CFR part 280. Senate Bill 779 (26.357, Texas Water Code) required that the TWC establish program requirements which were at least as stringent as the EPA's, so in response to EPA's rules and in fulfillment of the legislature charge, the Commission proposed statewide UST rules in March of 1989. After an extended comment period, the rules were adopted in September, 1989. The State PST rules are found at 31 TAC Chapter 334.

In the fall of 1988 and the spring of 1989, the Commission had interim rules in place and Commission staff was working with owners and operators who were performing voluntary clean-ups. The federal rules, on which the state rules were patterned, were being adopted. It was during this formative period in the regulatory program that House Bill 1588 was filed and was then debated in the 71st Legislature. House Bill 1588 was similar to other pieces of legislation pending in state houses across the country. It was conceived in response to experiences in tank regulation which had been observed all across the country. Sites were not being cleaned up because many owners and operators could not afford to do so and because federal clean-up funds made available by SARA were not

of financial ability to clean up a leak, such as insurance, letters of credit, or other mechanisms. In most places, pollution liability insurance was not available, and where it was available, it was often prohibitively expensive. House Bill 1588 engrafted a funding program onto the existing UST regulatory program to address these problems. It provided that eligible owners and operators of certain types of underground and aboveground storage tanks could receive funding or state assistance in clean-up of product leaks. In response to this new legislation, the commission reorganized its Underground Storage Tank Section in the summer of 1989. The Petroleum Storage Tank (PST) Division was created by the Commission to operate both the regulatory program and the funding program, with the support of the Commission's Field Operations Division, Fiscal Services Section, and Legal Division. Since that time, rules have been promulgated to address aboveground storage tanks, added by House Bill 1588, and to establish the reimbursement program for funding clean-ups.

II. OVERVIEW OF THE CURRENT PROGRAM

The following is a broad outline of the program functions:

PETROLEUM STORAGE TANK PROGRAM

<u>Regulatory Side</u>	<u>Funding Side</u>
1. Corrective Action Requirements	1. State lead clean-ups
2. Preventative Measures	2. Responsible Party Reimbursement

One thing that is very important to remember is that not all tanks are subject to all regulations, nor are all tanks eligible for all sources of funding. The first thing to do in order to sort things out is to look at the definition of underground and aboveground tanks to see if the tanks in question fit under either of those definitions:

Definition of 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), 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 definition comes from the federal definition found at 42 USC §6991(1).

Definition of 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.

It must be noted here that the Commission has limited by rule (31 TAC 334.121, effective June 25, 1990) the class 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.

The set of substances which are petroleum products is more limited than the set of substances which are petroleum. The effect of the Commission rule is to limit those types of AST's which could be subject to the regulatory side of the program to those types of AST's which are also subject to the funding side, as will be seen later.

General Applicability

Once it is determined whether a specific tank meets one of the definitions, the next step is to determine whether the tank is generally subject to the regulatory side or the funding side of the program, as shown in the diagram of the program above.

As a general rule, the following tanks come under the following areas:

Regulatory Side

1. CORRECTIVE ACTION:
 - a. federal law: applies to UST's (40 CFR 280.10)
 - b. state law: applies both to UST's and AST's (31 TAC 334.1; 31 TAC 334.129.)
2. PREVENTATIVE MEASURES:
 - a. federal law: applies to UST's (40 CFR 280.10)
 - b. state law: applies to UST's (31 TAC 334.1)

Funding Side

(To be described later in this paper)

1. REIMBURSEMENT PROGRAM:
 - a. federal law: not applicable
 - b. state law: applies to UST's and AST's which contain petroleum products and which are regulated by the Commission.(26.342(7), 26.3571, and 26.3573, Texas Water Code)
2. STATE LEAD PROGRAMS:
 - a. federal law: (LUST Trust Fund) applies to UST's which contain petroleum (42 USC 6991b(h))
 - b. state law: (PSTR Fund) applies to UST's and AST's which contain petroleum products and which are regulated by the Commission.(26.342(7), 26.3571, and 26.3573, Texas Water Code)

Exceptions

The next general line of inquiry must be whether the tank comes under one of the exceptions to regulation. This issue is obviously significant in terms of the regulatory side of the PST Program. It also has significance in terms of the funding side, as will be described later.

The federal statute excludes certain types of tanks from its definition of "underground storage tank." See: 42 USC 6991(1). The federal rules expand on those exclusions somewhat. They address applicability and deferrals in general at 40 CFR 280.10 and 280.11. In addition, technical requirements vary with different types of tanks, as explained in the body of the rules and not all requirements apply to all tanks. The financial responsibility rules apply to petroleum UST's, as explained in 40 CFR 280.90.

Section 26.344 of the Texas Water Code lists the statutory exemptions in Texas. The state statutory exceptions which apply to UST's mirror the federal statutory exceptions. The state rules also expand on the list of exemptions to some extent. The state rules regarding UST's for the most part do exempt the same tanks as the federal rules, however, some tanks which received deferrals from the EPA are regulated under the state rules. The applicability of state UST rules, as well as the statutory exemptions and Commission exclusions from regulation are found in 31 TAC 334.1, 334.3, and 334.4. As with the federal rules,

specific technical requirements vary, and the financial responsibility rules apply to petroleum UST's.

The statutory exemptions for aboveground storage tanks are also found in 26.344 of the Texas Water Code. The state rules regarding AST's contain exemptions and exclusions. These are found at 31 TAC 334.121, 334.123, and 334.124 of the Commission's rules.

Ownership

All of the above inquiries assume that the person in question is an owner or an operator of the tank. The terms are defined in 334.2 of the Commission's rules for UST's, and 334.122 for AST's. The ownership of tanks is in dispute or is uncertain in a number of cases, so the issue of ownership bears some examination here.

"Owner" defined in 334.2 as:

..Any person who currently holds legal possession or ownership of a total or partial interest in the underground storage tank system. For the purposes of this chapter, where the actual ownership of an UST system is either uncertain, unknown, or in dispute, the fee simple owner of the surface estate where the UST is located shall be considered the UST system owner, unless the owner of the surface estate can demonstrate by appropriate documentation (deed reservation, invoice, bill of sale, etc.) or by other legally acceptable means that the UST system is owned by others. "Owner" does not include a person who holds an interest in an UST system solely for financial security purposes unless, through foreclosure or other related actions, the hold of such security interest has taken legal possession of the UST system.

For the most part, this definition follows the law of fixtures. The key to ownership of the tank is in evidence relating to the intent of any persons involved with the tank or with the

land. If there is conclusive evidence to indicate that some person other than the owner of the land to which the tank is attached has retained ownership, the rules honor that. However, if ownership of the tank is "uncertain, unknown, or in dispute," the rules declare that responsibility for the tank falls on the fee owner of the surface estate.

II. THE REGULATORY SIDE

Once it is determined whether a tank fits under the regulatory side of the program, the next step is to determine what the regulatory requirements are. The regulatory side of the program focuses on two main issues: (1) what a tank owner or operator must do if there is a leak (Corrective Action Requirements); and (2) what a tank owner or operator must do to prevent leaks (Preventative Measures).

State law requires that an owner or operator of an aboveground or underground storage tank immediately take all measures necessary to prevent a threatened release and to abate and remove any releases (26.351, Texas Water Code). State law also prohibits any person from causing pollution or allowing the illegal discharge of waste (26.121, Texas Water Code). Both the EPA and the TWC have promulgated regulations relating to corrective action requirements. These federal and state rules are found in the Code of Federal Regulations and in Texas Administrative Code as cited below:

1. Federal Rules for Release Reporting and Corrective Action Measures: 40 CFR part 280, subparts E and F (280.50, et seq.).
2. State Rules for Release Reporting and Correction Action Measures: 31 TAC chapter 334, subchapter D (334.71, et seq.).

The federal and state rules both require owners and operators to take four basic actions in response to a release: (1) report the release; (2) contain and abate any emergencies; (3) assess the extent and degree of contamination; and, (4) remediate or clean-up the pollution.

As a practical matter, when a release occurs, the owner or operator of the tank should abate any emergency conditions and contact the Water Commission District Office in the district where the tank is located to report the release as soon as possible. A letter, which has become known as the "eight point letter" or the "CAD (corrective action directive) letter" will issue from the staff to the owner or operator. This letter will discuss generally the type of information which the staff will need to examine in regard to remedial investigation and clean-up of leaks.

The federal statute requires the EPA and the state statute requires the Water Commission to promulgate rules to foster the preventative side of tank management also. It should be noted that these rules apply only to underground storage tanks. The rules cover standards of construction and performance which the tanks themselves must meet, accepted methods of installation, and double containment in some cases. In addition, the rules require the following measures:

1. RELEASE DETECTION FOR TANKS: The rules require that equipment must be installed on tanks systems or methods must be employed in the operation to detect the occurrence of releases from tanks. Several alternative for release detection are offered by the rules.

2. CORROSION PROTECTION FOR TANKS: The rules require that steel tank systems have some form of corrosion protection system.
3. SPILL AND OVERFILL PROTECTION: The rules require that tank systems have features which minimize the damage caused by spills and overfills.

These federal and state rules are found in the Code of Federal Regulations and the Texas Administrative Code as cited below:

1. Federal Rules regarding technical standards: 40 CFR part 280, subparts B, C, and D.
2. State Rules regarding technical standards: 31 TAC Chapter 334, subchapter C.

The technical standards must be met for all "new" tanks at installation. New tanks are those on which installation was commenced after December 22, 1988 (40 CFR 280.12, 31 TAC 334.2). All other tanks are termed "existing tanks" under the rules. Existing tanks must also be brought into compliance with certain of the same technical standards on varying schedules, as prescribed in the rules. There are some minor differences in the state and federal technical standards which apply statewide in Texas. Also, additional state requirements are imposed on tanks located on the Edwards Aquifer Recharge and Transition Zones in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties (31 TAC 313.10 and 313.11).

Other Requirements of the Regulatory Side

In addition to the measures described above, there are other requirements for underground storage tanks in the federal and state

rules, such as financial assurance requirements and notification requirements. Proof of financial assurance from owners and operators of petroleum underground storage tanks is required in both the federal and state rules:

1. Federal Rules regarding Financial Responsibility: 40 CFR part 280, subpart H (280.90, et seq.).

2. State Rules regarding Financial Responsibility: 31 TAC Chapter 334, subchapter E (334.91, et seq.).

The financial responsibility rules require that owners and operators provide proof of insurance, letters of credit, or certain other security which will be available in case of a leak to cover: (1) third party property damage; (2) third party bodily injury and death; and (3) general costs of clean-up. The PSTR Fund currently satisfies the third requirement for petroleum storage tanks in both the federal and state programs for amounts between \$10,000 and \$1 million per occurrence. Proof of this financial responsibility comes due under the rules on a staggered scale, beginning with large petroleum marketing firms having 1,000 tanks or more, followed by those having 100--999 tanks. These requirements are already in place. Financial responsibility requirements for owners and operators of 13--99 tanks were to become effective on April 26, 1990, followed by requirements for all other owners and local governments on October 26, 1990. However, both the state and federal government have deferred on that requirement for the present.

The federal government has announced that it will extend its compliance dates for the 13--99 group one year to April 26, 1991,

and extend its compliance date for the last group to October 26, 1991. The Commission has not announced a formal extension for either of those groups. However, the executive director has stated that enforcement of the requirements for the 13--99 group will be suspended until September 1, 1990. At that time, the Commission will examine the situation and look at the availability of reasonably priced insurance and other alternatives for meeting the requirements of the rules. If the alternatives are still not there, the Commission will consider extending its deadlines further for both the 13--99 group and the last group.

The state rules require that owners and operators provide the Commission staff with prior notice before engaging in activities such as tank installations, major repairs, and tank removals. These notification requirements are found in 334.6 of the Commission's rules. Special provisions relating to notification and inspection of aboveground storage tanks are found in 334.126 and 334.132(c)(5). The latter provision relates to inspection authority which the Commission has concurrently with the State Fire Marshall's Office under V.T.C.S. art. 9201 (1989).

IV. THE FUNDING SIDE: REIMBURSEMENT UNDER H.B. 1588.

One of the things House Bill 1588 does is to establish a reimbursement program for owners and operators who use their own initiative to respond to releases from their tanks. The Commission has promulgated rules for this program and is proposing new rules for adoption. The rules are contained in Subchapter H of 31 TAC

Chapter 334 and are entitled "Interim Reimbursement Program." The old rules are found at 334.501, et seq. The proposed rules have been renumbered and will be found at 334.301, et seq. The two sets of rules are quite similar, except that the proposed rules will expand the list of costs which are subject to reimbursement, provided that those costs are incurred on or after July 17, 1990.

The important concepts to remember in regard to the reimbursement program and the sections of the proposed rules which govern them are:

1. the eligibility of the owner or operator - 334.310, 334.7 and 334.127 (relating to the registration of tanks), and the sections cited earlier in this paper to determine whether a tank is regulated;
2. the allowability of the costs - 334.308;
3. the reasonableness of the costs - 334.309;
4. the effective date of H.B. 1588 (expenses incurred before this date are not reimbursable) - 334.302 gives the date of May 31, 1989;
5. the meaning of the word "occurrence" - 334.311; and,
6. the definition of "corrective action" - 26.351, Texas Water Code.

The Reimbursement side is financed through the Petroleum Storage Tank Remediation Fund ("PSTR Fund"), established by House Bill 1588. The Fund reimburses eligible owners and operators for the expenses of corrective action incurred in response to releases of petroleum product from a petroleum storage tank. The Fund covers all allowable costs after the first \$10,000, up to \$1 million per occurrence.

The requirements for eligibility under the program are fairly simple. A person must first be the owner or operator of a petroleum storage tank (used to contain petroleum products) which is subject to the corrective action requirements of the Commission. In other words, they must be subject to corrective action on the regulatory side of the program as described earlier in this paper. Care should be taken to examine 26.344 of the Water Code for exemptions, as well as the exemption and Commission exclusion sections for UST's in Subchapter A of the TWC rules and the parallel sections for AST's in Subchapter F of the TWC rules to see that the tank is not on those lists. Next, before the application for reimbursement is made, the person claiming reimbursement must have all tanks he owns registered and have the fees paid. Finally, the leak must be reported.

II. STATE LEAD PROGRAMS AND FUND RECOVERY

Another aspect of the funding side of the PST Program is state lead clean-up projects. The source of funds for these projects are the federal LUST Trust Fund and the state Petroleum Storage Tank Remediation Fund.

Funding Side: State Lead Programs

Originally, SARA created a fund called the Leaking Underground Storage Tank Trust Fund ("LUST Trust Fund") which was to be used by EPA or the States for investigation and clean-up of petroleum releases from underground storage tanks under certain conditions,

RCRA, 9003(h); 42 USC 6991b(h). The funding was to be used by EPA or the states giving a priority to those sites which posed the greatest health or environmental risks, 42 USC 6991b(h)(3). Texas has received funds from this program and they are part of the Storage Tank Fund created pursuant to 26.358 of the Water Code. The Texas Water Commission was authorized to use these funds pursuant to 26.358 and the Commission has conducted remedial investigations and taken other action in different parts of the state.

The federal funds, although definitely welcome, were limited. Accordingly, state lead projects in the original program had to be limited. However, House Bill 1588 will help the Commission perform more clean-ups where it needs to do so. Monies from the Petroleum Storage Tank Remediation Fund are available for state lead clean-up operations as well as for reimbursement, 26.3573(d) and (e), Water Code.

At present, the Commission is using both the LUST Trust Fund program and the PSTR Fund to provided state initiated corrective action where needed. Consultants have been selected to operate statewide for the LUST Trust Fund Program. For the PSTR Fund Program, the state has been divided into six regions, shown on the map attached to this paper. A consultant has been selected for each region to perform remedial investigations, design remediation plans and perform construction or remediation management. Under both programs, as plans are designed, bids on the work will be taken from contractors.

What is Covered by the Two Funds

The two state lead programs are different. The two sources of funding apply to different types of tanks and are available under different conditions.

The LUST Trust Fund is designed to provide limited assistance to states in responding to particular health or environmental hazards caused by a release of petroleum. As noted earlier in the discussion of which tanks are regulated under various aspects of the program, the term "petroleum" is a term of art. It is defined in the federal statute at 42 USC 6991(8). The LUST Trust Fund, as all aspects of the federal program, applies only to underground storage tanks, not to aboveground storage tanks. The use of the LUST Trust Fund is limited to cases where:

1. No owner or operator subject to regulation and who is capable of performing the clean up can be found;
2. The owner or operator has failed or refused to comply with an order to perform corrective action; or,
3. Certain exigencies require the government to perform corrective action. See: 42 USC 6991b(h)(2).

The PSTR Fund is designed to be used to respond to releases of "petroleum products," as opposed to "petroleum." See: Texas Water Code, 26.3573(d)(2) and 26.342(7). The term "petroleum product" is more limited in scope than "petroleum." It is defined in Texas Water Code, 26.342(6) as follows:

...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.

The PSTR Fund can be used to respond to releases from "petroleum storage tanks." A petroleum storage tank is either an underground or an aboveground storage tank which contains petroleum products and which is regulated by the commission. See: Texas Water Code, 26.342(7). The conditions under which the Commission may use the PSTR Fund to respond to releases are also broader. Section 26.3511(a) of the Water Code states that the commission may use the fund under any circumstances it considers necessary to protect the public health and the environment.

State lead measures have been employed and doubtless will continue to be employed in a number of circumstances:

1. Where no owner or operator can be found or identified;
2. Where neither the owner nor the operator is able to handle the investigation or remediation and they request the Commission to take over;
3. Where it is necessary to take immediate action and the owner and operator have failed to respond or the Commission feels that they cannot respond adequately;

Quite likely, many of the cases above will be requests from eligible owners or operators for assistance from the PSTR Fund. The Commission staff is currently devising formal procedures for requesting state lead. Category no. 3 has been addressed in the Commission's proposed rules for Subchapter H, relating to the Interim Reimbursement Program. Proposed 334.321 addresses

corrective action by the commission. It provides that the executive director may take initiative at any site after giving 30 days notice to all owners and operator associated with the facilities in question who are registered with the Commssion. In emergency situations, the executive director may take initiative without prior notice provided he does send notice as soon as possible. No expenses incurred by an owner or operator at the site 30 days after the notice is sent will be allowable under the reimbursement rules. It is important to note that nothing in this rule affects the eligibility of the owner or operator. Their eligibility for reimbursement of pre-notice expenses and their protection from full cost recovery (described in the next section of this paper) are preserved intact. These measures are proposed primarily to make the rights of owners and operators vis a vis the Commission clear in areas where the contamination problem requires some action and the owners or operators cannot continue clean-up efforts or they have failed to make progress on the site.

At present, it appears most state lead sites which have owners or operators will be owned or operated by persons who could potentially qualify as eligible for assistance from the PSTR Fund. These clean-ups will be governed by the requirements of PSTR Fund. Therefor, the different coverages of the two state lead programs may not have much practical impact.

Fund Recovery ("Cost Recovery")

Section 26.355 of the Water Code provides that an owner or

operator is liable to the state for the reasonable costs of enforcement actions and corrective actions which the commission has taken with respect to their tanks, and for reasonable attorneys fees. Federal law also provides for recovery of the enforcement and corrective action costs. See: 42 USC 6991b(h)(6).

As of July 1, 1990, no actions for cost recovery in the LUST Trust Fund or PSTR Fund programs had been filed by the Water Commission. However, monies have been expended at different sites and the costs have been documented by Commission staff. With the recent selection of consultants for state lead projects in both funding programs will come increased state lead activity. It is not unlikely that the Commission will be examining possible cost recovery cases in the near future.

As noted above, the scopes of coverage provided by the LUST Trust Fund Program and the PSTR Fund Program are different. The limitations on cost recovery are also different. Cost recovery for expenditures from the Storage Tank Fund (LUST Trust Fund Program) is limited to reasonable costs and reasonable attorneys fees. See: Water Code, 26.355(a). However, there is an additional limitation applied to cost recovery for expenditures from the PSTR Fund. Section 26.355(i) of the Code provides that cost recovery in such cases is limited to \$10,000.00 per occurrence where it is being sought from an eligible owner or operator. (As noted earlier, eligibility defined in 26.3571 and in the proposed Commission rules in 334.310.)

As a result of the different scopes of coverage and the different cost recovery limitations, the following picture emerges:

<u>Tank/Tank Owner or Operator</u>	<u>Coverage</u>	<u>Limitations</u>
Petroleum Product Tanks (underground or aboveground - owner/operator eligible)	PSTR Fund	\$10,000
Petroleum Product Tanks (underground or aboveground - owner/operator not eligible)	PSTR Fund	reasonable
Petroleum Product Tanks (underground only)	LUST T.F.	reasonable
Petroleum Tanks (not petroleum product)	LUST T.F.	reasonable

In the section on state lead clean-ups above, it was mentioned that these distinctions may not have a tremendous impact. Many of the state-sponsored projects will be on sites owned or operated by persons who could potentially be eligible for PSTR Fund assistance. The eligibility requirements with which a person should comply are found in 334.310 of the proposed Interim Reimbursement Program rules June 19, 1990. No formal procedures for establishing eligibility in state lead situations have been promulgated to date. The reimbursement rules simply require that a person be eligible before they apply for funds, and it is doubtful that the state lead procedures will be any more stringent than the reimbursement

procedures. Nevertheless, at this point it behooves owners and operators to stay in compliance with the requirements for eligibility in 334.310 of the proposed Interim Reimbursement Program rules.

VI. DEPARTMENTS IN THE COMMISSION TO CONTACT

As mentioned at the beginning of this paper, the departments in the Texas Water Commission involved in the day-to-day administration of the program are the PST Division, TWC Fiscal Services, the Field Operations Division, and the Legal Division. Here is a breakdown of duties and the departments which handle them:

Regulatory Side

1. Corrective Action (reporting leaks, questions on clean-ups) - call:

*The TWC district office responsible for the county where your tank is located (see map attached to this paper)

*The Petroleum Storage Tank Division (ask for the Responsible Party Remediation Section) 8900 Shoal Creek Dr., Austin (512) 371-6200.

2. Preventative Measures (Construction notification, technical requirements for tanks, upgrading, closures, installations) - call:

*The TWC district office responsible for the county where your tank is located (see map attached to this paper)

*The Petroleum Storage Tank Division (ask for the Technical Services Section) 8900 Shoal Creek Dr., Austin (512) 371-6200.

3. Miscellaneous

(Contractor registration/installer licensing) - call:

*The TWC district office responsible for the county where your tank is located (see map attached to this paper)

*The Petroleum Storage Tank Division (ask for the Technical Services Section) 8900 Shoal Creek Dr., Austin (512) 371-6200.

(Tank Registration) - call:

*The Petroleum Storage Tank Division (ask for the Registration Section) 8900 Shoal Creek Dr., Austin (512) 371-6200.

(Financial Assurance matters for tanks and for contractors and installers) - call:

*TWC Fiscal Services Section (ask for the Financial Responsibility Unit) 1700 N. Congress, Austin (512) 463-8132.

(General legal questions about rules, enforcement, reimbursement, or any other PST matters) - call:

*TWC Legal Division (Say that you have a Storage Tank Question or a PST Question) 1700 N. Congress, Austin (512) 463-8069.

Funding Side

1. Reimbursement Program (question of a technical nature) - call:

*The TWC district office responsible for the county where your tank is located (see map attached to this paper)

*The Petroleum Storage Tank Division (ask for the Responsible Party Remediation Section) 8900 Shoal Creek Dr., Austin (512) 371-6200.

(Questions dealing with payment or refusal of claims) - call:

*TWC Fiscal Services Section (ask for the Financial Responsibility Unit) 1700 N. Congress, Austin (512) 463-8132.

2. State Lead Clean-ups - call:

*The Petroleum Storage Tank Division (ask for the Storage Tank Contracts Section) 8900 Shoal Creek Dr., Austin (512) 371-6200.

VII. FUTURE OF THE PROGRAM

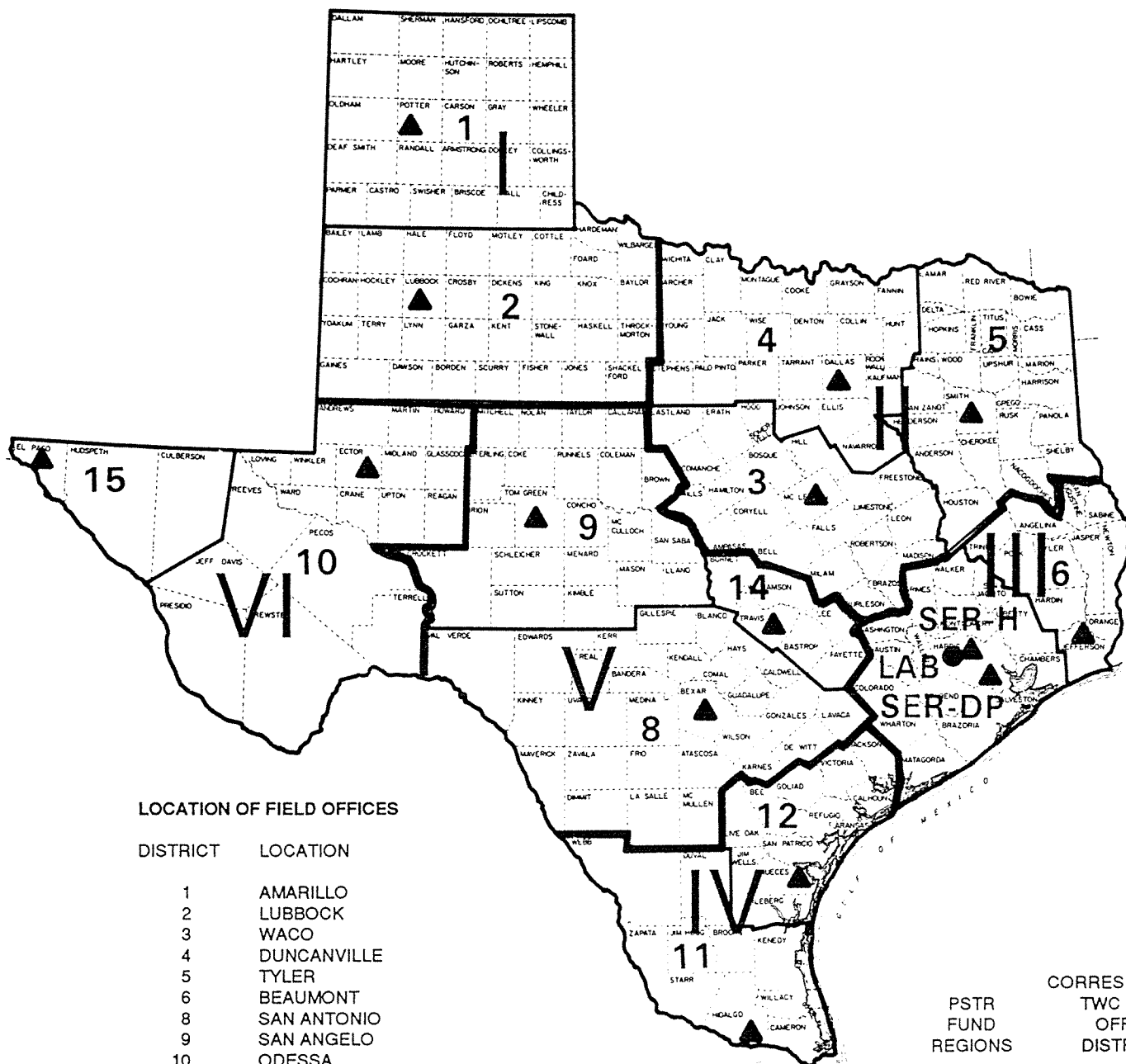
House Bill 1588, as noted earlier, changed the UST Program significantly. What is emerging from these changes is a more balanced approach to the problem of leaking tanks. This approach combines the funding incentive with the enforcement deterrent in an effort to make early release detection and reporting more desirable, to make upgrading tanks for the prevention of leaks more desirable, and to make cleaning up releases a preferred course of action.

On the funding side, the reimbursement program is already underway. State lead projects have already begun at several sites and the Commission has stepped in to take emergency action in several cases, also. Consultants have been chosen for the statewide LUST Trust Fund Program and for the six PSTR Fund regions.

On the regulatory side, several enforcement cases for notification violations have been filed this summer, requesting penalties in the \$3,000.00 to \$4,000.00 range.

What will be seen this fall includes increased efficiency in the processing of reimbursement applications, the beginning of state lead projects on a much larger scale than has been seen in the past, and enforcement--for failure to take corrective action as well as other violations of TWC rules. The reimbursement rules will again be discussed as the final set (Subchapter G) is scheduled to be drafted and proposed this fall. More comprehensive storage facility regulations for the Edwards Aquifer Recharge and Transition Zones in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties will be proposed this fall to replace the interim rules currently proposed.

Geographical Boundaries of Regions for Texas Water Commission PSTR Fund Multi-Site Contracts



LOCATION OF FIELD OFFICES

DISTRICT	LOCATION
1	AMARILLO
2	LUBBOCK
3	WACO
4	DUNCANVILLE
5	TYLER
6	BEAUMONT
8	SAN ANTONIO
9	SAN ANGELO
10	ODESSA
11	WESLACO
12	CORPUS CHRISTI
14	AUSTIN
15	EL PASO
	TWC LAB

SOUTHEAST REGION

SER-H	HOUSTON
SER-DP	DEER PARK

PSTR FUND REGIONS	CORRESPONDING TWC FIELD OFFICE DISTRICTS
I	1 & 2
II	3, 4 & 5
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III. THE THIRD THIRD LAND BAN

"We have come to bury these wastes, not to appraise them."

Legal Ramifications & Other Issues

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**THE THIRD-THIRD LAND BAN
OUTLINE OF TALK BY SAM LISTIAK,
STAR ENTERPRISE**

Introduction:

Rule is 950 double-spaced typewritten pages long and covers hundreds of wastes. Can't cover details in 25 minutes.

Very few individual wastes will be addressed.

Attempt will be made to organize the rule.

Background:

1984 RCRA amendments prohibited land disposal of:

Spent solvent wastes.

California list wastes.

Dioxin wastes.

UIC disposal of above was subject to differing but parallel standards.

EPA divided then existing wastes into thirds and determined whether the land disposal of each waste in each third was to be prohibited and set pretreatment standards for each waste.

Rulemaking on last third to be completed by May 8, 1990.

EPA failure to meet intermediate deadlines for the first two-thirds results in the "soft hammer"-limited disposal of affected wastes to landfills and surface impoundments meeting minimum technological requirements or in other land disposal units.

If EPA missed May 8, 1990 deadline for any waste the hard hammer fell, prohibiting land disposal of that waste.

EPA generally made no express decisions on the prohibition of land disposal for any waste. Set treatment standards based on technology not risk. Land disposal of waste which did not meet technology standards was prohibited.

Often treatment specified was in lieu of land disposal (such as incineration of ignitable liquids) rather than

pretreatment.

Standards were generally set by:

Limiting Appendix VIII concentrations in a waste extract.

Limiting Appendix VIII concentrations in the waste itself.

Specifying technology to be used.

Different standards were generally set for wastewater and non-wastewater forms of each waste.

Exemptions:

National capacity variance (up to two years).

Can treat in MTR impoundments so long as noncomplying residues are removed annually.

No migration petition for specific land disposal units.

Case-by-case extensions available where alternative to land disposal is not completed by deadline.

A technology failure variance based on a proof that the waste differs from the norm.

Third-Third Rulemaking:

Due to delays, the third-third was the largest third.

Waste can be grouped according to technologies - concentration standards are based on technology.

Some technologies are highly specialized, but commonly identified ones are:

Biodegradation,

Oxidation,

Reduction,

Deactivation (Remove hazardous waste characteristic),

Incineration/fuel substitution,

Solvent extraction,

Neutralization,

Precipitation,

Recovery,

Stabilization,

Steam stripping,

Wastewater v. non-wastewater.

Wastewater generally defined as water containing less than one percent TOC and less than one percent TSS.

For spent solvents - less than one percent solvents or less than one percent TOC.

There are a few other specialized definitions of wastewater for particular wastes.

Characteristic Wastes:

EPA asserts ability to require treatment below characteristic levels, but does not do so except for EP toxic pesticide wastes. Agency argues differing statutory standards for defining hazardous waste and treatment standards for land ban.

"Deactivation" to remove characteristic is standard for most characteristic wastes.

Exceptions:

Ignitable liquid waste (D001) with greater than or equal to ten percent TOC must be incinerated, used as fuel, or reclaimed.

Reactive cyanide wastes are subject to concentration limits.

EP toxic pesticide wastes have concentration limits which are set below the characteristic level.

Other characteristic waste issues.

TCLP, not EP is used to test compliance. If TC does not

show compliance for an EP toxic waste, EP toxic tests can be used.

Notice that waste has been treated to meet the standard is sent to the EPA, not to the disposal facility.

If characteristic waste is also a listed waste, both standards must be met. However, a specific standard for a characteristic in a standard for the listed waste will supersede the standard for the characteristic waste.

Multiple Wastes Codes:

As a general rule all standards for all waste codes must be met.

If standards are inconsistent, the more specific applies.

If both are equally specific, the more stringent applies.

California list wastes:

Does not apply to newly listed or identified waste.

Does apply to PCB waste.

Applies if there is no specific limit on a California list compound in the treatment standards for the wastes.

Does apply to characteristic wastes.

Does apply during extensions based on National Capacity Variances.

Multi-source leachate is now F039 with a specific set of concentration standards. Dioxin only waste must instead meet dioxin waste standards.

Specific F039 standards supersede standards for characteristic waste, but the characteristic must be removed before the waste is land disposed.

If waste mixture includes waste subject to land disposal extension and waste not subject to an extension, there is no extension for the mixture.

Residues ("derived from wastes") and mixtures of listed waste and non-hazardous waste must meet the same standards as listed

waste. Non-wastewater residues of treating wastewater must meet non-wastewater standards, and vice versa.

With rare exception (California list) cannot dilute non-wastewater waste to create wastewater or vice versa.

If treatment method is specified for the waste, the residue from that treatment method is not subject to any additional restrictions.

Refining Wastes, K048-52:

The standards were revised for non-wastewater forms of these and for cyanide in wastewater.

On the whole, revised standards are less stringent.

An additional three month extension was granted until November 8, 1990.

Capacity Extensions:

Additional three months for refinery waste.

Three months for the entire third-third, until August 8, 1990.

Two year extensions (except for injection wells):

Certain contaminated soil and debris (D004-11).

Many mercury wastes.

D008 being held for secondary smelting (batteries).

P087.

Non-wastewater forms of F039 (multi-source leachate).

Waste to be vitrified (radioactive waste).

Two Year Injection Well Extensions:

D009,

D003,

D007,

D002 (except acidic hazardous waste),
F039 wastewater,
K011, 13,14,

Dilution:

Generally standards may not be met through dilution.

Wastewater treatment systems and injection wells forced exceptions to this.

Clean Water Act regulated streams (NPDES, POTW) can dilute characteristic waste unless it would result in the avoidance of a specified treatment method. e.g. D001 ignitable liquids with greater than ten percent TOC may not be mixed with less concentrated D001 ignitable liquids unless the entire stream is incinerated.

Waste injected underground can be diluted even if it includes mixing high TOC D001 ignitable liquids with other wastes, so long as deactivate waste before injection.

Generally cannot mix streams requiring different treatments where one treatment is inappropriate for the other waste.

Combining wastes which all would be subject to the same treatment is permissible.

For nontoxic ignitable, reactive, and corrosive waste (does not include reactive cyanide and sulfide) dilution is a permissible form of deactivation treatment.

Dilution is permissible if no land disposal is contemplated.

90-Day Tanks:

Generator can accumulate his own hazardous waste for 90 days without a permit in tanks or containers.

Can he treat the waste? - Yes.

Can he treat the waste to land ban standards? - Yes, if he

develops a waste analysis plan and send it to EPA. Waste analysis plan is not required if waste is not fully treated to meet land ban standards but will be sent off-site for additional treatment.

Miscellaneous Issues:

There are special rules for lab packs containing combinations of waste which are specified in two appendices to Appendix VIII.

Even though TCLP is used to measure compliance, the newly identified TCLP wastes are not subject to the land ban, nor to California list restrictions.

If a no migration petition has been proposed for approval on date a prohibition becomes effective, this is a basis to apply for a case-by-case extension.

The mixture rule exemption for certain wastewater streams subject to NPDES remains, but:

Cannot intentionally mix waste into "treated" wastewater stream.

Applicability to facilities without a discharge remains unclear. If discharge was eliminated to comply with NPDES permit or an effluent guideline, wastewater may be exempt.

Generator has obligation to notify TSD facility of applicable standards. Standards no longer need be listed. Standards can be incorporated by reference so long as required information is included.

PQL's. Some concentration limits are set below SW-846 PQL's. The PQL's vary for different materials. EPA believes the specified concentrations are measurable in treatment residues. If incinerate a waste and achieve a quantification limit within one order of magnitude of the specified concentration limit, this is sufficient.

Capping waste in place without moving it does not trigger the land ban.

The soft hammer disappeared on May 8th for most wastes with the exception of waste subject to extensions. It does apply during the extension.

Likely Significant Litigation Issues:

Length of national capacity variance for refining waste.

Three month extension for all third-third waste.

Ability to set treatment standards to below characteristic level for characteristic hazardous waste.

"Dilution" rules.

Where the "point of generation" of wastes are to be measured.

Statement that waste which will not be land disposed is subject to restrictions if a treatment residue within the same treatability group will be land disposed.

Applicability of record-keeping requirements to those who do not generate hazardous waste.

Sampling rules.

Not applying standards to TCLP waste.

Whether California restrictions should apply to newly wasted wastes.

Permissibility of specifying deactivation as a standard.

Concentration limits for EP toxic metal waste.

Whether certain smelter waste should be considered newly listed.

Whether proposal to approve a no migration petition is adequate to obtain a case-by-case extension.

IV. TOXICITY CHARACTERISTIC LEACHING PROCEDURE

"Double, double, toil and trouble, Fire burn and cauldron bubble."

TCLP: Adding to the Universe of Hazardous Waste

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TOXICITY CHARACTERISTIC**Adding to the Universe
of Hazardous Waste****I. Current Situation (prior to September 25, 1990)**

A. Hazardous waste is defined as listed or characteristic

B. 1. Listed hazardous wastes are:

- o Non-specific sources
(F-Wastes 40 CFR 261.31)
- o Specific sources
(K-Wastes 40 CFR 261.32)
- o Commercial chemical products
(P & U Wastes 40 CFR 261.33)

- 2. Once a material becomes a listed hazardous waste it remains a listed hazardous waste unless delisted.
- 3. Mixtures of listed hazardous waste and solid waste become listed hazardous waste regardless of concentration (mixture rule, 40 CFR 261.3 (a)(2).
- 4. A solid waste generated from the treatment storage or disposal of listed hazardous waste remains hazardous waste (derived from rule 40 CFR 261.3 (c)(2).
- 5. Certain discarded commercial chemical products, off-specification manufacturing chemical intermediates, container residues and spills are listed hazardous waste.

C. 1. Characteristic hazardous wastes are solid waste that exhibit:

- o Ignitability (40 CFR 261.21)
 - Liquid (other than aqueous solution <24% alcohol) with a flash point <140°F
 - Capable under standard temperature and pressure of causing a fire through friction, absorption of moisture or spontaneous chemical change
 - Ignitable compressed gas
 - An oxidizer

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- o Corrosivity (40 CFR 261.22)
 - Aqueous solution with a pH less than or equal to 2 and greater than or equal to 12.5
 - Corrodes steel at a rate greater than 0.25 inch/year as determined by NACE TM-01-69
- o Reactivity (40 CFR 261.23)
 - Normally unstable
 - Reacts violently with water
 - Forms potentially explosive mixture with water
 - When mixed with water generates toxic gases and vapors or fumes
 - Cyanide or sulfide bearing waste that form toxic gas, vapor or fumes when exposed to conditions between pH of 2 and 12.5
 - Capable of detonation or explosion if subject to a strong initiating force
 - Readily capable of detonation or explosion at standard temperature and pressure
 - Forbidden, Class A or Class B explosive
- o EP Toxicity (40 CFR 261.24)
 - Using the extraction procedures analysis exceeds following the regulatory standards for:

Arsenic	5.0	mg/l
Barium	100.0	"
Cadmium	1.0	"
Chromium	5.0	"
Lead	5.0	"
Mercury	0.2	"
Selenium	1.0	"
Silver	5.0	"
Endrin	0.02	"
Lindane	0.4	"
Methoxychlor	10.0	"
Toxaphene	0.5	"
2, 4-D	10.0	"
2, 4, 5 - TP Silvex	1.0	"

2. Characteristics are broad classes of waste which are defined as hazardous because of their inherent properties.

3. Characteristics should be defined in terms of physical, chemical or other properties.
4. Characteristics must be measurable by standard and available testing protocols or by generators process knowledge.
5. When a characteristic hazardous waste loses that characteristic it is no longer a hazardous waste.
6. The mixture and derived from rules do not apply to characteristic hazardous wastes.

II. Congress mandates change

- A. In the 1984 Hazardous and Solid Waste Amendments (HSWA) Congress expressed their concern that too many wastes were escaping control and that the EP Toxicity test procedures may not be adequate. Therefore:
 1. HSWA 3001 (g) ... the administrator shall examine the deficiencies of the extraction procedure toxicity characteristic as a predictor of the leaching potential of wastes and make changes in the extraction procedure toxicity characteristic, including changes in the leaching media, as are necessary to ensure that it accurately predicts the leaching potential of waste which pose a threat to human health and the environment when mismanaged.
 - (2) HSWA 3001 (h) ... the administrator shall promulgate regulations under this section identifying additional characteristics of hazardous waste, including measures or indicators of toxicity.

III. EPA Response

- A. On June 13, 1986 EPA proposed the Toxicity Characteristic Leaching Procedure (TCLP) which addressed a new leaching procedure for the original 14 EP Toxicity material and added 38 additional organic compounds. It:
 1. Used a subsurface fate and transport model to determine compound-specific dilution/attenuation factors (DAF)
 2. Used chronic toxicity reference levels (levels below which for individual toxicants in drinking water are considered safe or pose minimal risk. Standards were proposed against:
 - o The Safe Drinking Water Standards

- o Recommended maximum contaminant levels (RMCL)
- o Reference doses for non-carcinogens (RfD)
- o Risk-specific doses for carcinogens (RSD)

B. EPA provided additional information and asked for comments:

1. November 7, 1986 - final land ban rule (which used the TCLP)
2. May 18, 1987 - consideration of separate characteristic for wastewater
3. May 19, 1988 - concern over uncertainties and technical difficulties with developing DAF
4. May 24, 1988 - modification of the TCLP protocol
5. August 1, 1988 - modification to the groundwater model
6. March 29, 1990 - Final TCLP/TC Rule

IV. March 29, 1990 Federal Register, Final Toxicity Characteristic Rule

A. The Toxicity Characteristic (TC)

1. Becomes effective on September 25, 1990, for generators and March 29, 1991, for small quantity generators.
2. Replaces the EP Toxicity test with the Toxicity Characteristic Leaching Procedure and which more accurately addresses leaching potential.
3. Provides standards for the original 14 EP toxicity parameters and adds 25 new organic constituents which define a characteristic hazardous waste, the Toxicity Characteristic (TC).
4. Uses a subsurface fate and transport model and establishes a DAF of 100.
5. Sets the regulatory level at the quantitation level where the calculated regulatory level is below the analytical quantitation limit.
6. This version of the TCLP supersedes and replaces the version used in the land ban restrictions.

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7. Defines the toxicity characteristic constituents as hazardous substances under CERCLA 101(14) with reportable quantities (40 CFR 302).
8. Defers the applicability of TC to petroleum-contaminated debris subject to Subtitle I of RCRA, Underground Storage Tanks (USTs).
9. Exempts Polychlorinated Biphenyl (PCBs) regulated under the Toxic Substances Control Act (TSCA).

V. The Toxicity Characteristics

A. Published in the Federal Register on:

1. March 29, 1990.
2. 40 CFR 261.24

B. The TC parameters are:

EPA Haz. Waste <u>ID No.</u>	<u>Contaminant</u>	Regulatory Level <u>mg/l</u>
D004	Arsenic	5.0
D005	Barium	100.0
D018	Benzene	0.5
D006	Cadmium	1.0
DO19	Carbon tetrachloride	0.5
D020	Chlordane	0.03
D021	Chlorobenzene	100.0
D022	Chloroform	6.0
D007	Chromium	5.0
D023	o-Cresol	200.0
DO24	m-Cresol	200.0
DO25	p-Cresol	200.0
D026	Cresol	200.0
DO16	2,4-D	10.0
D027	1,4-Dichlorobenzene	7.5
D028	1,2-Dichloroethane	0.5
D029	1,2-Dichloroethylene	0.7
D030	2,4-Dinitrotoluene	0.13
DO12	Endrin	0.008
D031	Heptachlor (and its hydroxide)	0.008
DO32	Hexachlorobenzene	0.13
DO33	Hexachloro-1,3-butadiene	0.5
DO34	Hexachloroethane	3.0
D008	Lead	5.0

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DO13	Lindane	0.4
D009	Mercury	0.2
DO14	Methoxychlor	10.0
DO35	Methyl ethyl ketone	200.0
D036	Nitrobenzene	2.0
D037	Pentachlorophenol	100.0
DO38	Pyridine	5.0
D010	Selenium	1.0
DO11	Silver	0.7
DO39	Tetrachloroethylene	0.7
D015	Toxaphene	0.5
D040	Trichloroethylene	0.5
D041	2,4,5-Trichlorophenol	400.0
D042	2,4,6-Trichlorophenol	2.0
D017	2,4,5-TP (Silvex)	1.0

VI. Affected Industries

- A. Although all industries and generators of solid waste are subject to these regulations, EPA has identified the following industries as most likely affected in its regulatory impact analysis.
- o Textile
 - o Lumber and wood
 - o Pulp and paper
 - o Printing and publishing
 - o Plastic materials and resins
 - o Synthetic rubber
 - o Synthetic fibers
 - o Pharmaceuticals
 - o Organic chemicals
 - o Petroleum Refining
 - o Miscellaneous petroleum and coal products
 - o Rubber and miscellaneous plastics
 - o Machinery and mechanical products

E N T R I X

- o Pipelines (except natural gas)
 - o Electrical services
 - o Wholesale petroleum marketing
- B. EPA estimates that between 15,000 and 17,000 generators will be affected by this rule.
- C. EPA estimates that approximately 730 million metric tons per year of wastewater and 0.85 to 1.8 million metric tons per year of non-wastewater will be affected by this rule.

VII. The Toxicity Characteristic Leaching Procedure Method 1311

- A. Published in the Federal Register on:
 - 1. March 29, 1990.
 - 2. Appendix II of 40 CFR 261.
- B. General Procedures
 - 1. Identify solid waste for analysis.
 - 2. Determine percent solids.
 - 3. If solids are less than 0.5% analyze liquids as TC extract.
 - 4. If solids are 100%, process solids:
 - o Particle size reduction if necessary
 - o Extract contaminants with appropriate reagents (for volatiles, use zero head space extractor)
 - o Analyze extract
 - 5. If sample is between 0.5% and 100% solids and liquid and solid extract is compatible with liquid combine and analyze.
 - 6. If sample is between 0.5% and 100% solids and liquid solid extracts are not compatible (form multi-phase mixture) analyze the solid extract and the liquid separately and mathematically combine the result.

VIII. TCLP Implementation from March 29, 1990

- A. 3 months (June, 1990)
 - 1. Notifications from generators and TSDFs who have not previously notified.
- B. 6 months (September, 1990)
 - 1. Generator compliance with TC Rule.
 - 2. Owners/operators cease generating or managing TC wastes.
 - 3. New TSDF submit Part A Permit Application.
 - 4. Interim status facilities amend Part A Application.
 - 5. Permitted facilities submit Class I modification for new TC waste.
- C. 12 months (March 1991)
 - 1. Small quantity generator compliance with TC Rule.
- D. 18 months (September, 1991)
 - 1. New land disposal facilities (units) submit Part B application and certification of groundwater and financial requirements.

E N T R Y X

- o Recommended maximum contaminant levels (RMCL)
- o Reference doses for non-carcinogens (RfD)
- o Risk-specific doses for carcinogens (RSD)

B. EPA provided additional information and asked for comments:

1. November 7, 1986 - final land ban rule (which used the TCLP)
2. May 18, 1987 - consideration of separate characteristic for wastewater
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4. May 24, 1988 - modification of the TCLP protocol
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6. March 29, 1990 - Final TCLP/TC Rule

V. SUPERFUND

"Things past redress are now with me past care."

PRP Perspective

Molly Cagle
Vinson & Elkins
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Agency Perspective

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EPA - Region VI

1990 Texas Environmental Superconference

A Midsummer's Nightmare--Much Ado About Pollution

August 2-3, 1990

Austin, Texas

Superfund In The 1990's, Or What's Left

By

Molly Cagle
Vinson & Elkins
With the Assistance of
Allison Dickson Baker
Sue Snyder
Rhonda Krebsbach

SUPERFUND IN THE 1990's, OR WHAT'S LEFT

The person who would characterize the Comprehensive Environmental Response, Compensation and Liability Act of 1980, (CERCLA, or commonly known as Superfund), 42 U.S.C. § 9601 et seq., as "an important environmental law of the 1980's," is the same soul who would have told General Custer, "there might be trouble," as the General headed toward Little Bighorn in 1876. In many ways, CERCLA was different from that famous battle. It did not arrive with fanfare and war whoops. No, it stole in like the Trojan Horse--disguised in incomprehensible acronyms that only EPA understood. But the Agency generously informed us what the new law meant ... HRS scores would be prepared and sites placed on the NPL; RIs would be conducted, FSs prepared, all not inconsistent with the NCP; RODs would be signed and, trust me EPA urged, PRPs will pay for it all!^{1/} Industry reacted with varying degrees of repulsion, but, by and large, there was a call to arms.

^{1/} EPA--U.S. Environmental Protection Agency: A governmental agency, established in 1970 by Presidential Executive Order, which is involved with the control of pollution.

FS--Feasibility Study: A study to develop and evaluate options for remedial action at a site on the NPL. Generally performed concurrently with the RI, the FS usually recommends selection of a cost-effective alternative. 40 C.F.R. § 300.5 (1990).

HRS--Hazard Ranking System: A scoring system used to evaluate potential relative risks to public health and the environment from releases or threatened releases of hazardous substances. EPA uses the HRS to calculate a site score from 0 to 100, based on the actual or potential release of hazardous substances from a site, which is the primary factor used to decide if a site should be placed on the NPL. 40 C.F.R. § 300.5 (1990).

NCP--National Contingency Plan: The federal regulations at 40 CFR Part 300 that guide implementation of the Superfund program. 42 U.S.C. § 9605(a)(8)(B).

NPL--National Priorities List: EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial responses using money from the Trust Fund. EPA is required to update the NPL, which is based primarily on the score a site receives on the HRS, at least once a year. 40 C.F.R. § 300.5 (1990).

PRP--Potentially Responsible Party: Any individual or company, including owners, operators, transporters, or generators, potentially responsible for response costs at a Superfund site. 42 U.S.C. § 9607(a).

RI--Remedial Investigation: An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a Superfund site; establish criteria for cleaning up the site; identify preliminary alternatives for remedial actions; and support the technical and cost analysis of the alternatives. The RI is usually accompanied by the FS. 40 C.F.R. § 300.5 (1990).

ROD--Record of Decision: A public document that explains which cleanup alternative(s) will be used at NPL sites.

Victories came in a few skirmishes, but generally the war was not going well. CERCLA, in spite of its clearly retroactive aspects, was constitutional. U.S. v. Monsanto Co., 858 F.2d 160 (4th Cir. 1988) cert. denied, 109 S.Ct. 3156 (1989). PRPs, it seemed, would likely be held to have joint and several, strict liability in most situations. Rhode Island v. Piccillo 883 F.2d 176 (1st Cir. 1989); U.S. v. Northeastern Pharm. and Chem. Co., 810 F.2d 726 (8th Cir. 1986), cert. denied 484 U.S. 848 (1987). On the question of costs, the trend seemed clear--PRPs would likely foot the bill for all response and removal action expenses, including EPA indirect costs, essentially for everything but golden shovels. The situation looked grim and the enemy had not even yet arrived.

But then it came, in the form of SARA, the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986). Although often cited as mid-course correction legislation, SARA was much more. Interestingly, through its provisions, SARA reflects Congressional mistrust of EPA's ability to carry out the Superfund program and Congress' codification of practically every policy adopted by EPA under the 1980 legislation. On the whole, SARA reaffirmed the government's position on most issues in dispute and provided legislation where only Agency policy had existed in the past. In the lingo of SARA, ARARs would now need to be addressed and NBARs could be prepared;^{2/} § 122 settlements would be offered in special circumstances. The new law brought a temporary cease-fire as PRPs studied their flanks, considered the body count at the courthouse, and chose new fields on which to fight. So what are those fields, and how go the battles as we begin the 90's?

This paper sifts through a few of the topics and issues that recently made or are making the headlines of the CERCLA debate, and summarizes the outcome, or, as appropriate, the status of several of those front-line confrontations. It does not discuss CERCLA from a historical perspective nor evaluate all the matters now being argued within or without EPA on either an administrative or judicial level. Major technical fights also are beyond the scope of this review. This article focuses on five major items that are likely to be important

^{2/} ARARs--Applicable or Relevant and Appropriate Requirements: Cleanup standards, standards of control, and other substantive requirements, criteria, or limitations that specifically address hazardous substances, pollutants, contaminants, remedial action, location, or problems or situations sufficiently similar to those found at a CERCLA site. State standards that are as or more stringent than federal requirements may be applicable or relevant and appropriate. 42 U.S.C. § 9621(a) and 40 C.F.R. § 300.5 (1990).

NBARs--Nonbinding preliminary Allocation of Responsibility: Process for EPA, as an aid to settlement, to propose an allocation of costs among PRPs. 42 U.S.C. § 9622(e)(3).

to a PRP that finds itself in multiple Superfund sites with multiple parties. Not every site will involve the issues analyzed herein, but hopefully, the selected briefings will help you develop a strategy for at least a few of the CERCLA battles that will be won, lost, or called to truce in the 90's on your behalf.

L

MUNICIPAL SETTLEMENT POLICY

CLIENT: "I understand that at least 3/4ths of the waste at this site is municipal solid waste and that an expensive methane gas recovery system will be required to manage its decomposition. Why hasn't EPA pursued the municipal generators/transporters that brought this problem to the site?"

EPA has been struggling for several years with the question of how to treat municipalities under CERCLA. Initially, the Agency contemplated a "Deferral Policy" that would allow EPA to defer cleanup of NPL sites to states and other federal agencies. Those sites placed on the deferral list by the Administrator of EPA could be cleaned up or not, but if they were, it would be under a process less bureaucratic and structured than CERCLA, and probably under different cleanup standards. 53 Fed. Reg. 51394 (Dec. 21, 1988). The "Deferral Policy" was deferred by Administrator Reilly in June 1989 in response to charges by Congress that it was illegal and by environmentalists that the concept promoted influence peddling as governors, legislators, and PRPs sought deferral of their pet sites.

EPA's dilemma on the question was not resolved by deferral. Politics were still posing heavy pressures on the Agency to take action.^{3/} The Agency felt internal pressures as it struggled with the prospect of bringing financially straining enforcement actions against multiple governmental entities. Also burdening the Agency was its own sense of the degree of hazard, on a comparative basis, that municipal waste typically represented at Superfund sites. Rather than struggle with the issue of the liability of municipal waste generators and transporters on a case-by-case basis, EPA commissioned a discussion group and, after more than two years of meetings, on December 6, 1989, published the "Interim Policy on CERCLA Settlements Involving Municipalities or Municipal Wastes." 54 Fed. Reg. 51071 (Dec. 12, 1989); see also OSWER Directive

^{3/} The politics of the municipal liability question came to the forefront in late 1988 when Region IV reversed its prior NPL listing of the city-owned and operated Munisport Landfill site on the shores of Biscayne Bay in North Miami. Accusations flew that EPA allegedly made its decision under severe pressure from members of the state's congressional delegation.

No. 9834.13 (Dec. 6, 1989). The Policy adopts special enforcement treatment for generators and transporters of municipal waste, sewage sludge, and trash.

Under the Policy, EPA proposes generally to ignore municipal solid waste, sewage sludge, and trash for purposes of its own CERCLA enforcement strategy. Specifically, EPA announced that it would exclude from its Superfund settlement process, generators of municipal waste from households, unless site-specific information is available that confirms the waste contains a hazardous substance from a "commercial, institutional, or industrial process or activity." 54 Fed. Reg. at 51072. Generators and transporters of sewage sludge will be similarly excused. To spread the leniency somewhat, EPA also included in the favored PRP status, generators and transporters of trash, even trash from commercial, institutional, or industrial entities.

Concerned that it not sweep too broadly in its clemency program, the Agency established an exception to the Policy. The exception is to be "sparingly applied." *Id.* Pursuant to the exception, EPA may consider action against these otherwise excused parties if the total privately generated commercial, institutional, and industrial waste at the site is insignificant compared to the municipal solid waste. A meager explanation is provided regarding the basis for determining the comparative significance between the various wastes.^{4/}

EPA provided a second safety valve in its new Policy. As noted in the Policy fact sheet, "CERCLA does not provide an exemption from liability for municipalities nor for municipal wastes. The interim policy does not provide an exemption from legal liability for any party or any substance; potential liability continues to apply in all situations covered under Section 107 of CERCLA." Following this line of reasoning, the Policy states, "Any decision EPA makes in exercising its enforcement discretion under this interim policy, does not mean that potential CERCLA legal liability no longer applies. In particular, nothing in the interim policy

^{4/} In a footnote to the OSWER Directive explaining the policy, EPA notes:

The Regions should consider both the volume and the toxicity of the commercial, institutional, and industrial hazardous waste when determining whether it is insignificant when compared to the MSW [municipal solid waste]. In determining whether the volume is insignificant, the Regions should consider the total volume of such waste contributed by all private parties. In determining whether the toxicity is insignificant, the Regions should consider whether such waste is significantly more toxic than the MSW and whether such waste requires a disproportionately high treatment and disposal cost or requires a different or more costly remedial technique than that which otherwise would be technically adequate for the site.

precludes a third party from initiating a contribution action. ... Nothing in this interim policy affects the rights of any party in seeking contribution from another party." Id. at 51071, 51076.

The response to the Municipal Settlement Policy was not surprising. Municipal entities and organizations from across America and a few members of Congress applauded the Agency for its wise decision and efficient use of taxpayer dollars. Others, primarily the industrial PRPs that were left holding the bag, attacked the Policy in comments submitted to EPA.^{5/} Legal arguments were numerous. For example, industry accused EPA of establishing an enforcement policy based upon a distinction not found in CERCLA. Also raised were arguments that EPA failed to follow proper rule making procedures in adopting the Policy. Apart from legal objections, those opposing the new Municipal Settlement Policy pressed the Agency on equity grounds. They stated that the Agency's new strategy, to look the other way when faced with a municipal PRP, increased the inequities that befell industrial generators. Those generators targeted by EPA for enforcement, now only industrial waste generators, will be forced to pay Superfund remedy costs up front and shoulder the additional burden of financing cost recovery litigation against municipal waste and sewage sludge generators. PRPs argued that EPA, not private parties, should carry out the enforcement tasks mandated by CERCLA. EPA has not responded to these comments.

As the Agency ponders its next step, PRPs have wasted no time in aggressively using the new Policy to their advantage. Perhaps the first set of PRPs to view the Policy as the answer to their dilemma was the Municipal Defendants in the Beacon Heights and Laurel Park Landfills suit. B.F. Goodrich Co. v. Harold Murtha, et al., No. N-87-52 (PCD) (D. Conn., filed Feb. 18, 1987) ("Beacon Heights"). On May 31, 1990, the Beacon Heights Municipal Defendants, all who claim to have sent only municipal solid wastes to the landfills in question, filed motions for summary judgment in response to actions filed by private party plaintiffs. Although the Municipal Defendants included in their motion arguments pertaining to elements of proof, the lack of connection between the contamination at the landfills and their contributions to the sites, and other minor points, their central position was that CERCLA does not cover municipal solid waste (MSW). Municipal Defendants' Memorandum in Support of Motion for Summary Judgment Filed On Behalf of the Defendant Municipal/Government Agency Collectors Group at 10. Fundamental to this view (and indeed, much of the

^{5/} Although the Policy became effective immediately upon publication, the Agency did solicit comments on it. Comments were filed by almost 100 interested persons. To date, no entity has attempted to challenge directly the Policy.

70+ page brief in support of the motion is dedicated to discussing the significance of the new Policy) is EPA's Municipal Settlement Policy.

The Municipal Defendants point out that CERCLA is silent on MSW, but not on the question of waste produced by commercial and industrial processes. This, they assert, confirms that Congress intended the burden of cleaning up Superfund sites to lie with industrial entities, not municipal waste generators (aka taxpayers). The fact that their view of the law, say the Municipal Defendants, is shared by EPA is evidenced by the New Municipal Settlement Policy. While admitting that the Policy is not law, the Municipal Defendants recommend that the court apply it as the law of the case.

In their reply to the motion for summary judgement, the Beacon Heights plaintiffs disagree with the position articulated by the Municipal Defendants on a number of bases. Beacon Heights Coalition Plaintiffs and Uniroyal Chemical Company Inc.'s Memorandum of Law in Opposition to the Defendants Municipal/ Government Agency Collectors Groups Motion for Summary Judgment. Relying primarily on the unambiguous wording of CERCLA, the plaintiffs assert that the Municipal Defendants are not due special treatment under the law. The Municipal Settlement Policy is no more than an announcement by EPA regarding its intended application of prosecutorial discretion. Neither the ordinary canons of statutory construction, the Policy itself, nor common sense make it reasonable to dismiss the action on a summary judgment motion.

Significantly, Beacon Heights caught the eye of the Department of Justice. In a late-filed amicus brief, the U.S. scolded the Municipal Defendants for their mischaracterization of the Municipal Settlement Policy. Opposition of the United States to the Motion for Summary Judgment Filed on Behalf of the Municipal Defendants. According to the United States, the Municipal Defendants' Motion "rests on an incorrect and unduly restrictive interpretation of the scope of liability under CERCLA. ...The Municipal Defendants misstate the purpose and impact of EPA's Municipal Settlement Policy." Id. at 2, 3. The government also refutes the suggestion that CERCLA does not cover municipal solid waste. Under the clear terms of the statute, the United States asserts, if the material the Municipal Defendants disposed of is "a hazardous substance," those parties are liable. With respect to the Municipal Settlement Policy, the government notes that the Policy is only intended to guide EPA employees and representatives in administering certain aspects of the Superfund program. Id. at 22. A policy such as the Municipal Settlement Policy that has no binding effect on EPA certainly cannot and should not bind the Court.

Although oral argument has been requested by all parties to Beacon Heights, lawyers close to the case doubt seriously if Judge Dorsey will grant the request. An opinion is expected soon in this case of national importance. Regardless of the ruling, an appeal is anticipated.

Reverberation from the new Municipal Settlement Policy also is being felt on an administrative level. The Policy brings into question the stability of PRP groups whose members include sewage sludge and municipal solid waste generators. In at least one case, municipalities who are members of a PRP group and who are respondents on an Agency § 104 Order recently asked EPA for a de minimis buyout based upon pronouncements in the Municipal Settlement Policy. See, July 10, 1990 letter regarding the Lowry Landfill from the Cities of Englewood, Littleton, and Lakewood, Colorado to Mr. James Scherer, EPA Regional Administrator, Region VIII. It is unclear at this time how EPA will respond to this or similar requests, but this type of maneuver should be anticipated by all industrial waste generator PRPs involved in mixed municipal/industrial waste sites.

II.

§ 106 ADMINISTRATIVE ORDERS

CLIENT: "We got this § 106 Order today. It appears that the Agency only sent it to a few of the PRPs and I just do not get along well with those companies. What if I avoid complying with it?"

In addition to the responses available to EPA under § 104 and § 107 of CERCLA, § 106(a) authorizes the President^{6/} to seek abatement action either in federal district court or through the issuance of an administrative order once he "determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility." 42 U.S.C. § 9606(a). Although it may appear ominous, EPA has never had difficulty overcoming this hurdle in enforcement cases. Thus, § 106 gives EPA a unilateral, administrative enforcement tool which, as a practical matter, is available in all Superfund cases.

Although EPA has had § 106 power since 1980, it ignored this significant authority for many years. The Agency appears to be changing its course. In comparison to the four § 106 Orders planned for the

^{6/} The President delegated his authority to the EPA Administrator and the Administrator subsequently redelegated that authority within EPA. Executive Order No. 12580 (Jan. 23, 1987), 51 Fed. Reg. 2923 (Jan. 29, 1987).

period 1980 through 1987, a total of fifteen unilateral administrative orders were issued in fiscal year 1988. During the first eight months of 1989, EPA issued twenty-two § 106 administrative orders, an increase of more than thirty-three percent from the same period in 1988. EPA Guidance promulgated to its various Regions in February 1990 encourages vigorous pursuit of § 106 actions, including demands for all costs, as well as treble damages and fines unless such penalty actions would be manifestly inappropriate. Superfund, 20 Env't Rep. (BNA) No. 44, at 1813 (Mar. 2, 1990). For a reprint of the Guidance, see Enforcement, IV Superfund Rep. No. 6, at 28 (Mar. 14, 1990).

What makes this new § 106 effort so imposing is the fact that (1) virtually no pre-enforcement review of the order exists; and (2) the penalties for noncompliance are potentially enormous.

On the first point, an early determination of conflicting issues obviously is highly desirable for PRPs considering the potential penalties for non-compliance. However, the law has developed adversely to PRPs on this question; courts lack "jurisdiction to review the merits of an EPA [§ 106] cleanup order prior to an attempt by EPA to enforce it. The October 1986 amendments to CERCLA confirm Congress' intent to preclude pre-enforcement review." Solid State Circuits, Inc. v. E.P.A., 812 F.2d 383, 386, n. 1 (8th Cir. 1987). Consequently, recipients of § 106 Orders appear to lack a right to judicial review except in those limited circumstances provided in § 113(h).^{7/} Even these few exceptions must be initiated by EPA as opposed to PRPs. As a result, barring magnanimous errors on EPA's part, a PRP will not be able to obtain prompt judicial relief from a § 106 Order.

With little chance of judicial intervention, PRPs must consider carefully the consequences of ignoring a § 106 Order. They are heavy. The penalty-triggering language of CERCLA centers around a party's non-compliance "without sufficient cause," which can result in \$25,000 for each day that the non-compliance continues, as well as punitive damages in an amount at least equal to, and not more than, three times the amount of any costs incurred by the Superfund as a result of the failure to take proper action. 42 U.S.C. §§ 9606(b)(1) and 9607(c)(3). Because they may have to wait several years before the propriety of their

^{7/} Exceptions include: (1) a § 107 action to recover response costs for damages or for contribution; (2) an action to enforce a §106(a) Order or to recover a penalty for violation of such an Order; (3) an action for reimbursement under § 106(b)(2); and (4) a § 106 action to compel a remedial action. There is also a citizen suit provision in situations where the § 106 Order removal or remedial action was in violation of CERCLA. 42 U.S.C. § 9613(h).

choice can be tested judicially, PRPs need a comprehensive understanding of what constitutes "sufficient cause" prior to any administrative order non-compliance.

The position most favorable to PRPs is that "sufficient cause" for non-compliance should be based on the PRP's subjective, good faith belief that the Order was in some way improper. Authority for this argument can be found in Aminol, Inc. v. U.S., 646 F. Supp. 294 (C.D. Cal. 1986) ("Aminol II"), a pre-SARA decision. The Aminol II court reasoned that while one court could find an action reasonable, another court could find the same action unreasonable, and that such a situation should preclude the use of an objective reasonableness standard because of the extreme risks associated with treble damages. Thus, by holding that the phrase "sufficient cause" should be interpreted to mean a "subjective good faith" defense, Aminol II authorizes the assessment of punitive damages and fines only where the government proves that a PRP refused in bad faith to comply with a § 106 Order.

Although fundamentally a sound decision, Aminol II appears to be the minority position. More support can be found for the proposition that an "objective good faith" standard may be applied retrospectively by the reviewing court following non-compliance with a § 106 Order. U.S. v. Parsons, 723 F. Supp. 757 (N.D. Ga. 1989). And it can be argued that the objective standard was the one adopted in Wagner Electric Corp. v. Thomas, 612 F. Supp. 736 (D. Kan. 1985). The Parsons courts opined that in order for CERCLA's penalty provisions to be constitutional, damages may not be assessed against a party which had an objectively reasonable basis for believing that EPA's Order was either invalid or inappropriate. Parsons, 723 F. Supp. at 763. Under this standard, a PRP's subjective good faith belief that non-compliance with a § 106 Order was authorized would still subject the PRP to fines and punitive damages if a reviewing court determined that the belief was not reasonable as well.

The third interpretation of the "good faith" standard of review followed Aminol II and was a precursor to the Parsons court "objective" finding. The Eighth Circuit in its Solid State Circuits opinion held that:

in order to establish the objective reasonableness of a challenge to an EPA clean-up order, a party must show that the applicable provisions of CERCLA, EPA regulations and policy statements, and any formal or informal hearings or guidance the EPA may provide, give rise to an objectively reasonable belief in the invalidity or inapplicability of the clean-up order.

812 F.2d at 392. Thus, just as in the subsequent Parsons decision, the Eighth Circuit used "objective good faith" as the standard and placed the burden of proof on the PRP. However, the Court felt that in limited

situations, the burden of proof should be placed on EPA. Therefore, if CERCLA, EPA regulations, or EPA policy statements failed to provide the challenging party with meaningful guidance as to the validity or applicability of the EPA Order, then the burden must rest with EPA to show that the challenging party lacked an objectionably reasonable belief in the validity or applicability of the cleanup order.

While the varying judicial interpretations of the "good faith" standard prevent a definitive answer to the question of the proper means of judicial review, a PRP would be ill-advised to rely solely on the Aminol II "subjective good faith" holding, particularly considering the magnitude of the down-side risks. These risks are further enhanced by the dicta found in three of these authoritative cases. Two courts have strongly hinted that if EPA held informal hearings prior to the required compliance date of the order, such actions would "usually remove" or "greatly limit" any good faith or sufficient cause defense of a PRP. Wagner Electric Corp., 612 F. Supp. at 749; Solid State Circuits, 812 F.2d at 392. The courts reasoned that informal hearings would enable a party to better determine the validity and applicability of an EPA order prior to the time it must decide whether to comply with a cleanup order or risk treble damages, thereby reducing the likelihood of any good faith defense.

The Parsons court went even further by stating that it would significantly limit the scope of the "sufficient cause" defense by removing the "financial inability" defense espoused by Senator Stafford in his legislative remarks.^{8/} Parsons, 723 F.Supp. at 763. The holding in Parsons centered around a September 1986 administrative order issued by EPA requiring defendants to clean up drums containing hazardous substances that posed a substantial threat of soil and groundwater contamination. The defendants refused to abide by the order claiming among other defenses a lack of any involvement with the site and financial inability.

^{8/} When asked by Senator Alan Simpson about the meaning of this phrase without sufficient cause, Senator Robert Stafford, the author of the bill, responded that the phrase

'sufficient cause' would encompass defenses such as the defense that [1] the person who was the subject of the ... order was not a [PRP] ... [2] [or if he] was not a substantial contributor to the release or threatened release, punitive damages should either not be assessed or should be reduced in the interest of equity ... [3] the party subject to the order did not at the time have the financial or technical resources to comply or if no technological means for complying was available ... [4] if the orders or expenditures were not proper, then certainly no punitive damages should be assessed or they should be proportionate to the demands of equity.

126 Cong. Rec. 30986 (Nov. 24, 1980).

Following non-compliance by the defendants, the court stated that it "would be reluctant to find financial inability as a sufficient cause because, from a policy standpoint, one should consider one's financial risks before becoming involved in transporting [and managing the disposal of] potentially hazardous materials."^{9/}

A decision to risk an adverse ruling on the sufficient cause question could be costly. On August 9, 1989, following a motion for reconsideration, the Parsons court granted the federal government's request for treble damages against six of seven defendant companies that failed to perform a response action ordered by EPA through a § 106 Administrative Order. The government sought treble damages based on the \$753,391 spent removing the hazardous wastes. According to EPA, this marked the first occasion that EPA had been awarded treble damages under CERCLA's penalty provisions. On April 5, 1990, the Court issued an order stating that the six defendants were jointly and severally liable for three times that amount, or \$2,260,173,72. *Litigation*, 21 Env't Rep. (BNA) No. 2, at 154 (May 11, 1990).

III.

CERCLA PRODUCTS/MANUFACTURERS DEFENSE

CLIENT: "I just received a § 106 Order/§ 104(e) request for a smelter site, but I did not send any 'wastes' there. I sold scrap metal to that site for reprocessing, and although the scrap contained Pb, Cd, Ni, it was not a waste. The hazardous substances associated with the release at the smelter were generated by a process at the site, not by me. Am I going to be liable for the cleanup of the Superfund site?"

The answer to your client's inquiry is, "That depends." A review of key statutory terms is necessary to respond to and understand why the courts' reactions to the fact situation outlined above, commonly referred to as the products or manufacturers defense, has varied. First, liability in this situation arises, if at all, under CERCLA § 107(a)(3). That provision states that a person is liable for the release of a hazardous substance into the environment if that person "by contract, agreements or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances...." 42 U.S.C. § 9607(a)(3).

^{9/} Id. at 763-64. The error of the court's reasoning is, of course, obvious. In many cases, the financial risks were unknown or taken into consideration consistent with practices at the time.

A hazardous substance is defined under § 101(14) of CERCLA as one of any number of substances regulated under the major federal environmental statutes.^{10/}

In cases involving the product defense, the critical question becomes whether the PRP "arranged for disposal or treatment." Definitions for the terms "disposal" and "treatment" although not found in CERCLA can be borrowed from § 1003 of the Resource Conservation and Recovery Act (RCRA). 42 U.S.C. § 6903.^{11/} The term "arranged," however, is not defined under RCRA or CERCLA. As a result, the caselaw regarding whether a manufacturer has "arranged for" disposal or treatment gives mixed responses depending upon the court's characterization of the nature of the transaction between the manufacturer and the disposer.

Cases deciding whether a manufacturer has "arranged for" disposal or treatment fall generally into one of three categories. The first category covers manufacturers that produce materials that are intended to be disposed. This group is generally held to be liable under CERCLA even if the manufacturers receives payment for such materials. For example, in U.S. v. Conservation Chem. Co., 619 F. Supp. 162 (W.D. Mo. 1985), a manufacturer sold fly ash, a by-product of combustion coal, to a waste facility to use as a neutralizing agent for other waste received at the facility. The manufacturer argued it did not "arrange for" disposal of its product because it sold the product to the facility. The Court held that the sale of materials to the disposal facility was not determinative because the definition of disposal does not require the waste to be worthless. Id. at 239-40. Because the manufacturer intended for its materials to be deposited or placed at the site, it arranged for disposal or treatment and therefore was liable under § 107(a)(3) of CERCLA. Id. at 240. According to the Court, the determining issue was the fact that the particular manufacturer had decided to place the hazardous substance into a facility that contained hazardous waste. Id.

^{10/} The following substances create potential liability under CERCLA: (1) a substance listed under § 1321(b)(2)(A) of the Clean Water Act; (2) an element listed under § 102 of CERCLA; (3) a toxic pollutant listed under 33 U.S.C. § 1317(a); (4) hazardous air pollutants listed under § 112 of the Clean Air Act; (5) imminently hazardous chemicals or mixtures under § 2606 of the Toxic Substance Control Act; or (6) a hazardous waste as defined under § 6903 of RCRA. 42 U.S.C. § 9601(14).

^{11/} Disposal is defined as "discharge, deposit, injection, dumping, spilling, leaking or placing of solid or hazardous waste into or on any land or water so that the solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into the waters, including groundwaters." Treatment means "any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste nonhazardous, safer for transport, amendable for recovery, amenable for storage, or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous."

A similar case is U.S. v. A & F Materials Co., Inc., 582 F. Supp. 842 (S.D. Ill. 1984). The Court in A & F Materials held that although McDonnell-Douglas sold spent caustic solution as a by-product of its manufacturing to a waste site operator to neutralize acidic oil, the relevant inquiry was not whether the waste was valuable but who decided to place the waste in the hands of the facility. Id. at 845. McDonnell-Douglas was liable under this test because it gave the waste to the disposal site or "otherwise arranged" for disposal of the by-product. Id. See also State of New York v. General Elec. Co., 592 F. Supp. 291 (N.D.N.Y. 1984) (the supplier of used transformer oil was not relieved of liability under CERCLA merely because it characterized its arrangement as a "sale"); U.S. v. Ward, 618 F. Supp. 884 (E.D.N.C. 1985), (company that sold PCB-contaminated transformer insulating fluid to a facility cannot avoid CERCLA liability by characterizing a transaction as a "sale").

The common characteristic among these cases is that the manufacturer knew the material was going to be disposed. It is not necessary that the material be useless at the time of sale or have already been used for a purpose and become a waste. See Conservation Chemical, 619 F. Supp. at 241. It also is not important whether the manufacturer knew or intended where the waste was to be disposed. If the intended use is disposal, CERCLA liability will attach.

The second category of manufacturers' product cases is those in which the material generated by the PRP is incorporated by another party into a second product that is later disposed. Courts generally have refused to impose liability when faced with this scenario. For example, in U.S. v. Westinghouse Elec. Corp., 22 E.R.C. 1230 (S.D. Ind. 1983), Monsanto manufactured PCBs which Westinghouse purchased to use as dielectric fluid in electrical equipment. The equipment was later disposed. The court held that CERCLA did not give Westinghouse the right to recover contribution from Monsanto, and cited as authority Middlesex County Sewage Authority v. National Sea Clammers Ass'n, 453 U.S. 1 (1981).

In Jersey City Redevelopment Authority v. PPG Industries, 655 F. Supp. 1257 (D.N.J. 1987), the seller of a particular property with waste mud was not liable under CERCLA when the subsequent owner transferred that mud to a Superfund site. The Court held that the prior owner did not "make the crucial decision" of how to dispose of the hazardous substance and that foreseeing that the waste mud might be sold as landfill by the future owner did not constitute "arranging for" the disposal. Id. at 1260. See also C. Greene Equipment Corp. v. Electron Corp., 697 F. Supp. 983 (N.D. Ill. 1988) (the sale of transformers containing PCBs to another

person who subsequently disposed of them was not sufficient to make the initial seller a PRP because the initial seller did not affirmatively "dispose" of the waste).

The most recent of the decisions following this line of cases is Florida Power & Light Co. v. Allis Chalmers Corp., 31 E.R.C. 1134 (11th Cir. 1990). In Florida Power & Light, the defendants manufactured and sold to Florida Power & Light transformers that contained mineral oil with traces of PCBs. At the end of the transformers' useful life, Florida Power & Light sold the transformers as scrap to Pepper Steel and Alloys, Inc. The transformer oil eventually contaminated Pepper's site and EPA sued Pepper and Florida Power & Light to recover cleanup costs. Those defendants then filed contribution actions against the manufacturers. Granting the manufacturers' motion for summary judgment, the Court found that whether an "arrangement" for disposal existed depended upon the facts of each case and whether the transaction included the ultimate disposal of a hazardous substance. Id. A manufacturer need not make the critical decisions as to how, when, and by whom the hazardous substance should be disposed, but to be liable, it must in some sense of the term be otherwise arranging for disposal of hazardous waste. Id. No such arrangement appeared in this case.

The third group of product defense cases is the hardest to isolate for it involves the manufacturer selling a product to be incorporated into a second product, and the incorporation itself creating a hazardous substance that is released. A split of authority exists on these cases. At least one case has held that a manufacturer can be liable under these facts. In U.S. v. Aceto Agriculture Chem. Corp., 872 F.2d 1373 (8th Cir. 1989), manufacturers sold pesticide constituents to a pesticide formulation facility. The pesticide formulation facility used the products, but created a Superfund site in the process. EPA sought to recover site response costs from the manufacturers of the pesticide constituents. The manufacturers argued that the statute required an intent to dispose of waste or at least the authority to control the disposal process, which was the common factor in all other cases finding manufacturers liable. Id. at 1379. The Court, however, did not accept this rationale. Instead, it held that because the waste was being generated by a process involving products owned by the manufacturers, for the manufacturers' benefit, and at their direction, the manufacturers should be liable under CERCLA. Id. at 1381. The Court seemed to imply that because the creation of waste was inherent in the manufacturers' sales, the manufacturers were liable. Id. at 1381. See also U.S. v. Velsicol

Chem. Corp., 701 F. Supp. 140, 142 (W.D. Tenn. 1987) (knowledge of industry practices in pesticide formulation that create hazardous waste was enough to prevent dismissing the manufacturers from the case).

Edward Hines Lumber Co. v. Vulcan Materials Co., 685 F. Supp. 651 (N.D. Ill.), aff'd, 861 F.2d 155 (7th Cir. 1988) stands for the proposition that manufacturers are not liable for the creation of hazardous waste in a second reprocessing. Manufacturers in Edward Hines sold chemicals to a party who used the substances in a manufacturing process and disposed of the process run-off in a holding pond. This pond later released hazardous substances into the environment. The Court held that the manufacturers did not "arrange for" disposal because the manufacturers did not sell the original product in order that it be disposed. Id. at 655. The determining factor was who made the decision to dispose of the substance. Here, the manufacturers did not know or decide how the process run-off water would be managed or disposed and hence they were not liable under CERCLA. Id. This rationale is inapposite to the reasoning of the other lines of cases which uniformly hold that the manufacturer need not know where the waste is disposed. In Edward Hines, however, the Court did note that motivation was an appropriate factor in determining whether the defendants arranged for disposal under CERCLA. Id. at 655.

The fate of product defense is uncertain. There is no logical, consistent rationale applied to these cases. It appears, however, that courts are applying any convenient rationale to obtain what they conceive to be an equitable result. For instance, in all of the reported cases in which manufacturers have been relieved of liability, other PRPs have been available to pay for the site cleanup. If this is the ultimate motivating factor, then obviously the availability of other viable PRPs will be critical to the success of the defense in a particular case. A suit recently filed by NL Industries in Dallas against its former customers may help resolve the law in Texas on the product defense.^{12/} NL v. Allied-Signal, Inc., No. CA3-89-2623-R (N.D. Tex., filed Aug. 16, 1989). Similar suits pending in various district courts may also contribute to the fate of the manufacturers' defense. See U.S. v. Marvin Pesses, No. 90-0654 (W.D. Pa., filed _____, 1990).

^{12/} NL asserts a contribution claim against its customers for reimbursement of response costs incurred in connection with the company's Dallas smelter.

IV.

CERCLA § 104 INFORMATION REQUESTS

CLIENT: "I received from EPA a letter requesting information about my potential involvement at the XYZ Superfund site. The letter cited § 104(e) of CERCLA and requested specific information concerning, among other things, the quantity or type of waste my company may have disposed of at XYZ, the amount of assets we hold, whether we are insured, and any role my company may have played in releasing waste into the environment at XYZ. Much of the information or data requested is, in my opinion, confidential. Must I answer EPA's letter?"

Section 104(e) of CERCLA gives EPA substantial authority to gather information about Superfund sites. Under the statute, EPA can seek data to help determine the need for carrying out a response or otherwise enforce the provisions of CERCLA. 42 U.S.C. § 9604(e). The statutory penalty for failing to respond to a request for information, or 104(e) letter, is a fine of up to \$25,000 per day. Just how serious EPA intends to be in securing responses to 104(e) letters will be reflected by the Agency's activities under the new get-tough Enforcement Strategy it issued in the fall of 1989. If the several enforcement actions filed in early 1990 against parties who did not provide information to the Agency on demand is a sign of things to come, there may be a troubled future for those who ignore EPA's § 104(e) requests.

Implementation by EPA of its new Enforcement Strategy will be central to Superfund implementation in the 1990s. Superfund Enforcement Strategy and Implementation Plan, U.S. EPA Office of Waste Programs Enforcement, July 12, 1989, reprinted in part at Enforcement Reforms, III Superfund Rep. (Inside Washington) No. 26, at 21 (Dec. 20, 1989). The Strategy incorporates recommendations from EPA's June 1989 90-day management review, as well as a study completed by the Environmental Law Institute. Correcting EPA's failure to follow up on information requests where no response was received, or to which an inadequate or fraudulent response was received, is a specific target of the Strategy. New management techniques and directives for the Regions to follow on this subject are outlined in the Strategy. The three-part plan consists of:

- (1) Establishing management systems at the Regional level to assure timely issuance of information requests, the tracking and review of responses, and implementation of necessary follow-up;
- (2) Encouraging the Regions to adopt more aggressive enforcement actions in cases of non-compliance, e.g., issuing § 104(e) orders, initiating judicial referrals, and issuing § 122(e) subpoenas; and

- (3) Referring PRPs who fail to respond, or who respond inadequately or fraudulently, to the Department of Justice for civil or criminal prosecution.

Although only recently implemented, application of the Enforcement Strategy in the 104(e) arena is causing vibrations in the Superfund community.

The seriousness with which EPA is treating its follow-up program is evidenced by EPA's issuance of Guidance in the form of a model complaint and litigation report to help EPA attorneys collect penalties for non-compliance with 104(e) letters. January 31, 1990 letter from Glenn Unterberger, EPA's Associate Enforcement Counsel, and Bruce Diamond, Director of the Agency's Office of Waste Programs Enforcement, to Counsel and Waste Division Directors in EPA Regions, reprinted in part at IV Superfund Rep. (Inside Washington) No. 4, at 14-16 (Feb. 14, 1990). The model litigation report describes, among other things, defenses often used by PRPs and suggests theories to respond to typical PRP positions. The model also suggests evidence that can be used to support a judicial claim for non-compliance penalties.

Four Superfund enforcement actions filed by the Department of Justice in January 1990 are part of what EPA calls its "first salvo in a nationwide campaign" against parties who fail to respond to 104(e) letters. The four suits filed in the U.S. District Court for the District of New Jersey are:

- (1) U.S. v. Francis Block and A. B. Drum Co., No. 90-193. The complaint seeks compliance of both defendants with Region II's 104(e) letter and penalties of up to \$25,000 per day for non-compliance. Both defendants are believed to have information concerning transportation and disposal of wastes at the Ewan Property Superfund Site.
- (2) U.S. v. Denzer & Schafer X-Ray Co., No. 90-298. EPA requests an injunction ordering the defendant to supply the requested information. Civil penalties for failure to respond are also demanded. The defendant, a silver reclamation company, is a PRP at both the Lone Pine Landfill and the Denzer & Schafer Superfund Site.
- (3) U.S. v. John Lesofski, No. 90-150. Penalties of up to \$25,000 per day for non-compliance and compliance with Region II's information request is sought by EPA. The defendant, an owner of a trucking company, is believed to have handled, transported, and disposed of hazardous substances at the Lang Property Superfund Site.

- (4) U.S. v. Madison Disposal Service, Inc., No. 90-299. The complaint seeks an injunction ordering the defendant to supply the requested information and civil penalties for the defendant's non-compliance with the 104(e) letter. The defendant, a garbage hauler, is believed to have information regarding the transportation and disposal of hazardous substances at the Lone Pine Landfill.

Prior to filing this litigation as part of its new nationwide strategy, EPA randomly pursued select 104(e) actions. The question of what happens when the recipient of a 104(e) letter dies before answering the request for information was answered recently by a federal District Judge in Indiana. Based on a magistrate's finding that CERCLA is a remedial statute even though it does include penalty provisions, the Court ruled that the duty to respond to an EPA information request can be passed along to a deceased party's next of kin. U.S. v. Northside Sanitary Landfill, Inc. and Jonathan W. Bankert, Sr., No. IP89-85 (S.D. Ind.). The Court's decision requires the widow of the deceased owner of a Superfund site to comply with the 104(e) letter issued by EPA to her husband prior to his death.

At least one corporate successor PRP company has been fined for failure to respond to an EPA 104(e) letter. In U.S. v. Crown Roll Leaf, Inc., 29 ERC 2025 (D.N.J. 1989) aff'd mem., 888 F.2d 1382 (3rd Cir.) cert. denied, ___ U.S. ___ (1990), Crown Roll Leaf, Inc. claimed it made a "good faith" effort to respond to EPA's request for information, but that a misunderstanding between company employees was the cause of its delinquency. The Court disagreed noting that Crown's delay of more than 600 days in answering the 104(e) request could only be characterized as willful and in bad faith. Id. at 2032, n. 3. Crown, according to the Court, was subject to civil penalties of up to \$15,750,000 for its non-compliance. Only a fraction of that amount--\$100/day for 630 days--was recommended by the United States and imposed by the Court for failure to reply to the 104(e) request.^{13/}

Perhaps a new and welcomed twist in CERCLA enforcement, PRPs who fail to respond to 104(e) requests now appear to be risking serious consequences. Whether all the Regions indeed follow Headquarters' directives on information requests remains to be seen, but certainly the more active PRPs will continue to urge EPA to take action against the silent minority. Those who are targeted for enforcement by EPA will likely be required to pay for their recalcitrance.

^{13/} The total penalty assessed by the court, \$142,000, included \$79,000 for a RCRA violation.

V.

STATES' ROLE IN SUPERFUND

CLIENT: "We finally convinced EPA to adopt our proposed remedy for cleanup of the XYZ site. The State is not too happy; their representatives insist the plan won't meet State water quality criteria. The State can't block our remedy, can it?"

There is a growing tension between EPA and states over the remedies being chosen in the Superfund program. Picking a remedy is within EPA's sole decision making authority, and EPA "may conclude settlement negotiations with potentially responsible parties without State concurrence." 42 U.S.C. § 9621(f)(2)(C). Until fairly recently, attempts by states to challenge EPA's cleanup agreements with PRPs were for the most part unsuccessful. However, a review of recent developments in this area indicates that involvement by states in Superfund sites is increasing.

In the past couple of years, there has been a wave of effort by states, in particular Kentucky, New York, Michigan, Colorado, Maryland, and Alabama, insisting on an increasing voice in remedy selection. A review of the efforts by these bodies illustrates that CERCLA provides states at least two opportunities to protest the terms of a consent decree. First, a state in which the Superfund site is located is entitled to assert that a proposed remedy is unlawful, arbitrary, or capricious under § 113(j) of CERCLA.^{14/} Second, once a consent decree is proposed by EPA, a state is entitled to intervene and challenge the consent decree under § 121(f) by positing that EPA has failed to comply with state ARARs. 42 U.S.C. § 9621(f). A review of recent decisions on states' roles in remedy decisions reveals that courts are not inclined to ignore the states' pleas, but there are conflicting decisions on how large a role the states should be given.

Colorado v. Idarado was the first state-prosecuted suit to go to trial after SARA. State of Colorado v. Idarado Mining Company, 707 F. Supp. 1227 (D.Colo. 1989). In Idarado, the state of Colorado sought an injunction under § 121(e)(2) to enforce its remedial action plan for the Idarado Superfund site. Idarado Mining Company argued that CERCLA did not provide Colorado authority to enforce cleanup standards other than those already established in a consent decree or in an EPA decision. In rejecting the PRPs' position, the

^{14/} U.S. v. Akzo Coatings of America, Inc., 719 F. Supp. 571 (E.D. Mich. 1989); State of Alabama v. E.P.A., 871 F.2d 1548 (11th Cir. 1989); 42 U.S.C. § 9613(j).

Idarado court recognized the state's authority to obtain court-ordered cleanup of CERCLA sites and opened the door for increased involvement by states in Superfund sites.

After Idarado, perhaps the most significant decision regarding a state's role in Superfund remedy selection is the September 15, 1989 unpublished opinion of the U.S. District Court for the Northern District of New York in the Moreau Superfund site litigation. U.S. v. Town of Moreau, No. 88-CV-934 (N.D.N.Y. 1989); see, 4 Toxics Law Rep. (BNA) No. 18, at 515 (Oct. 4, 1989); Hazardous Waste Litigation Rep. (Andrews Publication) at 18058 (Oct. 16, 1989). In Moreau, New York sought to intervene in the CERCLA § 106 action against General Electric and the town of Moreau to challenge the EPA remedy. The State of New York took the position that the remedy for groundwater contamination did not meet state ARARs, specifically the groundwater standards, and therefore did not comply with § 121 of CERCLA. EPA responded that compliance with ARARs could only be determined when the remedy was complete and that New York should be required to wait until then (probably sometime in the 21st century) to challenge EPA's remedy selection. 4 Toxics Law Rep. (BNA) No. 18, at 515 (Oct. 4, 1989). The court sided with New York. By ruling that New York may challenge EPA's remedy for the Moreau Superfund site prior to its implementation, the Moreau court's decision conflicts with rulings to date that remedy challenges must be postponed until cleanup work is complete. III Superfund Rep. (Inside Washington) No. 20, at 9 (Sept. 27, 1989). The Court agreed with the State's claims that EPA's remedy did not adequately treat groundwater on-site and that the Agency violated § 121, which requires meaningful involvement by the state in choosing a remedial action.

EPA reportedly is considering an appeal of the Moreau ruling, according to sources involved in the case. VI Env't. Policy Alert (Inside Washington) No. 20, at 29 (Oct. 4, 1989). An assistant attorney general with New York's Environmental Protection Bureau Division recently advised that New York and EPA have been negotiating on the appropriate remedial requirements since the September 15th judicial decision, but no real progress has been made toward a compromise. The State of New York reportedly plans to file a summary judgment action in federal court in the near future requesting dismissal of EPA's ROD in this matter.

Michigan's challenge to a consent decree between the United States and settling companies at the Rose Township Superfund site did not meet with the same success as New York in Moreau. A Michigan district court rejected the State of Michigan's attempt to force EPA to use more stringent cleanup standards than those outlined in the Agency's cleanup plan. U.S. v. Akzo Coatings of America, Inc., 719 F. Supp. 571

(E.D. Mich. 1989); see Hazardous Waste Litigation Rep. (Andrews Publication) at 17,893 (Sept. 18, 1989); Hazardous Waste Litigation Rep. (Andrews Publication) at 19,198 (June 4, 1990).

At issue in Akzo was EPA's selection of soil flushing as a cleanup method. Michigan argued that the consent decree was not in accordance with the law because the remedy did not meet the state's ARARs. Michigan also contended that the proposed consent decree was arbitrary and capricious. Ruling with EPA on both questions, the court found that soil flushing, the proposed remedial action, did not significantly violate Michigan's antidegradation standard, the ARAR in question.

The Akzo decision can be distinguished from the Moreau decision on at least one factual basis. The Michigan law ARAR that the state argued controlled the viability of soil flushing did not contain a specific numerical or otherwise provide a quantitative standard. It is quite possible that under another set of circumstances, e.g., with a more definite state standard, Michigan could have been successful in arguing that the proposed remedial action did not comply with applicable ARARs and therefore was contrary to law.

The State of Kentucky also recently challenged an EPA settlement with responsible parties for cleanup of the B.F. Goodrich site in Calvert City. U.S. v. B.F. Goodrich, et al., No. C-89-0005-P(cs) (W.D. Ky. 1989). Kentucky contended that the cleanup plan selected by EPA for the B.F. Goodrich site did not comply with state environmental laws for soil and groundwater and thus violates state ARARs. III Superfund Rep. (Inside Washington) No. 16, at 12 (Aug. 2, 1989). EPA opposed the State's claim using the same argument it plead unsuccessfully in Moreau, that a challenge to the selected remedy must be made after cleanup work has begun.

On November 20, 1989, in an unpublished opinion, the State of Kentucky's motion to intervene was granted. While allowing intervention under both §§ 113 and 121 of CERCLA, the Court postponed consideration of the merits of Kentucky's § 121 claim until it had a chance to decide whether the asserted state standard at issue was in fact an ARAR. III Superfund Rep. (Inside Washington) No. 25, at 12 (Dec. 6, 1989). According to an attorney with the National Resources Division of Kentucky's Attorney General's Office, negotiations on the terms of the remedy are proceeding between EPA, Kentucky, and B.F. Goodrich.

In U.S. v. Fairchild Industries, Inc., the State of Maryland sought increased involvement in the remedy selection at the Limestone Road Superfund site in Allegheny County. U.S. v. Fairchild Industries, Inc., No. R892870 (Md. April 7, 1989). EPA argued that Maryland could not block the decree and said the

government should maintain the lead at the site. Inside EPA (Inside Washington) No. 3, at 12 (Jan. 20, 1989). In an unpublished opinion on April 7, 1989, the U.S. District Court for the District of Maryland granted the State of Maryland's motion to intervene in the case. The Court found that the consent decree did not allow Maryland sufficient opportunity to review and comment on the cleanup. In declining entry of the consent decree, the judge found that the consent decree violated § 121(f)(1)(E) and stated that he would refuse to enter a decree that "ignores the statutory right of the host state." Inside EPA (Inside Washington) No. 37, at 9 (Sept. 15, 1989). After its bitter defeat, EPA withdrew its suit against the Limestone site PRPs, reached an accord with Maryland, and issued a § 106 Order to those same PRPs. EPA's action cuts off the state's leverage in remedy selection, avoids another appearance before an apparently hostile judge, and presumably allows the Agency to proceed with the remedy.

The cases discussed above concern states battling EPA over remedies in their own back yards. Alabama recently tested the waters of challenging a remedy in another state, Texas. Its challenge failed. The U.S. Court of Appeals for the Eleventh Circuit ruled in April 1989 that CERCLA did not allow Alabama to challenge a Texas site remedy. Specifically, the Eleventh Circuit said that Alabama was not entitled to special notice or an opportunity to comment on the remedy. State of Alabama v. EPA, 871 F.2d 1548 (11th Cir. 1989). Alabama attempted to enjoin the shipment of wastes from the Geneva site in Texas to a permitted disposal facility in Alabama, relying upon constitutional arguments and an assertion that it was an "affected State" under § 104(c)(2). The court rejected both of Alabama's arguments. The court also determined that there was no jurisdiction to consider Alabama's challenge under § 113 because the state was challenging a remedial action plan selected under § 104 of CERCLA. Section 113(h) removed the suit from federal jurisdiction until the remedial action is taken. State of Alabama v. EPA, 871 F.2d at 1560. Alabama sought Supreme Court review, arguing that the appeals court precluded the state from its "only meaningful opportunity for judicial review." 4 Toxics Law Rep. (BNA) No. 29, at 839 (Dec. 20, 1989). On December 4, 1989, the U.S. Supreme Court declined to review Alabama's claim that it had a right to comment on EPA's plan to ship hazardous waste from a Texas superfund site to an Alabama landfill. Alabama v. EPA, 110 S.Ct. 538 (1989).

States are aggressively seeking a broader role in remedy matters. Although the courts will make their decisions on a case-by-case basis, there appears to be a willingness on the part of the judiciary to allow state

intervention under the right circumstances. Savvy PRPs will respond to this trend by including negotiations with the host state as part of their remedy selection settlement strategy.^{15/}

VI.

CONCLUSION

In its relatively short life, Superfund seems to have spawned as much litigation as each of the other, much older, major federal environmental statutes. The battlefields on which suits are tried have changed and will likely continue to change as issues are decided either judicially or through new legislation. Based on EPA's Enforcement Strategy and the stakes generally up for grabs in Superfund cases, PRPs are likely to continue to find themselves at the courthouse arguing over Superfund issues for many years to come.

^{15/} A more subtle example of how a state can influence a remedy can be found in the State of Oklahoma's involvement in the Hardage Superfund site litigation. Although the State did not intervene in this lawsuit, the Deputy Commissioner for Environmental Health Services, with the Oklahoma Department of Health, Coleman, testified in the remedy that the State was ready to close the Hardage site in the early 1980's, but EPA took over, and that all remedy decisions thereafter were dictated by litigation, not remedy concerns. Coleman generally supported the PRPs' remedy. This testimony reflected the State's position and may have been critical to Judge Phillips' decision to adopt the PRPs' remedy as opposed to the one supported by EPA. U.S. v. Hardage, No. CIV-86-1401-P (W.D. Okl. 1990).

**AGENCY PERSPECTIVE, POTENTIAL LIABILITY
AND ENFORCEMENT UNDER CERCLA**

I. INTRODUCTION

A. This presentation is limited to issues under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) otherwise known as "Superfund".

B. Environmental issues are increasingly of public concern:

1. Texas alone has 30 sites either proposed or final on EPA's National Priorities List of the Nation's most hazardous waste sites.
2. As of the end of 1989 EPA has entered into over 69 agreements either Judicial or Administrative for the performance of cleanups at Superfund sites by responsible parties with an estimated value of \$795.1 million.
3. Additionally, EPA is seeking \$147.2 million through cost recovery actions to be filed by the U.S. Department of Justice.
4. EPA has, since 1980, changed its priority from "fund lead" to "enforcement lead" several times.
5. William Reilly, EPA Administrator, commissioned a study of the management of the Superfund program.

6. One of the main recommendations resulting from the study was that EPA concentrate on enforcement lead actions to conserve the Superfund.

II. ESTABLISHING LIABILITY UNDER CERCLA

- A. There are 4 categories of Potential Responsible Parties who are subject to liability for costs incurred as a result of a release or threatened release of hazardous substances.
- B. These categories are established in CERCLA Section 107(a), 42 U.S.C. § 9607(a), and are as follows:
 1. The owner and operator of a vessel or a facility,
 2. Any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of,
 3. any person who by contract, agreement or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity and containing such hazardous substances, and
 4. any person who accepts or accepted any hazardous substances for transport to disposal or treatment

facilities, incineration vessels, or sites selected by such person, from which there is a release, or a threatened release.

C. The PRPs are liable for the following costs in accordance with 42 U.S.C. § 9607(a):

1. all costs of a removal or remedial action incurred by the U.S Government or a State or an Indian Tribe not inconsistent with the National Contingency Plan (NCP);
2. any other necessary costs of response incurred by any other person consistent with the NCP;
3. damages for injury to, destruction of, or loss of natural resources;
4. the costs of any health assessment or health effects study carried out under CERCLA Section 104.

D. Some of the important terms or definitions are as follows:

1. Most importantly for the discussion here is the definition of "person" which is defined very broadly to include an individual, firm, corporation association... the U.S. Government, States, municipalities, commissions, political subdivision of a State, or any interstate body. CERCLA Section 101(21), 42 U.S.C § 9601(21).

2. "The" facility" includes any landfill or "any site or area where a hazardous substance has been deposited, stored, disposed of, or otherwise come to be located". CERCLA Section 101(9), 42 U.S.C. § 9601(9).
3. "Owner and Operator" this has been defined by the courts to include either an owner of a facility or the operator of a facility both past and present. Liability is not predicated on establishing that the person is both an owner and an operator. The landowner has liability as well as any person who controls or operates the facility on a regular basis. See, New York v. Shore Realty Corp., 759 F.2d 1032, 1044 (2d Cir. 1985); U.S. v. Maryland Bank & Trust Co., 632 F.Supp. 573, 578; (D.Md. 1986); U.S. v. Bliss, No. 84-2086C(1) (E.D.Mo. Sept. 27, 1988).
4. "Hazardous Substance" includes all elements, compounds, mixture solution or substances that have been designated as such under RCRA, Clean Air Act, Clean Water Act and Safe Drinking Water Act, exception petroleum or fractions thereof. CERCLA Section 101(14), 42 U.S.C. § 9601.
5. "Release" is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or

disposing into the environment. CERCLA Section 101(22), 42 U.S.C. § 9601(22).

E. The Scope of Liability

1. It was the intent of Congress to create a law that was broad in scope and wherever possible to place the financial burden of toxic waste cleanup on those responsible for creating the harmful conditions. Superfund is meant to be a self sustaining fund. See, e.g., Dedham Water Co. v. Cumberland Farms Dairy, 805 F.2d 1074, (1st Cir.1986); Lone Pine Steering Comm. v. EPA, 777 F.2d 882,886 (3d Cir.1985)
2. Though the statute does not explicitly state it, the Courts have uniformly imposed strict liability in construing CERCLA Section 107(a). See, e.g. N.Y. v. Shore Realty, supra, 1042; U.S. v. Maryland Bank & Trust, supra, 576; U.S. v. Northeastern Pharmaceutical & Chemical Co., 579 F.Supp. 823, 843-44 (W.D.Mo.1989)
3. The Courts have also held that this strict liability is joint and several. Where two or more persons cause or contribute to a single indivisible harm all are held liable. See, U.S. v. Monsanto Co., 858 F.2d 160 (4th Cir.1988); Versatile Metals, Inc. v. The Union Corp. 693 F.Supp 1563 (E.D.Pa.1988).

4. Liability is established first and the issues of fairness, equitableness and feasibility of apportionment are left to separate actions for contribution between the defendants. See O'Neil v. Picillo, 682 F.Supp. 706 (D.R.I.1988); U.S. v. Bliss, supra; U.S. v. Mottolo, 695 F.Supp. 615 (D.N.H.1988).
5. CERCLA's strict liability still requires that a causal connection between PRPs and a release or threatened release be demonstrated. CERCLA Section 107(a)(4), 42 U.S.C. 96007(a)(4). See, N.Y. v. Shore Realty, supra, 1044 & 17; Idaho v. The Bunker Hill Co., 635 F.Supp. 665, 674 (D.Idaho 1986).
6. The retroactive nature of CERCLA has been upheld in the Courts. The statute does not violate due process or bill of attainder or ex post facto prohibitions. See, U.S. v. Monsanto Co., supra; U.S. v. Mottolo, supra; Wehner v. Syntex Corp., 27 Env't Rep. Cas. (BNA) 1694 (E.D.Mo.1988).

F. Defenses

1. CERCLA is a strict liability statute which does not allow for any common law or equitable defenses. Equitable defenses apply only to the amount of damages not liability. See, Dedham Water Co., Supra, 1223; Versatile Metals, Inc. v.

Union Corp., supra 1563; City of Philadelphia, et al. v. Stepan Chemical Co.,: City of Philadelphia v. Congoleum Corp., Nos. 81-0851, 83-5493, (D.E. Pa. 1987), 18 E.L.R. 20133.

2. There are three statutory defenses found in CERCLA Section 107(b) to the liability of covered persons who can demonstrate that the release was solely caused by:
 - a. an act of God
 - b. an act of war
 - c. an act or omission of a third party other than an employer or agent of the defendant if the defendant establishes by a preponderance of the evidence that he exercised due care and took precautions against all foreseeable acts or omissions of a third party.
3. A city's sovereign immunity or protection under a state Torts Claims Act is not a bar to a CERCLA action. See, U.S. v. Seymour Recycling Corp., 686 F.Supp. 696 (S.D. Ind. 1988); Artesian Water Co. v. Gov't of New Castle County, 605 F.Supp. 1348, 1354 (D. Delaware 1985): City of Philadelphia v. Stepan Chemical Co., supra.
4. The EPA's "Interim Policy of CERCLA Settlement Involving Municipalities or Municipal Wastes" OSWER Directive #9834.13 establishes how the

Agency will exercise its enforcement discretion when pursuing settlements involving municipalities or municipal wastes.

- a. EPA will continue to pursue both municipal and private party owners and operators at Superfund Sites.
- b. EPA will continue to pursue both municipal and private party generators or transporters of hazardous substances.
- c. EPA will not pursue municipal and private party generators or transporters of municipal solid waste or sewage sludge when the waste is believed to be derived from households including household hazardous wastes.

III. ENFORCEMENT UNDER CERCLA

- A. Under CERCLA Section 106(a), EPA is empowered seek judicial relief or to take such other action including the issuance of administrative orders as may be necessary to protect public health and welfare and the environment.
- B. Failure to comply with an order issued pursuant to CERCLA Section 106 may subject the Respondent to penalties as set out in CERCLA Section 106(a)(1) or treble damages as set out in CERCLA Section 107(c)(3), 42 U.S.C. § 9607(c)(3). See, Wagner Seed Company v.

Daggett, 800 F.2d 310 (2nd Cir. 1986); United States v. Parsons, 723 F.Supp. 757 (N.D.Ga. 1989); Aminoil, Inc. v. United States, 646 F.Supp. 294 (C.D.Cal. 1986).

1. CERCLA Section 106 allows issuance of an order when there is an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility.
2. CERCLA Section 106(a)(1) authorizes the United States District Court to impose fines of not more than \$25,000 for each day that any person, without sufficient cause, willfully violates or fails or refuses to comply with any order.
3. CERCLA Section 107(c)(3) provides that any person who is liable for a release or threat of release of a hazardous substance and who fails without sufficient cause to properly provide removal or remedial action upon order of EPA may be liable to the United States for punitive damages in an amount at least equal to , and not more than three times, the amount of any costs incurred by the Superfund as a result of such failure to take proper action. The punitive damages are in addition to any recovery of costs for the action.

VI. ENVIRONMENTAL DUE DILIGENCE

"Unbidden guests are often welcomest when they are gone."

Wetlands

Sam Damico
President
S.A. Damico & Associates
Houston, Texas

Pesticides

Taryn McCain
Brown Maroney & Oaks Hartline
Austin, Texas

Indoor Air Pollution

C. Herndon Williams, Ph.D., C.I.H.
Senior Staff Scientist
Radian Corporation
Austin, Texas

Asbestos

Sharon D'Orsie, Ph.D., C.I.H.
President
Eagle Environmental Health, Inc.
Houston, Texas

CURRENT WETLANDS REGULATION IN THE UNITED STATES

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INTRODUCTION

Wetlands are among our most valuable national resources. They can be vast, exotic swamps as those found throughout the southeast United States. Or they can be small, critical habitats such as are found along the Platte River in the great plains. They function to provide food, water and harborage for a wide diversity of wildlife species. For some migratory birds, a specific isolated wetland may be critical to the completion of an annual migration that spans thousands of miles. Wetlands are the last remaining habitat for many threatened and endangered species of wildlife. They are breeding and nursery areas for many fish and wildlife species. Much of our pre-history is discovered in and around wetlands where game and water were abundant.

With so much value and beauty associated with wetlands, it is no wonder that modern man has continued to encroach on them in his efforts to accommodate an ever expanding population. Over 30 percent of the wetlands existing in the lower 48 states at the time of european colonization have been irreversibly lost. The average annual loss during the 1950's through the 1970's was over 450,000 acres. That rate has declined during the 1980's to about 275,000 acres lost per year. Less than 100 million acres of wetlands exist in the lower 48 states. An additional 200 million acres are estimated to exist in Alaska. The prudent utilization of these diminishing resources is in the best interests of all concerned. Governmental regulation is the natural result of such a perceived need.

Few regulatory programs have resulted in greater confusion and misunderstanding than the jointly administered program of wetlands regulation in the United States. Highway planners, pipeline companies, public utilities others who historically select the rights of way and corridors by which our society moves its energy, products and people are confounded by definitions of wetlands and delineation criteria. Corporate executives and consulting engineers who locate new plants; land developers who plan the nation's neighborhoods and industrial parks; waste management companies who dispose of our municipal solid wastes; each are experiencing uncertainty with regard to the jurisdictional status of the properties they plan to develop. Even farmers who are considering changing their agricultural crops are finding out about restrictions emanating from new polices and regulations associated with wetlands.

The principal federal legislation governing wetlands regulation is Section 404 of the Clean Water Act which prohibits discharge of dredge or fill materials into "Waters of the United States." Such waters have been defined to

include wetlands. Two points deserve recognition at this time. First, wetlands are Lands by definition. Some are surprised that normally dry areas can be classified as wetlands. Secondly, Section 404 Regulates wetlands, it does not necessarily Protect them; at least not according to existing interpretations. However, state and local lawmakers are now enacting protective measures in selected instances.

In the limited time available at this conference, one cannot address the variety of concerns presently at issue. Therefore, this paper will concentrate on four primary questions which can affect almost anyone who is considering development activity. These are: (1) What is a wetland; (2) What is the federal policy on use of wetlands; (3) How is that policy implemented; and (4) what does the future hold?

DEFINITION OF WETLANDS

If asked to describe a wetland, most individuals would generally agree with the definition appearing in the Code of Federal Regulations implementing Section 404 of the Clean Water Act (Figure 1); particularly with the reference to swamps, marshes and bogs. However, past judicial decisions and policy positions have expanded the definition of wetland far beyond these easily agreed to examples. The U.S. Supreme Court has ruled that Section 404 applies to all waters of the United States, including wetlands. Unfortunately, the court left the definition of wetlands to the regulating agency; the U.S. Army Corps of Engineers. In 1986, in accordance with earlier amendments to the Clean Water Act, the Corps and the Environmental Protection Agency (EPA) issued a Memorandum of Agreement by which the two agencies would jointly regulate the provisions of Section 404. However, the question of what constituted a wetland was yet ill defined and subject to individual interpretation on the part of agency staff. Early in 1989, these two cognizant agencies, along with the Department of Interior's Fish and Wildlife Service (FWS) and the Agricultural Department's Soil Conservation Services officially adopted their jointly developed manual for identifying and delineating wetlands according to three mandatory criteria (Figure 2).

In order to be regulated under the jurisdiction of Section 404, an area must demonstrate wetlands hydrology, hydric soils and hydrophytic vegetation. Wetlands hydrology means, in general, that there is sufficient ground water to saturate the surface soils during the growing season or the area can support surface ponding for a sufficient time to account for such saturation. The hydric soils criterion can be met if the soils meet the National Technical Committee on Hydric Soils criteria (and therefore be listed as Hydric) or exhibit characteristics similar to the criteria in the field. The hydrophytic vegetation criterion is met if the predominant plant species of the area are listed by the FWS as typically associated with saturated soil conditions. The Manual specifies a variety of field protocols and procedures to verify the presence or absence of the three criteria. Usually, all of the criteria must be verified before a jurisdictional determination can be made. In limited instances, the existence of a criterion may be assumed.

The methodologies defined in the Manual allow for an extremely liberal application of jurisdictional claims. Often the difference between the wetland/upland boundary can be a matter of mere inches of elevation. Vast areas presently or previously in agriculture now may qualify as jurisdictional. Most flood plains exhibit the requisite criteria. The Johnson Space Center, Disney World, Manhattan

WHAT IS A WETLAND?

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. (33 CFR 323.2; 40 CFR 230.3)

WETLANDS REGULATION

JURISDICTIONAL WETLANDS CRITERIA

- WETLANDS HYDROLOGY
 1. SATURATED TO THE SURFACE (6" TO 18"), OR
 2. INUNDATED ONE WEEK DURING GROWING SEASON
- HYDRIC SOILS
 1. MEETS NTCHS CRITERIA FOR HYDRIC SOILS
 2. EXHIBIT HYDRIC CHARACTERISTICS
- HYDROPHYTIC VEGETATION (USF&WS LIST)
 1. OBLIGATE WETLAND
 2. FACULTATIVE WETLAND
 3. FACULTATIVE
 4. OVER 50% OF DOMINANT SPECIES ARE LISTED
- ALL THREE CRITERIA MUST BE MET

Figure 2

Island; all would likely be jurisdictional wetlands under current rules. An area is not a jurisdictional wetland until a determination is made by the Corps. However, lack of a determination does not provide protection from civil or criminal penalty for violation of Section 404. The landowner is responsible for seeking a determination if there is the possibility that wetlands exist. This can be accomplished by directly requesting a determination by the Corps, or by retaining a consultant to survey the tract using the federal guidelines provided in the Manual. In the latter case, the Corps can make its determination on the basis of the independent survey if requested. Some landowners prefer to retain consultants either for expediency or to revise development plans before approaching the Corps.

FEDERAL WETLANDS POLICY

One early statement on federal policy regarding wetlands was the issue of Executive Order 11990 by then President Carter which mandated that federal agencies "take action to minimize loss or degradation of wetlands." However, this order specifically excluded actions on non-federal lands.

The official policy of the Bush Administration is that there will be "No Net Loss of Wetlands." This policy has been somewhat refined to reflect no net loss of "Wetlands Functions and Values." This refinement was considered reasonable in light of the extreme variability of wetlands types found throughout the country. The FWS has identified 55 different classes of wetland and deepwater habitats. Obviously, wetlands vary considerably in terms of function and value and the loss of an acre of one type may not equate to a one acre loss of another.

The concept of value as applied to wetlands is extremely subjective at best. Expression of value in dollars would invoke market principles and would be dependent on the present or future land use. To relate value on the basis of recreation would be more subjective. For instance, the value of an area as fishing or hunting lands may be very different to a rural community compared to an urban community. The value units to relate a wetland's importance to local, regional or even global ecology do not exist. Thus, value is addressed on a case-by-case basis when it is considered at all.

Wetlands functions are somewhat easier to evaluate if not to quantify. Figure 3 is a list of some of the most generally accepted functions of wetlands. Theoretically, the use of a specific wetland must not result in the net loss of these kinds of functions.

From the above, it is easily concluded that the federal policy regarding wetlands is vague and subject to technical and legal interpretation.

WETLANDS FUNCTIONS

- FLOOD STORAGE AND CONVEYANCE
- GROUNDWATER RECHARGE AND DISCHARGE
- GAME BIRDS
- FISHERIES
- ENDANGERED SPECIES HABITAT
- OTHER WILDLIFE HABITAT
- POLLUTION CONTROL
- EDUCATION AND RESEARCH
- HERITAGE AND ARCHAEOLOGICAL VALUE

Figure 3

POLICY IMPLEMENTATION

However vague the current federal policy may be, its implementation may be found within the existing regulatory program authorized under Section 404 of the Clean Water Act. While both the Act and the implementing regulations are very clearly directed toward regulating the discharge of dredge or fill material into waters of the United States (including wetlands), judicial decisions and agency interpretations have resulted in the restriction of many other activities in jurisdictional wetlands. The plowing of a field has been characterized as the discharge of fill. Siphoning a man-made impoundment has similarly been classified as requiring a 404 permit. These cases are unique and extreme; however, they serve to illustrate latitude of the agencies and the courts.

The Corps is the agency which issues permits under Section 404. It is responsible for jurisdictional determinations and approvals of plans and specifications, including mitigation plans. The FWS (and the National Marine Fisheries Service where applicable) is responsible for consulting with the Corps and offering technical advice on individual permit applications. The FWS has no regulatory authority under Section 404. The EPA reviews all proposed permits and can elevate decisions to higher levels within the Corps and the EPA when regional offices cannot resolve differences of opinion on a particular application. EPA also has the responsibility of enforcement and is the agency which issues citations and files suit on the part of the federal government in cases of alleged violations of Section 404.

Historically, federal policy has been to encourage mitigation of wetlands losses in association with the 404 permit program. The FWS was usually the principal negotiator in the commitment of mitigation actions on the part of the applicant. Figure 4 is a list of the acceptable types of mitigation. Avoidance, either by eliminating the offending activity or moving it to another area is the most acceptable action to the agencies. Minimization of the impact is the next acceptable action. Rectification is applicable to temporary activities and is unique in that respect. Reduction is a special form of minimization wherein specific steps are taken to keep an impact from growing with time. Compensation is the act of enhancing other wetlands to a higher value and/or function or, alternatively, to create a new wetland from an existing upland site. Until recently, these mitigation types were considered as alternatives, agency preferences notwithstanding.

Early in 1990, the EPA and the Corps issued a Memorandum of Agreement which detailed the federal policy regarding mitigation of wetlands impacts. This policy requires that

WETLANDS MITIGATION

- AVOIDANCE (ACTION OR LOCATION)
- MINIMIZATION (DEGREE OR MAGNITUDE)
- RECTIFICATION (REPAIR OR RESTORE)
- REDUCTION (BY PRESERVATION OR MAINTENANCE)
- COMPENSATION (REPLACEMENT)
 - ON-SITE MITIGATION
 - OFF-SITE MITIGATION

Figure 4

mitigation strictly follow the sequence of Avoidance, Minimization and Compensation. Thus, minimization may only be accepted if avoidance is demonstrated not to be practicable or has been applied to the maximum extent practicable. Compensation may only be considered when minimization has been either applied to the maximum or is not practicable. Compensatory mitigation can be the most advantageous method of mitigation to all parties concerned if proper steps are taken to ensure that sequencing is fulfilled and that the compensation area is properly designed to function in its intended role. Compensatory mitigation is also desirable for mitigation banking of large areas to offset multiple projects by one or more entities in the future. Figure 5 is a recommended approach to successful mitigation planning. The agencies anticipate another Memorandum of Agreement will be issued in the next year or so to provide guidance in creating mitigation banks. Until then, mitigation banks will be evaluated on a case by case basis and will consider each plan on its technical merits.

COMPENSATORY MITIGATION

- DELINEATE WETLAND TO BE IMPACTED
- CHARACTERIZE ITS FUNCTIONS AND VALUE
- DESIGN MITIGATION AREA FOR FUNCTIONAL REPLACEMENT
 - ENSURE HABITAT FEATURES
 - ENSURE RECHARGE CAPABILITY
 - COORDINATE WITH OTHER DEVELOPMENT
- DEED INTO PERPETUITY
- MONITOR TO DOCUMENT SUCCESS

Figure 5

FUTURE ISSUES IN WETLANDS REGULATION

Within the next one to two years there will be a continuing evolution of regulations and policy making which will directly affect the use of wetlands in the United States (Figure 6). Specifics of satisfying the sequencing requirements of mitigation will be defined both through judicial decisions and through policy statements. More regionally specific regulation will be seen on the part of state and local governments will reflect local interests. This will be additional to and likely far more restrictive than federal regulation. Specific guidelines on mitigation banks will induce a new industry of wetlands mitigation brokering. The EPA can be expected to more ardently pursue criminal indictments of corporate executives and individual property owners in cases of Section 404 violations. Tax codes are likely to be altered to provide inducements for wetlands preservation efforts.

Each of the above issues will be addressed by the relevant agencies with ample opportunity for public comment. Participation in this process, either as an individual or as part of trade association, political organization or activist group is essential to ensure that all points of view are considered before final decisions are made.

FUTURE ISSUES

- ADDRESS ISSUE OF SEQUENCING MITIGATION
- MORE STATE AND LOCAL REGULATION
- FEDERAL STORMWATER REGULATIONS
- WETLANDS BANKING GUIDELINES
- CRIMINAL ENFORCEMENT
- TAX INDUCEMENTS FOR WETLANDS PRESERVATION

Figure 6

**DISCERNING THE "SILENT SPRING":
PESTICIDAL PERPLEXITIES FOR DUE DILIGENCE**

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DISCERNING THE "SILENT SPRING":
PESTICIDAL PERPLEXITIES FOR DUE DILIGENCE

FOR THE FIRST TIME in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death. In the less than two decades of their use, the synthetic pesticides have been so thoroughly distributed throughout the animate and inanimate world that they occur virtually everywhere. They have been recovered from most of the major river systems and even from streams of groundwater flowing unseen through the earth. Residues of these chemicals linger in soil to which they may have been applied a dozen years before. They have entered and lodged in the bodies of fish, birds, reptiles, and domestic and wild animals so universally that scientists carrying on animal experiments find it almost impossible to locate subjects free from such contamination. They have been found in fish in remote mountain lakes, in earthworms burrowing in soil, in the eggs of birds -- and in man himself. For these chemicals are now stored in the bodies of the vast majority of human beings, regardless of age. They occur in the mother's milk, and probably in the tissues of the unborn child.¹

The above-quoted excerpt from Rachel Carson's seminal book Silent Spring graphically relates both the vexation and deliverance of the buyer of pesticide-laden property. Pesticides have indeed become ubiquitous, both in urban and rural areas. Some pesticides which are now banned for their potential adverse effects on humans and the environment (e.g., chlordane) were used recently to spray both crops and lawns. The now notorious chlordane and heptachlor were legally used as commercial termiticides until April 15, 1988.² Indeed, the diazanon many of us use on our own lawns has been banned for use on golf courses.³

While it is not novel in the Superfund⁴ context to hold property owners liable for contamination which results from activities which were legal when conducted,⁵ Congress has specified that liability for response costs or damages will not attach as a result of the application of a FIFRA-registered pesticide.^{7, 8} Although the discard or spillage of pesticides may be analogous to the discard or spills of other hazardous substances, such "discard" or "spill" is not the use for which the product was produced. In

the case of pesticides, the "application" of pesticides to the land is often precisely the use for which the pesticide was manufactured and distributed.⁶

While the aforementioned exemption is to be welcomed by a prospective buyer, it further complicates the already amorphous task of exercising "due diligence" prior to purchasing property. That is, the detection of pesticide contamination is not always indicative of the "disposal" which may trigger liability under CERCLA,⁹ thus requiring a more thorough preliminary assessment before potential liabilities can be adequately assessed. The absence of such an exemption under state law also indicates that pesticide contamination is a potential liability problem which may warrant rigorous evaluation.

I. FEDERAL SUPERFUND ISSUES

CERCLA § 107(i) sets forth the aforementioned liability exemption as follows:

No person (including the United States or any State) or Indian tribe may recover under the authority of this section for any response costs or damages resulting from the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act. Nothing in this paragraph shall affect or modify in any way the obligations or liability of any person under any other provision of State or Federal law, including common law, for damages, injury, or loss resulting from a release of any hazardous substance or for removal or remedial action or the costs of removal or remedial action of such hazardous substance.

This author was unable to locate any reported case law construing this provision. The U.S. Environmental Protection Agency (EPA) has, however, proposed to interpret Section 107(i) only to limit EPA's ability to recover costs from releases associated with pesticide use, not EPA's ability to list the site on the National Priorities List (NPL).^{10, 11} As a practical matter, therefore, a purchaser of property contaminated with legally applied FIFRA pesticides may still stand to lose much or all of the value of his investment, even if he does not incur liability for response costs.

Realistically, the most fundamental Superfund issue is whether the pesticides which may be released¹² are among the "hazardous substances" identified by CERCLA¹³ or designated in 40 C.F.R.

§ 302.4. Even so, such information may be unavailable without a preliminary site assessment which involves actual sampling.

II. STATE LIABILITY ISSUES

The so-called "Superfund" provisions of the Texas Solid Waste Disposal Act (TSWDA)¹⁴ do not contain any pesticide application exemption similar to CERCLA § 107(i). Subchapter I of the TSWDA applies a Superfund-type liability scheme to actual or threatened releases of "solid waste" (as opposed to identified hazardous substances), which arguably prevents its application to sites where contamination is solely due to legal application (not discard) of pesticides. On the other hand, TSWDA Subchapter F applies the same liability scheme to releases or threatened releases of hazardous substances, thus essentially imposing potentially broader Superfund-type liability than does CERCLA with respect to Texas sites. Such potential liability again dictates a fairly rigorous pre-purchase site assessment in order to demonstrate due diligence at a site with potential for significant pesticide contamination, regardless of whether the contamination occurred from the normal application of pesticides.

III. DUE DILIGENCE

A. Legal Standard.

Under both the federal and state Superfund laws, a property owner may avail himself of a defense that the release or threatened release was caused solely by an act or omission of a third person other than a person whose act or omission occurs in connection with a "contractual relationship."¹⁵ Both of these laws define "contractual relationship" to include instruments transferring title or possession to the property unless it was acquired after the disposal or placement of hazardous substances on, in, or at the facility, and the defendant can establish by a preponderance of the evidence that:

1. at the time the defendant acquired the facility, the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of, in, or at the facility;

2. the defendant is a governmental entity which acquired the facility by involuntary transfer or acquisition, or by eminent domain; or

3. the defendant acquired the facility by inheritance or bequest.¹⁶

Under both the federal and state Superfund laws, in order to demonstrate that the defendant did not know and had no reason to know that a hazardous substance that is the subject of the release or threatened release was disposed of on, in, or at the facility, the defendant must have made, at the time of the acquisition of the facility, "all appropriate inquiry" into the previous ownership and uses of the property consistent with good commercial or customary practice in an effort to minimize liability. In deciding whether the defendant meets this condition, the court shall consider:

1. any specialized knowledge or experience of the defendant;
2. the relationship of the purchase price or the value of the property if the property were uncontaminated;
3. commonly known or reasonably ascertainable information about the property;
4. the obvious presence or likely presence of contamination of the property; and
5. the defendants' ability to detect the contamination by appropriate inspection.¹⁷

B. Pre-Acquisition Site Assessment.

The pre-acquisition site assessment attempts to address the latter three items of "appropriate inquiry," as set forth above. Apparently preferring to remain flexible (or to avoid commitment) on the issue, neither EPA nor the Texas Water Commission have offered much guidance regarding an appropriate protocol for a pre-acquisition assessment which achieves the "due diligence" standard. Consequently, the scope of such an assessment varies widely depending upon consultant recommendations, client preferences, and external factors such as timing and financial pressures. Within the industry, a phased approach is typical, with a "Phase I" assessment targeting fundamental information which is virtually dictated by the legal standard. A Phase I review will typically include a site visit, general site characterization, review of readily available records, evaluation of historical aerial photographs, discussions with persons familiar with the site regarding the site history and matters affecting environmental compliance, discussions with regulatory agencies regarding the property and neighboring properties, and an evaluation of whether additional investigation is deemed necessary to identify or quantify potential contamination and related liabilities. If deemed appropriate, a "Phase II" assessment may be conducted including studies of soils, groundwater, surface water and other

matters as necessary to more fully characterize the site and associated potential liabilities.

Many of the typical elements of a Phase I site assessment will not disclose information which is helpful in ascertaining potential pesticide contamination. For instance, while farmland would be suspect for such contamination, a title run is unlikely to disclose prior agricultural uses of the property. Further, at least for purposes of assessing potential liability under the federal Superfund law which contains an exemption from liability for releases of hazardous substances due to the application of FIFRA-regulated pesticides, historical aerial photos may disclose prior cultivation but may not indicate areas at which pesticides may have been discarded (instead of applied). Ultimately, a Phase II assessment may be necessary when pesticide contamination is suspected, in order to quantify widespread contamination which resulted from application of pesticides, and identify any areas of higher concentrations where pesticides may have been disposed. While, therefore, an adequate assessment of potential liabilities due to pesticide contamination may be difficult using solely a Phase I site assessment, knowledge of certain regulatory provisions and programs may assist in gathering and evaluating the information available.

1. Pesticide Disposal.

In Texas, Section 76.131 of the Texas Agricultural Code grants the authority to the Texas Department of Agriculture (TDA) to adopt rules governing the storage and disposal of pesticides and pesticide containers, so long as those rules are consistent with the Texas Water Commission rules adopted under Chapter 26 of the Water Code. TDA has indeed adopted some broadly worded prohibitions and requirements.¹⁸ As a practical matter, however, the TWC has taken the lead in regulating pesticide disposal. Notably, waste from agricultural operations is included in the TWC's definition of "industrial solid waste."¹⁹ Further, if a pesticide is identified or listed as a hazardous waste under the federal Resource Conservation and Recovery Act regulations, then its disposal is controlled just like any other hazardous waste unless the disposer is a farmer. That is, a farmer disposing of hazardous pesticide wastes from his own use on his own farm may dispose of the hazardous pesticide waste on his property, so long as disposal is conducted in accordance with the instructions on the label of the pesticide container, and the pesticide container is triple-rinsed as required in 31 Tex. Admin. Code § 335.41(f)(2)(c) prior to its disposal.²⁰

2. Registration of Pesticide-Related Entities.

Certain records kept by the Texas Department of Agriculture may be of assistance in determining the use of rural commercial buildings which may have served as distribution facilities. According to Section 76.071(b), pesticide dealers must obtain a license for each location in the state from which any "restricted-use"²¹ or "state-limited-use"²² pesticide is distributed. Each such licensed pesticide dealer must also maintain for a period of two years records of each restricted-use and state-limited-use pesticide sold, including the name, address, and certified applicator number or dealer license number of the person to whom the pesticide was sold or delivered, the date of sale and information identifying the pesticide and quantity sold.²³ Information of this type might be useful in identifying the pesticides applied in a particular area. Additional information might also be obtained by consulting records maintained by certified applicators in the area, who are required to obtain a license and maintain records of pesticide use, including dates and locations of pesticide application.²⁴

While private applicators²⁵ are not required to be licensed or certified in order to use restricted-use or state-limited-use pesticides, the Texas Department of Agriculture has established a voluntary program to certify such applicators, and certification records may prove useful in a pre-acquisition assessment. Even private applicators must also comply with the Agricultural Hazard Communication Regulations²⁶ which require agricultural employers whose gross annual payroll for laborers is \$15,000 or more to migrant workers or \$50,000 otherwise, and who cause agricultural laborers to be present in a workplace where the threshold amount (55 gallons or 500 pounds or a lesser amount determined by TDA for certain highly toxic or dangerous chemicals) of any FIFRA-registered pesticide is annually used or stored.²⁷

The Agricultural Hazard Communication Regulations require that a workplace chemical list be kept along with an MSDS for each FIFRA-registered pesticide. The workplace chemical list must be prepared and either maintained at the employer's principal place of business for 30 years or filed annually with the Texas Department of Agriculture.²⁸ Workplace chemical lists are to be "accessible" to members of the community and others as specified in 4 Tex. Admin. Code § 8.7(c).

3. Groundwater.

The newly created Texas Groundwater Protection Commission is required to prepare a Groundwater Contamination Report no later than April 1st each year, which report is available

to the public.²⁹ The report is to be issued jointly by the Texas Water Commission, the Texas Water Well Drillers Board, the Texas Department of Health, the Department of Agriculture, the Railroad Commission of Texas, and State Soil and Water Conservation Board.³⁰ The report is to contain a description of cases of groundwater contamination documented by the agencies, along with the current status of measures addressing the contamination.³¹ The report is to contain all groundwater contamination cases reasonably suspected of having been caused by activities or by entities under the jurisdiction of these agencies (with certain exceptions for cases of contamination of poor quality or exempt aquifers).³²

In the April 1, 1990 Joint Groundwater Monitoring and Contamination Report, the Texas Department of Agriculture reported 164 cases of groundwater contamination at wells in 10 counties. The Texas State Soil and Water Conservation Board also indicated in the report that it will be developing a monitoring program for Erath County to examine the effects of agricultural and silvicultural non-point source pollution on groundwater.

4. Surface Water.

Pursuant to Section 201.026 of the Texas Agricultural Code, the Texas State Soil and Water Conservation Board is required to plan, implement, and manage a program for abating agricultural and silvicultural non-point source pollution. In the Joint Groundwater Monitoring and Contamination Report mentioned above, this agency indicated that it is also preparing a surface water monitoring program for Erath County.

The Texas Water Commission has also conducted recent studies of the Trinity River, and in a report issued in February 1990, indicated that toxic chemicals contaminating the river include chlordane and diazanon.³³ Monitoring reports such as these may also provide information regarding a particular area reflective of pesticide contamination.

IV. CONCLUSION

The task of due diligence at property which is potentially contaminated by pesticides is often difficult to achieve in a Phase I risk assessment. The use of pesticides is and has been widespread at various types of properties, including unimproved land such as farmland or golf courses, and in residential or commercial areas attempting to maintain a pest-free green space. Nevertheless, reference to available indicators of pesticide use and contamination may assist significantly in achieving the due diligence standard.

NOTES

¹ Excerpt from Rachel Carson's Silent Spring (1962), Chapter 3 "Elixirs of Death."

² See, 53 Fed. Reg. 11798.

³ See, 53 Fed. Reg. 1119, April 5, 1988 providing notice of cancellation of registration for the major producer of diazanon.

⁴ "Superfund" is often used to refer to both the federal Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA - 42 U.S.C. § 9601 et seq.) and analogous state laws.

⁵ For instance, CERCLA imposes liability on owners of property from which there has been a release of hazardous substances, despite the fact that disposal of the hazardous substances thereon may have been accomplished in total compliance with the laws in effect.

⁶ This distinction between discard and use is also evident in the regulatory scheme under the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. See, e.g., 40 C.F.R. § 261.33(e) and (f) which list numerous discarded commercial pesticides, including chlordane and heptachlor, as hazardous wastes; and 40 C.F.R. § 261.2(c)(1)(ii) which states that commercial chemical products listed in § 261.33 are not "used in a manner constituting disposal" if they are applied to the land and that is their ordinary manner of use.

⁷ "FIFRA" is the acronym for the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. § 136 et seq.

⁸ 42 U.S.C. § 9607(i).

⁹ Part of the so-called "due diligence" requirement of a third-party defense under CERCLA requires that, despite conducting all appropriate inquiry, the defendant had no reason to know that a hazardous substance which is the subject of the release was disposed of on, in, or at the facility. See, 42 U.S.C. § 9607(b)(3) and § 9601(35)(A) and (B). The term "disposed" is not defined by CERCLA.

¹⁰ EPA proposed in 1984 to add to the National Priorities List six sites in Hawaii at which groundwater contamination appeared to be the result of legal application of pesticides. [See, 49 Fed. Reg. 40320, 40323, October 15, 1984.] Due to the controversy aroused by the proposal, EPA indefinitely postponed a final decision on the listing [See, 51 Fed. Reg. 21054, 21063, June

10, 1986] and has yet to finalize the listing. EPA officials in the Region IX office (where the proposed sites are located) have verbally indicated that they anticipate an EPA decision on the issue by the end of 1990.

¹¹ The mere listing of a site on the NPL does not impose any duty on EPA to expend CERCLA Trust Fund monies on a response to a release or threatened release of hazardous substances at the site.

¹² While CERCLA § 101(22) [42 U.S.C. § 9601(22)] excludes "the normal application of fertilizer" from the definition of "release," no similar exclusion is provided for the application of pesticides.

¹³ CERCLA § 101(14) [42 U.S.C. § 9601(14)] incorporates pesticides controlled under other designated statutes. Note that no pesticides are incorporated by virtue of the Clean Air Act or the Toxic Substances Control Act.

¹⁴ See, TEX. HEALTH & SAFETY CODE, Chapter 361, Subchapters F and I.

¹⁵ See, 42 U.S.C. § 9607(b)(3) and TEX. HEALTH & SAFETY CODE, § 361.275(a)(3) & (c)(2).

¹⁶ See, 42 U.S.C. § 9601(35)(A) and TEX. HEALTH & SAFETY CODE, § 361.275(d) & (e)(2).

¹⁷ See, 42 U.S.C. § 9601(35)(B); TEX. HEALTH & SAFETY CODE, § 361.275(f).

¹⁸ See, 4 Tex. Admin. Code § 7.21.

¹⁹ TEX. HEALTH & SAFETY CODE, § 361.003(12).

²⁰ 31 Tex. Admin. Code § 335.77.

²¹ See, TEX. AGRIC. CODE § 76.001(21).

²² See, TEX. AGRIC. CODE § 76.003.

²³ 4 Tex. Admin. Code § 7.8(e).

²⁴ See, 4 Tex. Admin. Code §§ 7.13 and 7.18.

²⁵ See, TEX. AGRIC. CODE § 76.112 for definition of "private applicator."

²⁶ 4 Tex. Admin. Code, Chapter 8.

²⁷ 4 Tex. Admin. Code, Section 8.4. See also, 4 Tex. Admin. Code, Section 8.2 definition of "threshold amount."

²⁸ 4 Tex. Admin. Code, § 8.7(a), (b)(2) and (b)(7).

²⁹ Tex. Water Code, § 26.406 and 31 Tex. Admin. Code § 601.5.

³⁰ 31 Tex. Admin. Code § 601.2.

³¹ 31 Tex. Admin. Code § 601.5.

³² 31 Tex. Admin. Code § 601.3 definition of "groundwater contamination."

³³ Davis, J. and M. Bastian, "Analysis of Fish Kills and Associated Water Quality Conditions in the Trinity River, Texas -- III Final Toxicological Considerations," Texas Water Commission Document No. LP90-03, February 1990.

TEXAS ENVIRONMENTAL SUPER CONFERENCE
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"INDOOR AIR POLLUTION"

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Although problems with indoor air quality (IAQ) have been recognized since the early 1970s, there is still no comprehensive regulating legislation at the national or state level. However, concern over IAQ has continued to intensify. Because of the complexity and scope of the problem it has proved to be difficult to identify an existing agency or program that can address all the issues. However, IAQ legislation is progressing through Congress now. The Indoor Air Quality Act of 1990 has been reported out of committee in both the House (Bill HR 5155) and the Senate (Bill S657). However, neither of these bills has a regulatory focus. They address the problems in IAQ with appropriations for research, technical assistance, right to know programs and grants to the states to help establish IAQ programs.

A number of regulatory agencies and professional societies are already dealing piece-meal with aspects of the overall IAQ problem. Table 1 lists the major contributors to the establishment of protocols and standards for resolving IAQ problems. The role of each of these entities in IAQ will be discussed in the conference. A "dirty dozen" airborne contaminants that are being considered for specific regulation in indoor air are listed in Table 2.

The complexity of IAQ problems is indicated by the multiplicity of factor that would have to be considered in establishing IAQ standards, shown in Table 3. The resolution of IAQ problems is also hampered by the diversity and non-specific character of the complaints. Table 4 gives some of the more common acute symptoms that are associated with IAQ problems. There is also

the fear that IAQ problems could result in adverse chronic health effects such as asthma, damage to the central nervous system, or cancer.

Although the common perception is that IAQ problems are due to the presence of toxic airborne chemicals, NIOSH has concluded that inadequate ventilation, i.e. insufficient outside air, is responsible for more than half of all IAQ problems in public and commercial building. Table 5 lists the results of NIOSH's investigation of 529 buildings between 1978 and December 1988. In 13% of the studies no assignable cause could be found for the IAQ problems.

An indoor air quality survey is an investigation to determine the cause(s) of an IAQ problem. Table 6 lists the parameters that Radian investigates in carrying out an IAQ survey in a public or commercial building. The priority or weight given to each of these parameters is determined by the specific circumstances of the problem. The Health Questionnaire shown in Table 7 can be distributed to building occupants to help define the scope of an IAQ problem.

The measurements made as part of the IAQ Survey are compared with the standards and guidelines that have been proposed to help quantify the elements of good IAQ in public and commercial buildings. Table 8 gives an overview of the current proposed standards/guidelines for a number of IAQ parameters. Most of these standards/guidelines are only recommendations and should not be interpreted in a strict sense. However, they do serve as effective guides to the experienced professional in helping to resolve IAQ problems.

The situation for IAQ in residences is even less well defined than in public and commercial buildings. Residential IAQ problems have the potential to be more serious than in the workplace because most people spend more than 8 hours/day at home. There is a population that spends almost 24 hours/day at home for extended periods and this population includes the very young and very old, the infirm and those recovering from illness. For this reason, residential IAQ standards should be at least as stringent as ambient (outside) air standards. The EPA (and the states) have the responsibility for establishing ambient air standards. However, ambient air standards have been established for only a relative few chemicals, although EPA is actively researching this area.

TABLE 1. PUBLIC AGENCIES AND PROFESSIONAL SOCIETIES WITH
A ROLE IN INDOOR AIR QUALITY REGULATION

OSHA	-	Occupational Safety and Health Administration U.S. Department of Labor
NIOSH	-	National Institute of Occupational Safety and Health, U.S. Department of Health and Human Services
EPA	-	U.S. Environmental Protection Agency
AIHA	-	American Industrial Hygiene Association
ACGIH	-	American Conference of Governmental Industrial Hygienist
ASHRAE	-	American Society of Heating, Refrigeration, and Air Conditioning Engineers
NAS	-	National Academy of Sciences, National Research Council

TABLE 2. AIRBORNE CONTAMINANTS BEING CONSIDERED FOR
SPECIFIC REGULATION IN INDOOR AIR

-
-
- asbestos
 - benzene
 - biological contaminants
 - carbon monoxide
 - environmental tobacco smoke
 - formaldehyde
 - lead
 - methylene chloride
 - nitrogen oxides (NO_x)
 - pesticides
 - polycyclic aromatic hydrocarbons (PAHs)
 - radon
-
-

TABLE 3. FACTORS THAT INFLUENCE THE ESTABLISHMENT OF
INDOOR AIR QUALITY STANDARDS

-
-
- indoor air can contain up to 100 (or more) airborne chemicals and other agents, but usually at very low concentrations (1-50 ppb)
 - our current knowledge of the acute and chronic health effects of chemicals at low concentrations is limited
 - there is a wide range of individual sensitivities to airborne pollutants and odors
 - there is the potential for additive and/or synergistic effects for air that contains a number of chemicals
 - an individual can become sensitized to certain chemicals, i.e. sensitivity increases with repeated low level exposure
 - physical factors, such as temperature, relative humidity, light and sound, can influence perceptions of IAQ
 - ergonomics and psychosocial factors can influence perceptions of IAQ
-
-

TABLE 4. MOST COMMON INDOOR AIR QUALITY COMPLAINTS

eye irritation	shortness of breath
dry throat	cough
headache	nausea
fatigue	sneezing
dizziness	nose irritation
sinus congestion	skin irritation

TABLE 5. CATEGORIES OF CAUSES OF IAQ PROBLEMS
IN PUBLIC AND COMMERCIAL BUILDINGS
INVESTIGATED BY NIOSH 1978-1988

Inadequate ventilation	53%
Chemical sources inside the building	15%
Chemical sources outside the building	10%
Microbiological sources inside the building	5%
Contamination from building materials	4%
Unknown causes	<u>13%</u>
	100%

TABLE 6. INDOOR AIR QUALITY SURVEY PARAMETERS

-
-
- | | |
|-----|--|
| 1.0 | Building and Ventilation (HVAC) System Survey |
| | 1.1 review chronology of occupancy and complaints |
| | 1.2 review HVAC design and mechanical drawings |
| | 1.3 review potential sources of indoor air contaminants |
| | 1.4 review Material Safety Data Sheets (MSDS) for
chemical products and building materials |
| | 1.5 check fresh outside air flow into the building |
| | 1.6 inspect HVAC drip pans for mold growth |
| | 1.7 inspect HVAC filters for dust capture |
| | 1.8 inspect air diffusers and returns |
| | 1.9 review HVAC maintenance schedule |
| | 1.10 identify locations of office equipment |
| 2.0 | Real-Time Measurement of Air Quality Parameters
(in both problem areas and control area) |
| | 2.1 temperature and relative humidity |
| | 2.2 carbon dioxide (CO ₂) level as a function of time
and occupancy |
| | 2.3 airborne chemical gases and vapors, e.g. NH ₃ , CO, HCHO |
| | 2.4 total Volatile Organic Compound (VOC) concentration |
| | 2.5 air flow rate and pattern in rooms and halls |
| 3.0 | Employee Survey |
| | 3.1 personal interviews and/or |
| | 3.2 health questionnaire |
| 4.0 | Air Sampling and Analysis (OPTIONAL or Phase 2) |
| | 4.1 dusts: inert and chemical |
| | 4.2 chemical gases and vapors |
| | 4.3 microorganisms: molds and bacteria |
| 5.0 | Tracer Gas or Smoke Study (OPTIONAL or Phase 2) |
| | 5.1 sulfur hexafluoride gas injection |
| | 5.2 dispersion of visible smoke |
-
-

TABLE 7. HEALTH QUESTIONNAIRE

Some individuals working in this building complex have registered health complaints. To help investigate these complaints, this questionnaire is being distributed to all occupants and your assistance is requested. Please complete this questionnaire as accurately as possible. Return in a sealed envelope to the building manager and please put your initials on the outside of the envelope. Thank you for your cooperation!

1. COMPLAINTS: (Select the choices that may be related to your presence in this building. This is a comprehensive list; not all the complaints listed have been reported in this building.)

<input type="checkbox"/> Aching joints	<input type="checkbox"/> Sinus congestion
<input type="checkbox"/> Muscle twitching	<input type="checkbox"/> Sneezing or coughing
<input type="checkbox"/> Back pain	<input type="checkbox"/> Chest tightness or choking
<input type="checkbox"/> Hearing disturbances	<input type="checkbox"/> Eye irritation or tears
<input type="checkbox"/> Dizziness	<input type="checkbox"/> Problems wearing contact lenses
<input type="checkbox"/> Dry, flaking skin	<input type="checkbox"/> Headache
<input type="checkbox"/> Skin irritation/itching	<input type="checkbox"/> Fatigue or drowsiness
<input type="checkbox"/> Heartburn	<input type="checkbox"/> Fever
<input type="checkbox"/> Nausea	<input type="checkbox"/> Chills
<input type="checkbox"/> Metallic taste	<input type="checkbox"/> Other (specify) _____
<input type="checkbox"/> Disagreeable odors	_____

2. WHEN DO THESE COMPLAINTS OCCUR?

<input type="checkbox"/> Morning	<input type="checkbox"/> Specific day(s) of the week
<input type="checkbox"/> Afternoon	<input type="checkbox"/> Erratically
<input type="checkbox"/> All day	<input type="checkbox"/> Other (specify) _____
<input type="checkbox"/> Daily	_____

3. HOW LONG DO THE COMPLAINTS LAST OR WHEN DO YOU EXPERIENCE RELIEF?

<input type="checkbox"/> Hay fever, pollen allergies	<input type="checkbox"/> Cold/flu
<input type="checkbox"/> Skin Allergies, dermatitis	<input type="checkbox"/> Sinus problems
<input type="checkbox"/> Other allergies (specify) _____	_____

5. DO YOU SMOKE TOBACCO? ☐ Yes ☐ No
ARE YOU NEAR ANY OFFICE EQUIPMENT? ☐ Yes ☐ No

6. ON WHAT FLOOR AND IN WHICH AREA OF THE BUILDING ARE YOU LOCATED?

7. COMMENTS OR OBSERVATIONS: _____

YOUR NAME (optional): _____

TABLE 8. OVERVIEW OF STANDARDS/GUIDELINES FOR
INDOOR AIR QUALITY PARAMETERS

PARAMETER	STANDARD/GUIDELINE
1. Temperature	73-79°F
2. Relative Humidity	20-60%
3. Ventilation	5-20 CFM/person
4. Carbon dioxide	1000-5000 ppm
5. Carbon monoxide	50 ppm
6. Formaldehyde	0.1-3.0 ppm
7. Total volatile organic compounds	5 mg/m ³
8. Asbestos	0.2-2 fibers/cm ³
9. Microbiological contaminants	10,000 CFU/m ³
10. Pesticides e.g. chlordane	5 ug/m ³
11. Radon	4 picocuries/liter

Abbreviations:

CFM = cubic feet per minute
 ppm = parts per million by volume
 mg/m³ = milligrams per cubic meter
 CFU/m³ = colony forming units per cubic meter
 µg/m³ = micrograms per cubic meter
 fibers/m³ = fibers per cubic centimeter

**ASBESTOS:ENVIRONMENTAL DUE DILIGENCE
TEXAS ENVIRONMENTAL SUPER CONFERENCE
THURSDAY AUGUST 2, 1990**

Presented by Sharon M. D'Orsie, Ph.D., CIH
President, Eagle Environmental Health, Inc.
5450 Northwest Central Drive #110
Houston, Texas 77092
713-690-9990

1.0 Introduction

1.1 (Slide 1) What is asbestos? Mineral, Chain silicate

- + Amphiboles: amosite, an iron magnesium silicate; and crocidolite, a sodium iron silicate; anthophyllite, tremolite
- + Chrysotile: a hydrated magnesium silicate

1.2 (Slide 2) Asbestos is mined.

- + Canada, South Africa, Soviet Union

1.3 (Slide 3) Asbestos is a fiber with desirable qualities.

- + (Slide 4) Desirable Asbestos Qualities
 - o High tensile strength, fibers are flexible, heat resistant, abrasion resistant, chemical resistant

1.4 (Slide 5) "Asbestos" (Greek): indestructible or inextinguishable

2.0 (Slide 6) Asbestos is most often identified microscopically: Polarized light microscopy; x-ray diffraction, or electron microscope (TEM/SEM)

3.0 (Slide 7) Why is there concern about asbestos?

- 3.1 Lung disease: asbestosis, a form of fibrosis or scarring of the lungs; and cancers of the bronchi, pleura and peritoneum
- 3.2 Current thinking: size and morphology of fiber rather than its composition may be the most important factor in the development of lung disease

- + significance is that other fibers are under scrutiny as to their health effects. Rock wool (derived from magma rock), and slag wool (derived from molten slag) which are both classified as "mineral wools;" as well as refractory fibers have been classified by IARC as "possibly carcinogenic to humans"
- + however several epidemiological studies have failed to show a statistically significant increase in non-malignant respiratory disease to populations exposed to man-made mineral fibers

3.3 Key: LUNG DISEASE; ie. one must inhale fibers; problem has been viewed primarily as occupational, but a new study by the American Cancer Society showed that wives and children of asbestos workers have a cancer rate 1.5 times higher than the general population. (Having not reviewed the study, I am not sure what that means.)

4.0 Where is asbestos commonly found? (Slide 8) Mostly in building materials, especially asbestos-cement type products like wall boards

- + Brakes and clutches, fire blankets, curtains, fireproofing
- + (Slide 9): wallboard, floor tile, ceiling tile, plaster, spackling compounds, grout
- + (Slide 10): roofing felts, shingles, transite
- + (Slide 11): water pipes, pressure pipes, pipe insulation, boiler or furnace insulation, HVAC system insulation
- + (Slide 12): Example of pipe insulation

- + Estimated that over 3,000 building materials used commonly since 1978 contain various amounts of asbestos. On July 12, 1989 the EPA issued its final rule making banning the use of asbestos in almost all products, over a 7 year period.

5.0 (Slide 13) What does asbestos mean to me as a person with an interest in a building?

- + Potential effect on value of building
- + Potential liability from asbestos exposure to occupants and repair/installation type workers

6.0 Whether you are involved in a real estate transaction involving a building, or are a current building owner or manager, you will need a building asbestos survey.

6.1 (Slide 14) What you want a building asbestos survey to tell you:

- + Which, if any, of the prevalent building materials are "asbestos containing materials?"
- + What are the conditions of the materials? Specifically, are any of the materials friable, or able to be broken by hand-pressure?
- + What are the locations of the materials? (Like locker room or boiler room)
- + How much of the material is in the building?
- + If a material contains asbestos, must it be removed or can it be managed?

6.2 If you are buying or selling a building, an environmental audit will most likely be required and asbestos will most likely be the hazard identified. (Slide 15)

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The following information was recently obtained from a survey done by a sample of 200 members of the Mortgage Bankers Association.

HAZARDS COMMONLY UNCOVERED BY ENVIRONMENTAL AUDITS

<u>Problem</u>	<u>Total</u>
Asbestos	49%
Contaminated surface/groundwater	33%
Underground storage tank	29%
Hazardous substances (general)	23%
Leaking underground tank	19%
Soil contamination	13%
PCBs	12%
Chemical spillage	5%
Improper waste disposal	4%
Lead in paint	3%
Radon	3%
Formaldehyde	2%
All others	10%

This survey revealed that three years ago, about 15 percent of all properties received an environmental appraisal. It is estimated that within the next three years, 85 percent of property transfers will have some kind of environmental assessment conducted.

From our own experience, the presence or absence of asbestos in a building can affect the sale and the selling price of a building, but the significance is variable and regional.

7.0 (Slide 16) Why "Asbestos Management" is the theme of the 1990s

7.1 Removal of asbestos "just because it's there" that is, without any reasonable probability for fiber release is a poor use of funds. The average cost for a commercial abatement project currently between \$200,000 and \$500,000.

7.2 Forward thinking building owners and managers are voluntarily establishing Asbestos Operations and Management Plans

7.3 (Slide 17) Key Aspects of an O & M Plan

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- + Have someone in the organization responsible to direct and oversee the operations and maintenance plan
- + Have an adequate asbestos survey performed on the building
- + Notify employees and tenants of the presence of asbestos-containing materials
- + Conduct specific awareness training for workers who may come in contact with asbestos-containing materials. This might be electricians or telephone installers who come in close contact with insulation. Some type of formal communication method should be established for contract workers who work in your facility.
- + Institute work practices and procedures (written) that minimize the disturbance of asbestos-containing materials, as well protect workers should the materials be disturbed.
- + Perform periodic inspections of the asbestos-containing materials
- + Consider periodic area air sampling
- + Have a written emergency plan (review OSHA 1910.120) so you know what to do in case of an emergency and asbestos is released
- + Consider a work permit system that operates through the responsible person

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HELPFUL REFERENCES

1. "Managing Asbestos in Place" a new federal guidance document.
Call the EPA information hot line: 202/554-1404.
2. Asbestos Abatement Association: Winston-Salem, NC 919/722-9895
3. National Asbestos Council, Inc.: Atlanta, GA 404/633-2NAC
4. Safe Building Alliance: Washington, D.C. 202/879-5120
5. EPA Regional Asbestos Coordinator: EPA Region VI
John West
Asbestos Coordinator
EPA Region VI (6T-PT)
1445 Ross Ave.
Dallas, TX 75202-2733
214/655-7244

VII. MAQUILADORA PLANTS

"Reason, in itself confounded, saw division grow together."

U.S. Perspective

Steven P. McDonald
Luce, Forward, Hamilton & Scripps
San Diego, California

Mexican Perspective

Allen Smith
President
Allen Smith & Associates
McAllen, Texas

TEXAS ENVIRONMENTAL SUPER CONFERENCE

August 3, 1990

ENVIRONMENTAL CONSIDERATIONS FOR THE MAQUILADORA INDUSTRY IN THE 1990'S

The term "maquiladoras" is used to describe the arrangement whereby raw materials and components are imported from a foreign plant for assembly, processing, or manufacturing at a "twin plant" in Mexico. In the great majority of cases, the foreign plant is owned by a U.S. company which maintains some degree of ownership in the Mexican plant. In essence, these "maquilas," as the Mexican plants are usually called, convert "in-bond" raw materials into finished and semi-finished products for export back to the United States or some other country. The raw materials are referred to as "in-bond" goods because they are duty-free as imported, with the U.S. Customs Service collecting a tariff only on the value added when they, in turn, are exported from Mexico back to the U.S. as finished products. For that and other reasons, maquiladoras have proliferated in recent years and there are now approximately 1,700 such plants, many owned by blue-chip U.S. firms, that line the Mexican side of the 2,000-mile U.S./Mexico border.

In addition to favorable tariff treatment, some of the other reasons maquiladoras have gained such popularity are obvious. It comes as no surprise that as compared with the United States' workforce, Mexican labor is much cheaper (often 10 times so), readily available (with unemployment as high as 40% in some border towns), and Mexican workers are willing to work substantially longer hours than their American counterparts. It is also obvious, but not so readily advertised, that some companies seek maquiladora status in an effort to avoid the increasingly stringent environmental laws and regulations in the United States, particularly in Southern California.

This paper will evaluate that latter consideration in the context of Mexico's evolving environmental laws, the applicability of the United States' environmental laws, and the growing cooperation between American and Mexican authorities to jointly investigate and enforce such laws.

THE CONVERGENCE OF MAQUILADORA GROWTH AND MEXICO'S ENVIRONMENTAL LAWS

The development of Mexico's in-bond industry can be traced back to the early 1960's. For some time the Mexican government had recognized that the northern border region of Mexico was characterized by both a high rate of population growth and strong economic links to the United States. The initial concept of the maquiladora program in Mexico began in 1964. In a period of

abnormally high unemployment, the Mexican government set about to develop a method whereby jobs could be created within Mexico to alleviate the problem. At the same time, Mexico also desired to attract investment, industry and technology. On the other hand, in meeting these objectives, the Mexican government did not want to establish any activity which would displace any other national industry or create any disturbance in the domestic marketplace.

With the initiation of the maquiladora industry, the laws of Mexico were modified in behalf of the maquiladora company to attract population, foreign investment, and economic development. In particular, as of last year, the maquiladora could be 100% foreign owned. With the relaxation of traditional restrictions, the 1980's saw rapid growth in the Maquiladora industry.

There are many reasons as to why living conditions on Mexico's side of the border towns are substandard. Most of those reasons involve complex social, political and demographic patterns. Nevertheless, the fact remains that many in the Mexican population along the border towns live in unhealthy environments. It is also a fact that whatever the truth may be as to cause and effect, the American maquiladoras are perceived by many to be contributing adversely to that environment. It is indeed ironic that these same maquiladoras which have been acknowledged as breathing new life into the workforce of these depressed communities, are also perceived as adversely impacting the living environment of those same communities. The concern for the handling, transportation and disposal of hazardous waste which became paramount in the United States in the early 1980's has now reached an equivalent level of concern along Mexico's border towns, in large part due to the rapid expansion of maquiladoras.

In 1983, the United States and Mexico entered into an agreement known as the "La Paz Treaty," which was executed by former Presidents Reagan and Madrid. That agreement established a general framework for resolving transborder environmental problems between the two countries, with the effective border zone defined as a 100-kilometer-wide zone along either side of the International Border. The La Paz Treaty also established the U.S. Environmental Protection Agency and Mexico's Department of Urban Development and Ecology ("SEDUE") as national coordinators for their respective countries. SEDUE, of course, is the functional equivalent of the U.S. EPA in Mexico.

Also in 1983, Mexico published "the Decree for the Promotion and Operation of the Maquiladora Industry for Exportation." This Decree aimed to regulate wastes generated by the maquiladoras. It defined such wastes generally as "the residues of the material after the production process which includes products which do not pass quality control tests and which [SEDUE] determines that the rejection of is normal."

The 1983 Decree required that the maquiladoras return all generated wastes to the country of origin or dispose of the waste by either destroying it under the oversight of Mexican Customs or donating it to educational or non-profit organizations.

It should be noted that in 1986, as an annexation to the La Paz Treaty of 1983, the two countries agreed that "in-bond materials, as temporarily admitted to Mexico for processing by maquiladoras, would be imported under the condition that they be exported back to the United States as finished products, along with any waste generated in the process."

In 1988, Mexico's Environmental Law of Ecological Equilibrium and Environmental Protection (the "Environmental Law") was promulgated. The Environmental Law is a comprehensive scheme that addresses a number of environmental media, including the handling and disposition of hazardous materials and wastes. As a comprehensive law, the Environmental Law in theory supersedes any pre-existing federal law as to relevant subject matter. In that same year of 1988, the "Regulations to the Environmental Law of the Ecological Equilibrium and Environmental Protection Relating to Hazardous Materials" were published as implementing regulations under the Environmental Law. They became effective the following year on May 26, 1989. It is SEDUE's interpretation that the Environmental Law and its implementing regulations supersede the previously referenced 1983 Decree in prohibiting the destruction or donation of maquiladora wastes in Mexico. In effect then, maquiladora "in-bond" wastes need to be returned to the United States for final disposition. (A fourth option, "nationalization" of wastes, is normally not a viable one in that it requires prior approval from SEDUE, Mexican Customs and other agencies, in addition to requiring payment of import duties.)

In addition to the regulation of hazardous materials and wastes, the Environmental Law focuses on preventing air, water and soil pollution. A discussion of those provisions is beyond the scope of this paper, but a few points can be emphasized. First, it is true that, with the exception of the hazardous waste regulations, many of the implementing regulations need to be further developed and are not as stringent as those of the U.S. EPA. However, the mandates of the Environmental Law are sufficiently strong and broad so as to allow for the development of very stringent regulations. Second, the Environmental Law and its regulations are as applicable to maquiladoras as they are to Mexico's domestic companies. In fact, due to the growing attention to transborder environmental problems and maquiladoras in general, one might expect more scrutiny of maquiladoras' compliance with these evolving regulations. Third, SEDUE is the agency empowered with the jurisdiction to enforce the Environmental Law, and its agents are being trained in such matters as environmental sampling and conducting inspections through a joint program with U.S. EPA's Region VI (headquartered in Dallas, Texas). EPA Region IX (headquartered in San

Francisco, California) is just now embarking on such a joint training program with its Mexican counterparts. Through personal communications with EPA personnel involved in these programs, this author has been informed that while the funding and environmental field equipment at SEDUE is lagging behind that of EPA, SEDUE inspectors and technicians are at least the equal of EPA personnel in their application of technique.

A fourth point might also be made that has to do more with the absence of a particular type of environmental law. Mexico has no analog to the revolutionary Superfund law of the United States. That is, Mexico has no available fund of monies garnered through levies on industry with which to finance government cleanup actions. Neither does the Environmental Law arm SEDUE with anything similar to the expansive Superfund liability scheme that has allowed the EPA and state agencies so much success at hazardous waste sites. There would appear to be sufficient authority, however, under Mexico's environmental laws to require maquiladoras to remediate any environmental contamination they have caused. In fact, one might argue that the fundamental law that requires maquiladoras to return all hazardous waste to the country of origin, would include in its scope all such waste that had escaped into the environment.

ENFORCEMENT OF TRANSBORDER VIOLATIONS

Sanctions available to government prosecutors for violations of Mexico's environmental laws and regulations include substantial civil and criminal penalties. On the civil side, fines based on a formula of 20 to 20,000 times the minimum wage in the applicable federal district can result in a range of approximately 100 to 100,000 U.S. dollars. Note that as is the case with most environmental statutes in the United States, each day of non-compliance constitutes a separate offense. Moreover, unlike many environmental statutes in the United States, a second offense results in a doubling of the fine. Individuals, as well as corporations, are subject to fines, and private citizens may file complaints against alleged violators. SEDUE also has the power to shut plants down for continuous violations. Finally, individuals are subject to criminal sanctions, including imprisonment, for environmental violations.

Again, and understandably, there has been little environmental enforcement activity in the form of direct actions brought by SEDUE in the two years since the passage of the Environmental Law. However, SEDUE has been cooperating with EPA in jointly investigating environmental violations in the transborder zone. For example, this past February, 1990, a joint effort by SEDUE and EPA inspectors uncovered some 82 barrels of toxic waste that had been transported across the border illegally by an American company. The fact that the joint investigation may turn out to be the high point of the case which now appears to be awaiting prosecution somewhere between the Washington

offices of EPA and the Department of Justice, should not detract from the success of the U.S./Mexican cooperative effort. (On a kinder note, the precedent-setting nature of the case might account for some of the confusion, including Washington's overabundance of evidentiary caution in allowing the drums to sit for many months after their discovery in a small Mexican town before finding a place to dispose of them.)

Such joint inspections along the transborder zone for hazardous waste problems, in particular, will become more and more commonplace. More specifically, a formal maquiladora initiative for EPA-SEDUE inspection of border facilities has been put in place. As described above, the agencies are already familiarizing themselves with each other's programs and techniques. As part of that initiative, facilities on the U.S. side were selected for inspection on the basis of their similarity to maquiladoras operations. Such facilities included those in the semi-conductor, paint, chemical manufacturing and finishing operations industry. Having toured and exchanged inspection techniques at these U.S.-side facilities, the plan is for EPA and SEDUE inspectors to now conduct joint inspections of maquiladoras.

In short, with the passage of the 1988 Environmental Law, Mexico's environmental laws are now quite stringent. It is the enforcement of those laws that has naturally lagged. In that latter regard, EPA is assisting SEDUE to bring their enforcement capabilities up to par with Mexico's newly enacted laws and regulations. Environmental compliance officers for maquiladoras should take note.

POTENTIAL FOR TOXIC TORT LITIGATION

In recent years, the term "toxic tort" has become firmly embedded in America's legal lexicon. In brief, it refers to litigation brought by a plaintiff, or more typically a group of plaintiffs, claiming to have suffered some injury or at least some fear of injury, through an alleged exposure to hazardous substances in the environment. Toxic tort litigation has proliferated in this country in the last decade commensurate with the elevation of America's environmental consciousness. The great majority of these cases arise out of exposure to extremely low levels of contamination and they have changed the landscape of American tort law. Except for the isolated and tragic cases of high-level toxic exposure such as in the Bhopal disaster in India in 1984, toxic tort litigation has not been exported to other countries. Many commentators predict that with the raising of global environmental consciousness, such as was experienced through Earth Day this spring of 1990, toxic tort litigation for foreign countries cannot be far behind. One obvious place for the test case on foreign soil is the U.S./Mexico transborder zone. From the outset, it needs to be appreciated that in view of rapidly evolving caselaw which is eroding traditional

"corporate veil" protection in environmental cases, the U.S. parent corporation is more vulnerable than ever to liability for the acts and omissions of its maquila. As discussed below, the environmental setting as well as the necessary supply lines for conducting toxic tort litigation lie in wait in the transborder zone.

There are numerous publicized examples of serious environmental contamination along the transborder zone. One of the more disturbing cases as it relates to maquiladoras was reported recently in a major American newspaper. Children in a transborder town along Baja California were discovered drinking from the family water supply kept in 55-gallon drums. The drums came from the maquila of one of the United States' largest paint manufacturers and had previously contained a hazardous substance which company employees had been warned not to handle without protective gloves, eye protectors and long sleeves. Under both Mexican and United States hazardous waste regulations, the empty drums qualified as regulated hazardous waste and should have been returned to the United States for proper disposal. A spokesperson for the paint manufacturer expressed alarm when informed of the situation and could not explain how the drums got to where they were. At the very least, the case stands for the proposition that maquiladoras should get to know their waste transporters.

One of the attractive things about toxic tort law for America's growing army of plaintiffs' lawyers is that one need not prove an existing injury in order to recover large sums of money in litigation. The typical toxic tort case is brought on behalf of many plaintiffs, oftentimes as a class action, and is based on such claims as increased risk of contracting cancer, emotional distress and the need for establishing a medical monitoring fund to last the lives of the plaintiffs, and sometimes their yet-to-be-born progeny. In other words, such suits are predicated more on the notion of "cancerphobia" than they are on actual physical injury. Moreover, a claim for punitive damages to punish the defendant for its "outrageous conduct" is universally asserted in these cases and the jury is given free rein to decide upon the dollar amount. It is not uncommon to find juries handing down multi-million dollar awards as punitive damages in toxic tort cases where the underlying compensable injury might only support an award in the thousands of dollars.

The factual settings along the transborder zone fit neatly into that legal framework. The setting can be provided by the specific example of children drinking from 55-gallon drums traced back to a maquiladora, or more generally to people drinking from a water supply contaminated by releases of hazardous wastes from nearby maquiladoras. The toxic tort case need not be confined to soil or drinking water contamination, but might come from exposing nearby residents to excessive solvent emissions to the air from a maquiladora's circuit board manufacturing plant.

Neither need the case be confined to outdoor exposure of residents, as factory workers may be exposed to high levels of solvents in the maquiladora plant operations themselves. For example, an increasing number of California boat manufacturers are establishing maquiladoras in part to avoid California's impending air toxics regulations which will apply extremely stringent limitations on emissions of solvents and volatile organic compounds ("VOC's") in general. As it is, the South Coast Air Quality Management District in the Los Angeles basin has promulgated very strict regulations under increasing pressure from EPA on styrene and fiberglass emissions, typical pollutants from boat-building operations. Maquiladoras need to be concerned both with indoor and outdoor air pollution in operations involving VOC's and particulates.

As to available "supply lines," the proximity of American law firms that specialize in prosecuting toxic tort suits cannot be overlooked. There are plaintiff's firms in Los Angeles, for instance, that have developed national reputations for their involvement in toxic tort litigation across this country. Such firms would conduct their own litigation where the United States courts could be persuaded to take jurisdiction of a transborder matter, but could also serve as advisors to Mexican law firms should such actions be brought in the Mexican courts. On the local scene, citizen groups are starting to organize in such cities as Tijuana and Mexicali, assisted by American environmental groups such as the Sierra Club. Most of these groups have come together only in the last two years and they are expressing concern about where all the maquiladora waste is ending up in citing statistics that purport to show discrepancies between the estimated volume of maquiladora waste and how much waste is documented as actually returning to the United States.

On the other hand, there are legal and practical obstacles to the successful conduct of a toxic tort case arising out of environmental contamination on the Mexican side of the transborder zone. The first problem for American lawyers would be persuading the United States courts to take jurisdiction over the matter. Not only would such lawyers be on their home turf, but they would have the added advantage of established American toxic tort theory. If the facts of the case would not support a traditional negligence cause of action against the maquiladoras, American counsel might have the benefit of negligence per se theory where a Mexican environmental law or regulation was violated. For example, hazardous waste that should have been returned to the United States might be the agent of exposure and, in such a case, negligence could be imputed on the basis that a law meant to protect these plaintiffs' health was violated.

Failing those basic theories, counsel in the U.S. courts could avail themselves of strict liability principles based on the argument that the maquiladora was engaged in "ultra-hazardous activities" in dealing with the hazardous substances of concern. If established, there would be no need to prove any

negligence or any degree of culpability on the part of the maquiladoras. There are other theories available to the American lawyer in toxic tort litigation that move much beyond traditional common law concepts and, more importantly here, traditional Mexican law. In particular, while modern Mexican law allows recovery for "moral damages" in addition to compensation for personal injuries, it is a law that is still evolving and has not had the impact that the American system of punitive damages has had on litigants. At the most practical level, of course, the plaintiffs' attraction for securing a United States forum is primarily related to the growing tendency of American juries to award excessively high damages, particularly when they find themselves affronted by company profits at the expense of an individual's injuries.

As to the prospects for a U.S. court asserting jurisdiction over a transborder environmental case, such a determination involves a complex analysis of many factors such as any interests of the United States to be protected, conflicts of law issues, adequacy of the remedies available to the plaintiff in the foreign jurisdiction, and access to information necessary for the orderly process of trial. In the end, the U.S. court is given much discretion in balancing legal, political and policy questions in answering the question, and if it decides that the United States forum is a "forum non conveniens," it will refuse jurisdiction just as the federal court did in sending the Bhopal case back to the courts of India. See, In re Union Carbide Corp. Gas Plant Disaster, 634 F.Supp. 842 (S.D.N.Y. 1986).

As a final impediment to developing a toxic tort case in the transborder issue, plaintiffs' attorneys might not have the benefit of a wealth of sampling and other technical data upon which to support the case. The typical toxic tort case in the United States arises out of a Superfund site or similarly contaminated property after federal and state agencies have conducted various investigations and evaluations of the impact of the contamination. Plaintiffs' attorneys pour over the volumes of hydrogeologic, toxicologic and exposure and risk assessment studies left in the wake of the government cleanup actions for the data needed to support their clients' claims. As indicated previously, the Mexican government has no comparable program and does not conduct the kind of extensive environmental sampling and analysis that has become routine in EPA's cleanup and enforcement programs. Moreover, even though the environmental impacts to the United States of such transborder problems as the Tijuana and New Rivers are well known, EPA has not addressed them. There does not appear to be an absolute prohibition in the Superfund Act against applying Superfund monies to those causes. However, EPA's Office of General Counsel has apparently taken the position that Superfund monies should not be utilized at the present time in these transborder situations.

On balance, and for the immediate future, toxic tort litigation arising out of the transborder zone exists largely in the potential. Maquiladoras should use this time wisely.

HOW MAQUILADORAS CAN LIMIT THEIR ENVIRONMENTAL RISKS

Newspaper accounts have fastened on to the environmental cliché of the last decade, as it was applied to the newly discovered Superfund sites in the United States, and are now referring to the transborder zone as the "ticking time bomb." Whatever it's worth as a cliché, it may be a self-fulfilling prophecy in that more and more EPA, SEDUE and citizen group personnel are out looking to find environmental "bombs." Maquiladoras are going to be subject to a naturally higher degree of scrutiny through stepped-up inspections. As a first step in protecting themselves, maquiladoras should conduct an internal audit of their operations. Depending on a proper evaluation of the legal relationship between the plants, the internal audit might be structured in advance by the American component. That structuring should include procedures to ensure that information generated through the audit can be afforded legal protection and remain confidential. The auditing team needs to have the authority and objectivity to access all relevant information at the maquila operations and draw the necessary conclusions. Some of the specific measures the auditing team should evaluate are the way that hazardous materials are handled and the potential pathways for releases of such materials into the environment. Records, along with the record-keeping system itself, should be evaluated particularly with regard to the transport and fate of hazardous wastes. Moreover, the waste transporter should be evaluated for reputability, licensing and financial assurance. The audit should also focus on worker exposure to chemicals and consideration should be given to a worker education program with respect to the use and handling of chemicals.

Beyond the auditing exercise, the need to perform a risk assessment should be considered to protect against potential actions by private parties. That assessment might consider the risks to workers as well as residents in the vicinity of the plant. Finally, with the growing emphasis on recycling and waste minimization, methods of source-reduction and waste stream control should also be evaluated.

CONCLUSION

The maquiladora program offers tremendous benefits for both American industry and the Mexican people. Care needs to be taken, however, not to upset the delicate balance of considerations. Environmental compliance and pollution along the transborder zone will be watched very closely from both sides of the border in the 1990's.

MEXICAN MAQUILADORAS AND MEXICAN ENVIRONMENTAL PROTECTION LAWS

By Allen E. Smith* and Maria Olga Gonzalez Karam**

THE MEXICAN MAQUILADORA

Maquiladoras are Mexican manufacturing and assembly plants that produce for the export market. 65% of them are foreign-owned, and 85% of them are located on the México-U.S. border.

The modern Mexican maquiladora industry grew out of a combination of the 1965 Mexican Border Industrialization Program (BIP) and the existence of low duty provisions in the U.S. tariff regulations. In 1965 the Mexican BIP was created to permit temporary importation into México of foreign-made raw materials and components on an in-bond, duty free basis. The products of such materials assembled or processed in México at relatively low wage rates are exported in-bond to the U.S. and other countries.

Back in 1965 the vast majority of maquila facilities were involved in sewing textiles to take advantage of Mexican low labor costs. Cutting was done on the U.S. side.

By 1979 electronic and electrical equipment assembly occupied 36% of the total number of plants and 57% of the total maquiladora employment. By 1989 the importance of the textile sector had diminished considerably.

Now basic manufacture is growing, and the variety of products and activities is astonishing. There are about 1800 maquila plants.

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Initially the maquiladora industry was concentrated on the eastern border region in the cities of Ciudad Juarez, Nuevo Laredo, Reynosa and Matamoros. During an expansion period from 1982 to present, the number of maquiladora plants increased rapidly in the western border area.

Presently Tijuana ranks first with 32% of the total plants, and second in terms of number of employees with 12% of total employment.

With the recent rapid growth and diversification of foreign-owned maquiladora plants in México has come many industrial facilities that use or produce significant quantities of hazardous substances, and many that produce hazardous wastes.

Just as in the U.S. plant operators must be aware of their obligations in México, because Mexican law closely regulates hazardous substances of all kinds.

Maquiladoras are treated by the law and the officials no worse than any other Mexican company, and in fact may benefit to some extent from the high respect afforded foreign-owned maquilas for the benefits they bring to México.

U.S. law and regulations affecting all aspects of the process must be complied with if maquila products enter the U.S. See 40 CFR Parts 26D, 261 and 267. EPA administers the U.S. side of the process, through U.S. Customs. 49CFR Parts 171-17 and 178 and 179 cover D.O.T regulations of packaging and marking in transit, as well as vehicle standards and registration.

However México has not yet finally developed a complete scheme

of regulation covering the special problems of maquiladoras, especially regarding the treatment of waste and scrap.

In general, maquilas are allowed to destroy their waste and scrap in México; donate it to a charity; pay duties on it and import it permanently into México; or export it, all upon compliance with applicable regulations.

However if the waste or scrap is classified as "hazardous" the picture is still unclear. It is further complicated by the fact that there are a few-if-any qualified and SEDUE-certified hazardous waste disposal operators in northern México (although four Mexican companies now advertise their services).

One item is quite clear, the importation into México of hazardous material solely for disposal there is prohibited.

It seems fairly certain that maquilas can recycle their hazardous wastes or have them recycled in México, assuming that this can be done in compliance with Mexican law and regulations, which are none too clear on this point. Some companies use a "constructive exportation" to be sure that wastes they recycle were first "exported" from México. (In fact hazardous wastes can be imported into México for the specific purpose of recycling).

At the present time it appears that maquilas may not store or incinerate hazardous wastes in México, either themselves or by means of contractors.

The net result is that maquilas that are hazardous waste generators export to the U.S., and it is tremendously expensive for them to do so. It costs from \$10,000.00 to \$50,000.00 per load to export hazardous wastes!. Relief is needed, and soon.

In México an umbrella federal Environmental Protection Law, the "Ley General del Equilibrio Ecologico y la Protección al Ambiente" adopted effective March 1, 1988 and its various related regulations, standards, and one decree from 1987, provide the legal basis for the Mexican government through its Department of Urban Development and Ecology (SEDUE) to monitor and control all maquiladora operations.

A basic principle of the Law is that if a substance could not be imported into its country of origin it can't be imported into México either. In addition to coverage of hazardous substances the Law and regulations cover: (1) water pollution; (2) soil pollution; (3) atmospheric pollution, and; (4) noise pollution. "Technical Standards" issued by SEDUE are the detailed rules that industry must look to for planning and in case of allegations of violations.

SEDUE works closely with state and local authorities in the attempt to protect the environment, but it is woefully underfunded and understaffed, and the 31 states and various local governments have virtually no funds or staff, so enforcement beyond the processing of paperwork is very limited. A few relatively non-industrialized states have their own environmental laws (which may not conflict with federal law).

México also has bilateral agreements with the United States that cover hazardous imports and exports into and from that country.

The following is a summary of the basic requirements of Mexican environmental law for maquila operations.

1. THE ENVIRONMENTAL IMPACT REPORT (Regulation of the General Law on Environmental Impact, effective June 8, 1988)

When a foreigner plans to establish a new operation or expand an operation in México that is specified in the Law or that is listed among those classified as "hazardous activities" (published in the Official Gazette 1990) it must first submit to SEDUE an application and an environmental impact report using one or more of its three questionnaire forms: general (by all applicants), intermediate, or specific, depending on the type of industrial operation. The environmental impact report is based on a study which can only be made by a person who is an expert (perito) and who is authorized by and registered with SEDUE.

In addition a "risk study" must be submitted, assessing risks and explaining plans for risk management.

SEDUE receives the application, impact statement, and risk study and decides to approve the project; deny it; or condition it upon the making of specific changes. It has very wide discretion, which to date it has exercised in a very judicious and professional manner. Rejections, administrative delays, or hassles of maquiladoras are virtually non-existent.

2. THE OPERATING LICENSE (Regulation of the General Law on Prevention and Control of Air Pollution, published November 25, 1988).

All maquila operations must obtain an operating license from SEDUE.

Operations that do not appear in the regulations among those classified as "hazardous activities" need only obtain an operating license.

The only industrial activities that are exempt from obtaining an operating license are those very small industries (listed as

"Microindustrias"), as long as the activity is not among the classified as hazardous (published in the Official Gazette, April 14, 1988). As a practical matter all new maquilas apply for a license on SEDUE-provided questionnaires.

The installation of pollution-control and monitoring devices may be required by SEDUE in the geographic areas set forth in the Law, and by states and localities as well.

When the kind of emission from an operation is among those regulated by the Law a questionnaire must be filed with SEDUE once a year during the month of February.

3. THE LICENSE FOR LAND USE

Prior to applying for an operating license a maquila must obtain a "license for land use" from the municipal Public Works Department of the city in which the plant is to be located. This license is issued in accordance with the zoning area indicated in the Urban Development Plan of the city in question. If the site chosen for the plant is in an industrial zone acquiring this license is no problem.

But the importance of this license is great if the site is not classified as an industrial zone, since then a request to SEDUE for a change of the zoning use of the land to industrial use must be filed. This procedure always requires the presentation of an environmental impact report, whether or not the activities are classified as hazardous.

If the plant is to be located in an authorized Mexican industrial park, the administration of the park usually provides the land use license.

The Law effectively prohibits industrial activity in certain ecological preserves designated by the Law or federal state, or local authorities. In addition, SEDUE has the power to issue and record zoning regulations that restrict the use of the land anywhere in México.

Obviously the existence of restricted zones requires prospective maquilas and others to investigate their possible applicability to their projects before getting very far into them.

Paradoxically the local land use license can cause maquilas the most problems because the bureaucracy is less efficient and sometimes corrupt at that level.

SEDUE, on the other hand, is quite efficient and not corrupt.

4. IMPORTATION/EXPORTATION OF HAZARDOUS MATERIALS OR HAZARDOUS WASTE (Regulation of the General Law related to Hazardous Waste, published November 25, 1988)

Early in the process of establishing a maquila in México, even before requesting the Mexican Department of Commerce (SECOFI) to issue an import permit for raw materials, components, and substances needed for the manufacturing or assembly operation, the list of "hazardous materials" (published November 9, 1988) must be reviewed by the Company. If any of the materials to be imported appears on this list an authorized transporter must be used and an "ecological manifest" (Guia Ecologica) must be obtained from SEDUE. A liability bond in the amount specified by SEDUE also must be acquired. The amount of the bond depends on the type and amount of the constituent material. SEDUE must be notified within 15 calendar days after the importation is completed.

The ecological manifest is valid only for 90 days after issuance, but it may be extended.

Only when the maquila operator has possession of this ecological manifest will SECOFI issue the requested authorization to import.

The same procedure is required for every exportation of hazardous waste or hazardous materials.

5. REGISTRY AS A HAZARDOUS WASTE GENERATOR (Regulation of the General Law related to Hazardous Waste, published November 25, 1988).

Every maquila must decide whether the waste and scrap it generates is classified as "hazardous".

Specific federal regulations describing materials considered as "hazardous waste" were published in the Official Gazette on June 6, 1988, and these which preempt state and local laws. A maquila that produces hazardous waste must apply for a permit and register with SEDUE as a hazardous waste generator.

As such it must maintain a monthly record of all hazardous wastes generated, and report to SEDUE every six months its movements of hazardous wastes during that period.

The forms, instructions and manuals regarding these requirements were published in the Official Gazette on May 3, 1989.

The "handling" of hazardous waste (including collection, storage, transport, treatment, incineration, recycling, and final disposal) also requires a prior SEDUE permit.

A generator may handle its own hazardous wastes or contract to have them handled, or processed in México, or both.

The regulations governing the storage of hazardous wastes are essentially the same as in the United States.

Every hazardous waste generator must also comply with the regulatory requirements for segregation of incompatible wastes, (published in the Official Gazette, December 14, 1988); and for properly collecting and storing the hazardous waste. When hazardous wastes are transferred to a hazardous waste disposal site the maquila must ensure that the waste is properly packaged and identified, and keep a record of movements to comply with SEDUE requirements.

6. THE REGISTRY OF RESIDUAL WATER DISCHARGES (The Law and the Regulations for the Prevention and Control of Water Pollution, published March 28, 1973).

All water discharges generated from an industrial process must be registered with SEDUE and a questionnaire for "establishing the particular conditions of the discharge" (fijación de condiciones particulares de descarga) filed. If the discharge has hazardous content as specified in the Technical Standards a prior SEDUE permit is required.

If the final point of discharge is at a body of water (river, lake, etc.), eight samples per month must be analyzed and a monthly report of the results sent to SEDUE.

7. WATER USE

If the maquila is to make use of well water, or surface water,

in its industrial processes it must also obtain a permit from the Department of Agriculture and Water Resources (SARH). If the water to be used in the process is potable water obtain a permit from the City Water Commission (COAPA).

7. MINERAL EXTRACTION AND PROCESSING

A permit from the Department of Mining and from SEDUE is required for companies that extract or process minerals, ores, slags, and ore sweepings.

ENFORCEMENT

INSPECTION

Almost all foreign-owned maquilas are accustomed to obeying U.S. environmental protection laws or the laws of their countries of origin, so they have no difficulty psychologically or practically in complying with Mexican law. Violations by them are few. Most violations are by the Mexican-owned maquilas, representing 30% of the total number of maquilas.

However, there may be a good bit of questionable hazardous waste storage pending further developments in the Law.

The Law authorizes SEDUE and state and local authorities to inspect for violations of the Law and for compliance with the conditions of permits. A warrant is required. Requested information must be provided unless it is a proprietary secret.

Any citizen can complain and allege a violation, thereby triggering an inspection.

If the inspector finds a violation SEDUE can require

corrective action; can seize hazardous materials; and can even shut the operation down. The inspected party has the right to contest the finding. There is provision for an administrative appeal in the Law.

Criminal violations may be referred to the Attorney General.

SANCTIONS

Two kinds of sanctions are provided for by Mexican law in the event of non-compliance with the Environmental Law: administrative and criminal.

A. Administrative sanctions:

1.- A fine of 20 to 20,000 times the daily minimum wage in the Federal District (about \$60.51 to \$69,517.00 U.S.)

2.- Temporary, permanent, or partial closure of the plant and administrative arrest of up to 36 hours.

3.- If compliance is not met within the time period granted a fine can be imposed for each additional day up to the highest fine authorized.

4.- For any subsequent offense the fine may be doubled and the plant permanently closed (Art.171).

5.- Depending on the gravity of the violation SEDUE may revoke any authorization obtained by the violator (Art.172).

B. Criminal Sanctions:

a). Operating a hazardous activity without authorization or

without compliance with the regulations can result in imprisonment from three months to six years, and imposition of a fine of 100 to 10,000 times the daily minimum wage in the Federal District. If the activity took place in an urban center the sentence may be up to nine years and a fine of up to 20,000 times the daily minimum wage in the Federal District (Art. 183).

b). For performance of any act relating to hazardous materials or wastes without authorization or without compliance with the authorized conditions: imprisonment from three months to six years and a fine equal to 1,000 to 20,000 times the daily minimum wage in the Federal District.

c). Import or export of hazardous materials in contravention of the regulations carries the same penalty as operating without authorization (Art. 184).

d). Water pollution violations: imprisonment of three months to five years and a fine equal to 100 to 10,000 times the daily minimum wage in the Federal District (Art. 186).

e). For Air pollution and/or Noise, vibration, thermal energy or light pollution violations: imprisonment for one month to five years and a fine equal to 100 to 10,000 times the daily minimum wage in the Federal District (Art. 187).

In addition SEDUE may revoke permits and close plants. It has wide discretion.

If the maquila also violates U.S. law in its transportation and disposal activities in the U.S. it can receive administrative fines of up to \$25,000.00 U.S. per day, and also criminal fines and imprisonment.

CONCLUSION

The AFL-CIO and overheated journalists from time to time allege that U.S.-owned maquilas are actively abusing the Mexican environment. A story about alleged pollution by maquilas appeared in the New York Times Magazine on June 6, 1990.

However, the complaints are never documented. There is good reason for this. Almost all U.S.-owned maquilas are in compliance. Although there may be some technical violations the spirit of the law is being complied with, despite the lack of an adequate inspection force in Mexico. Although only 24% of the maquilas made the first filing deadline, SEDUE is not worried.

Simple logic suggest that this must be true. The maquilas have too much to lose if they are caught out of compliance.

Moreover, despite the lurid tales most maquilas want to be corporate good citizens in México. They sincerely desire not to harm México or Mexicans.

The Mexican Law is not unduly burdensome and is working well. It is only two years old and it takes time to work out the bugs. Some clarification is needed regarding recycling.

The only complaint is that provisions should be made for disposal or incineration of hazardous wastes and scrap in México, to reduce the exorbitant current costs. I have no doubt that this will occur as soon as Mexican disposal companies show the Mexican authorities that they are up to the task.

While this brief summary provides an overview, it is not sufficient to deal with particular problems. I will be happy to

provide citations and/or copies of the Law and Regulations and Decrees to those who need them.

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VIII. AIR & WATER TOXICS

"The quality of air and sea is strained by the droppeth of the toxic rain from heaven upon the place beneath."

Air

Jess McAngus
Vice President
Pilko & Associates, Inc.
Houston, Texas

Water

C. Mike Moffitt
President
SeaCrest Environmental Services
Houston, Texas

Clean Air Act Amendments of 1990
Texas Issues

by: Jess A. McAngus
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Texas Environmental
Super Conference
Austin, TX

August 3, 1990

CLEAN AIR ACT AMENDMENTS OF 1990 TEXAS ISSUES

I. INTRODUCTION

On April 3, 1990 the Senate passed S 1630 by a 89 - 11 vote. On May 23rd the House passed Clean Air Act Bill HR 3030 by a 401 - 21 vote. These two bills represent over 1200 pages of legislation which have now gone to a House - Senate conference committee for debate. Though there are over 1200 pages to debate, the provisions of the two bills are quite similar. There are, however, major issues that must be addressed prior to the bills being reported on the conference. Major issues which will be debated in the conference include; the sale of clean fuel cars in California; the differences between the House and Senate permit shield provisions; the Senate's requirement for residual risk for hazardous air pollutants and the House's worker protection plan found in the acid rain provisions.

Each bill contains numerous titles. The titles are generally grouped by the following provisions:

- o Nonattainment
- o Control of mobile source
- o Air toxics
- o Permits
- o Acid deposition control
- o Enforcement
- o Miscellaneous issues

Though each of these issues will be important to those of us in Texas, this paper focuses on the nonattainment, air toxics and the permit titles. The schedule for agreeing on a conference bill is still anyone's guess. However a review of the process since the House passage of House Bill HR 3030 indicates that the debate will likely drag on.

After passing the House Bill on May 23rd, the Senate on June 6th announced the names of nine Senators selected to the joint conference committee. It took the House, however, until June 28th to submit its list of 135 House conferees. The House conferees actually represent seven different committees. Though not all House conferees will meet together, there may be as many as 52 Representatives and nine Senators meeting at one time.

Most legislators, environmentalists and state representatives would like to see the conference bill passed before Congress adjourns on October 5th, so the Clean Air Act can

be used as an election issue. Industry, however, is hoping that the bill's passage will be after the November elections and will occur during the "lame duck" session. Given the history of the Clean Air Act Amendments reauthorization it is likely that the bill will not be passed until sometime after the November election.

II. NONATTAINMENT ISSUES

Currently over 100 areas in the United States do not meet health standards under the Clean Air Act for ozone, more than 40 areas are failing to attain the carbon monoxide standards, and an estimated 58 areas exceed the health standard for particular matter (PM₁₀). State and local governments are responsible for implementing measures that will reduce pollution to levels that do not threaten health, and it is EPA's requirement to set minimum requirements that assure that the state's carry out that responsibility.

Both the House and Senate bills on the nonattainment provision divide nonattainment areas into different categories depending upon the severity of the existing pollution problems. Each bill sets out requirements of different levels of stringency for each category. Shown on Table 1 is a side by side comparison of major issues in the House and Senate Bills.

A. Classification and attainment dates:

In the House bill the designated ozone nonattainment areas are classified as marginal, moderate, serious, severe or extreme as shown in the table below:

<u>Area Classification</u>	<u>Design Value</u> (ppm)	<u>Primary Standard</u> <u>Attainment Date</u> (years after enactment)
Marginal	.121 - .135	3 years
Moderate	.135 - .160	6 years
Serious	.160 - .180	9 years
Severe	.180 - .280	15 years
Extreme	.280 +	20 years

In Texas there are four consolidated metropolitan statistical areas (CMSA) designated nonattainment. These areas and their design values are: Beaumont - .160ppm; Dallas - .140ppm; El Paso - .170ppm and Houston - .190ppm. Shown on Figure 1 are the current nonattainment areas and their classifications.

B. Major Source Definition:

Another major issue to be worked out in conference is a definition of major source. In the House bill each nonattainment classification has a corresponding major source definition. A summary of the House bills definition and controls is shown on Table 2. For example, in the Houston area, a major source will be redefined from 100 tons to 25 tons per year. In the Senate version the current

TABLE 1
NONATTAINMENT ISSUES

	<u>House</u>	<u>Senate</u>
Major Source Definition	New source review, LAER, and non-CTG RACT threshold: 100 tons per year - marginal and moderate; 50 tons per year - serious; 25 tons per year - severe; 10 tons per year - extreme.	New source review, LAER, threshold: 100 tons/year, non-CTG RACT threshold: 100 tons/year except 50 tons/year in severe and extreme.
Progress Requirements	For serious, severe, and extreme areas, 15% reductions in first 6 years. Then, 3% annually.	For serious, severe, and extreme, 12% reductions in the first 6 years. Then, 3% annually.
Netting & Offsets	Restrictions on netting plus options on relief from LAER and offsets. Offsets ratio: 1.2:1 - serious; 1.3:1 - severe; 1.5:1 - extreme.	Netting allowed but without any net increase. Offset ratio: greater than 1:1.
Sources of NOx	Regulates all major sources of NOx regardless of the presence of hydrocarbons necessary to form ozone.	Controls NOx from sources emitting more than 100 tons/years.
CMSA	Defines nonattainment areas by including the entire Consolidated Metropolitan Statistical Area plus a 25 mile radius.	Incorporates the CMSA in extreme nonattainment areas only.
RACTs	Exempts major sources in marginal areas from complying with RACT standards.	Adopts RACT across the board for all sources.

FIGURE 1
TEXAS
OZONE NONATTAINMENT AREA

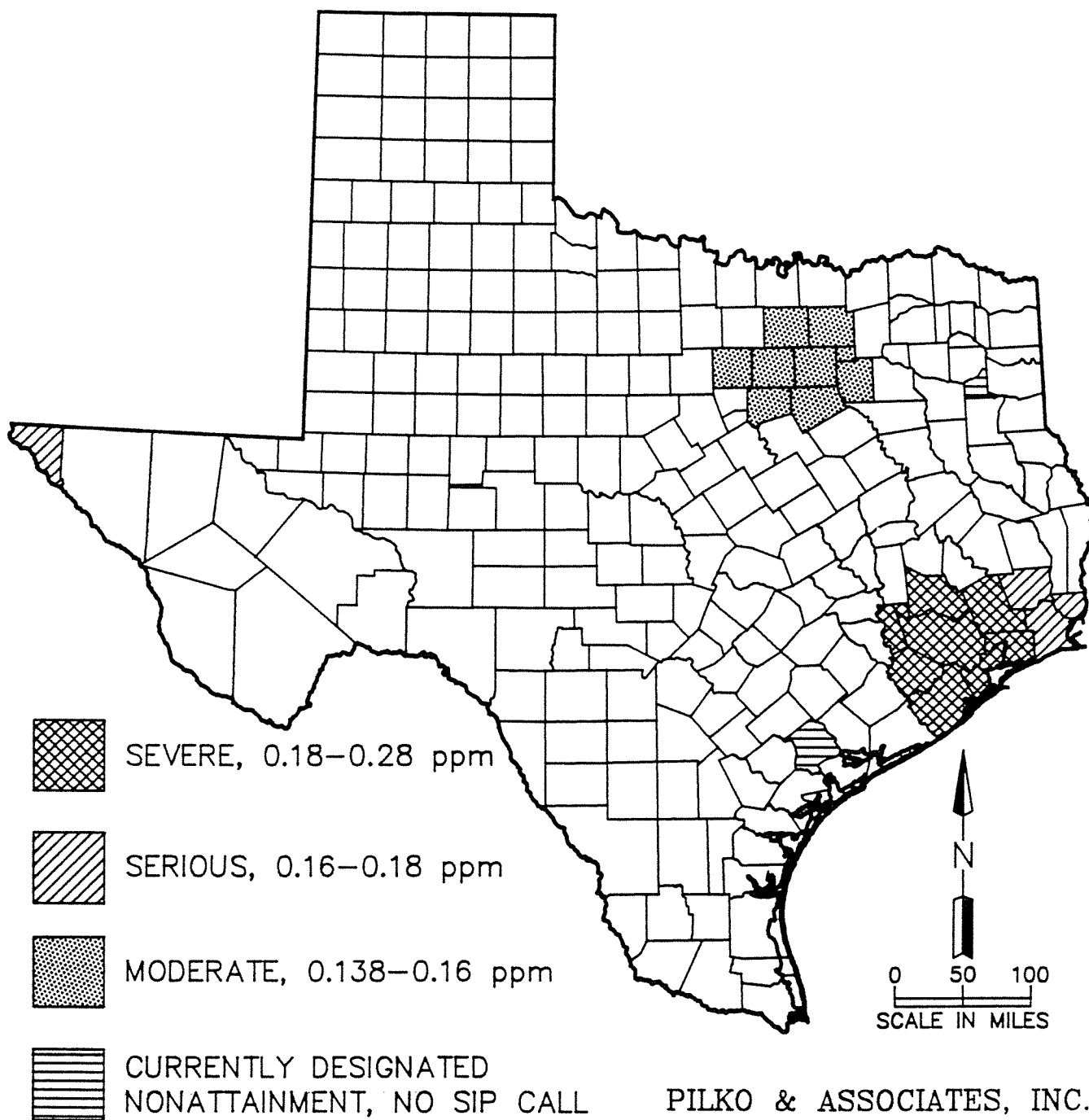


TABLE 2
CONTROLS REQUIRED IN DIFFERENT NONATTAINMENT AREAS

	Size of Major Source	VOC Offsets	I/M	Stage II	Percent Reduction	Transportation Emissions	Modification Offsets	TCMs	Clean Fuels
Marginal	100 tpy	1:1	--	--	--	--	--	--	--
Moderate	100 tpy	1:1	basic I/M	Stage II	15% VOC & NOx	--	--	--	--
Serious	50 tpy	1.2 to 1	enhanced I/M	Stage II	15% VOC & NOx	Submit projected transportation emissions	<100 tpy VOC 1.3 to 1 or LAER >100 tpy VOC 1.3 to 1	--	--
Severe	25 tpy	1.3 to 1 (1.2 to 1 + BACT)	enhanced I/M	Stage II	15% VOC & NOx	Submit projected transportation emissions		TCMs to offset growth	--
Extreme	10 tpy	1.5 to 1 (1.2 to 1 + BACT)	enhanced I/M	Stage II	15% VOC & NOx	Submit projected transportation emissions	1.3 to 1	TCMs during heavy traffic hours	Stationary sources >25 tpy NOx to use clean fuels

100 ton per year definition is maintained except in severe and extreme areas where the definition is reduced to 50 tons.

The difference in this definition is key as is demonstrated in Harris County. In a recent emission inventory of all VOC sources, 63 sources had emissions greater than 100 tons per year of VOCs, 30 sources had emissions between 100 tons and 50 tons per year and an additional 52 sources had emissions of between 50 and 25 tons per year. The House definition of major source would subject an additional 82 sources (130 percent increase) to RACT requirements.

C. Progress Requirements:

Little differences exist between the House and Senate version, as the House requires a 15% reduction within the first six years and the Senate requires a 12% reduction during the same period. After six years each bill requires a 3% annual reduction until attainment has been achieved.

D. Netting:

The House requires a variable emission offset ratio of: 1 to 1 for marginal and moderate areas; 1.2 to 1 for serious; 1.3 to 1 for severe and 1.5 to 1 for extreme areas. The Senate bill requires only a greater than 1 to 1 emission offset.

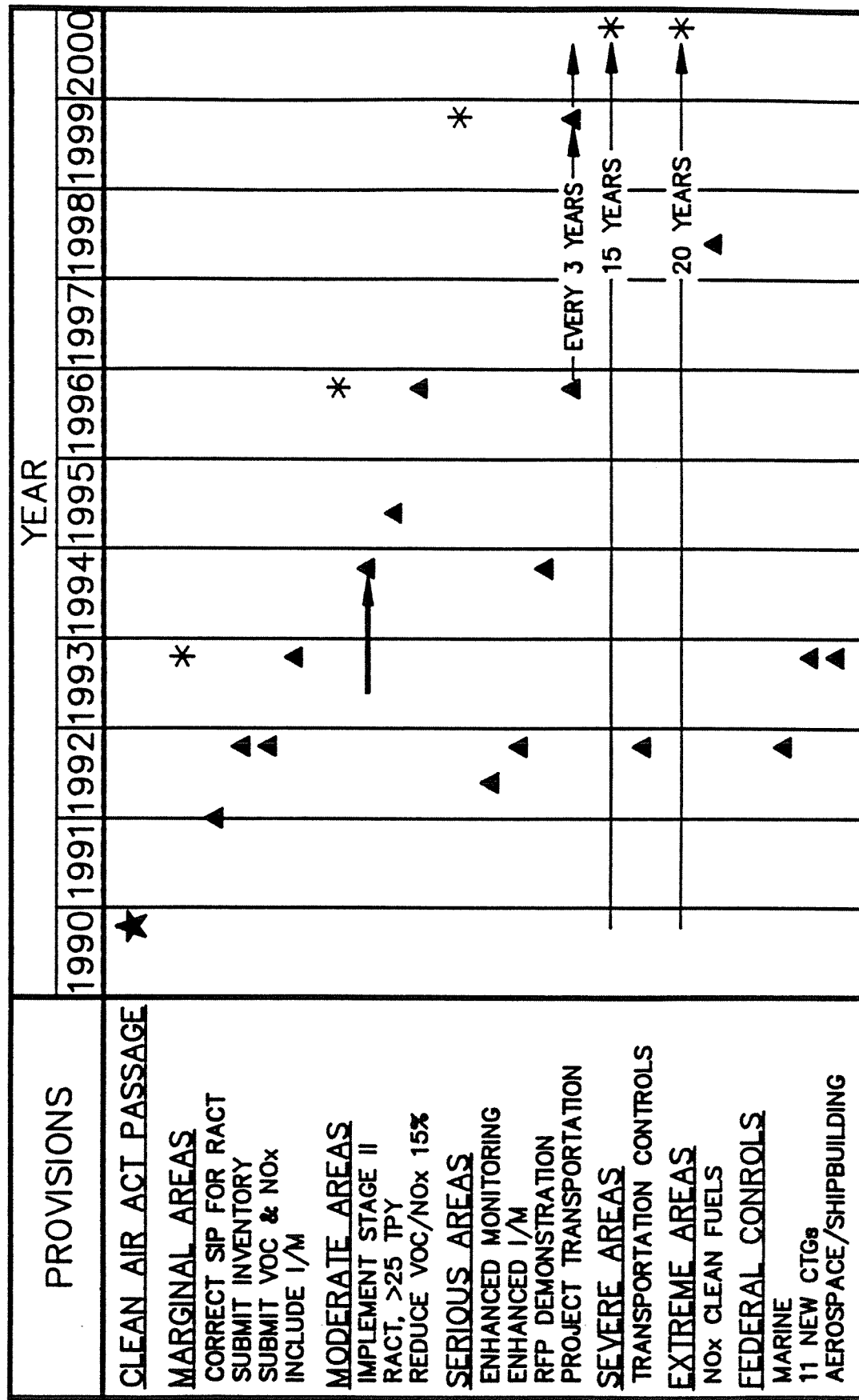
E. Control Technique Guidelines

EPA will be required to issue additional control technique guideline documents (CTGs). To date EPA has issued 29 CTGs. EPA, as shown on Figure 2, is required to issue, within two years, standards for loading and unloading of marine vessels. In three years EPA is to issue an additional 11 CTGs. EPA in October, 1989 began once again to develop CTGs. As of April, 1990 EPA was working on the 15 following CTGs:

- | | | | |
|---|-------------------------|---|-------------------------------------|
| o | SOCMI Distillation | o | Pesticides Application |
| o | SOCMI Reactors | o | Petroleum and Industrial Wastewater |
| o | SOCMI Batch | o | Consumer/Commercial Products |
| o | Wood Furniture | o | Architectural/Industrial Coatings |
| o | Plastic Parts (Business | o | Adhesives |
| | Machines) Coating | o | Autobody Refinishing |
| o | Plastic Parts Coating | o | Marine Vessel Loading and |
| | (other) | | Unloading |
| o | Clean-up Solvents | | |

Also in three years, EPA is to issue separate CTGs for aerospace coatings and shipbuilding and ship repair. An estimate of the additional CTG costs in the U.S. is \$1.1 billion per year by year 2000.

FIGURE 2
TIMING OF NONATTAINMENT PROVISIONS
ASSUMING A NOVEMBER 1990 PASSAGE

*--ATTAINMENT
PILKO & ASSOCIATES, INC.

F. Impacts of nonattainment issues in Texas

The obvious effect of the nonattainment provisions of the Clean Air Act Amendment will be to require additional sources within nonattainment areas to reduce their existing emissions.

If the House version of the bill passes, the major source definition will require many additional sources to install reasonable available control technology. In addition for new sources and modifications in nonattainment areas, permitting will become more difficult and more costly. I have already seen many companies questioning the availability of existing offsets. We are also working with several companies to evaluate the need for a new site in an attainment area. This would suggest that there will start a relocation of industry from the upper Texas Gulf Coast to the area south of Freeport between Victoria and Corpus Christi. The permitting of new major facilities along the upper Texas Gulf Coast will grind to a halt as offset sources will be depleted to satisfy RACT requirements and companies will be reluctant to build a new facility with an ultimate capacity to only emit 25 tons per year of VOC.

III. AIR TOXICS

The Air Toxics provisions of the House and Senate bills are designed to rework section 112 of the Clean Air Act, dealing with control of hazardous air pollutants commonly called the NESHAPs regulations. Pollutants controlled under this section tend to be less widespread than those criteria pollutants regulated under the NAAQS, established under section 109. However, the hazardous air pollutants are associated with more serious health impacts such as cancer, neurological disorders and reproductive dysfunctions. EPA has estimated that 2,700 excess cancer cases annually are a result of air toxics. This represents 11 cancer cases per million population. Because of their serious impacts, air toxics are subject nationally to uniform source category and sub-category specific controls.

In theory air toxics were to be stringently controlled under the existing Clean Air Act, Section 112. However, only seven of the hundreds of potential hazardous air pollutants have been regulated by the EPA since section 112 was enacted in 1970.

In general, the House and Senate versions of the current air toxic provisions are similar. Industry and environmental groups tend to prefer the House Clean Air Act Bill because of the clearer language contained within the bill. Therefore, it is anticipated that the final version will resemble the House bill.

The expected differences to be debated will be over:

- o Residual Risk Levels
- o Maximum Available Control Technology (MACT)
- o Plant Modifications

Shown on Table 3 is a side by side comparison of The House and Senate versions of the Air Toxics Provisions.

A. Chemical List/Categories

The final bill will generally require the agency list approximately 190 chemicals as air toxics. A copy of this list is included as an attachment to this paper. Of this list of chemicals, EPA is to establish a list of categories and subcategories of major and area sources subject to regulation under this section. Any source emitting one of the listed pollutants, in quantities greater than 10 metric tons or in any combination greater than 25 metric tons, is classified as a major source. Industry and EPA have estimated that the number of source categories could reach 400.

B. Schedule

Within two years EPA is to issue standards for 10 source categories; 25% of the categories to be issued within four years; 50% of the categories to be issued within seven years and 100% of the categories to be issued within 10 years. For each source category, EPA will promulgate its standard, which requires the installation of maximum achievable control technology (MACT). This technology will be defined as a maximum degree of reduction in emissions that is deemed achievable for new sources and will not be less stringent than the best controlled 10-15% of sources in the same source category.

EPA has already begun to work on the listing of these sources in anticipation of the approval of the act. EPA has decided to select its first 10 sources based upon its ongoing NESHAPs work. The sources which are anticipated to be in the first round will include; chemical manufacturing processes, electroplating, steelmaking, commercial sterilizers and dry cleaning. Within each source category, EPA will likely develop sub-categories, such as distillation operations, reactors processes, storage, fugitive leaks, transfer operations and waste handling.

C. Residual Risk

Once EPA has developed its list of source categories and has determined the MACT technology for these sources, EPA must develop health-based standards for the toxic pollutants remaining after MACT is applied. This is one area where the House and Senate Bills differ significantly. If the House version is passed as is expected, the EPA and the Surgeon General are required to evaluate the risk to human health that remains eight years after the application of MACT. If Congress does not provide additional legislation, EPA would then have the authority to set new rules insuring an ample margin of safety. The Senate Bill mandates a similar evaluation, however, if Congress does not take the legislative action, EPA would be required to establish a 10^{-4} risk based standard for the most exposed individual.

TABLE 3
AIR TOXICS ISSUES

	House	Senate
Chemical List	The House lists 189 chemicals to be regulated under the air toxics title.	The Senate requires EPA to list 191 air toxics, adding ammonia and hydrogen sulfide to the House list.
Major Source	>10 metric tons/year of one chemical >25 metric tons/year of all air toxics	Same except short tons.
Schedule for Standards	The House bill requires EPA to issue standards for ten source categories within two years, specifying only that EPA must consider quantity and location of emissions, known or anticipated health effects and efficiency of grouping categories. The schedule for standards is the same as in the Senate bill except 50% of categories must be regulated in seven rather than six years.	Within two years EPA must issue rules for sources of acrylonitrile, benzene, 1,3-butadiene, cadmium, carbon tetrachloride, chloroform, chromium, ethylene dichloride, ethylene oxide, methylene chloride, perchloroethylene, trichloroethylene, and coke oven emissions. In four years, EPA must issue standards for 25% of source categories--then 50% within six years and 100% within ten years.
Plant Modifications	The House would require new source standards for plants that "significantly" alter their operations. Emission increases of more than de minimis amounts would trigger the provision that any "modification" would in effect create a new source.	The Senate retains current Clean Air Act language, defining plant reconstruction, which triggers new source requirements, as a 50% overhaul of the facility.
MACT Floor	Maximum achievable control technology (MACT) is defined as performing as well as the best controlled 15% of sources in the same source category. New state of the art technologies are deferred one year before being calculated into the MACT pool. For categories with less than 30 sources, MACT will be based on the best five sources.	The Senate defines MACT as equal to the best performing 10% of regulated sources in the same category. For categories with less than 30 sources, MACT is defined as the level of control achieved by the best three sources.
Voluntary Reductions	The House grants a one-year extension for compliance with MACT for facilities which have voluntarily reduced toxic emissions from a 1987 base-year level.	The Senate grants an exemption from MACT standards for sources that imposed non-federally mandated reductions from a 1985 emission base-year.

**MACT
Exemptions**

House

Sources that prove a 10⁻⁶ risk to the most exposed individual to plant operations are given a negligible risk exemption from MACT requirements.

Residual Risk

Eight years after implementation of MACT, EPA must evaluate residual risks and submit recommendations for further controls to Congress. The House bill says if

Congress does not act on EPA's advice, the agency would be required to establish the necessary rules to provide an "ample margin of safety."

**Accidental
Releases**

The House bill requires EPA to list 100 chemicals with the greatest potential for accidental release, assess the hazards of these chemicals and draft detailed risk management plans to prevent and respond to accidents. The bill also requires the establishment of an independent chemical safety board with broad investigatory powers.

Senate

No similar provision.

The Senate bill requires NAS and a presidentially appointed risk assessment commission to study residual risk. These bodies and EPA must submit

recommendations to Congress, which would have five years to decide whether to mandate new rules; if Congress did not act, EPA is required to establish 10⁻⁴ risk-based standards for the most exposed individual while striving to achieve 10⁻⁶ standards.

The Senate bill requires EPA to list 50 dangerous chemicals with the potential for accidental release. EPA would set detailed standards for hazardous assessments and require risk management plans. The bill also mandates a chemical safety board.

D. Plant Modification

The definition of plant modifications is the other major issue facing the conferees. The House version of plant modification includes a de minimus increase which would trigger an air toxics review. The Senate version has no such modification definition, but does retain the current laws' reconstruction definition requiring a 50% capital expense before applying new source controls.

E. Accidental Releases

Both the House and the Senate Bills require EPA to provide a list of dangerous chemicals with a potential for accidental releases. EPA will develop rules and regulations which will require industry to develop risk management plans. Each bill also requires that a chemical safety board be set up within three (3) years to review and comment upon chemical plant accidents.

F. Impacts to Texas

The Texas Air Control Board has already begun to regulate air toxics through its New Source Review and specifically the Health Effects Review. New facilities will likely see no difference in regulation of air toxics as the TACB has been aggressively pursuing control of these types of substances. In some specialized cases the Texas Air Control Board has already begun to evaluate the effect of air toxics from existing facilities using a new permit application as a triggering mechanism. The new air toxics provisions will mainly affect existing facilities which have not been active in new source permitting in the last two years.

The SARA regulations have already sensitized industry to the quantity and impacts of toxic pollutants. Many plants and companies have already begun a program to better quantify and ultimately reduce their emissions of these materials. Maintaining accurate emission inventories of these compounds will be important, not only for SARA regulations, but for the determination of applicability to the air toxics provisions. Many companies have been evaluating their residual risk to the ambient air and are making plans to reduce the risk where the results are found to be unacceptably high.

IV. PERMIT PROVISIONS

Both the House and Senate bills add a new title to the Clean Air Act, recommended by President Bush, establishing for the first time a comprehensive and uniform operating permit program. Sources subject to this provision will include stationary sources which are subject to:

- o SIP Requirements.
- o New Source Performance Standards
- o NESHAPs

- o PSD Permits
- o Nonattainment New Source Review
- o Acid Deposition Control

The permit program is patterned generally after the program which now applies to sources of water pollution under the Clean Water Act. The permit will have a term of not more than five years. Permittees will be required to pay a fee sufficient to cover direct and indirect costs of the state programs. Continuous monitoring, unless infeasible, will be required by the permit with monitored results and violations to be reported to the state agencies.

The primary differences between the two bills deals with the ability of EPA to make changes to the permit during the life of the permit. Under the House Plan, companies are shielded from any changes to the terms of their original permit. In the Senate Bill, however, the permit must be revised if new rules and regulations are issued during the term of the permit. On July 13, in the first conference committee meeting the Senate offered a compromise allowing minor changes to be exempt from permitting.

Industry has repeatedly argued against the permit provisions of the Clean Air Act as unworkable and repetitive of the existing permit process. The permit review requirements of the TACB will effectively triple, if this provision is passed. As you may be aware, the TACB has recently requested a 1992-1993 Budget Increase from \$16.2 million to over \$27 million annually. It is expected that this number could again double if the permit provisions of either act are adopted. In addition, the state will be required to include permit fees designed to recoup the cost of the permit program. The states will be required to charge a minimum \$25 per ton of regulated air toxic and criteria pollutants.

As one can expect this provision of the regulation will create tremendous paperwork burden both for industry and the Texas Air Control Board. One major problem with the permit program will be how to incorporate all the numerous sources of facility into one permit. In addition the viability of an exemption process is brought into question. Industry is concerned that minor changes normally handled by exemptions now could potentially reopen the general operating permit of the facilities.

V. SUMMARY

As one can anticipate, the Clean Air Act Amendments of 1990 will have major impacts on industry, especially in Texas. We will see a dislocation of future growth to new attainment areas. Controls on new and existing sources will continue to be required additional reductions. Fees and enforcement penalties will cause much higher direct costs. EPA is estimating the Clean Air revisions will cost an additional \$20 billion per year (20-25% increase).

Companies, to protect themselves, must begin now to anticipate the affect of this bill. The new regulations are scheduled to be issued at an accelerated rate. Planning for the future is the only way most companies will be able to survive the amendment's schedule.

TABLE 4

PERMIT ISSUES

House

Challenges to EPA/State permit decisions are prohibited if issues are shown to be considered during permit review process or part of the terms of the permit.

Revisions are limited to the effective dates of new requirements after permit expiration. Compliance with requirements issued during the term of a permit "shall occur as expeditiously as practicable."

**Permit
Shield**

Senate

No shield provisions. Application of all requirements placed in the permit.

**Reopening
Permits**

Permit must be revised if material mistake or if new rules make it necessary.

Cas No.	Chemical Name	Cas No.	Chemical Name	Cas No.	Chemical Name
75070	Acetaldehyde	95487	Cresols/Cresylic acid (isomers and mixture)	75343	Ethylidene dichloride (1,1-Dichloroethane)
60355	Acetamide	108394	Cresols/Cresylic acid (isomers and mixture)	50000	Formaldehyde
75058	Acetonitrile	106445	Cresols/Cresylic acid (isomers and mixture)	76448	Heptachlor
98862	Acetophenone	98828	Cumene	118741	Hexachlorobenzene
53963	2-Acetylaminofluorene	94757	2,4-D, salts and esters	87683	Hexachlorobutadiene
107028	Acrolein	3547044	DDE	77474	Hexachlorocyclopentadiene
79061	Acrylamide	334883	Diazomethane	67721	Hexachloroethane
79107	Acrylic acid	132649	Dibenzofurans	822060	Hexamethylene-1,6-diisocyanate
107131	Acrylonitrile	96128	1,2-Dibromo-3-chloropropane	680319	Hexamethylphosphoramide
107051	Allyl chloride	84742	Dibutylphthalate	110543	Hexane
92671	4-Aminobiphenyl	106467	1,4-Dichlorobenzene(p)	302012	Hydrazine
62533	Aniline	91941	3,3-Dichlorobenzidine	7647010	Hydrochloric acid
90040	o-Anisidine	111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)	7664393	Hydrogen fluoride (Hydrofluoric acid)
1332914	Asbestos	542756	1,3-Dichloropropene	123319	Hydroquinone
71432	Benzene (including benzene from gasoline)	62737	Dichloroos	78591	Isophorone
92875	Benzidine	111422	Diethanolamine	58899	Lindane (all isomers)
98077	Benzotrichloride	121697	N,N-Diethyl aniline (N,N-Dimethylaniline)	108316	Maleic anhydride
100447	Benzyl chloride	64675	Diethyl sulfate	67561	Methanol
92524	Biphenyl	119904	3,3-Dimethoxybenzidine	72435	Methoxychlor
117917	Bis(2-ethylhexyl)phthalate (DEHP)	60117	Dimethyl aminoozobenzene	74839	Methyl bromide (Bromomethane)
542881	Bis(chloromethyl)ether	119937	3,3'-Dimethyl benzidine	74873	Methyl chloride (Chloromethane)
75252	Bromoform	79447	Dimethyl carbamoyl chloride	71556	Methyl chloroform (1,1,1-Trichloroethane)
106990	1,3-Butadiene	68122	Dimethyl formamide	78933	Methyl ethyl ketone (2-Butanone)
156627	Calcium cyanamide	57147	1,1-Dimethyl hydrazine	60344	Methyl hydrazine
105602	Caprolactam	131113	Dimethyl phthalate	74884	Methyl iodide (Iodomethane)
133062	Captan	77781	Dimethyl sulfate	108101	Methyl isobutyl ketone (Hexone)
63252	Carbaryl	534521	4,6-Dinitro-o-cresol, and salts	624859	Methyl isocyanate
75150	Carbon disulfide	51285	2,4-Dinitrophenol	80626	Methyl methacrylate
56235	Carbon tetrachloride	121142	2,4-Dinitrotoluene	1634044	Methyl tert butyl ether
463581	Carbonyl sulfide	123911	1,4-Dioxane (1,4-Diethyleneoxide)	101144	4,4-Methylene bis(2-chloroaniline)
120809	Catechol	122667	1,2-Diphenylhydrazine	75092	Methylene chloride (Dichloromethane)
133904	Chloramben	106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	101688	Methylene diphenyl diisocyanate (MDI)
57749	Chlordane	106887	1,2-Epoxybutane	101779	4,4'-Methylenedianiline
7782505	Chlorine	140885	Ethyl acrylate	91203	Naphthalene
79118	Chloroacetic acid	100414	Ethyl benzene	98953	Nitrobenzene
532274	2-Chloroacetophenone	51796	Ethyl carbamate (Urethane)	92933	4-Nitrobiphenyl
108907	Chlorobenzene	75003	Ethyl chloride (Chloroethane)	100027	4-Nitrophenol
510156	Chlorobenzilate	106934	Ethylene dibromide (Dibromomethane)	79469	2-Nitropropane
67663	Chloroform	107062	Ethylene dichloride (1,2-Dichloroethane)	684935	N-Nitroso-N-methylurea
107302	Chloromethyl methyl ether	107211	Ethylene glycol	62759	N-Nitrosodimethylamine
126998	Chloroprene	151564	Ethylene imine (Aziridine)	59892	N-Nitrosomorpholine
1319773	Cresols/Cresylic acid (isomers and mixture)	75218	Ethylene oxide	56382	Parathion
		96457	Ethylene thiourea	82688	Pentachloronitrobenzene (Quintobenzene)

HAZARDOUS AIR POLLUTANTS LIST - H.R. 3030

Cas No.	Chemical Name	Cas No.	Chemical Name
87865	Pentachlorophenol		<i>Antimony Compounds</i>
108952	Phenol		<i>Arsenic Compounds (inorganic including arsine)</i>
106503	p-Phenylenediamine		<i>Beryllium Compounds</i>
75445	Phosgene		<i>Cadmium Compounds</i>
7808512	Phosphine		<i>Chromium Compounds</i>
7723140	Phosphorus		<i>Cobalt Compounds</i>
85449	Phthalic anhydride		<i>Coke Oven Emissions</i>
1336363	Polychlorinated biphenyls (Aroclors)		<i>Cyanide Compounds</i> ¹
1120714	1,3-Propane sultone		<i>Glycol ethers</i> ²
57578	beta-Propiolactone		<i>Lead Compounds</i>
123386	Propionaldehyde		<i>Manganese Compounds</i>
114261	Propoxur (Baygon)		<i>Mercury Compounds</i>
78875	Propylene dichloride (1,2-Dichloropropane)		<i>Mineral fibers</i> ³
75569	Propylene oxide		<i>Nickel Compounds</i>
75558	1,2-Propylenimine (2-Methyl aziridine)		<i>Polycyclic Organic Matter</i> ⁴
91225	Quinoline		<i>Radionuclides (including radon)</i> ⁵
106514	Quinone		<i>Selenium Compounds</i>
100425	Styrene		
96093	Styrene oxide		
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin		
79345	1,1,2,2-Tetrachloroethane		
127184	Tetrachloroethylene (Perchloroethylene)		
7550450	Titanium tetrachloride		
108883	Toluene		
95807	2,4-Toluene diamine		
584849	2,4-Toluene diisocyanate		
95534	o-Toluidine		
8001352	Tozaphene (chlorinated camphene)		
120821	1,2,4-Trichlorobenzene		
79005	1,1,2-Trichloroethane		
79016	Trichloroethylene		
95954	2,4,5-Trichlorophenol		
88062	2,4,6-Trichlorophenol		
121448	Triethylamine		
1582098	Trifluorin		
540841	2,2,4-Trimethylpentane		
108054	Vinyl acetate		
593602	Vinyl bromide		
75014	Vinyl chloride		
73954	Vinylidene chloride (1,1-Dichloroethylene)		
1330207	Xylenes (isomers and mixture)		
95476	Xylenes (isomers and mixture)		
108983	Xylenes (isomers and mixture)		
106423	Xylenes (isomers and mixture)		

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 infra-structure.

¹ XCN where X = H' or any other group where a formal dissociation may occur. For example KCN or Ca(CN)₂

² includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-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-(OCH₂CH₂)_n-OH

Polymers are excluded from the glycol category.
³ 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.

⁴ includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C

⁵ a type of atom which spontaneously undergoes radioactive decay.

Water Toxics:
Effluent Biomonitoring

by

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President
SeaCrest Environmental Services Inc.
Houston, Texas

I. Rationale

- EPA recommends the use of an integrated water quality-based approach for controlling toxic discharges under the NPDES program.
 - Main objective of the NPDES program is the control of toxic pollutants.
- An "integrated strategy" involves the use of three control approaches to protect aquatic life:
 - Chemical specific approach
 - Sets specific chemical effluent limitations (e.g., metals, organic chemicals, non-metal inorganics).
 - Whole effluent toxicity approach (biomonitoring)
 - Employs standardized, surrogate freshwater or marine plants, invertebrate, and vertebrate species to determine toxicity.
 - Biocriteria/bioassessment and biosurvey approach
 - Involves the collection, processing and analysis of a sample of the resident aquatic community to determine potential impact.

II. Whole Effluent Toxicity
(Biomonitoring)

- Toxicity testing utilizes EPA-published protocols to examine short-term or long-term effects.
 - Acute tests are \leq 96 hours in duration.
 - Lethality is the measured endpoint.
 - Chronic (or Short-Term Chronic) tests are longer in duration (typically seven days).

Water Toxics:
Effluent Biomonitoring

-- Lethality, growth, reproduction or fertilization are the measured endpoints.

- Various toxicity endpoints expressed as effluent concentration are estimated or calculated utilizing standard statistical methods. Again, effects can be lethal or non-lethal.
 - "LC₅₀": Lethal concentration of toxicant to 50 percent of exposed organisms at a specific time of observation.
 - "NOEC" ("No Observed Effect Concentration"): The highest concentration at which no adverse effects are observed on the test organisms.
 - "LOEC" ("Lowest Observed Effect Concentration"): The lowest concentration that results in observable adverse effects.
- Test organisms are standardized vertebrate and invertebrate species oftentimes cultured by the testing laboratory.
 - Figures 1, 2, 3 and 4 illustrate typical test organisms.

III. Advantages and Disadvantages of the Whole Effluent Toxicity Approach

- Main Advantages
 - The aggregate toxicity of all components in a complex effluent is measured. Additionally, antagonism and synergism of toxic constituents are taken into consideration.
 - Approximates more of a "real world" impact.
 - Toxicity caused by compounds not commonly analyzed in chemical tests is determined.
 - The actual bioavailability of toxic compounds is determined, rather than detecting the level of a chemical with unknown biological relevance.
- Main Disadvantages
 - There is generally less familiarity with biological techniques than with chemical analytical techniques. Wastewater engineers are faced with a more difficult task of controlling a non-specific toxicity parameter rather than specific chemical limitations.

Water Toxics:
Effluent Biomonitoring

- Interactions between the effluent and receiving water (brought on by pH or salinity changes, photolysis, etc.) can occur downstream and away from the discharge point and not be detected in laboratory toxicity testing.
- The whole effluent toxicity test directly measures only the immediate bioavailability of a toxic compound. Generally the test duration is too short to determine low-level chronic effects of persistent toxicants or bioaccumulation effects.
- If toxicity is identified, Toxicity Reduction Evaluations (TRE's) can become expensive and complicated, particularly in regard to domestic effluents.

IV. Present and Future Applications of Effluent Biomonitoring

- Biomonitoring is now appearing as an effluent limitation on NPDES permits of major industrial and municipal dischargers.
 - Results are submitted to the Agency in Table 1 of the permit and the Discharge Monitoring Report (DMR).
 - Frequency of required biomonitoring can vary from monthly to biannually.
- Future biomonitoring might incorporate additional species, e.g., algal growth test, the "Ames Test" (Salmonella reverse mutation assay), etc.
- Continuing issue of the development of a biomonitoring laboratory certification program.
 - EPA and other groups have investigated both intralaboratory precision and interlaboratory ("round robin") precision.

TYPICAL MARINE TEST ORGANISMS

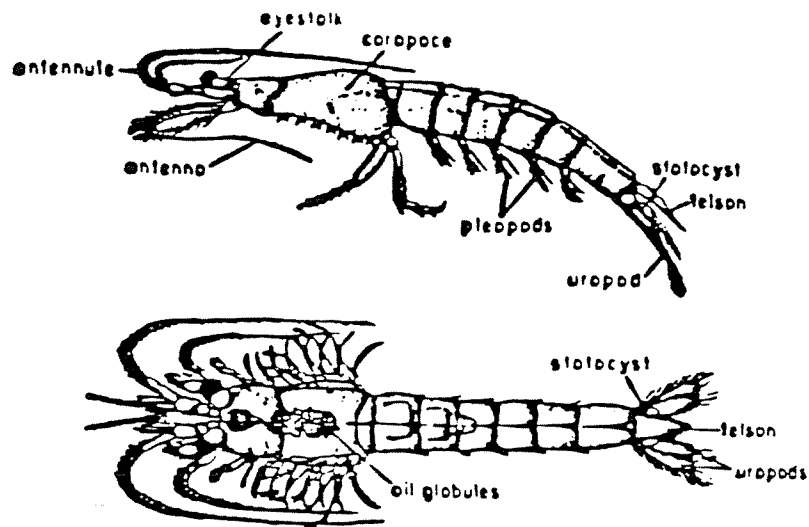


Figure 1. Immature M. bahia (mysid shrimp), (A) lateral view, (B) dorsal view. Average length is 2-3 mm (From EPA/600/4-87/028)

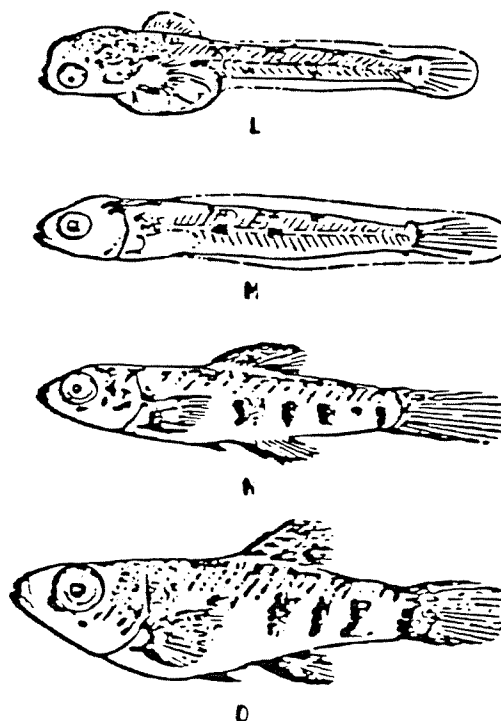


Figure 2. Sheephead minnow (Cyprinodon variegatus):
 L. Newly hatched fish, actual length 4 mm;
 M. Larval fish 5 days after hatching, actual length 5 mm;
 N. Young fish 9 mm in length;
 O. Young fish 12 mm in length. (From EPA/600/4-87/028)

TYPICAL FRESHWATER TEST ORGANISMS

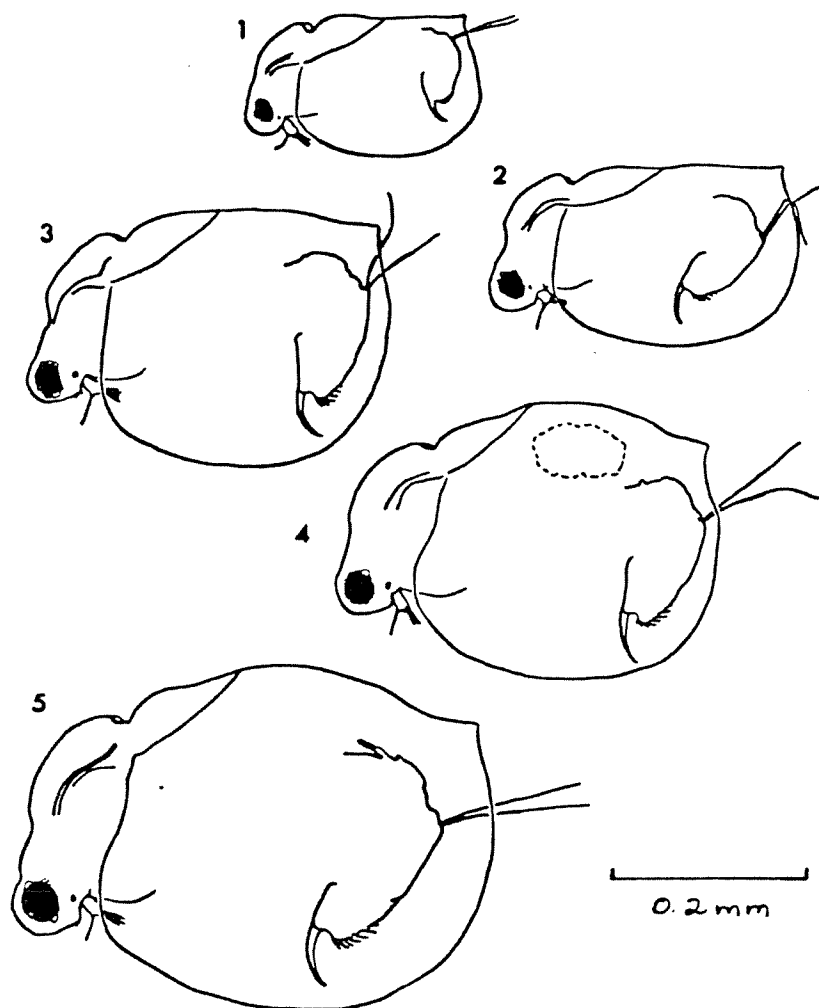


Figure 3. Shape changes during growth of Ceriodaphnia dubia parthenogenetic females: 1.-3. juveniles; 4., 5. adults. (From EPA/600/4-86/032)

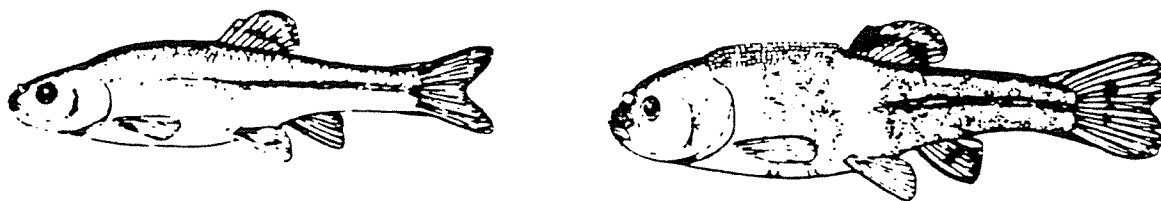


Figure 4. Fathead minnow: adult female (left) and breeding male (right). Average length is 50 mm. (From EPA/600/4-85/013)

IX. ENVIRONMENTAL LIABILITY

"By the pricking of my thumbs something wicked this way comes."

Individual Liability - Recent Developments

Frances E. Phillips
Gardere & Wynne
Dallas, Texas

Corporate Response

Russell Susag
Director, Environmental Regulatory Affairs
3M Corporation
St. Paul, Minnesota

T E X A S E N V I R O N M E N T A L
S U P E R C O N F E R E N C E

PERSONAL LIABILITY UNDER ENVIRONMENTAL LAWS

AUGUST 3, 1990

FRANCES E. PHILLIPS¹

GARDERE & WYNNE

DALLAS, TEXAS

I. Introduction

In the past, individuals faced little threat of personal liability under environmental laws.

In the 1970s, Congress, EPA, the courts, and, to some extent, the environmental laws themselves, emphasized the compliance status of major sources or the compliance status of certain areas of the country that could not achieve this or that environmental goal.

This translated into enforcement priorities centered around the civil prosecution of large stock exchange or multi-state corporations; companies of any size with severe environmental problems; and companies or municipalities located in environmentally problematic areas. Criminal enforcement was rare, expensive and so unpredictable in the courthouse that it was generally discouraged as neither a cost effective or useful deterrent.²

Environmental enforcement was, and probably still is, also driven by the number of enforcement actions initiated or the "bean"

¹ The author wishes to thank three Gardere & Wynne summer law clerks for their invaluable assistance with this paper, Josephine Collins, Robert Prevost and Jeff Hunt-Toney.

² See Habicht, "The Federal Perspective on Environmental Criminal Enforcement: How To Remain on The Civil Side," 17 Env't. L. Rep. (Env'tl. L. Inst.) 10478 (1987).

count. "Beans" serve as the most acceptable surrogate for environmental compliance or progress and justification for a variety of needs. Consequently, the record always has included numerous "easy make" cases against smaller companies or self reporters and "traffic ticket" cases for violations that were inconsequential or where the problem had been corrected and the fine was just a penalty for "penalties sake."

In the early 1980s the "bean" count dropped significantly and then revived in the mid-80s with a renewed emphasis on criminal enforcement. Many of these criminal enforcement actions were against individuals, often corporate officers, directors, or employees. Between 1982 and 1986, individual defendants had cumulatively served a total of 55 years, 8 months in prison.³

The 1990s environmental enforcement scorecard will still contain the early categories of civil enforcement actions but additionally will contain a significant number of criminal enforcement actions. In my opinion, a new category of enforcement action also should be recognized - that of personal liability for environmental noncompliance with environmental requirements. Recently, the number of individuals prosecuted, both civilly and criminally, has increased dramatically. These enforcement actions have been increasing successful for the government.⁴

In addition to the increase in criminal activity, there are two other main reasons for this new development...increased public concern for the environment...and the, seemingly never ending, rippling effect of the expansion of the national program to cleanup old hazardous waste sites.

The heightened sensitivity of the public to the serious effects of pollution on human health and the quality of life has had a profound impact on the system. The Congressional and media appetite for more enforcement activity and "juicier" cases has been peaked. Prosecutors, juries, and judges, are now more willing, and in fact, may now be required to sentence offenders to hard time rather than community service for violations of environmental laws,⁵ especially when the violations involve hazardous waste. Judges are now more willing to take the time to maneuver through

³ Id. at 10,489.

⁴ Seymour, "Civil and Criminal Liability of Corporate Officers Under Federal Environmental Laws," Env. Rep. (BNA) 337 (1989).

⁵ Starr and Kelly, "Environmental Crimes and the Sentencing Guidelines, " 20 Env't. L. Rep. (Env'tl. L. Inst.) 10,096 (1990).

the heretofore almost sacrosanct traditional legal concepts of corporate law and sovereign immunity to find individuals in the corporate structure and hallowed halls of government personally liable for their wrongful acts. And, finally this increased public sensitivity has had an impact on the regulators who are now more willing to try innovative legal theories to expand culpability because of the "enlightened" responses of the system.

Further, the strict liability provisions of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA," commonly known as "Superfund")⁶ coupled with the government's desire to pick "deep pockets" to clean up Superfund sites as well as the courts' willingness to go along, has broaden the base of potentially responsible parties to individuals who are liable based solely on their status, even though remote, as owners, operators, generators, or transporters, without regard to the traditional concepts of wrongdoing or harm.

Regardless of the reasons for the expansion of environmental enforcement activity into the realm of the individual, the consequences can be professionally and personally devastating for a client charged with violating an environmental law in his or her individual capacity.⁷ The paper that follows is intended to serve as a resource and reminder of the gravity of the issue.

II. Types of Environmental Laws

The environmental laws of this country are lengthy, complex and rely essentially on a "command and control" regulatory scheme whereby failure, directly or indirectly, through action or

⁶ Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601-9675 (1988) and Pub. L. No. 99-499.

⁷ Whether or not the little old lady in tennis shoes, who happens to own the warehouse where barrels of "gook" were abandoned, is really worthy of the attention of the United States Department of Justice, i.e. whether or not this surge in personal liability is good public policy, is thought provoking and should be discussed another day. Whether or not a personal liability "bean" count will or should replace "easy make" or "traffic ticket" enforcement actions could be in that same discussion.

inaction,⁸ to comply with the commands of the law and the voluminous implementing regulations can result in potential sanctions against a wide variety of people, businesses and governments. The possible plaintiffs include not only the federal and state government but, in many instances, citizens and private parties can bring⁹ civil actions against offenders of the environmental laws.

The environmental laws can be described generically in a variety of ways. Quite simply, the statutes fall into three categories - those that regulate before the fact - during the fact - and after the fact.

The first category of laws deals with potential contaminants before they are released into the environment. Under this group of laws, manufacturers, processors and importers, must test the efficacy of their products, chemicals or materials and receive preapproval for their manufacture and proposed use. The Toxic Substances Control Act ("TSCA")¹⁰ and the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA")¹¹ are examples of this first category of laws.

Most of the environmental laws fall in the second category. These statutes are concerned with pollution or waste as it enters the environment. These statutes establish programs, usually delegable to the states, with prescriptive requirements focused on the pollution source and what will be emitted or discharged from that source. These programs usually require the discharger to

⁸ Compare the 13-year prison term imposed on the defendants in *United States v. Colbert*, No. 85 CR 1134 (S.D.N.Y. 1986), for shipping and brokering hazardous waste chemicals to international destinations under the pretense of selling usable products; with the civil penalties imposed on the defendant children for failure to respond to a request for information under RCRA in *United States v. Charles George Trucking Co.*, 624 F. Supp. 1185 (D. Mass. 1986).

⁹ See generally Miller, "Private Enforcement of Federal Pollution Control Laws," 13 *Envtl. L. Rep.* [Envtl. Law Inst.] 10,309.

See Gaba and Kelly, "The Citizen Suit Provision of CERCLA: A Sheep in Wolf's Clothing?" 43 *SW. LJ.* 929 (1990).

See Guida, "Dramatic Growth in Citizens Suit Under the Federal Clean Water Act," *Nat'l LJ.*, Dec. 3, 1984, at 24.

¹⁰ 15 U.S.C. §§ 2601-2654 (1988).

¹¹ 7 U.S.C. §§ 136 to 136y (1988).

obtain a permit limiting the amount of allowable pollution and to conduct certain related activities such as record keeping.¹² The permit becomes the enforceable contract between the regulator and the regulated. The related activities are enforceable in their own right or through the permit conditions. The Clean Air Act,¹³ Clean Water Act¹⁴ and Solid Waste Disposal Act (which includes the Resource Conservation and Recovery Act, "RCRA")¹⁵ are examples of this category.

The final and, at this point in time, the overarching category, deals with environmental problems of the past, retroactively. CERCLA imposes strict liability on a variety of responsible parties based on their status under the law as either a past or current owner or operator of a problem site; a generator of waste or the party who arranged for its disposal; or the transporter who selected the site for disposal.¹⁶ The liability is imposed whether or not the party contributed to the harm and whether or not the original conduct was lawful. The liability is joint and several meaning that the liability is unlimited - unlike criminal and civil liabilities which have a statutory cap.¹⁷

Similarly, most states have analogous environmental laws in the pollution prevention category with analogous sanctions for failure to comply with their mandates.¹⁸

In addition, the four most significant federal environmental statutes, the Clean Air Act, the Clean Water Act, RCRA and CERCLA

¹² See United States v. Brittain, No. 89-283 (W.D.Okla. 1989). In this case the head of a city's public utilities department and the water pollution control manager were convicted of negligently discharging raw sewage and knowingly falsifying reports.

¹³ 42 U.S.C. §§ 7401-7642 (1988).

¹⁴ 33 U.S.C. §§ 1251-1387 (1988).

¹⁵ As also amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901-6991i (1988).

¹⁶ 42 U.S.C. § 9607.

¹⁷ Civins, "Personal Liability Under Environmental Laws-How To Avoid It," as presented to the Synthetic Organic Chemical Manufacturers Association, Inc. (November 9, 1989).

¹⁸ See e.g., the Texas Solid Waste Disposal Act, Tex. Rev. Civ. Stat. Ann. art. 4477-7 (Vernon 1976 & Supp. 1989).

give states the authority, either inherently or specifically statutorily, to enact legislation, to implement federal standards, and to enforce the environmental laws. Therefore, state imposed responsibilities must be considered along with federally imposed obligations.

III. Sanctions under the Environmental Laws

Although the mens rea, or state of mind, elements may differ from statute to statute, all major federal environmental laws, as well as the analogous state laws, impose criminal and civil sanctions for violations of the laws and the implementing regulations. In addition, CERCLA exposes responsible parties to unlimited liability and several statutes allow the regulatory agency to assess administrative penalties.

A. Criminal Sanctions

Criminal penalties in the environmental laws include probation, fines, imprisonment or a combination thereof, and some of the statutes include multipliers for second offenses. For a compilation of the criminal provisions of the major environmental laws, see Appendix A attached hereto.

Each of the criminal provisions in the environmental statutes impose liability for a "willful" or "knowing" violation of the law. A "willful" violation generally requires that the actions be voluntary rather than accidental. A "knowing" violation generally requires knowledge of the actions. Whether intent to violate the law is required, depends either upon the wording of the particular statute or the court's interpretation of that wording.

Because the environmental laws are public welfare statutes¹⁹ "willful" and "knowing" are not likely to be construed to require specific intent to violate the law²⁰. This means that the

¹⁹ United States v. Dotterweich, 320 U.S. 277, (1943); and United States v. Park, 421 U.S. 658 (1975).

²⁰ See United States v. Hayes International Corp., 786 F.2d. 1499 (11th Cir. 1986) in which the court held: (1) knowledge could be inferred from circumstantial evidence; (2) knowledge that the paint waste was hazardous was not required, i.e. ignorance of the regulations was not an excuse; (3) that a defendant acts knowingly and criminally if he fails to determine the permit status of the facility receiving the waste; but (4) that knowledge that a permit was required was germane.

government need only prove that the acts were known to the defendants, and intentional or voluntary. In other words, the party must intend the act that violates the law but need not know the law and intend to violate it. And, if the crime involves a hazardous substance, the knowledge need only be general knowledge that the substance is dangerous rather than specific knowledge about the degree of risk.²¹

The Clean Water Act, imposes criminal liability for negligent violations of the law. No specific intent is required.²² The leading case is United States v. Frezzo Brothers, Inc.²³ in which the defendant's negligent failure to maintain their facility mushroomed into a criminal offense.

In addition, the Clean Water Act and RCRA carry tougher penalties for "knowing endangerment."²⁴ "Knowing endangerment" is defined in RCRA as:

any person who knowingly transports,
treats, stores, disposes of, or

See United States v. Johnson & Towers, Inc., 741 F.2d 662 (3rd Cir. 1984), cert. denied, 469 U.S. 1208 (1985). This case interpreted "knowingly" in dicta to mean that the defendant only needed to know that a permit was required for the actions and that the company lacked one. Thus, the government does not have a great burden under the knowledge requirement to convict under the statute.

In U.S. v. Hoflin, 880 F.2d 1033 (9th Cir. 1989), cert. denied, 110 S. Ct. 1143 (1990), the defendant claimed that he didn't know that the city did not have a permit. The court rejected this defense.

These cases point to the fact that the courts will take a lax attitude toward the mens rea element of a criminal offense under an environmental statute. Courts have either eliminated the knowledge requirement altogether or have so lessened the burden of proof that it is very easy for the government to prove the requisite intent.

²¹ See United States v. International Minerals and Chemical Corp., 402 U.S. 558 (1971).

²² 33 U.S.C. § 1319(c)(1).

²³ 546 F.Supp. 713 (E.D. Pa 1982), aff'd, 703 F.2d 62 (3rd Cir., cert. denied, 464 U.S. 829 (1983)).

²⁴ 33 U.S.C. §1319(c)(3) and 42 U.S.C. § 6928(e).

exports any hazardous waste identified or listed under this subchapter or used oil not identified or listed as a hazardous waste under this subchapter title in violation of paragraph (1), (2), (3), (4), (5), (6) or (7) of subsection (d) of this section who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment for not more than 15 years, or both. A defendant that is an organization shall, upon conviction of violating this subsection, be subject to a fine of not more than \$1,000,000.²⁵

There are special rules for determining a person's state of mind for a "knowing endangerment" as well as specific and general defenses.²⁶

The "knowing endangerment" provisions have been utilized only recently. The first such conviction under RCRA was in U.S. v. Protex, 874 F.2d 740 (10th Cir. 1989); U.S. v. Borowski, CR 89-256 WD (D.C. Mass. 1990), is the first conviction under the Clean Water Act. In Borowski, Borjoh Optical Technology, Inc. operated a metal-finishing business. Its president, John Borowski, allegedly ordered his employees to dump toxic wastewater into the sewer system with plastic buckets. This activity exposed the employees to toxic levels of nickel, nitric acid and nitrogen dioxide.

Borowski was convicted under the knowing endangerment provision of the Clean Water Act. He faces a maximum of 15 years in prison and a possible \$500,000 fine.

These convictions represent a new turn in prosecution under the environmental statutes. EPA Region I administrator, Julie Belaga, in commenting on the significance of Borowski, "underscored the agency's commitment to prosecuting environmental

²⁵ 42 U.S.C. § 6928(e).

²⁶ 33 U.S.C. § 1319(c)(3)(B) and 42 U.S.C. § 6928(f).

crimes and stressed that 'the crime of knowing endangerment is the most serious of all environmental crimes'."²⁷

The Environmental Crimes Act of 1990 (H.R. 3641), if enacted, would radically alter the structure of criminal penalties for environmental crimes. Under this bill, sanctions would no longer be tailored to the violation of a specific statutory or regulatory requirement.

In essence, the bill upgrades a conviction for a criminal offense under the twenty-four listed environmental statutes to the RCRA "knowing endangerment" sanctions. The list of twenty-four laws ranges from the Clean Air Act to the Wild-Free Roaming Horses and Burros Act. If there is a criminal offense and a demonstration of "knowing or reckless endangerment" of life or the creation of an environmental catastrophe, there is a violation of the Environmental Crimes Act. An "environmental catastrophe" is the death or injury of even a single member of any federal or state endangered species.

Secondarily, it would be a crime to commit an environmental offense and negligently cause a significant risk of death, serious bodily injury or environmental catastrophe. The penalties for "negligent endangerment" would be imprisonment for up to 1 year and a fine of \$125,000 for an individual; an organization could be fined as much as \$500,000.

The bill has some basic flaws, but significant support. An example of one, perhaps, fatal flaw is its failure to consider the application of the Federal Sentencing Guidelines.²⁸

The Federal Sentencing Guidelines require judges to follow strict measures within certain parameters when determining sentences for specifically designated crimes. Environmental offenses are a designated category. The rules remove most of the discretion that judges have traditionally enjoyed at the sentencing stage and make the criminal penalty more a matter of math than judgment similar to the Civil Penalty Policy.²⁹

²⁷ 21 Env. Rep. 298-299 (June 1, 1990).

²⁸ "U.S. Sentencing Commission Guidelines Manual," 18 U.S. C.A., app. at 62 (West Supp. 1989). The constitutionality of the guidelines was held in *Mistretta v. United States*, 109 S. Ct. 647 (1989). The Commission has recently issued proposed guidelines governing the sentencing of organizations.

²⁹ See infra note 5.

In a recent article on the guidelines, the authors compare previous sentences to the new mechanical formula in the Federal Sentencing Guidelines and the differences are quite profound.³⁰ For example, the Frezzo brothers who received jail sentences of thirty days each for criminal violations of the Clean Water Act would, under the sentencing guidelines, have to be sentenced to 27 to 33 months in jail, 30 times the sentence actually imposed.

That Would Hang Us, Every Mother's Son.

B. Civil Sanctions

In civil matters, the plaintiff usually can request injunctive relief and/or the assessment of a fine. The liability imposed is generally a fine and generally up to \$25,000 per day of violation.

Civil liability under the environmental laws is similar to strict liability in that it is imposed without regard to negligence or fault after a casual connection is established. Absolute liability is imposed on the entities which are responsible.

The Civil Penalty Policy is analogous to the Federal Sentencing Guidelines, at least, in theory. Under this policy, EPA has established an agency-wide approach to the assessment of civil penalties. Fines are calculated by formulas based on certain consistently applied factors.³¹

C. Administrative Sanctions

Although civil and criminal enforcement proceedings are the most feared enforcement actions, EPA and the states also have authority under many statutes to assess administrative penalties. The Clean Water Act was recently amended to allow the assessment of administrative penalties and the use of these sanctions are increasing tremendously.³² Administrative penalties generally fall in the "traffic ticket" category, but provide for certain due process rights such as public notice, the presentation of evidence,

³⁰ Id. at 10,099.

³¹ See Price, "New Civil Penalty Policy," United States Environmental Protection Agency (Feb. 16, 1984).

³² See Walker, "High Stakes on a Fast Track" Administrative Enforcement at EPA," 35 Fed. B. News & J. 453 (1988).

the right of the person and interested persons to a hearing, and judicial review.³³

D. Parallel Proceedings

Since the sanctions for violating the environmental laws can lead to criminal, civil or administrative enforcement, there are situations in which all three actions are pursued at the same time, or in any combination thereof. Hence, the term "parallel proceeding."

EPA has an established policy that authorizes parallel proceedings whenever risk to human health or imminent environmental hazards require both or whenever the actions are so egregious as to require both.³⁴ In reality, parallel proceedings are generally initiated not only for the above reasons, but whenever there is a concern about establishing the requisite evidence and the government wants to be certain that no time is wasted in pursuing an enforcement action. These proceedings although parallel are separate and should be treated as such within the Agency.

E. CERCLA Section 107 Sanctions

As was alluded to earlier, CERCLA Section 107 liability is harsh. Because of joint and several liability, a finding that one is a liable party under this section could subject that party to astronomical costs far exceeding the civil or criminal penalties provisions of any other environmental law. Liable parties under CERCLA must clean up the hazardous waste site at issue or pay for others to clean up the site. The average cost of cleaning up a Superfund site is in the tens of millions. As stated earlier, Section 107 imposes liability on the past and present owners and operators of the hazardous waste site, the persons who arranged for disposal of hazardous substances to the facility usually generators, and persons who transported hazardous substances to the facility, from which there was a release or threatened release.³⁵ Responsible parties are liable for three types of costs:

1. governmental response costs;

³³ 33 U.S.C. § 1319(g).

³⁴ Thomson, "Guidelines On Investigation Procedures to Parallel Proceedings" United States Environmental Protection Agency (June 14, 1989).

³⁵ 42 U.S.C. § 9607.

2. private response costs; and
3. damages to natural resources.

The statute does allow certain limited defenses. The most significant one is the innocent purchaser defense, which is applicable only if the defendant can prove that he/she exercised due care and took necessary precautions.³⁶

IV. Sources of Liability for Individuals

A. Individuals as "Persons"

Although the act or omission giving rise to liability may vary from statute to statute, all major federal environmental laws impose liability on natural persons or individuals for failure to comply with their mandates. Individuals fall within the definition of "persons" who are subject to the regulatory, enforcement and penalty provisions of environmental laws. For example, in air pollution prevention, a "person" includes:

an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent, or employee, thereof.³⁷

For a compilation of the definition of "person" in the major environmental laws see Appendix B attached hereto.

B. Individuals as "Owners or Operators"

Owners and operators are the "persons" subject to regulatory and enforcement provisions under many regulatory schemes. If the owner or operator is an individual, that individual is exposed to personal liability without question. When the owner or operator is a business organization, including the government, the statutes generally are not explicit as to whether the individual employees, agents or officers are included or excluded from liability. For example, in the Clean Air Act, the term "owner or operator" means:

³⁶ 42 U.S.C. § 9607(b)(3).

³⁷ 42 U.S.C. § 7602(e).

any person who owns, leases, operates, controls or supervises a stationary source.³⁸

For a compilation of the definition of "owner or operator" in the major environmental laws see Appendix C attached hereto.

C. Individuals in Other Roles

1. The Clean Air Act and the Clean Water Act explicitly subject the "responsible corporate officer" to criminal liability.³⁹

2. The Clean Water Act holds liable the "person in charge."⁴⁰

3. CERCLA holds liable those who arrange for disposal of substances at sites owned and operated by others and those who select and transport wastes to such sites.⁴¹

4. RCRA holds liable those who are "in any way responsible" or those who "have contributed or are contributing to the past generation, transportation, treatment, storage or disposal."⁴²

D. The Individual under Common Law

Likewise, common law theories may impose liability on individuals for acts or omissions because of their effect on human health or the environment. An individual could, at the same time that he/she violates an environmental law, also violate a common law principle such as nuisance, trespass, or tort. In addition, contract and landlord/tenant principles are increasingly coming into play to hold individuals liable for environmental problems that interfere with "peaceable enjoyment," violate the "implied warranty of habitability," the Deceptive Trade Practices Act, and so on.

³⁸ 42 U.S.C. § 7411. See also 42 U.S.C. §§ 7412-14, 7419-7420.

³⁹ 42 U.S.C. § 7413(c)(3) and 33 U.S.C. § 1319(c)(6).

⁴⁰ See 33 U.S.C. §§ 1321(5) and 1321(6).

⁴¹ 42 U.S.C. §§ 9607(a)(2) and 9607(a)(3).

⁴² 42 U.S.C. § 6972(a)(1)(B).

E. The Individual In Case Law

Finally, the liability of the individual in case law must always be considered and is evolving rapidly. As mentioned previously, for numerous reasons, judges are more willing than ever to either expand the law to include individuals where the facts warrant or to expand other elements of the law to support environment policies and allow individuals to be included in the ever widening net. This is especially true in the area of civil liability where it appears that the courts seem to want to find liability.

V. The Role of Individuals

It appears from reviewing the sources of personal liability that one individual could have at least three opportunities to be liable under the environmental laws and, coincidentally or separately, liable under one or more common law theories.

If an individual acting in his or her own capacity violates an environmental mandate, that individual is liable for the act's consequences. For example, if John Doe, while on a picnic with his children, decides to drain his crankcase into the creek, John Doe, as an individual, as a "person" within the statutory definition of the Clean Water Act, could be liable for discharging pollutants into waters of the United States without a permit pursuant to §§ 301(a) and 309(c) of that Act. Or, because the Clean Water Act expressly imposes criminal liability for negligent violations of the Act, Mr. Doe could be facing a fine of at least \$2,500 but not more than \$25,000 and/or a year in prison.⁴³ Or, if the government can establish a "knowing" violation (which seems apparent), Mr. Doe could be facing not less than \$5,000 nor more than \$50,000 in fines and/or up to 3 years in prison.⁴⁴ Pretty expensive picnic.

Secondly, an individual by virtue of his or her status under the law can be personally liable for environmental compliance. "Status" liability or "situation" liability is strict liability if the individual fits the descriptor. "Status" liability is associated with either one's proprietary interests in a facility, e.g., owner or operator; the status or position of one's employment, e.g., agent or "person in charge;" or one's activities regardless of interests in the property or position of employment, e.g., the person who arranged for disposal. As mentioned

⁴³ 33 U.S.C. § 1319(c)(1).

⁴⁴ 33 U.S.C. § 1319(c)(2).

previously, under Superfund, these statutorily-based "status" liabilities are strict, and joint and several, subjecting the individual who corresponds to the definition to potentially tremendous liability based solely on that status. If, for example, Widow Jones of Texas owned a piece of property in New Jersey that becomes a Superfund site, the widow is liable for the cleanup of that site, regardless of whether or not she knew that hazardous substances were being dumped on the site by her lessee.⁴⁵

Finally, individuals may be personally liable by virtue of their employment within offending corporations, companies, associations or governmental bodies. This "employment-related" liability is of the gravest concern to the greatest number of individuals.

VI. Shielding Structures

While it is true that all forms of business organizations can be held liable for violation of environmental requirements - associations, consortiums, joint ventures, partnerships, corporations and even governments, traditionally, one of the main advantages of a corporate form of business association has been the limitation of liability concept.

As a general rule, in a corporate structure, the company's liability and that of its directors, officers, stockholders and employees is limited to the assets of the corporation.⁴⁶ Although many recognize this basic legal tenet as a legal fiction, the courts have refused generally to "pierce the corporate veil" by construing the evidence in favor of the corporate structure, thereby shielding the employee from personal liability. Even in environmental cases, many state courts continue to follow this traditional approach.

There are two exceptions to this rule. Under Texas law, the corporate fiction may be disregarded and derivate liability imposed when the corporate form is used as an unfair device to achieve an

⁴⁵ See United States v. Monsanto, 858 F.2d 160 (4th Cir. 1988) where an absentee landlord was held liable based solely on the status of owner.

⁴⁶ See Fletcher, 3A Cyclopedia of Law of Private Corporations, § 137 (1986 revised).

inequitable result.⁴⁷ Secondly, the corporate form may be disregarded and the individual corporate official or shareholder may be held directly, personally liable if he participates in, authorizes or sanctions the commission of a corporate violation of law. Liability is based on participation.

Both theories are used to penetrate the corporate shield when prosecutors are seeking to find corporate individuals personally liable under environmental laws. Usually liability is based on participation or control, but often the distinction between individual participation in the commission of an offense and piercing the corporate veil is blurred. Furthermore, when an individual also could be reached because of his or her status under the law, the distinctions are further blurred. Sometimes blurred enough to be positively dizzy.

Environmental defendants should be wary of the corporate shield as a defense. A more precise statement for environmental law is that corporations may be liable for the acts or omissions of their employees and employees may be liable for the acts or omissions of their companies.

In addition, the doctrine of sovereign immunity has acted to shield government employees from personal liability. The general rule is that the United States cannot be sued unless it has consented to be sued. And, if the government cannot be sued, then the liability of the federal employee working as an agent of the sovereign is likewise restricted. In at least one RCRA case, the court held that a federal employee's liability was coextensive with the agency's sovereign immunity. See, Meyer v. United States Coast Guard, 644 F.Supp. 2321 (E.D.N.C. 1986).

On the other hand, sovereign immunity cannot limit the personal liability of a government employee who is directly and personally responsible for an illegal acts. A federal employee

⁴⁷ In Texas, equity has been specifically defined to include the following: when incorporation is used as a means of perpetrating fraud; when incorporation is used as a mere tool or conduit for another corporation; when incorporation is used to avoid another existing legal obligation; when incorporation is used to obtain a monopoly; when incorporation is used to circumvent a statute; where the corporation is inadequately capitalized or where the incorporation is relied upon as a protection of crime or to justify wrong. Castleberry v. Branscum, 721 S.W.2d 270 (Tex. 1986).

has no immunity from federal criminal prosecution by virtue of his or her federal employment.⁴⁸

Their appear to be at least three fundamental questions to consider in "employment-related" liability: 1) does the specific statute reach the individual or is there a shield under the circumstances; 2) what level, amount or degree of individual involvement in the noncomplying activity is necessary for the individual to be deemed liable; and 3) what type of sanctions does that degree of involvement carry.

The answer to the first question appears to be settled. The environmental laws include individuals or natural persons as "persons." As a practical matter, whether or not the statute itself expressly includes corporate officials, the courts will likely include the term person in most of these statutes to include responsible corporate officials. There are no shields whenever a wrongful act is performed by an individual.

VII. Personal Liability of Employees, Supervisors and Managers Under Federal Environmental Laws

As stated in the section above, employees, supervisors, managers and corporate officials at all levels, and even shareholders, can be found personally liable for administrative, civil, or criminal violations of the environmental statutes if the individual directly authorizes or personally participates in the wrongful act or condons the criminal act. Additionally, "responsible corporate officers," managers, or executives who have ultimate authority over corporate activities have been found liable in certain circumstances.

A. Civil Liability for Wrongful Act.

In general, a corporate officer will be personally liable for the wrongful act of a corporation or an employee if the officer took part in the act, or directed or authorized other officers, agents or employees to engage in the activity.⁴⁹ The reverse is equally true, corporate officers cannot generally be held liable

⁴⁸ Bartus, "Federal Employee Personal Liability Under Environmental Law: New Ways for The Federal Employee to Get in Trouble," Air Force Law Review 45 (1989).

⁴⁹ See infra note 34.

for acts undertaken by others without their knowledge, consent or authorization.⁵⁰

Personal civil liability has been imposed against corporate officers who personally participated in a wrongful act under a number of environmental statutes. In U.S. v. Mottolo, the court held that if the government could prove that the president of the corporation personally participated in waste removal decisions, he could be held personally liable under CERCLA.⁵¹ In U.S. v. Carolawn Co., the court found if the individual has control or authority over the actions at the hazardous wastes site, and the day-to-day operations of hazardous waste disposal, he may be personally liable under CERCLA.⁵² Both of these defendants were also "owners and operators" of the facilities at issue so also had status induced liability.

B. Criminal Liability for Wrongful Act.

As a general rule in the criminal area, a corporate officer cannot be held liable simply because of his position in the corporation. Rather, the government must establish some personal involvement of the corporate official in the matter.⁵³ This goes to the "willing" or "knowing" tests discussed earlier. Knowledge can be inferred, however.⁵⁴

C. Civil Liability of Responsible Corporate Officers

⁵⁰ Id.

⁵¹ 695 F.Supp. 615 (D.N.H. 1988).

⁵² 889 F2d 1146 (D.S.C. 1984).

⁵³ See infra note 4.

⁵⁴ See United States v. Ward in which the owner of the company hired a vendor to dispose of PCBs and the pollutants were illegally dumped. The court found that although there was no direct evidence of the owner's participation in the scheme, the jury could infer knowledge because the price paid for the oil was very low. 676 F.2d, 94 (4th Cir. 1982), cert. denied 459 U.S. 835 (1982).

See also United States v. Greer, where the jury was allowed to infer willing and knowing intent because the individual directed that the waste be disposed of quickly and inexpensively. 850 F.2d 1447 (11th Cir. 1988).

A few courts have held officers or senior executives liable because of their general authority over corporate matters. For example in a civil case, U.S. v. Northeastern Pharmaceutical and Chemicals, Co., the defendant organized the company and was its president and major stockholder, but did not engage in day-to-day corporate activities relating to hazardous waste disposal. There was no evidence that he participated in or was even aware of the unlawful disposal practices of his vice president, who was the supervisor and manager of the facility. Nevertheless, the court imposed personal liability on the corporate president because he was in charge of and responsible for all corporate operations.⁵⁵

In Michigan v. Arco Industries Corp., the controlling stockholder and chairman of the board of Arco Industries and the president of the company, were held liable because of their overall responsibility and management of the Arco plant and/or their direct oversight in the operation and management of the plant.⁵⁶ The judge stated:

I believe that CERCLA's statutory scheme varies the configuration of traditional corporate principles which prevent individual liability absent a conclusion that an individual engaged in procedural irregularities justifying a court in "piercing of the corporate veil" or that an individual has had close, active involvement or direct supervision in the events leading to the alleged tortious harm.... the case law indicates that where CERCLA seeks to impose liability beyond the corporate form, an individual's power to control the practice and policy of the corporation, and the responsibility undertaken by that individual in this area should be considered.... This Court will look to evidence of an individual's authority to control, among other things, waste handling practices evidence such as whether the individual holds the position of officer or director, especially where there is a co-existing management position; distribution of power within the corporation, including position in the corporate hierarchy and percentage of shares owned. Weighed along with the power factor will be evidence of responsibility undertaken for waste disposal practices, including evidence of responsibility undertaken and neglected, as well as

⁵⁵ 810 F.2d 726 (8th Cir. 1986), cert. denied 484 U.S. 848 (1987).

⁵⁶ Michigan v. Arco (D.C. W. Mich. No.K87-372-CA4, 9/27/89) 30 ERC 1759 (W.D. Mich. 1989).

affirmative attempts to prevent unlawful hazardous waste disposal. Besides responsibility neglected, it is important to look at the positive effects of one who took clear measures to avoid or abate the hazardous waste damage. Therefore, the Court will look to this evidence when determining liability by the "prevention" test.⁵⁷

The court hereby focuses on the capacity to prevent the hazardous waste release as the test for liability.

D. Criminal Liability of Responsible Corporate Officers

In a few cases, criminal liability has been imposed on corporate officers even in the absence of any evidence of the officers direct participation or acquiescence in criminal behavior by a subordinate. For example, in U.S. v. A.C. Lawrence Leather Company, the president and vice president of the company were charged with failing to find out about and stop an illegal bypass under the responsible corporate officer's theory. Although this was a Clean Water Act case, and the criminal liability could have been imposed for simple negligence, the officers pled guilty and admitted that they should have known about the illegal activities.⁵⁸

VIII. Recommendations

In a recent seminar, the lawyers recommended five steps that a company could take to avoid liability when involved in the treatment, storage or disposal of hazardous waste. These steps are good advice for any company dealing with any pollutants.

1. Conduct an internal review or audit of the company's compliance history;
2. Require mandatory training;
3. Insist on mandatory corrective programs;
4. Adopt an incentive program; and

⁵⁷ Id. at 30 ERC 1761, 1763.

⁵⁸ U. S. v. A. C. Lawrence Leather Company, Criminal No. 82-L-07-L (D.N.H. 1982). See also infra note 4.

5. Institute an employee reporting system.⁵⁹

Other preventive actions are equally as obvious. For example, delegation of authority in written form to competent environmental professionals with appropriate supervision, would assist the responsible corporate officer under Arco. Further, special care and due diligence should be taken in hiring waste handlers and selecting disposal contractors, methods or sites.⁶⁰

The point, of course, is that the best way to avoid environmental noncompliance is to assure environmental compliance. To assure environmental compliance, an assessment of both the individual and corporate exposure is required.

Make Assurance Double Sure

In addition to a good offense, there are several defensive steps that can be taken as well. For example, the company or an individual should request the following before an inspection or inquiry:

1. The government agent's creditals;
2. The purpose of the questions or the inspection;
3. A copy of the report or analysis; and
4. A split sample.

Also, remember that while the government may not be there to help you, legal counsel and environmental consultants are. A Miranda warning only applies if the individual is in custody and undergoing interrogation. An individual has constitutional rights, especially if criminal prosecution appears possible. These rights include the protection against self-incrimination and the right to have an attorney present.

O, My Offence is Rank, It Smells To Heaven!

⁵⁹ McAllister, Boughman, Meyer and Knowles, "Avoidance of Criminal Liability for Violations of Federal Environmental Laws," presented at the Rocky Mountain Mineral Law Foundation seminar, Environmental Law: An Update for the Busy Natural Resources Practitioner (May 21, 1990).

⁶⁰ See infra note 17.

APPENDIX A

CRIMINAL PROVISIONS

1. The Clean Air Act has established criminal penalties for the knowing violation of emissions limitations. The provision sanctions:

(a) A knowing violation of an implementation plan,

"(i) during any period of Federally assumed enforcement, or (ii) more than thirty days after having been notified by the Administrator...that such person is violating such requirement, or

(b) The violation of any compliance or enforcement order (including orders regarding nonferrous smelters), or

(c) The construction or operation of a facility in violation of performance standard, or

(d) The violation of any requirement of Section 1857c-10(g) of this title (as in effect before August 7, 1977), or the subsections regarding noncompliance penalties or zone-protection provisions.

CAA § 113(c)(1), 42 U.S.C. § 7413(c)(1).

The Clean Air Act provides for sanctions of up to \$25,000 per day of violation, or of imprisonment for not more than one year, or both. Subsequent convictions carry double the penalty, or \$50,000 fine per diem or two years imprisonment, or both.

2. The Clean Air Act also punishes for false statement. It is a violation to knowingly make:

any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this chapter or [to falsify, tamper] with, or knowingly [render] inaccurate any monitoring device or method required to be maintained under this chapter.

The penalty for such false statements under the Clean Air Act is a fine of not more than \$10,000, or up to six months imprisonment, or both.

LAA § 113(c)(2), 42 U.S.C. § 7413(c)(2).

3. CERCLA provides for criminal penalties for failure to immediately notify an appropriate governmental agency of a release of a hazardous substance in amounts greater than the maximum allowed by governmental regulations. This applies to any person --

(1) in charge of a vessel from which a hazardous substance is released,

(a) into navigable waters, adjoining shorelines or the waters of the contiguous zone, or

(b) which may affect natural resources belonging to, appertaining to or under the exclusive management authority of the United States, if such person is otherwise subject to the jurisdiction of the U. S. at the time of release; or

(2) in charge of a facility from which a hazardous substance is released.

The penalty for failure to notify, or for including any false information in the notification, includes a fine in accordance with Title 18, or imprisonment for not more than 3 years (or not more than 5 years after the first conviction), or both.

CERCLA § 103(b), 42 U.S.C. § 603(b).

4. CERCLA provides for criminal penalties for failing to notify the EPA of the existence of an unpermitted facility. The obligation to notify applies to --

any person who owns or operates or at the time of disposal owned or operated, or who accepted hazardous substances for transport and selected

the facility. The notification must specify

the amount and type of any hazardous substance to be found there, and any known, suspected, or likely releases of such substances from such facility.

Failure to notify carries a penalty of up to \$10,000, or up to one year's imprisonment, or both. Additionally, anyone who fails to notify will be denied any limitation of liability or defenses provided by 42 U.S.C. § 9607. However, this provision does not apply to any container which falls under this section only as a result of a stoppage in transit.

CERCLA § 103(c), 42 U.S.C. § 9603(c).

5. The violation of recordkeeping provisions of CERCLA also carries criminal penalties. The regulations require that records regarding facilities and substances be kept for 50 years after December 11, 1980, or for 50 years after a record is established, whichever is later. It is a violation for any person:

knowingly to destroy, mutilate, erase, dispose of, conceal, or otherwise render unavailable or unreadable or falsify any records

that are required to be kept, before the expiration of the specified period.

The penalty for violation of this section without a waiver is a fine in accordance with Title 18, or imprisonment for not more than three years (or not more than 5 years for any offense after the first), or both.

CERCLA § 103(d)(2), 42 U.S.C. § 9603(d)(2).

6. The Clean Water Act establishes criminal penalties for non-permitted discharges into the navigable waters. The general prohibition against non-permitted discharges appears in Clean Water Act § 301a, 33 U.S.C. § 1311a. Further prohibitions are contained elsewhere in the Act.

- (a) The discharge of pollutants from a point source, or a publicly owned treatment works, either without a permit or in excess of effluent limitations established in the permit, is illegal.
- (b) Notwithstanding any other provisions of the Clean Water Act, the discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste is unlawful. Clean Water Act § 301f, 33 U.S.C. 1311f.

- (c) The discharge of pollutant in violation of the water quality related effluent limitations is also illegal. Clean Water Act § 302, 33 U.S.C. 1312.
- (d) Violation of the statute's water quality standards and implementation plans is unlawful. Clean Water Act § 303, 33 U.S.C. § 1313.
- (e) It is also a violation of the Clean Water Act's § 1311 general prohibition against non-permitted discharge, for a new source to emit in excess of national performance standards established for that particular facility's category. Clean Water Act § 306, 33 U.S.C. § 1316.
- (f) The statute also criminalizes the discharge of toxic pollutants, or other pollutants to a publicly-owned treatment works in excess of toxic or pretreatment effluent standards. Clean Water Act § 307, 33 U.S.C. § 1317.
- (g) It is also a violation of this general prohibition to discharge in excess of, or not in compliance with a permit to discharge under an approved aquaculture project. Clean Water Act § 318, 33 U.S.C. § 1328.
- (h) It is a violation of the statute to discharge in excess of either a permit issued under the National Pollutant Discharge Elimination System [NPDES], or a permit for dredged or fill material. Clean Water Act §§ 402, 404, 33 U.S.C. §§ 1342, 1344.
- (i) The statute criminalizes violations of its record and report provisions. This provision obligates operators of sources to establish and maintain such records and reports, install, use and maintain monitoring equipment or methods, sample effluents, and provide other information as required by regulations promulgated under this section. Clean Water Act § 308, 33 U.S.C. § 1318.
- (j) The disposal of sewage sludge which could end up in the navigable waters is also illegal without a permit.

Clean Water Act § 405, 33 U.S.C. § 1345.

7. Criminal penalties are established by the Clean Water Act. They come in three varieties: penalties for negligent violations, knowing violations and knowing endangerment.

(a) Any person who negligently violates §§ 1311, 1312, 1316, 1317, 1318, 1328, or 1345, or any permit condition or limitation of a permit issued under § 1342, or any pre-treatment requirement established under § 1342(a)(3) or (b)(8), or any permit issued under § 1344, or negligently introduces into a sewer or publicly owned treatment works any pollutant or hazardous substance which such person knew or reasonably should have known could cause personal injury or property damage, or which causes such treatment works to violate any effluent limitation under § 1342, is subject to the negligent violation penalty.

The penalty for one of the above-enumerated negligent violations is a fine of not less than \$2,500 nor more than \$25,000 per day, or imprisonment for not more than one year, or both. For subsequent convictions, punishment shall be by fine of not more than \$50,000 per day, or by imprisonment of not more than two years, or by both.

(b) Knowing violations. Any person who knowingly violates §§ 1311, 1312, 1316, 1317, 1318, 1328, or 1345, or any permit condition or limitation under § 1342, or any pre-treatment program under § 1342(a)(3) or (b)(8), or knowingly introduces into a sewer system or publicly owned treatment works a pollutant or hazardous substance which such person knew, or reasonably should have known, could cause personal injury or property damage or, causes such treatment works to violate any effluent limitation under § 1342, is subject to the knowing violations' penalty.

The knowing violation penalty is punishment by a fine of not less than \$5,000 nor more than \$50,000 per day, or imprisonment for not more than three years, or both. For subsequent convictions, punishment shall be by a fine of not more than \$100,000 per day of violation, or by imprisonment of not more than six years, or both.

(c) Knowing endangerment. Any person who knowingly violates §§ 1311, 1312, 1313, 1316, 1317, 1318, 1328, or 1345, or any permit condition or limitation imposed under § 1342, or permit issued under § 1344, and who knows that he or she thereby places another person in imminent danger of death or serious bodily injury, is subject to the knowing endangerment penalty.

Such a person is subject to a fine of not more than \$250,000 or imprisonment of not more than fifteen years, or both. A person who is an organization shall, upon conviction,

be subject to a fine of not more than \$1,000,000. Subsequent convictions are subject to a maximum punishment which is doubled with respect to both fine and imprisonment established above.

Clean Water Act §§ 309(c)(1),(2), and (3), 33 U.S.C. §§ 1319(c)(1),(2), and (3).

8. False statements.

(a) The Clean Water Act criminalizes the making of any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Clean Water Act. It is also a violation to knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained.

The penalty for violations of this Section include a fine of not more than \$10,000 or imprisonment for not more than two years, or both. For subsequent violations, the punishment shall be by fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

Clean Water Act § 309(c)(4), 33 U.S.C. § 1319(c)(4).

9. Failure to report a discharge of oil also carries a criminal penalty under the Clean Water Act. The relevant provision requires any person in charge of a vessel or of a facility to immediately notify the appropriate agency of a discharge of oil or hazardous substance into the navigable waters, adjoining shorelines, or contiguous zone of the United States, or any discharge from a vessel covered by the Outer Continental Shelf Lands Act, or Deep Water Port Act, or which may affect natural resources flowing into, appertaining to, or under the exclusive management authority of the United States. Failure to notify immediately carries a penalty of not more than \$10,000 or imprisonment for not more than one year, or both.

See Clean Water Act § 311, 33 U.S.C. §1321.

10. The Federal Insecticide, Fongicide and Rodenticide Act ("FIFRA") requires registration of pesticides before their introduction into commerce. It is unlawful for any person to distribute, sell, offer for sale, hold for sale, ship, deliver for shipment, or receive and deliver or offer to deliver any

pesticide not so registered, or in any way not in accordance with its registration or requirements of the statute.

FIFRA § 12, 7 U.S.C. § 136(j).

Violation of the various requirements of the statute carry the following penalties:

- (a) Generally, any registrant, commercial applicator, wholesaler, dealer, retailer, or other distributor who knowingly violates any provision of this subchapter shall be guilty of a misdemeanor and shall, on conviction, be fined not more than \$25,000 or imprisoned for not more than one year, or both.
- (b) Any private applicator or other person not included above who knowingly violates any provision of this subchapter shall be guilty of a misdemeanor and shall, on conviction, be fined not more than \$1,000, or imprisoned for not more than thirty days, or both.
- (c) Any person who, with intent to defraud, uses or reveals information relative to formulas of products acquired under the authority of this Act, shall be fined not more than \$10,000, or imprisoned for not more than three years, or both.

FIFRA §§ 14(b)(1), (2) and (3), 7 U.S.C. §§ 136(l)(1), (2) and (3).

11. Criminal penalties under the Resource Conservation and Recovery Act ("RCRA").

- (a) RCRA establishes criminal penalties for the transportation of hazardous waste to a facility which does not have a permit.

S.W.D.A. § 3008(d)(1), 42 U.S.C. § 6928(d)(1).

- (b) It is a violation of RCRA to knowingly treat, store or dispose of any hazardous waste without a permit, or in knowing violation of any material condition and requirement of such permit, or of any applicable interim status regulations or standards.

S.W.D.A. § 3008(d)(2), 42 U.S.C. § 6928(d)(2).

- (c) It is unlawful to knowingly omit material information, or make any false, material statement or representation, in any application, label, manifest, record, report, permit, or other document filed, maintained, or used for purposes of compliance with the statute.

S.W.D.A. § 3008(d)(3), 42 U.S.C. § 6928(d)(3).

- (d) It is illegal to knowingly generate, store, treat, transport, dispose of, export, or otherwise handle any hazardous waste or any used oil not identified or listed as a hazardous waste, and knowingly destroy, alter, conceal or fail to file any record, application, manifest, report or other document required to be maintained or filed by the statute.

S.W.D.A. § 3008(d)(4), 42 U.S.C. § 6928(d)(4).

- (e) It is a violation to knowingly transport without a manifest, or cause to be transported without a manifest, any hazardous waste or used oil not identified as a hazardous waste by the statute, which the statute requires to be accompanied by such manifest.

S.W.D.A. § 3008 (d)(5), 42 U.S.C. § 6928(d)(5).

- (f) The Statute also criminalizes the knowing export of a hazardous waste identified or listed under this subchapter either without the consent of the receiving country or, where, there exists an international agreement, establishing notice, export, and enforcement procedures for such a waste, in a manner which is not in conformance with such agreement.

S.W.D.A. § 3008 (d)(6), 42 U.S.C. § 6928(d)(6).

- (g) It is illegal to knowingly store, treat, transport, or cause to be transported, disposed of, or otherwise handled any used oil not identified or listed as a hazardous waste, in knowing violation of any material condition or requirement of a permit or applicable regulation or standard under this chapter.

S.W.D.A. § 3008 (d)(7), 42 U.S.C. § 6928(d)(7).

The penalty for such knowing violations of RCRA include a fine of not more than \$50,000 per day, or imprisonment not to exceed two years, or both. For violations of § 6928(d)(1) and §6928(d)(2) (involving transportation to an unpermitted facility or treatment, storage, or disposal at an unpermitted facility), the maximum term of imprisonment is five years. For subsequent convictions, the maximum punishment is doubled with respect to both fine and imprisonment.

12. RCRA provides for criminal penalties for knowing endangerment.

"Any person who knowingly transports, treats, stores, disposes of, or exports any hazardous waste identified or listed under this sub-chapter or used oil not identified or listed as a hazardous waste under this sub-chapter in violation of paragraph (1), (2), (3), (4), (5), (6), or (7) of subsection (d) of this section who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment for not more than fifteen years, or both. A defendant that is an organization shall, upon conviction of violation this subsection, be subject to a fine of not more than \$1,000,000."

S.W.D.A. § 3008(e), 42 U.S.C. § 6928(e).

13. The Toxic Substances Control Act ("TSCA") provides for criminal penalties for the violation of its regulations regarding the testing, record keeping, marking, storage, and disposal requirements for PCB's and other chemicals. Criminal penalties are provided for any prohibited act under TSCA. It is unlawful for any person to:

"1. Fail or refuse to comply with any rule promulgated or order issued under § 2603 of this title, any requirement prescribed by §§ 2604 or 2605 of this title, any rule promulgated or order issued under §§ 2604 or 2605 of this title, or any requirement of subchapter 2 of this chapter or any rule promulgated or order issued under subsection 2 of this chapter;

2. Use for commercial purposes a chemical substance or mixture which such person knew or had reason to know was manufactured, processed or distributed in commerce in violation of §§ 2604 or 2605 of this title, a rule or order under §§ 2604 or 2605 of this title, or an order issued and action brought under §§ 2604 or 2606 of this title;

3. Fail or refuse to establish or maintain records, submit reports, notices, or other information, or permit access to or copying of records, as required by this chapter or a rule thereunder;

4. Fail or refuse to permit entry or inspection as required by § 2610 of this title."

TSCA § 15, 15 U.S.C. § 2614.

The penalties provided for violation of the prohibited acts include:

"In addition to or in lieu of any civil penalty which may be imposed under subsection (a) of this section for such violation...a fine of not more than \$25,000 for each day of violation, or...imprisonment for not more than one year, or both." TSCA § 16(b), 15 U.S.C. § 2615(b).

14. Congress has provided for penalties for the violation of various general criminal provisions of the U.S. Code which could affect the environmental offender. There are criminal penalties available for the making of false statements to federal agencies. 18 U.S.C. § 1001. It is also a crime to conspire to make, or cause to be made, false statements to a governmental agency. 18 U.S.C. § 371. There are also a variety of general criminal provisions, including 18 U.S.C. § 2 (aiding and abetting); 18 U.S.C. § 3 (accessory after the fact); 18 U.S.C. § 4 (misprison of felony); and 18 U.S.C. § 1341 (mail fraud).

APPENDIX B

1. In air pollution prevention, a "person" includes:

an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee, thereof.

Clean Air Act § 302(e), 42 U.S.C. § 7602(e).

And, for purposes of criminal violations, the term "person" includes:

in addition to the entities referred to in section 7602(e) of this title, any responsible corporate officer.

Clean Air Act § 113(c)(3), 42 U.S.C. § 7413(c)(3).

2. In water pollution prevention, the term "person" means:

an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.

Clean Water Act § 502(5), 33 U.S.C. § 1362(5).

And, for purposes of criminal violations, the term "person" means:

in addition to the definition contained in Section 1362(5) of this title, any responsible corporate officer.

Clean Water Act § 309(c)(6), 33 U.S.C. § 1319(c)(6).

3. In oil and hazardous substance spills, "person" includes:

an individual, firm, corporation, association, and a partnership.

Clean Water Act § 311(7), 42 U.S.C. § 1321(7).

4. In environmental response, etc., the term "person" means:

an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States Government, State, municipality, commission, political subdivision of a State, or any interstate body.

Comprehensive Environmental Response, Compensation, and Liability Act § 101(21), 42 U.S.C. § 9601(21).

5. In pesticide control, the term "person" means:

any individual, partnership, association, corporation, or any organized group of persons whether incorporated or not.

Federal Insecticide, Fungicide, and Rodenticide Act § 2(s), 7 U.S.C. § 136(s).

6. In toxic substances control, a "person" is defined in the general section of the regulations implementing the Toxic Substances Control Act, 15 U.S.C. § 2601 et. seq., as:

a manufacturer, importer or processor.

40 C.F.R. § 700.43.

7. In drinking water quality control, the term "person" means:

an individual, corporation, company, association, partnership, State, municipality, or Federal agency (and includes officers, employees, and agents of any corporation, company, association, State, municipality, or Federal agency).

Safe Drinking Water Act § 1401(12), 42 U.S.C. 300f(12).

8. In solid and hazardous waste disposal, the term "person" means:

an individual, trust, firm, joint stock company, corporation (including a government corporation, partnership, association, State, municipality,

commission, political subdivision of State, or
any interstate body.)

Solid Waste Disposal Act § 1004(15), 42 U.S.C. §
6903(15).

APPENDIX C

1. In the Clean Air Act, the term "owner or operator" means:

any person who owns, leases, operates, controls, or supervises a stationary source.

Clean Air Act, §111(a)(5). See also, Clean Air Act §§ 112-114, 119-120, 42 U.S.C. §§ 17411-14,7419-7420.

2. In the Clean Water Act, the term owner or operator is not included in the general definition section but owners and operators of treatment works and sources can be sued for violating pretreatment or toxic standards.

Clean Water Act, §309(f), 33 U.S.C. §1319(f).

3. Under §311 of the Clean Water Act, owner or operator is defined for purposes of oil and hazardous substances liability and means:

- (a) in the case of a vessel, any person owning, operating, or chartering by demise, such vessel, and
- (b) in the case of an onshore facility, and an offshore facility, any person owning or operating such onshore facility or offshore facility, and
- (c) in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

Clean Air Act, 311(a)(6), 33 U.S.C. § 1321(a)(6).

4. Under CERCLA, "owner or operator" is defined most specifically and includes the § 311, Clean Water Act definition in its entirety as well as: any person who owned, operated or controlled a facility immediately before it--

was conveyed due to bankruptcy, foreclosure, tax delinquency,...or similar means to a unit of state or local government....

The definition also contains the following statement:

Such term does not include a person, who, without participating in the management of a vessel or facility, holds indicia of ownership primarily to protect his security interest in the vessel or facility;

5. With regard to a hazardous substance accepted for transportation by a common or contract carrier,

(i) the term "owner or operator" shall mean such common carrier or other bona fide for hire carrier acting as an independent contractor during such transportation,

(ii) the shipper of such hazardous substance shall not be considered to have caused or contributed to any release during such transportations which resulted solely from circumstances or conditions beyond his control.

However, this definition is subject to the "transporter liability" provisions of CERCLA § 107(a)(3), 42 U.S.C. § 9607(a)(3).

CERCLA § 101(20)(B), 42 U.S.C. § 9601(20)(B).

6. For hazardous substances already delivered by a common or contract carrier to a disposal or treatment facility,

(i) the term "owner or operator" shall not include such common or contract carrier, and

(ii) such common or contract carrier shall not be considered to have caused or contributed to any release at such disposal or treatment facility resulting from circumstances or conditions beyond its control.

This definition is also subject to the "transporter liability" provision of CERCLA § 107(a)(3), 42 U.S.C. § 9607(a)(3).

CERCLA § 101(20)(c), 42 U.S.C. § 9601(20)(c).

7. For CERCLA purposes, the term does not include a unit of state or local government which:

acquired ownership or control involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances which the government involuntarily acquires title by virtue of its function as sovereign.

However, such a governmental unit is considered an "owner or operator" if it causes or contributes to any release or threatened release.

CERCLA § 101(20)(D), 42 U.S.C. § 9601(20)(D).

8. For solid and hazardous waste disposed regulations, the term "owner or operator" is not specifically defined. The regulations promulgated for owners and operators contain the definition:

"Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES [National Pollutant Discharge Elimination System] program.

40 C.F.R. § 122.2. For standards applicable to owners and operators, see SWDA § 3004, 42 U.S.C. § 6924.

37004.GW04

ENVIRONMENTAL LIABILITY: THE 3M APPROACH

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INTRODUCTION

Compliance with environmental regulatory requirements is no guarantee against future liability -- the Superfund program is living proof to that.

Compliance with environmental regulatory requirements at 3M is complicated by the fact that 3M does not make just one or two kinds of products. 3M has more than 45 different major product lines -- ranging from our famous pressure sensitive tape products like Scotch brand tape, to colored roofing granules...medical products...office products such as microfilm, and overhead projectors...electrical insulation products...specialty chemicals...audio-visual tapes and data recording materials, to name a few. This means 3M generates many different wastes that are subject to regulatory control. These include hydrocarbon air emissions from coating operations, acid solutions in wastewater discharges and heavy metal wastes that would be sent to landfills. The major waste category is solvents and solvent-contaminated materials.

3M's 45 major product lines include literally thousands of individual products. This means that there are many hundreds of different wastes to control from nearly 100 manufacturing plant locations around the country. To complicate the issue further, the details of various state and local pollution control regulations vary from place to place. In addition, 5,000 technical people keep inventing new products and production processes every year.

Even though 3M's corporate management is concerned about pollution control costs, a corporate environmental policy says 3M must solve its own pollution problems...conserve resources...and cooperate fully with all governmental environmental agencies.

3M ENVIRONMENTAL POLICY

1. Solve its own environmental pollution and conservation problems.
2. Prevent pollution at the source wherever and whenever possible.
3. Develop products that will have a minimum effect on the environment.
4. Conserve natural resources through the use of reclamation and other appropriate methods.
5. Assure that its facilities and products meet and sustain the regulations of all Federal, State and local environmental agencies.
6. Assist, wherever possible, governmental agencies and other official organizations engaged in environmental activities.

In accordance with its policy to 'solve its own environmental problems' 3M constructed a state-of-the-art incinerator in 1972 to destroy waste solvent and solvent contaminated wastes and reduce or eliminate reliance on waste processing vendors.

ENVIRONMENTAL PROTECTION REQUIREMENTS

In the past the requirements of most government environment regulatory agencies have centered on the concept of waste treatment. Examples of this concept include installing air pollution control facilities at the end of the manufacturing process to treat or control air pollution emissions...wastewater treatment facilities installed at the end of the manufacturing process to treat or control liquid discharges before they enter a municipal sewer system or body of water...and stabilizing industrial waste through some form of treatment before they are sent from a factory to a landfill.

Unfortunately, the waste treatment concept has its problems. First of all, building black boxes at the back of the factory to control pollutants is costly--hundreds of thousands or even millions of dollars for a single facility is not unusual. It takes a lot of natural resources to build these facilities, which are energy intensive when it comes to operation. Further, air or water pollution control facilities generate substantial amounts of residues, much of which can be hazardous.

ALTERNATIVE TO TREATMENT

The limitations of treatment were very much in mind back in 1975 when the Pollution Prevention Pays program was begun.

The heart of this program is preventing or minimizing pollution at the source so that treatment at the end of the manufacturing process is not necessary. Further, after the product leaves the factory, there are no major problems in use or in final disposal.

There are four basic ways to prevent pollution at the source. These include:

1. Developing nonpolluting products or reformulating existing products. This is done by substituting nonpolluting materials for ingredients that are pollutants. A good example of this is 3M's effort to substitute water-based adhesives for those that contain solvents. These solvents are pollutants because -- untreated -- they have been implicated in the formation of ozone in the atmosphere.
2. A second important method of preventing pollution at the source is by modifying production operations. For example, by converting to solventless coating processes or by changing from a batch process to continuous operations to reduce peak discharges and allow for water recycle.
3. A third way to prevent pollution at the source is by redesigning equipment used in a manufacturing process. For example, the 3M incinerator was converted from a moderate to a high temperature operating mode, which resulted in substantial fuel oil savings.
4. The fourth way of preventing pollution at the source is through recycling -- or recovery for reuse or resale. At 3M's Chemolite Center, for example, a waste ammonia solution is being collected and recovered for reuse as a fertilizer. Thus, the necessity to install a treatment process that would result in substantial waste sludges has been eliminated. 3M also is reclaiming many of our waste solvents for reuse in products, as cleaning solutions and as fuels.

It must be emphasized that attacking the problem at the source is not a new idea. It has been around for years -- generally used on a cost reduction basis. The unique aspect of the Pollution Prevention Pays program is that it applies the pollution prevention concept on a comprehensive companywide basis -- throughout the world.

THE 3P PROGRAM

Each of the 40 3M product divisions and each of the 30 3M subsidiary companies around the world is encouraged to participate in this effort. A coordinated management level program was designed to maximize implementation.

The 3P program is directed at the company's 5,000 technical employees -- laboratory, engineering and manufacturing personnel. These are the men and women who are responsible for product formulation, process design, manufacturing operations and recycling.

Working in their own specialty areas -- doing the work they know best -- they are asked to implement pollution prevention concepts in their everyday activities. They become, in effect, an extension of 3M's Corporate EE&PC staff.

When they believe they have made a worthwhile accomplishment, they submit their effort to a 3P coordinating committee of laboratory, engineering and manufacturing representatives for review.

Each effort is judged on the following criteria:

1. It must result in an environmental benefit that can be quantified, such as the amount of pollution prevented.
2. It must have a cost savings for the company.
3. It must demonstrate technical achievement.

If the effort meets with peer approval, then -- and only then -- is it accepted as a 3P project. The technical employee receives a certificate suitable for framing. A presentation is made by a senior management official in front of fellow employees, and frequently a private dinner or other suitable award is involved. The recognition process is such that other employees are encouraged to contribute 3P projects.

Top management is highly supportive of the program. During past annual management reviews, there has been an accounting as to which product divisions are doing the most -- and the least -- to produce 3P projects.

The point is that an old idea has been updated and turned into a continuing well-coordinated companywide program. Because it enjoys top management support, it continues to grow and the results are getting better every year.

3P RESULTS

Let's look at those results for a moment. In the fifteen years since the program began in 1975, 785 3P projects have been recognized in the United States. More than 1,950 smaller 3P projects have been recognized by 3M companies in 20 countries outside the United States.

The combined total of 2,740 projects has resulted in eliminating the discharge of 126,000 tons of air pollutants, 16,600 tons of water pollutants, and 410,000 tons of sludge and solid waste along with the prevention of more than 1.65 billion gallons of wastewater.

Cost savings to 3M total more than \$500 million. These costs are for pollution control facilities that did not have to be constructed, for reduced pollution control operating costs and for retained sales of products that might have been taken off the market as environmentally unacceptable.

These 3P results from our company are an illustration of what other companies also can do. The encouraging word today is that many companies are, in fact, eliminating or reducing pollution at the sources. They are, however, doing it in their own way and not necessarily broadcasting the results.

Source reduction, or preventing pollution at the source, should take over as the best technical approach of the 1990's. The reason is that it is more environmentally efficient and less costly than the treatment approach of the 1970's and 1980's. This doesn't mean treatment will be eliminated as a means of controlling pollution, but the industrial emphasis will be on prevention.

In 1989, 3M made a further commitment to pollution prevention that goes beyond any present regulatory requirement. Mr. Jacobson, 3M CEO, committed 3M to a program of reducing emissions (air and water) by the year 2000 by 90 percent (to 10 percent) of what they were in 1988. 3M's goal would be to achieve zero emissions, or as close to zero as we could achieve. Solid wastes are to be reduced by 50 percent by the turn of the century. In this manner, we will go a long way toward reducing or eliminating liability.

X. PROFESSIONAL AND ETHICAL RESPONSIBILITIES OF ENVIRONMENTAL PROFESSIONALS

"The first thing we do, let's kill all the lawyers."

Lawyers

J.D. Head
Ford, Ferraro, Fritz & Byrne
Austin, Texas

Mark Jordan
Legal Division
Texas Water Commission
Austin, Texas

Engineers and Scientists

Bob Jones
President
Jones & Neuse
Austin, Texas

John Black
Vice President
Woodward-Clyde
Houston, Texas

ENVIRONMENTAL LAW PRACTICE AND THE REVOLVING DOOR

BY

J. D. HEAD
FORD, FERRARO, FRITZ & BYRNE

AUTHOR'S NOTE:

In accepting the invitation to participate in the Texas Environmental Super Conference, this writer was given wide latitude in selecting a topic involving Professional and Ethical Responsibilities of the Environmental Professional. Suggested subjects included Superfund conflicts, scofflaw clients, Ex Parte communications, and dilatory motions. While all of the foregoing are worthy candidates for discussion, recent media coverage and an anticipated flood of proposed legislation compelled me to address the revolving door phenomenon.

I want to express my appreciation to Ms. Lynn Watson, a law clerk at the firm, for her significant contribution to Section III dealing with federal prohibitions applicable to consecutive government and private employment.

* * * * *

I. INTRODUCTION

In the past month, major newspapers in the State have carried articles reporting concern over prior high ranking Texas government employees representing private clients in matters before the agencies of their past employment. These articles focused attention on the "revolving door", broadly defined as the movement of individuals between government service and the private sector, at the Texas Racing Commission, the Texas Water Commission (TWC), and the Texas Air Control Board (TACB). In the case of the TACB and the TWC, the controversy centered on the involvement of attorneys previously employed in a supervisory capacity by these agencies in contested proceedings before these agencies. Environmental attorneys leaving governmental agencies to work in the private sector has increasingly become commonplace with the explosion of regulatory programs. This phenomenon has, in turn, engendered concern by government watchdog organizations and elected officials over the revolving door's potential for conflicts of interest and the exertion of undue influence on state and federal agencies.

This paper does not purport to examine the merits and competing interests relative to the appropriate boundaries of private endeavors after government service. These issues are thoughtfully addressed by Texas Water Commission Chairman B. J. Wynne, III in a recent publication. Wynne, Proper Limits on the Private Activities of Texas Public Employees After Government Service, 20 State Bar of Texas Env. L. J. 65 (1990). Rather,

this article provides an overview of existing law applicable to attorneys associated with revolving door situations. Section II of this paper discusses Rule 1.10 of the Texas Disciplinary Rules of Professional Conduct and its provisions regarding disqualification. Next, Section III summarizes 18 U.S.C. § 201 et. seq., the Ethics in Government Act, relating to restrictions on post federal government employment activities. Finally, Section IV examines the implications of House Bill No. 1237 and its mandate that Texas environmental agencies deny permit applications when certain classes of former government officials represent a private applicant.

II. STATE BAR RULES OF PROFESSIONAL CONDUCT

Since the adoption of the American Bar Association Canon of Professional Ethics No. 36, in 1937, it has been generally accepted that a lawyer, having retired from government service, is disqualified from accepting private employment in connection with a matter he was substantially involved with as a public employee. The rationale for disqualification is primarily based on the appearance of impropriety. Encompassed within this is the spectre of unfair advantage, conflict of loyalties, the exploitation of public office, and the fundamental rule prohibiting a lawyer from switching sides in a case.

From 1971 through 1989, Disciplinary Rule 9-101 (b) of the Texas Code of Responsibility acted as a bar to former government attorneys accepting employment in matters in which she/he had substantial responsibility as a public employee. The Texas Disciplinary Rule, codified under Canon 9 providing A Lawyer Should Avoid Even the Appearance of Professional Impropriety, was a restatement of D.R. 9-101(B) of the ABA Code of Professional Responsibility, adopted in 1969. The Ethical Consideration under Canon 9, EC9-3, stated as follows: After a lawyer leaves judicial office or other public employment, he should not accept employment in connection with any matter in which he had substantial responsibility prior to his leaving, since to accept employment would give the appearance of impropriety even if none exists.

Since 1971, then, The Supreme Court of Texas, through its Disciplinary Rules, afforded the legal community minimal guidance with respect to ethical considerations and grounds for disqualification incident to the revolving door phenomenon. While an attorney leaving government service was prohibited from accepting private employment in a matter in which he had substantial responsibility as a government lawyer, significant issues remained unaddressed. For example, did a "matter" include involvement in rule-making proceedings and/or policy decisions, or was a "matter" restricted to adversarial proceedings? The term was undefined. How much involvement was necessary to reach the threshold of "substantial responsibility" and was personal

involvement a prerequisite to disqualification? Was the entire firm with whom the prior government attorney associated himself disqualified, by virtue of the employment of that attorney, vis-a-vis its client with which the attorney dealt in government service? This final query was particularly relevant in view of the 1988 Texas Court of Appeals decision in Petroleum Wholesale, Inc. vs. Marshall, 751 S.W.2d 295 (Tex. App. -- Dallas 1988, no writ). In Petroleum Wholesale, Inc. the Dallas Court of Appeals rejected the utilization of a "Chinese Wall," defined as a device erected by a law firm intended to quarantine a firm member from other lawyers, as a legitimate means to avoid disqualification of the entire firm.

The adoption of the new Texas Disciplinary Rules of Professional Conduct, which became effective January 1, 1990, clarified many of these outstanding issues. The pertinent provision is Rule 1.10 entitled Successive Government and Private Employment, taken verbatim from Rule 1.11 of the American Bar Association Model Rules of Professional Conduct, adopted by the ABA in 1983. See Attachment No. 1. Rule 1.10 (a) provides that:

Except as law may otherwise expressly permit, a lawyer shall not represent a private client in connection with a matter in which the lawyer participated personally and substantially as a public officer or employee, unless the government agency consents after consultation.

The purpose of Rule 1.10 is to prevent a lawyer from exploiting public office for the advantage of a private client. See comment #1.

There are two key changes in the language between D.R. 9-101(b) and Rule 1.10(a). First, Rule 1.10(a) expands the threshold involvement to personal and substantial as opposed to D.R. 9-101(b)'s substantial involvement. Second, Rule 1.10(a) offers a government waiver, by consent, to disqualification.

With respect to the threshold question of the degree of an attorney's involvement in a case while employed by the public sector, the phrase "substantial responsibility" in DR 9-101(B) was modified to read "personally and substantially." The Terminology Section of the rules defines substantial as a "matter of meaningful significance or involvement." It is the opinion of this writer that Rule 1.10(a)'s usage of the language personal and substantial clarifies that a government attorney must have had "hands on" involvement with a case to become subject to disqualification. If a matter was technically under his or her supervision, but that attorney was not personally involved, he would not be disqualified under Rule 1.10 (a). This view is supported by comment 1 to Rule 1.11, which addresses the revolving door of adjudicatory officials. In discussing "personally and substantially", the comment notes that a judge's

exercise of remote or incidental responsibilities not affecting a case's merits would not be grounds for disqualification.

Note that there is no time frame included in the Rule. Accordingly, one would assume that a private attorney seeking to represent a client in a matter in which he was the staff attorney or hearings examiner many years previously would be proscribed from such representation. The prohibition set forth in Rule 1.10 (a) is not absolute. A governmental agency may consent, after consultation, to a former employee's representation of a private client in connection with a matter in which the lawyer participated personally and substantially as a governmental attorney.

Under Subsection (f) of Rule 1.10, it is expressly stated that a matter does not include regulation-making or rule-making proceedings or assignments. A matter does encompass, however, (a) any adjudicatory proceeding, application, request for a ruling or other determination, contract claim, controversy, investigation, charge accusation, arrest or other similar, particular transaction involving a specific party or parties, and; (2) any other action or transaction covered by the conflict or interest rules of the appropriate government agency. In effect, a "matter," for purposes of Rule 1.10, includes almost every type of activity imaginable in the legal arena, with the exception of rule-making proceedings.

It has become a common practice for environmental lawyers, after a tenure in public service, to join private law firms. In most instances, the governmental attorney carries on his practice in environmental law in the representation of private clients. While a government lawyer joining a firm may be prohibited under Rule 1.10(a) from representing a private client in connection with a matter in which the lawyer personally and substantially participated as a public officer or employee, the question arises whether other lawyers in the firm may undertake or continue representation of a client to which the government attorney was substantially involved. This situation is addressed in Rule 1.10(b) which provides as follows:

No lawyer in a firm in which the lawyer is subject to paragraph (a) is associated may knowingly undertake or continue representation in such a matter unless:

- (1) the lawyer subject to paragraph (a) is screened from any participation in the matter and is apportioned no part of the fee therefrom; and
- (2) written notice is given with a reasonable promptness to the appropriate governmental agency.

In effect, a law firm may continue or undertake representation of a private client in a matter in which a recently hired governmental attorney was substantially involved if a "Chinese Wall" is developed around the "tainted" attorney and written notice is given to the governmental agency with reasonable promptness.

The screening required by Rule 1.10(b) is not defined in the Disciplinary Rules of Professional Conduct. However, in the comments to Rule 1.10(b) it is stated that the screening provision contemplates that the screened lawyer has not furnished and will not furnish other lawyers with information relating to the matter, will not have access to the files pertaining to the matter and will not participate in any way as a lawyer or adviser in the matter. Proper screening procedures should be memorialized in written form and circulated to all firm employees. I would recommend sanctions for any firm personnel that violate these procedures. Further, because an agency is entitled to scrutinize a law firm's screening procedures in a case subject to Rule 1.10(b), these procedures should be formalized and available for agency review.

The writer would offer two observations on Rule 1.10(b). First, this rule is often disregarded by law firms hiring environmental attorneys from State agencies. Second, while notice is required to be given of this situation with reasonable promptness to the affected governmental agency, there is no requirement that the governmental agency consent to the continued representation or undertaking of representation by the law firm. Note that this is different from Rule 1.10(a), which requires that an agency consent to continued representation by the governmental employee. In effect, the rule can be construed as allowing a law firm to continue representation, or undertake representation, of a private client in a matter in which a lawyer with the firm had a substantial involvement in a related matter as a government employee regardless of whether the agency consents or not. According to the comments to Rule 1.10(b), the notice is required to be given as soon as practicable in order that the governmental agency or affected person will have a reasonable opportunity to ascertain compliance with Rule 1.10 and take appropriate action if necessary. One would assume that such appropriate action would be to investigate whether screening of the prior governmental attorney is actually occurring and to either consent or object to the attorney's involvement with the matter if the lawyer is not being screened appropriately.

Where a lawyer is faced with a conflict situation arising from the "revolving door", Rule 1.15 comes into play. Pursuant to Rule 1.15(a) a lawyer shall decline to represent a client or, when representation has commenced shall withdraw from the representation of the client, if representation will result in

violation of Rule 3.08 [relating to lawyer as witness], other applicable rules of professional conduct or other law. Therefore, if a governmental agency withholds consent to a lawyer representing a private client in connection with a matter in which the lawyer participated personally and substantially as a public officer or employee, that lawyer must, under Rule 1.15, decline representation or withdraw from representation of said client. That situation is, of course, the easy case. A more interesting question arises where a law firm has hired a governmental attorney who was substantially and personally engaged in a matter with the agency and that law firm undertakes or continues representation of the private client in the same matter. The reader should consider whether the law firm is required under Rule 1.15 to withdraw from representation if it fails to provide written notice to the governmental agency with reasonable promptness as required under Rule 1.10(b)(2). Inasmuch as failure to provide written notice of the situation violates Rule 1.10(b), it is the reader's opinion that this violation would obligate the law firm to withdraw representation pursuant to 1.15 inasmuch as failure to notify with reasonable promptness has already resulted in violation of Rule 1.10.

Turning again to Rule 1.10, the Supreme Court has adopted a new provision at subsection (e) which should be of particular interest to governmental attorneys and law firms contemplating hiring government attorneys. Rule 1.10(e)(2) states as follows:

Except as law may otherwise expressly permit, a lawyer serving as a public officer or employee shall not negotiate for private employment with any person who is involved as a party or an attorney for a party in a matter in which a lawyer is participating personally and substantially.

Such a situation is, at the least, unseemly and certainly could lead to the exertion of undue influence on both the governmental attorney and the attorney representing a party in which the governmental attorney is participating personally and substantially. Regardless of the personal integrity of the governmental attorney and the private law firm, there is an appearance of impropriety when a governmental attorney joins a private law firm soon after that attorney has been involved in a case where that firm represented a private client.

I would urge all practitioners to become familiar with Rule 1.10 and the comments promulgated thereto. The disqualification of Rule 1.10 is based, not on attorney conflicts, but rather on the appearance of impropriety. Disciplinary rules regarding conflicts are, of course, applicable to all attorneys, regardless of a revolving door scenario. These Rules not only affect the government attorney upon leaving public service and entering private practice, but also potentially impact law firms seeking

to employ government attorneys. Moreover, Rule 1.10 provides grounds for attorneys involved in cases against lawyers previously employed by a governmental agency to investigate whether his adversary should be disqualified from the case.

III. FEDERAL PROHIBITIONS ON POST-GOVERNMENT EMPLOYMENT

Restrictions on post-federal government employment activities have been codified in the Ethics in Government Act, 18 U.S.C. 201 et. seq. Section 207 conveys the substantive provisions of this Act. Not only does Section 207 (j) grant the appropriate government agency the power to take disciplinary action in response to activities outlined in the statute, it also provides various criminal penalties for statutorily unethical behavior.

The current version of Section 207 is extremely complex, making its application difficult. For example, Section 207 (a) places permanent restrictions on certain government employees, prohibiting them from knowingly acting as agent or attorney for, or otherwise representing, any other person in any formal or informal appearance before departments, agencies, courts, etc., with the intent to influence, or from making any oral or written communication on behalf of any other person in connection with any proceeding, contract, investigation, etc., involving a specific party in which the government is also a party or has a direct and substantial interest and in which the employee participated personally and substantially as an officer or employee. 18 U.S.C. sec. 207 (a).

Time-sensitive restrictions are set forth in Section 207 (b), adding even more confusion to the statute. For example, this subsection makes it a crime to engage in representation within two years of the government employment's cessation--in matters pending under the employee's official responsibility in the year preceding the employment termination or in matters in which the employee participated personally and substantially as an officer or employee. 18 U.S.C. sec. 207 (b). There appears to be substantial overlap between the permanent and time-sensitive restrictions; this problem has not been addressed in judicial interpretation of the statute, nor have amendments to the statute (effective January 1, 1991) corrected the problem. A third subsection provides a one-year restriction on post-employment activities for former "senior Government employees" and former employees specifically designated by the statute. 18 U.S.C. sec. 207 (c).

Basing authority on Section 207, the Office of Management and Budget ("OMB") and the Office of Government Ethics ("OGE") have each promulgated regulations to reflect the provisions of Section 207. Regulations Concerning Post Employment Conflict of Interest, 5 C.F.R. sec. 2637 (1990); Post Employment Conflict of

Interest, 5 C.F.R. sec. 1304 (1990). The OGE regulations list government employees falling into the "senior Government employees" category of the Section 207 post-employment restrictions. 5 C.F.R. sec. 2637.216. Apparently, various employees (including some attorneys) of the Environmental Protection Agency and the Justice Department are thus subject to the restrictions on post-government employment representation paralleled in Section 207 (c).

Because Section 207 is poorly structured and wordy, the regulations promulgated by the OGE and the OMB provide helpful insight into the effect of Section 207 on various issues. For example, section 2637.209 of the OGE regulations clarifies that Section 207 (g) does not disqualify partners of former government employees, but that the statute in fact contains in Section 207 (b) (ii) a built-in restriction on secondary-level activity. 5 C.F.R. sec. 2637.209 (1990). Although section 2637.209 hints that the distinction between the permanent restrictions in Section 207 (a) and the time-sensitive restrictions in Section 207 (b) lies in the degree of the former government employment involvement, the statutory text does not make this distinction clear. The OGE synopsis of Section 207 (a) and (b) indicates that the permanent restriction will operate with respect to matters in which an employee participated personally and substantially as a government employee, while the two-year restriction will operate when matters pending under the employee's responsibility during the year preceding termination of her official responsibility are involved. 5 C.F.R. sec. 2637.201 and 2637.202. However, the text of Sections 207 (a) and (b) does not make this distinction as clear.

These regulations also help to clarify the distinctions between permanent and time-sensitive application of the statute's post-employment restrictions. The OGE regulations, for example, provide a synopsis of the pertinent subsections of Section 207:

Section 2637.201 (a) Basic prohibition of 18 U.S.C. 207 (a). No former Government employee, after terminating Government employment, shall knowingly act as agent or attorney for, or otherwise represent any other person in any formal or informal appearance before, or with the intent to influence, make any oral or written communication on behalf of any other person (1) to the United States, (2) in connection with any particular Government matter involving a specific party, (3) in which matter such employee participated personally and substantially as a government employee.

Section 2637.202 (a) Basic prohibition of 18 U.S.C. 207 (b) (i). No former Government employee, within two years after terminating employment by the United States, shall knowingly act as agent or attorney for,

or otherwise represent any other person in any formal or informal appearance before or with the intent to influence, make any oral or written communication on behalf of any other person (1) to the United States, (2) in connection with any particular Government matter involving a specific party (3) if such matter was actually pending under the employee's responsibility as an officer or employee within period of one year prior to the termination of such responsibility.

Section 2637.203 (a) Basic prohibition of 18 U.S.C. 207 (b) (ii). No former Senior Employee, within two years after terminating employment by the United States, shall knowingly represent or aid, counsel, advise, consult, or assist in representing any other person by personal presence at any formal or informal appearance, (1) before the United States, (2) in connection with any particular government matter involving a specific party, (3) in which matter he or she participated personally and substantially.

5 C.F.R. sec. 2637 (1990).

Sections 2637.201 and 2637.202 remedy the overlap apparent in Sections 207 (a) and (b) by omitting the concluding language in Section 207 (b) (3). This omitted language remains in the statute, making the two year restriction applicable to matters pending during the last year of the employee's service "or matters in which he participated personally and substantially as an officer or employee." This is the same situation addressed by Section 207 (a), thus giving rise to an apparent overlap between Sections 207 (a) and (b) in the statute. In short, the distinction between the permanent and time-sensitive restrictions lies in the magnitude of the employee's involvement in a particular matter. If the government employee participated personally and substantially in a matter, she is permanently precluded from representing a private party in that matter; if the matter was merely pending under the former employee's responsibility during her last year of service, she is restricted from representing a related private party within the first two years following her termination of government employment.

In summary, federal government attorney-employees will face slightly different post-employment restrictions than will state attorney-employees subject to Rule 1.10 of the Texas Disciplinary Rules. The federal statutes and regulations permanently preclude post-government employment representation of certain clients in certain matters, but unlike the Texas Rules make some of its restrictions sensitive to time. Judging by the OGE regulations, the distinction between permanent and time-sensitive restrictions lies in the degree of a former employee's

involvement in the matter. The federal statutes and regulations do not impute a government employee's disqualification to her partners and associates.

IV. HOUSE BILL NO. 1237

The enactment of House Bill No. 1237 (the "Act") in 1989, represents a classic example of legislation aimed at curtailing the revolving door practice before state environmental agencies. See Attachment No. 2. While the scope of the Act is limited to permit proceedings involving former high ranking State employees, House Bill No. 1237 is significant both from a precedential standpoint and the fact that specific agencies having jurisdiction over environmental programs were singled out.

House Bill 1237 adds new provisions regarding permit actions to the Texas Clean Air Act, Chapter 26 of the Texas Water Code, and Section 4(e) of the Texas Solid Waste Disposal Act. Applicable to the TWC, TACB, and the Texas Department of Health (TDH), the legislation mandates denial of an application for the issuance, amendment, renewal or transfer of a permit if the agency determines that its former employee:

- (1) participated personally and substantially in the agency's review, evaluation or processing or the application before leaving agency employment, and
- (2) after leaving that agency's employment, provided assistance with the same application, including assistance with preparation or presentation of the application or legal representation of the applicant.

House Bill No. 1237, effective September 1, 1989 applies to applications for issuance, amendment, renewal or transfers of permits submitted to the TACB, TWC or TDH on or after September 1, 1989 or pending before these agencies on or after September 1, 1989.

A few matters are particularly germane with respect to House Bill No. 1237. As originally introduced by Representative Tony Polumbo D-Houston and Senator Gene Green D-Houston, the bill provided that permit denial be based on a former employee's mere participation in the agency's review, evaluation, or processing of the subject application before leaving his employment with the agency. The requirement that the participation was personal and substantial was added as an amendment to the bill. Note that the added phrase "participated personally and substantially as a former employee" is directly taken from rule 1.10(a) of the Texas Disciplinary Rules of Professional Conduct. An interesting highlight to the Act is the fact that, at the time of its introduction, pending before the TWC was a hazardous waste permit application represented by the prior TWC executive director.

The facility was located in the Houston area, where the bill's sponsors reside.

In a permit action within the ambit of House Bill No. 1237, the agency must afford an applicant the opportunity for a hearing before denying an application on the basis of conduct proscribed by the Act. While not specifically spelled out in the legislation, the hearing would obviously entail an inquiry into (1) whether the former employer was within the definition of that term in the Act, (2) whether the former employee participated personally and substantially in the agency's review, evaluation or processing of the application before leaving the agency, and (3) whether the former employee, in fact, is representing the applicant. An affirmative findings by the agency compels denial of the application.

House Bill No. 1237 defines "former employee" to mean a person (1) who was previously employed by the agency as a supervising or exempt employee; and (2) whose duties during employment with the agency included involvement in or supervision of the agency's review, evaluation or processing of applications. On its face, then, the bill would not cover a staff attorney at the TWC, TACB or TDH. Rather, the obvious intent is to prohibit high ranking government employees from exerting undue influence on agency proceedings, on behalf of private clients, upon leaving the government.

The Act does not include a provision allowing for an agency's consent to representation of an applicant by a former employee, as does Rule 1.10(a) of the State Bar Rules. Furthermore, permit denial can be based on "legal representation" by a former employee to an applicant. Query whether the sole act of a former employee providing advice to an applicant should be grounds for permit denial. As written, the Act could result in permit denial without a former employee even appearing before the agency. The writer submits that such a result borders on the draconian.

V. CONCLUSION

While the adoption of Rule 1.10 is very recent and should remain in place for many years, we can expect to see more and more legislation similar to House Bill No. 1237. Revolving door legislation will be the subject of lively debate in the 72nd Session of the Texas Legislature and Texas environmental agencies will again be the target of bills which impose post-employment restrictions. As is typically the case with Texas lawmaking, precisely what will result as law is anyone's guess.

**RULE 1.10 SUCCESSIVE GOVERNMENT AND
PRIVATE EMPLOYMENT**

(a) Except as law may otherwise expressly permit, a lawyer shall not represent a private client in connection with a matter in which the lawyer participated personally and substantially as a public officer or employee, unless the appropriate government agency consents after consultation.

(b) No lawyer in a firm with which a lawyer subject to paragraph (a) is associated may knowingly undertake or continue representation in such a matter unless:

(1) The lawyer subject to paragraph (a) is screened from any participation in the matter and is apportioned no part of the fee therefrom; and

(2) written notice is given with reasonable promptness to the appropriate government agency.

(c) Except as law may otherwise expressly permit, a lawyer having information that the lawyer knows or should know is confidential government information about a person or other legal entity acquired when the lawyer was a public officer or employee may not represent a private client whose interests are adverse to that person or legal entity.

(d) After learning that a lawyer in the firm is subject to paragraph (c) with respect to a particular matter, a firm may undertake or continue representation in that matter only if that disqualified lawyer is screened from any participation in the matter and is apportioned no part of the fee therefrom.

(e) Except as law may otherwise expressly permit, a lawyer serving as a public officer or employee shall not:

(1) Participate in a matter involving a private client when the lawyer had represented that client in the same matter while in private practice or nongovernmental employment, unless under applicable law no one is, or by lawful delegation may be, authorized to act in the lawyer's stead in the matter; or

(2) Negotiate for private employment with any person who is involved as a party or as attorney for a party in a matter in which the lawyer is participating personally and substantially.

(f) As used in this rule, the term "matter" does not include regulation-making or rule-making proceedings or assignments, but includes:

(1) Any adjudicatory proceeding, application, request for a ruling or other determination, contract, claim, controversy, investigation, charge accusation, arrest or other similar, particular transaction involving a specific party or parties; and

(2) any other action or transaction covered by the conflict of interest rules of the appropriate government agency.

(g) As used in this Rule, the term "confidential government information" means information which has been obtained under governmental authority and which, at the time this Rule is applied, the government is prohibited by law from disclosing to the public or has a legal privilege not to disclose, and which is not otherwise available to the public.

(h) As used in this Rule, "Private Client" includes not only a private party but also a governmental agency if the lawyer is not a public officer or employee of that agency.

(i) A lawyer who serves as a public officer or employee of one body politic after having served as a public officer of another body politic shall comply with paragraphs (a) and (c) as if the second body politic were a private client and with paragraph (e) as if the first body politic were a private client. (Adopted eff. Jan. 1, 1990.)

COMMENT

1. This Rule prevents a lawyer from exploiting public office for the advantage of a private client.

2. A lawyer licensed or specially admitted in Texas and representing a government agency is subject to the Texas Rules of Professional Conduct, including the prohibition against representing adverse interests stated in Rule 1.06

and the protections afforded former clients in Rule 1.09. In addition, such a lawyer is subject to this Rule and to statutes and government regulations regarding conflict of interest. Such statutes and regulations may circumscribe the extent to which the government agency may give consent under paragraph (a) of this Rule.

3. Where a public agency and a private client are represented in succession by a lawyer, the risk exists that power or discretion vested in public authority might be used for the special benefit of the private client. A lawyer should not be in a position where benefit to a private client might affect performance of the lawyer's professional functions on behalf of public authority. Also, unfair advantage could accrue to the private client by reason of access to confidential government information about the client's adversary obtainable only through the lawyer's government service. However, the rules governing lawyers presently or formerly employed by a government agency should not be so restrictive as to inhibit transfer of employment to and from the government. The government has a legitimate need to attract qualified lawyers as well as to maintain high ethical standards. The provisions for screening and waiver are necessary to avoid imposing too severe a deterrent against entering public service. Although "screening" is not defined, the screening provisions contemplate that the screened lawyer has not furnished and will not furnish other lawyers with information relating to the matter, will not have access to the files pertaining to the matter, and will not participate in any way as a lawyer or adviser in the matter.

4. When the client of a lawyer in private practice is an agency of one government, that agency is a private client for purposes of this Rule. See paragraph (h). If the lawyer thereafter becomes an officer or employee of an agency of another government, as when a lawyer represents a city and subsequently is employed by a federal agency, the lawyer is subject to paragraph (e). A lawyer who has been a public officer or employee of one body politic and who becomes a public officer or employee of another body politic is subject to paragraphs (a), (c) and (e). See paragraph (i). Thus, paragraph (i) protects a governmental agency without regard to whether the lawyer was or becomes a private practitioner or a public officer or employee.

5. Paragraphs (b)(1) and (d)(1) do not prohibit a lawyer from receiving a salary or partnership share established by prior independent agreement. They prohibit directly relating the attorney's compensation to the fee in the matter in which the lawyer is disqualified.

6. Paragraph (b)(2) does not require that a lawyer give notice to the governmental agency at a time when premature disclosure would injure the client; a requirement for premature disclosure might preclude engagement of the lawyer. Such notice is, however, required to be given as soon as practicable in order that the government agency or affected person will have a reasonable opportunity to ascertain compliance with Rule 1.10 and to take appropriate action if necessary.

7. Paragraph (c) operates only when the lawyer in question has actual as opposed to imputed knowledge of the confidential government information.

8. Paragraphs (a) and (e) do not prohibit a lawyer from jointly representing a private party and a government

agency when doing so is permitted by Rule 1.06 and is not otherwise prohibited by law.

9. Paragraph (e)(1) does not disqualify other lawyers in the agency with which the lawyer in question has become associated. Although the rule does not require that the lawyer in question be screened from participation in the matter, the sound practice would be to screen the lawyer to the extent feasible. In any event, the lawyer in question must comply with Rule 1.05.

10. As used in paragraph (i), "one body politic" refers to one unit or level of government such as the federal government, a state government, a county, a city or a precinct. The term does not refer to different agencies within the same body politic or unit of government.

AN ACT

relating to certain circumstances for denial of an application for the issuance, amendment, renewal, or transfer of a permit by certain state agencies.

Be it enacted by the Legislature of the State of Texas:

SECTION 1. The Texas Clean Air Act (Article 4477-5, Vernon's Texas Civil Statutes) is amended by adding Section 3.282 to read as follows:

Sec. 3.282. DENIAL OF APPLICATION FOR PERMIT; ASSISTANCE PROVIDED BY CERTAIN FORMER EMPLOYEES. (a) In this section, "former employee" means a person:

- (1) who was previously employed by the board as a supervisory or exempt employee; and
 - (2) whose duties during employment with the board included involvement in or supervision of the board's review, evaluation, or processing of applications.
- (b) The board shall deny an application for the issuance, amendment, renewal, or transfer of a permit and may not issue, amend, renew, or transfer the permit if the board determines that a former employee:
- (1) participated personally and substantially as a former employee in the board's review, evaluation, or processing of that application before leaving his employment with the board; and
 - (2) after leaving his employment with the board, provided assistance with the application for the issuance, amendment, renewal, or transfer of the permit, including assistance with preparation or presentation of the application or legal representation of the applicant.
- (c) The board shall provide an opportunity for a hearing to an applicant before denying an application under this section.
- (d) Action taken under this section will not prejudice any application other than an application in which the former employee provided assistance.

SECTION 2. Chapter 26, Water Code, is amended by adding Section 26.0283 to read as follows:

Sec. 26.0283. DENIAL OF APPLICATION FOR PERMIT; ASSISTANCE PROVIDED BY CERTAIN FORMER EMPLOYEES. (a) In this section, "former employee" means a person:

- (1) who was previously employed by the commission as a supervisory or exempt employee; and
 - (2) whose duties during employment with the commission included involvement in or supervision of the commission's review, evaluation, or processing of applications.
- (b) The commission shall deny an application for the issuance, amendment, renewal, or transfer of a permit and may not issue, amend, renew, or transfer the permit if the board determines that a former employee:
- (1) participated personally and substantially as a former employee in the commission's review, evaluation, or processing of that application before leaving his employment with the commission; and
 - (2) after leaving his employment with the commission, provided assistance with the application for the issuance, amendment, renewal, or transfer of a permit, including assistance with preparation or presentation of the application or legal representation of the applicant.
- (c) The commission shall provide an opportunity for a hearing to an applicant before denying an application under this section.
- (d) Action taken under this section will not prejudice any application other than an application in which the former employee provided assistance.

SECTION 3. Section 4(e), Solid Waste Disposal Act (Article 4477-7, Vernon's Texas Civil Statutes), is amended by adding Paragraph (14) to read as follows:

(14) After providing an opportunity for a hearing to an applicant, the state agency shall deny an application for the issuance, amendment, renewal, or transfer of a permit within its jurisdiction and may not issue, amend, renew, or transfer the permit if the state agency determines that a former employee participated personally and substantially as a former employee in the state agency's review, evaluation, or processing of that application before leaving his employment with the state agency and, after leaving his employment with the state agency, provided assistance on the same application for the issuance, amendment, renewal, or transfer of a permit, including assistance with preparation or presentation of the application or legal representation of the applicant. Action taken under this paragraph will not prejudice any application in which the former employee did not provide assistance. In this paragraph, "former employee" means a person:

- (A) who was previously employed by the state agency as a supervisory or exempt employee; and
- (B) whose duties during employment with that state agency included involvement in or supervision of that state agency's review, evaluation, or processing of applications.

SECTION 4. This Act takes effect September 1, 1989, and applies only to an application for the issuance, amendment, renewal, or transfer of a permit that is:

- (1) submitted to the Texas Air Control Board, the Texas Water Commission, or the Texas Department of Health on or after September 1, 1989; or
- (2) pending for consideration by the Texas Air Control Board, the Texas Water Commission, or the Texas Department of Health on September 1, 1989.

SECTION 5. The importance of this legislation and the crowded condition of the calendars in both houses create an emergency and an imperative public necessity that the constitutional rule requiring bills to be read on three several days in each house be suspended, and this rule is hereby suspended.

Passed by the House on May 23, 1989, by a non-record vote; passed by the Senate on May 27, 1989, by a viva-voce vote.

Approved June 16, 1989.

Effective Sept. 1, 1989.

PROHIBITED EX PARTE COMMUNICATIONS
WITH AGENCY DECISION MAKERS

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August 3, 1990

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I. INTRODUCTION

The purpose of this paper is to discuss Texas law relating to ex parte communications in contested case adjudication before state administrative agencies. Accordingly, relevant statutory and constitutional provisions with interpretive caselaw will be examined. Exceptions to the ex parte prohibition will be also presented as well as relevant caselaw. Additionally, problems dealing with presumptions of validity of agency actions and whether there exists further need to establish harm will be discussed as well as proof of ex parte communications not contained in the agency record. Finally, the State Bar rules relating to professional conduct and provisions of the Texas Penal Code relating to prohibited ex parte communication will be briefly presented.

II. EX PARTE COMMUNICATION

Ex parte communication occurs when there is communication by any person to a decision maker in a pending contested case regarding any issue of fact or law in the case and no notice or opportunity to hear and respond to such communication has been provided to the parties. Such communication may, obviously, afford one party unfair access to the decision maker and provide a greater ability to influence the outcome of a contested matter. The manner of this communication may be direct and open or indirect and secretive. The form of this contact may be written or oral or by

demonstration or inspection. Such communications are unrestrained by the oath of truth, the penalty of perjury, by cross-examination by an adverse party, or the rules of evidence. Generally, there is no record of what communication is made. Its effect may take hold long before it is discovered by the other parties, if at all, and before any meaningful attempt can be made to correct or dispute it by the other parties. For these reasons, it is considered by many to be the most dangerous threat to the integrity of the adjudicative system.

III. DUE PROCESS AND FUNDAMENTAL FAIRNESS

Under the 14th Amendment to the U.S. Constitution, persons are protected from state action by the guarantee of due process of law. Procedural due process provides, in part, that persons whose rights or privileges are to be affected must be afforded notice and an opportunity to be heard, as well as the opportunity to confront the evidence presented. This right is also protected under Article I, Section 19, of the Texas Constitution.

Prior to the enactment of Section 17 of the Administrative Procedure and Texas Register Act (APTRA), art. 6252-13a, Tex. Rev. Civ. Stat., the legal basis used to support the prohibition of ex parte communication was the constitutional due process test as applied to specific administrative procedures. The principal pre-APTRA case on ex parte communications is Lewis v. Guaranty Federal Savings and Loan Association, 483 S.W.2d 837 (Tex. Civ. App. - Austin 1972, writ ref'd n.r.e.). This case involved a contested

application to grant a charter for a proposed savings and loan association filed with the Texas Savings and Loan Commission pursuant to the Texas Savings and Loan Act, art. 852a, Tex. Rev. Civ. Stat. The matter was heard in an adjudicative type hearing procedure which was adversarial, subject to the rules of evidence, and conducted for the purpose of constructing an evidentiary record on which the Savings and Loan Commissioner would base his determination. Almost four months after the close of the evidentiary hearing, the Commissioner and his Deputy flew to the site of the proposed charter and conducted an "investigation," accompanied by one of the organizers of the savings and loan association. The purpose of the trip, according to the Commissioner, was "to confirm or deny what's written in the record." No notice of the investigation was provided to the other parties. Additionally, no written memorandum of the trip and no findings developed by the investigation were placed in the official record of the hearing. Three days after the trip, the Commissioner granted the application. The opponents did not learn of the trip until eight months after its occurrence during a deposition of the deputy commissioner in preparation for trial.

In determining whether opponents of the application had been denied due process of law, the Austin Court of Appeals began with an examination of the decision of the Texas Supreme Court in Gerst v. Nixon, 411 S.W.2d 350 (Tex. 1966). Relying on that case, the court held that the provisions of the new Savings and Loan Act contained in article 852a complied with the Texas Constitution in

providing that "due process is denied if the Commissioner considers, without notice and opportunity to be heard, evidentiary matters not introduced or not made a part of the record of the hearing as otherwise permitted." 483 S.W.2d at 841. The court added that the parties were never made aware that they were being confronted by evidence obtained by the Commissioner during his investigation. The result of this omission was that the opponents were denied not only the right to cross-examine and to offer evidence in rebuttal or explanation of the impressions, communications, and other evidence presented to the Commissioner during his investigation, but were entirely excluded from the investigation. Id. at 841. The court concluded that, given the exclusive nature of the investigation, the stated purpose, and the arrival of a determination so shortly after the investigation, "it must be presumed that the separate and covert investigation resulted in findings which, consequently, precipitated the decision." Id.

In summary, there exists a due process basis for relief with respect to ex parte communications that is separate and independent from any statutory provisions. Even after the enactment of APTRA, court decisions examining whether prohibited ex parte communication occurred not only apply the standards of Section 17, but also of due process and fundamental fairness to determine whether relief is warranted. See County of Galveston v. Texas Department of Health, 724 S.W.2d 115 (Tex. Civ. App. - Austin 1987, writ ref'd n.r.e.);

Texas State Board of Medical Examiners v. Nacol, 696 S.W.2d 687 (Tex. Civ. App. - Beaumont 1985 no writ).

It should be noted that the court, in addition to addressing the legal issue presented, also felt compelled to address the "extraordinary conduct" of the Commissioner in making his ex parte investigation four months after the close of the evidentiary hearing, in the private company of a leading organizer, and followed three days later by the Commissioner's order granting the charter. After comparing the Commissioner's duties to that of a judge in court, the court went on to state that "each is charged with the solemn trust to act fairly and impartially in fulfilling invested duties in the governmental household of the public. Each must act with genuine evenhandedness, compelled by a firm and continuous desire to render to everyone that which is due, and to shun any conduct tending to undermine faith and confidence in the man or the office in which he acts. Caesar's wife, Pompeia, was merely a bystander when Clodius committed an act of sacrilege in the house in which she was lodged, yet Caesar divorced her, not because he believed her guilty of misconduct, but, he said, 'Because my wife should be above suspicion'" Id. at 843.

IV. SECTION 17 OF APTRA

In 1975, the Texas Legislature enacted the Administrative Procedure and Texas Register Act (APTRA), the provisions of which became effective January 1, 1976. Ch. 61, 1975 Tex. Gen. Laws 136. Originally, Section 17 of the Act contained a general prohibition

on ex parte communications in contested cases with parties or representatives of parties regarding issues of both fact and law. However, it implicitly permitted ex parte communications with any other person regarding these issues. Because of this omission, the next session of the legislature amended Section 17 in 1977 to read in its present form:

Unless required for the disposition of ex parte matters authorized by law, members or employees of an agency assigned to render a decision or to make findings of fact and conclusions of law in a contested case may not communicate, directly or indirectly, in connection with any issue of fact or law with any agency, person, party or their representatives, except on notice and opportunity for all parties to participate. An agency member may communicate ex parte with other members of the agency, and pursuant to the authority provided in Subsection (q) of Section 14, members or employees of an agency assigned to render a decision or to make findings of fact and conclusions of law in a contested case may communicate ex parte with employees of the agency 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.

As presently written, therefore, Section 17, with some exceptions, prohibits ex parte communications between decision makers and any person regarding an issue of fact or law in a contested case.

APTRA does not specify a penalty if the ex parte prohibition is violated. However, Texas case law indicates that evidence of ex parte contacts is sufficient to void an agency order or appeal (see discussion below). Presumably, the matter would then be remanded back to the agency for a rehearing to cure the alleged error. The

offending agency member or employee would most likely need to abstain from the decision making process.

Decision makers are described under the section as "members or employees of an agency assigned to render a decision or to make findings of fact and conclusions of law in a contested case." Although no further definition is provided, such agency "members" would include the commissioners, directors, and other such elected or appointed heads of agencies. "Employees" of an agency for purposes of this provision would include hearings examiners, since they preside over the hearings, make determinations as to the admissibility of evidence, rule on motions and otherwise develop the record which forms the basis of the agency decision. Examiners also propose findings of fact and conclusions of law. Ex parte communications with non-decision making officials are implicitly allowed as long as they do not lead indirectly to subsequent ex parte communications between these officials and the decision makers.

In County of Galveston v. Texas Department of Health, Supra, the Court considered the argument of appellants that the final order of the Department of Health represents the decision of an "organization," and not just merely of the Department's members, because the functions of various Department personnel affected the final decision. Specifically, the appellants argued that communications between the applicant and agency staff during the application review stage where agency staff informed the applicant of numerous changes that were required for the application to meet

Department regulations, were prohibited ex parte communication. Once these requirements were met, the application was forwarded as "complete" and recommended for approval. All this occurred prior to the public hearing. The court easily rejected this argument by finding that this communication did not fall within the prohibition because the staff members were not assigned to render a decision or make findings of fact or conclusions of law. It may additionally be added that such communication did not relate to a "contested" case at the time it occurred.

A. Exceptions

Exceptions to the ex parte prohibition are found in Section 17 itself, some with the help of judicial construction.

1. Notice and opportunity to participate was provided.

The most obvious exception contained in Section 17 provides that an ex parte communication is not prohibited when notice and opportunity to participate has been provided to all the parties in a contested case. A party has no justified claim to lack of due process or fundamental fairness if, after receiving notice, it decides not to participate. Section 17 does not state what constitutes adequate notice. Also, many agencies do not provide what constitutes adequate notice of ex parte communications in their rules. For example, rules of the Texas Water Commission contained in Title 31, Texas Administrative Code ("31 TAC") §263.22 simply provide that notice and opportunity for all parties to

participate must be given. In the absence of any specific agency rules, one may always look to the State Bar Rules on Professional Conduct. However, Rule 3.05 merely states that ex parte communications are permissible if it is done: (1) in writing and the proponent "promptly" delivers a copy to the adverse parties or their legal representatives; or (2) orally "upon adequate notice" to the parties or their lawyers. Finally, I can find no Texas case law on this aspect of Section 17. Therefore, many agencies must attempt to determine what constitutes adequate notice on a case-by-case basis. Factors that might be considered, for example, would be the distance to be traveled by the adverse parties, adequate time to avoid scheduling conflicts, the complexity of the subject to be discussed, and the amount of evidence to be produced.

2. Communications between agency members.

Section 17 expressly allows an agency member to communicate ex parte with other members of the agency. However, such closed communication may be in conflict with the Open Meetings Act, requiring notice of any "meeting" between a quorum of agency members when agency business is being discussed. Art. 6252-17 Tex. Rv. Civ. Stat. In Texas Water Commission v. Acker, No. C-9031 (Tex. May 2, 1990), the Texas Supreme Court found that the three-member Texas Water Commission violated the Open Meetings Act by virtue of private deliberations between two members of the Commission during a recess of the Commission's hearing on a waste water discharge permit application. In reaching its decision, the

Supreme Court rejected the County Appeals ruling that Section 17 was in irreconcilable conflict with the Open Meeting Act but that since Section 17 was the more recent and specific provision, it took precedence over the Open Meetings Act and, therefore, the private conversations between the Commissioners was permissible ex parte communication. In rejecting this decision of the Court of Appeals, the Supreme Court reasoned that Section 17 can be harmonized with the Open Meetings Act by allowing a State Commission's members to confer ex parte when there is less than a quorum present. In a footnote, the Court admitted that this harmonizing denies three-member commissions the opportunity to meet ex parte. However, the Court explains that since APTRA "applies to all statewide boards, commissions, departments of officers, regardless of size... our approach to interpreting APTRA and the Open Meetings Act together accords meaning to both." The court then remanded the matter to the trial court for further proceedings "consistent with this opinion."

Finally, it should be noted that the exception to the prohibition allowing ex parte discussions between agency members does not suspend the due process requirement and provisions under §13(h)g APTRA that the decision be based upon evidence in the record and facts officially noticed at the hearing with notice to all parties of such evidence and opportunity to respond. See Railroad Commission of Texas v. Lone Star Gas Co., 618 S.W.2d 121 (Tex.Civ. App. - Austin 1981, no writ). Dotson v. Texas State Board of Medical Examiners, 612 S.W.2d 921 (Tex. 1981). Therefore,

any permissible ex parte should be disclosed in the record if it forms a basis for the decision.

3. Communication with agency employees who have not participated in a hearing, to use special skills and knowledge in evaluating the evidence.

Another express exception found in Section 17 to the general prohibition against ex parte communications with agency decision makers is that communication between decision makers and "employees of the agency who have not participated in any hearing of the case" if the communication is "for the purpose of utilizing the special skills or knowledge of the agency and its staff in evaluating the evidence." See Galveston County. First, it should be noted that such communication may only be for the purpose of evaluating the evidence may be presented in such discussions without proper notice and opportunity for hearing. See, Railroad Commission of Texas v. Lone Star Gas Co., supra; Dobson v. Texas State Board of Medical Examiners, supra. Secondly, although the exception applies only to employees who have in no way participated in the contested hearing, the possibility exists that an indirect communication can occur where the staff member who participated in the hearing communicates with the non-participating staff person who has been asked by the decision maker to assist in evaluating the evidence. The latter staff member, in turn, imparts information to the decision maker gained from the participating staff member. It is, therefore, incumbent upon the agencies to establish policies and procedures which make employees aware of such prohibited ex parte

communication. Rules of the Texas Water Commission contained in 31 TAC §263.23 provide that a decision maker may request the executive director to assign to the decision maker one or more employees who have not participated in the proceeding to assist in the evaluation of the evidence. If this is done prior to the evidentiary hearing getting underway, it may, in effect, "quarantine" the assisting staff member in making participating staff members aware by this formal designation that communication between the designated staff and the decision maker is limited by the ex parte provision of Section 17.

4. Communications between agency members and the agency's general counsel.

The most comprehensive case on the ex parte prohibition under Section 17 is County of Galveston v. Texas Department of Health, 724 S.W.2d 115 (Tex. App. - Austin 1987, ref'd n.r.e.). The case is probably best known for producing a corollary to the exception involving communications between the decision maker and non-participating staff. Specifically, the Court examined the issue of whether ex parte communications between an agency member and the agency's general counsel regarding issues of law relating to a contested hearing fell within the prohibition contained in Section 17.

Section 17 forbids a decision maker from obtaining legal advice ex parte, concerning a contested case, unless such advice falls within the exception allowed for ex parte communications "required for the disposition of the ex parte matters authorized by

law...." The court expressed concern that a literal interpretation would isolate decision makers from any legal views and opinions except those given on notice and opportunity for all parties to participate. After finding no judicial opinion or the authority that shed light on the legislative intention behind this exception, the Court examined the statutory purpose and structure of the agency. The Court concluded that because the Legislature does not require the agency member to be legally trained, the Legislature must have intended that he should have independent legal advice when necessary to discharge his statutory duties. "If claimed that advice in contested cases submitted to him for final decision," the Court reasoned, "then their adjudication becomes a charade and hardly the kind of determination envisaged by the Legislature in any statute requiring contested-case adjudications." Id., at 124

5. Communication involving uncontested or immaterial issues of fact or law.

Procedural matters that are uncontested or were not material to the substantive issues of a contested case may be permissible subjects for ex parte communications. In Railroad Commission of Texas v. City of Forth Worth, 576 S.W.2d 899 (Tex. Civ. App. - Austin 1979, writ ref'd n.r.e.), the City of Fort Worth appealed an order of the Railroad Commission adjusting the base cost of gas used in calculating the gate rate charged by the transmission company to a distribution company. The City alleged that several ex parte communications were violations of Section 17, including:

- (1) a letter from staff to a party concerning procedural rules;
- (2) a party's request, presumably to the hearings examiner, for a continuance;
- (3) a request for a hearing date, presumably by a party to the hearings examiner;
- (4) an exhibit which was lost and which the examiner disclaimed any consideration; and
- (5) an amended application indicated on its face that service was made.

After reviewing these communications, the court stated its belief that "it is clear that the communications either did not concern any issue of fact or law or did not involve any agency member assigned to render a decision or making findings [of fact or conclusions of law]. At any rate, no showing of harm has been made." Id at 904. The court gives nothing else as to its reasons for finding these ex parte communications permissible. With respect to item one, it is assumed it was permissible since it did not involve any agency member or employee assigned to render a decision or make findings of fact or conclusions of law. Since items 2, 3, 4, and 5 were made to the hearings examiner, one who makes such finds and conclusions, presumably the court determined that they did not involve an issue of fact or law. Procedural matters may be communications "required for the disposition of ex parte matters authorized by law" only if they are not issues, i.e., contested, in the case. The court's opinion does not state whether

one lost exhibit or the procedural matters were contested issues in the case. However, the court's holding that no harm was shown indicates they were either uncontested or immaterial.

6. Communications prior to filing of application.

In Vandygriff v. First Savings and Loan Association of Borger, 617 SW.2d 669 Tex. 1981), Section 17 was held to not apply in the absence of the pendency of a contested case. The facts in Vandygriff involved a charter application that had been previously denied by the Texas Savings and Loan Commission. After the denial, five of the disappointed organizers came to Austin and visited with the Commissioner, giving him a "different view" of economic conditions in the area where the proposed charter was to be established than that reflected in the order denying the application. Subsequently, a new application was filed, which the Commission approved. The court of civil appeals determine that, under the circumstances, the absence of a formal contested case did not preclude the application of Section 17 since the first and second proceedings "were, in effect, just one ongoing application; and" the applicants acted contrary to the command of §17. First Savings and Loan Association of Borger v. Vandygriff, 605 S.W.2d 740, 742 (Tex. Civ. App. - Austin 1980) rev'd 617 S.W.2d 669. Relying on the pre-APTRA cases of Gerst v. Nixon, 411 S.W.2d and Lewis v. Guaranty Federal Savings and Loan Assoc., supra., 350 (Tex. 1966), the court also stated that an administrative order must be grounded upon evidence taken at the hearing and upon facts

officially noticed by the hearings officer in the record of such hearing. "Recognition of this fundamental rule necessarily means that ex parte communications may not be a basis for such order." Vandygriff, supra, 617 S.W.2d at 672.

However, the Texas Supreme Court rejected the appellate court's determination that the two separate proceedings were really just one ongoing application and held that Section 17 was applicable since no charter application was on file at the time of the communication between the organizers and the Commissioner. Because there was no contested case at the time, the meeting could not be an ex parte communication prohibited by Section 17. 617 S.W.2d at 672. The Supreme Court's opinion may be criticized in that it may encourage a future applicant to initiate ex parte communications with agency decision makers in order to influence their decision, and, thus, defeat the purposes of the provision simply because there is absent one pendency of a contested case.

V. PRESUMPTIONS AND BURDENS

Generally, the scope of judicial review for contested administrative agency decisions is whether there existed substantial evidence in the record to reasonably support the decision. The substantial evidence rule is found under Section 19(e) of APTRA and is also contained in many court decisions. See, e.g., Imperial American Resources Fund, Inc. v. Railroad Commission of Texas, 557 S.W.2d 280 (Tex. 1977). The scope of review under the substantial evidence rule begins with the presumption that the

agency's decision is valid and that the agency performed its duty in accordance with the law. Id.; Vandygriff, supra. It is the burden of the party complaining of the agency decision to overcome that presumption of validity. Id. A party urging the invalidity of a decision of an administrative agency on the ground of ex parte must overcome the presumption of validity by showing that Section 17 has been violated or that due process has been denied.

However, it seems that the complaining party may not rest upon that showing alone. The courts have also required that the violation must also result in harm to the complaining party. Guaranty Federal, supra; Imperial American, supra; Vandygriff, supra. Whether the harm may be presumed is an open question. In Guaranty Federal, the Supreme Court concluded that because: (1) the ex parte communication occurred four months after the close of the evidentiary hearing; (2) the communication was conducted without the knowledge of the opposing party; and (3) the decision granting the application was made only three days after the ex parte communication; that the communication "became so vital in the Commissioner's decision as to constitute harm as a matter of law and denial of due process." 483 S.W.2d at 841. However, the Supreme Court later held in Vandygriff that the court of civil appeals erred in presuming that harm had resulted from the ex parte communication. 617 S.W.2d at 673. In distinguishing the case from Guaranty Federal, the court pointed out that there was no pending contested case at the time the ex parte occurred, that the content of the ex parte communication was voluntarily disclosed at the

onset of the hearing and the opponent had the opportunity to cross-examine and present evidence to the contrary, the order granting the application discloses the ex parte communication, and the order stated that it is based solely on the record. Since the Commissioner's order is presumed to be valid, the facts of the case themselves did not establish invalidity or harm, and the appellants failed to overcome the presumption of invalidity. 617 S.W.2d at 672-673. The court concluded, "We hold that the court of civil appeals erred in presuming harm resulted from the meeting and setting aside the order granting a charter to Citizens Security and Loan Association." Id. It is unclear from this statement whether the Supreme Court felt it was an error to presume harm in any case, or whether the facts of this particular case were insufficient to presume harm. Because of this uncertainty, therefore, it is suggested that a complaining party demonstrate that it was harmed by the ex parte communication.

It may be argued that under APTRA, no further demonstration of harm is necessary to obtain a reversal or remand of an agency decision. Section 19(e) provides that the reviewing court:

. . . shall reverse or remand the case for further proceedings if substantial rights of the appellant have been prejudiced because the administrative findings inferences, conclusions, or decisions are:

- (1) in violation of constitutional or statutory provisions; [or] . . .
- (3) made upon unlawful procedures;. . . .

Since Section 19(e) provides reversal or remand only if "substantial rights are prejudiced," then perhaps a mere showing of denial of due process because of a violation of Section 17 is

necessary. Support for this argument may be found in Vandygriff, where the court, after stating that the Commissioner's order may be overturned only upon showing that "substantial rights of the appellant have been prejudiced," (citing APTRA §19(e)), stated that, "Denial of due process is one ground for finding substantial prejudice." 617 S.W.2d at 672 However, just presenting "one ground" may not be sufficient. The court does not elaborate. Additionally, the use of the word "substantial" with respect to a right may go to the issue of harm.

VI. PROOF OF EX PARTE NOT IN THE AGENCY RECORD

Generally, where the scope of review of a decision of an administrative agency is under the substantial evidence rule, judicial review is limited to the record. Where the administrative record does not reflect the facts and circumstances surrounding the ex parte communication, then such limited scope would defeat any showing of violation of due process rights and Section 17, or resulting harm. However, Section 19(d)(3) of APTRA provides an exception to confining judicial review to the agency record in that "the court may receive evidence of procedural irregularities alleged to have occurred before the agencies but which are not reflected in the record." Violations of procedural due process or Section 17 would obviously involve "procedural irregularities" and a party would be afforded discovery by the district court to develop facts surrounding the alleged procedural irregularity not reflected in the record.

VII. RULES OF PROFESSIONAL CONDUCT

Rule 3.05 of the State Bar Rules of Professional Conduct prohibits a lawyer from communicating, or causing another to communicate, with a "tribunal" for the purpose of influencing that entity or person concerning a "pending matter." Exceptions are provided if such communication is (1) in the course of the official proceedings in the cause, (2) in writing, if a copy is "promptly" delivered to opposing counsel or adverse party if not represented by a lawyer, or (3) orally, upon "adequate" notice to opposing counsel or adverse party if not represented by a lawyer. No guidance is provided as to what constitutes prompt and adequate notice. "Tribunal," as defined in the terminology provisions of the Rules, includes "administrative agencies when engaging in adjudicatory or licensing activities as defined by applicable law or rules of practice or procedure" but does not include "governmental bodies when acting in a legislative or rule-making capacity."

Rule 3.05 is, except in one respect, more limited in its application than Section 17 of APTRA. First, it applies only to lawyers, whereas, Section 17 applies to any person. Furthermore, the ex parte communication must be for the purpose of influencing the decision maker. Section 17 prohibits ex parte communication concerning an issue or fact regardless of the intent behind the communication. However, Rule 3.05 prohibits ex parte communication when a matter is "pending," which is defined under the rule not only to mean when the tribunal has been selected to determine the

matter, but also when it is reasonably foreseeable that the tribunal will be so selected. Therefore, pre-application ex parte discussions such as those found not to be violative of Section 17 in County of Galveston, would be in violation of Rule 3.05.

The range of disciplinary actions for violation of Rule 3.05 makes it significant to the practicing attorney. Section 7, Article 10, of the State Bar Rules, provides that discipline may be imposed for professional misconduct, which includes violations of the Texas Code of Professional Responsibility. Section 8 under the same Article lists possible sanctions for misconduct, including private and public reprimands, suspension from practice, and disbarment.

VIII. TEXAS PENAL CODE

Texas criminal law concerning ex parte communications is found in Section 36.04 of the Texas Penal Code. Section 36.04 provides:

- (a) A person commits an offense if he privately addresses a representation, entreaty, argument, or other communication to any public servant who exercises or will exercise official discretion in an adjudicatory proceeding with the intent to influence the outcome of the proceeding on the basis of considerations other than those authorized by law.
- (b) For purposes of this section, "adjudicatory proceeding" means any proceeding before a court or any other agency of government in which the legal rights, powers, duties, or privileges of specified parties are determined.
- (c) An offense under this section is a Class A misdemeanor.

References in the statute to "public servant" and "adjudicatory proceeding...before...any other agency of government" indicates that Section 36.04 applies to contested cases under APTRA. Additionally, the definition of "contested case" under Section 3(2) of APTRA is essentially the same as that for "adjudicatory proceeding" found in subsection (b) of Section 36.04.

In addition, subsection (a) of Section 36.04 provides that it is unlawful to communicate to any decision maker with the intent to influence the outcome of the proceeding "on the basis of considerations other than those authorized by law." Therefore, the statute seems to encompass unpermissible ex parte communications under Section 17 of APTRA. The obvious difference between Section 36.04 and Section 17 is that the Penal Code's provision requires a specific intent to influence the outcome of the proceedings. Since evidence of ex parte communications is, oftentimes, difficult if not impossible to obtain, proving such specific intent may be the reason that the statute's annotations provide no application of this provision to the administrative setting.

Finally, subsection (c) of Section 36.04 provides that an offense under the section is a Class A misdemeanor. Such crimes are punishable by a fine not to exceed \$2,000; confinement in jail for a term not to exceed one year; or both such fine and imprisonment. Tex. Penal Code sec. 12.21.

**ETHICAL ISSUES IN THE
ENVIRONMENTAL CONSULTING PRACTICE**
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A consultant is usually retained by a client in order to evaluate a situation and advise that client as to how best he might proceed. For an environmental professional, the needs of a client may include, for example, an audit to monitor compliance with certain regulations, preparation of a permit of some sort, or evaluation of the nature and extent of contamination at a site which maybe subject to state or federal law. Sometimes the assignments undertaken require a visit to a facility, with a visual evaluation of that facility. On other occasions, the evaluation will include the obtaining of geologic, hydrogeologic, and chemical data which are to be analyzed and evaluated. A concern that must be addressed in the conduct of professional work arises when a client wants the consultant either to do or report less than the consultant ethically believes to be appropriate. During a compliance audit in which a facility is being visually inspected and perhaps compared to a checklist to assess compliance with appropriate law, the client may suggest that certain equipment is non-functional on the day of inspection because it is broken when in fact it may have been taken out of service to reduce operating costs. Alternatively, it may be that the client might suggest wording in a report with a view to guiding the reader that a certain condition exists where in fact it does not.

In another scenario, samples may be required to be collected to demonstrate the chemical composition of contaminants of concern. Samples would then be sent to a chemical laboratory for appropriate analysis and evaluation and reporting. The client may suggest, from a knowledge base that he has, that it might be a good idea not to test for certain parameters. If data, including those parameters, are not generated then there would be no reporting conflict.

What is the consultants' moral and ethical obligation under circumstances such as these? The consulting profession is a highly competitive one. This means that consultants must be familiar with the type of facility or service being provided, must be able to perform the service economically and to the satisfaction of the client. In many cases, the consultant is required to submit a competitively priced bid and if successful, will be awarded the work provided that an appropriate contract can be worked out. The purpose of the contract is to define the circumstances under which the work will be performed, the scope of the work, the schedule, and the obligations both of the consultant to the client and the client to the consultant. Woodward-Clyde contracts contain a statement in which Woodward-Clyde represents that services shall be provided within the limits prescribed by the client in a manner consistent with that level of care and skill, ordinarily exercised by other professional consultants, under similar circumstances at the time the services are performed. We do not profess to provide "state of the art" services.

So we have done our marketing homework. We have learned what the client requires. We have been awarded the project and we have negotiated a contract in which professional responsibility is described. So now we get to do the work. The detailed scope of work is developed. The appropriate staff are assigned to the project and the work commences. We have trained our staff to follow certain procedures that we know will provide representative results that will stand up to scrutiny by an independent reviewer.

If, in order to be more "economical", our client suggests that we perform the services using less well proven procedures, we have two choices. Either we can accede to the wish of the client and proceed using the lower standard of procedure. Or we can hold out for the performance of the work according to the procedure that we know will be satisfactory to those who may subsequently review our work. If we chose the first course,

we may subsequently open the door for legal action against us, for not having performed the work in a professional manner as described in our contract. If we follow the latter course, we may upset our client, and could ultimately be removed from the work because we are being "non-responsive" and are not looking out for the client's better interest. This becomes a very difficult situation in which none of us likes to find ourselves involved. As managers, we have a responsibility to our staff to understand clients to the extent that we know what their values are and assure ourselves that those values are not totally inconsistent with ours. If we find during discussions prior to signing a contract, that the values held by the client are in conflict with those of our firm, we really should not undertake the project in the first place.

But that may sound like a cop-out. The client doesn't always lay on the table what his true agenda is. We cannot always find specifically what is the driving force behind the work that is to be done. So we may well find ourselves contracted to a client to provide services, which as the work progresses, we find to be difficult to provide because of the requirements of that client. We are obligated by contract to provide the services within the schedule and budget that have been agreed. From the professional performance aspect should try very hard to stick to the procedural standards that we represented would be appropriate for the performance of the work at outset.

With more environmental experience, our clients are becoming increasingly sophisticated. They are aware of the need, for example, to thoroughly decontaminate sampling equipment between one sampling location and another so that the potential for cross-contamination is reduced. We may become aware during the progress of the work that certain chemical constituents may be of concern. The client may not wish to test for those constituents. We may not be contractually, obligated to provide information about those constituents. We may know, however, that when the product of our work finds its way, for example, to an agency for their

review, that the failure to analyze for certain chemical constituents could cause difficulties for our client. As good consultants, it is our obligation to point out to our client what the potential risks are associated with one course of action as opposed to another and to appraise him of the likely consequences of those different courses of action. In order to assure ourselves that the various courses of actions and associated risks are understood they should be documented. It may also be that when the different courses of action and associated risks are discussed with client, the client may react negatively.

One example comes to mind in this regard in which a set of contaminants of concern to state agencies was identified. The potential costs associated with dealing with the circumstance that likely generated that set of contaminants could have been quite large. Shortly after bringing the matter to the attention of our client, our assignment was terminated. At another facility, a state agency had required that certain suite of parameters be analyzed. One particular parameter that would likely be a cause for concern was not requested to be analyzed. The matter was brought to the attention of our client with the recommendation that this overlooked parameter be analyzed. We should at least have the client understand that at some point in time, the agency may come back and say that this particular parameter was not analyzed, it should have been, the characterization is incomplete and another round of sampling and associated chemical analysis and interpretation may require to be conducted. We should help our clients understand what is likely to be required by external agencies. The client is obviously free to decide on the approach to be followed.

I believe that we in the consulting profession should insist to clients that sampling procedures and chemical analysis be appropriate and we should collectively resist pressure to perform work at a standard lower than, that we believe to be professionally responsible.

On the other hand we cannot be whistle blowers on our clients and continue to do business. We may find that the individual or individuals that we are deal with within the client organization are non-responsive to our suggestions that may have significant consequence to the client organization. I believe we should try to seek out individuals at higher levels of responsibility such that these issues can be evaluated at the appropriate level and dealt with accordingly. As a worse case if we find that a client wants to "bend the rules" to the extent that we find to be ethically unacceptable, then we have a professional obligation to withdraw from the project.

(7) A registrant should insure the security of his engineer's seal at all times. In the event of loss of a seal, the registrant will immediately upon learning of such loss communicate all facts relative to the loss to the executive director of the board.

(8) Whenever an engineer's seal impression is required under the Texas Engineering Practice Act, all engineering registrants must place their normal signatures and date of execution in close proximity to their seal impressions. The use of signature reproductions, such as rubber stamps or other facsimiles, shall not be permitted in lieu of actual signatures.

§131.139. Re-registration.

(a) A person whose certificate of registration has been expired for two or more years may obtain a new certificate of registration by submitting to examination by the board and complying with the legal requirements for obtaining an original license. Such examination will take into consideration pertinent data which produced the previous registration, the professional conduct during that registration, the length of license expiration and activities during the unlicensed period.

(b) The applicant will:

- (1) prepare an official application form and submit it with the current application fee;
- (2) provide the required supplementary experience record;
- (3) account for activities during the unlicensed period;
- (4) arrange for the submission of current reference statements;
- (5) have transcripts submitted for any degrees or college credits being claimed which were earned since the previous application for registration.

(c) The board will:

- (1) process the application under procedures established for an original license, except as otherwise might be provided herein;
- (2) recognize official board records which previously confirmed any approved engineering degrees and successful passing of written examinations, as stipulated in sections 12(a) and (b) of the Act.
- (d) Upon its evaluation of the above, the board may administer additional oral or written examinations to substantiate current professional engineering competency and suitability for re-registration.
- (e) A new certificate of registration and serial number will be issued if the application is approved.

PROFESSIONAL CONDUCT AND ETHICS

§131.151. Code of Responsibility for Professional Engineers. The following is the Code of Responsibility for Professional Engineers to establish standards of conduct and ethics for engineers in keeping with the purpose and intent of the Act and is in its entirety a board rule. All applicants for registration and licensure to practice engineering in Texas shall subscribe to and agree to exemplify the code.

(1) **PREAMBLE.** Inasmuch as the practices, procedures, judgments and decisions of professional engineers in a time of rapidly developing technology have a direct and vital impact upon the lives, safety, health and welfare of all Texas citizens and are essential to the orderly use of the physical environment, the Texas Legislature has charged the Texas State Board of Registration for Professional Engineers, hereinafter referred to as the board, with the responsibility and authority for making and enforcing all rules and regulations necessary to establishing standards of conduct and ethics for engineers. The legislature has expressly declared that professional engineering is a learned profession, and its practitioners are to be held accountable to the state and members of the public by high professional standards in keeping with the ethics and practices of the other learned professions in this state. Accordingly, the board does hereby make and establish such standards of ethics and conduct for professional engineers by authority of section 8 of the Texas Engineering Practice Act. Such standards and ethics shall be known as the Code of Responsibility for Professional Engineers. The canons are concise axiomatic statements of the obligations of engineers to the public, to the state of Texas, and to the engineering profession.

They embody general concepts from which the ethical considerations and the disciplinary rules are derived.

The ethical considerations are aspirational in character and represent the objectives toward which every member of the profession should strive. They constitute a body of principles upon which the engineer can rely for guidance in specific situations.

The disciplinary rules, unlike the ethical considerations, are mandatory in character and state the minimum level of conduct below which no engineer can function without being subject to disciplinary action. The disciplinary rules should be applied uniformly, with reason and fairness, to all engineers regardless of the nature of their professional activities.

Neither the canons, the ethical considerations, nor the disciplinary rules are intended to suggest or define standards of liability in civil actions against engineers involving their professional conduct.

The code provides a basic standard. Each engineer must find within his own conscience the touchstone against which to test the extent to which his actions should rise above the minimum standards set forth in the disciplinary rules.

(2) **CANON I. The engineer's paramount professional responsibility should be the safety, health, and welfare of the general public.**

(A) **Ethical considerations.**

(i) **EC 1.1.** The Texas Engineering Practice Act (Vernon's Ann. Civ. St., Art. 3271a, Sec. 1.1) was enacted by the Texas legislature "in recognition of the vital impact which the rapid advance of knowledge of the mathematical, physical and engineering sciences as applied in the practice of engineering is having upon the lives, property, economy, and security of our people and the national defense. . . . Every day the lives, safety, health and welfare of Texas citizens are dependent upon engineering judgments, decisions and practices incorporated into structures, machines, products, processes and devices which affect the lives and activities of the people of this state. If the engineer fails to make professional responsibility his basic tenet in the practice of his engineering, the public health, safety and welfare are placed in jeopardy and the profession of engineering has failed to serve the purposes for which the Texas Engineering Practice Act was put into effect.

(ii) **EC 1.2.** While the engineer owes the highest degree of fidelity to his employer or client, such fidelity must remain subservient to his paramount responsibility toward those whose lives, safety, health and welfare must depend upon his engineering judgments, decisions and practices.

(B) **Disciplinary rules.** **DR 1.1.** The engineer shall not knowingly prepare, complete, sign, or seal any designs, plans, specifications, or orders, or in any manner participate in any engineering practice, judgment, or decisions which, when measured by generally accepted engineering standards, may result in any structure, machine, process, product or device endangering the lives, safety, health, or welfare of the general public.

(3) **CANON II. The engineer should exercise independent professional judgments, decisions, and practices on behalf of clients and employers.**

(A) **Ethical considerations.**

(i) **EC 2.1.** The Texas Engineering Practice Act expressly declares professional engineering to be "a learned profession to be practiced and regulated as such, and its practitioners in this state shall be held accountable to the state and members of the public by high professional standards in keeping with the ethics and practices of other learned professions in this state." One of the basic tenets of the traditional learned professions is that the practitioner must always place the welfare of those he serves above his own personal gain or proprietary interests. Subject only to his public responsibility, all professional judgments, decisions and practices of the engineer should be exercised solely for the benefit of his client or employer and free from compromising influences and loyalties, including his personal interests and the interests of others.

(ii) **EC 2.2.** The engineer should not accept employment if there is any reasonable probability that his personal interests or desires may affect adversely, or interfere with, the engineering services to be rendered. After accepting employment, the engineer should refrain from acquiring a property right or assuming a position that might make his judgments, decisions and practices less protective of the interests of his client or employer.

(B) Disciplinary rules.

(i) DR 2.1. Except with the consent of his client or employer after full disclosure, the engineer shall not accept employment when there is a reasonable probability that the exercise of his professional judgments, decisions or practices on behalf of his client or employer may be affected by his own financial, business, property, or personal interests.

(ii) DR 2.2. The engineer shall avoid all conflicts of interest with his client or employer, but when a conflict of interest is unavoidable, the engineer shall promptly inform his employer or client of any business association, interest, or circumstances which might tend to influence his professional judgments, decisions or practices or the quality of his services.

(iii) DR 2.3. The engineer shall not accept compensation, material favors or benefits of any substantial nature, financial or otherwise, from more than one party for services on the same project or assignment, or for services pertaining to the same project or assignment, unless the circumstances are fully disclosed to all interested parties. The phrase "benefits of any substantial nature" is defined to mean any act, article, money or other material possession which is of such value or proportion that its acceptance creates a clandestine obligation on the part of the receiver or otherwise compromises his ability to exercise his own judgment, without regard to such benefit.

(iv) DR 2.4. The engineer shall not solicit or accept, directly or indirectly, any financial or other valuable considerations, material favors or benefits of any substantial nature from any supplier of materials or equipment for any project on which he is performing or has contracted to perform engineering services.

(v) DR 2.5. The engineer shall not solicit or accept any gratuity, material favor or benefits of any substantial nature, directly or indirectly, from contractors, their agents, servants or employees or from any other party dealing with his client or employer in connection with any project on which he is performing or has contracted to perform engineering services.

(vi) DR 2.6. The engineer shall not solicit or accept, directly or indirectly, any engineering contract or employment from a governmental body, agency or department in which a principal or officer of his organization serves as a member or employee.

(vii) DR 2.7. When in public service as a member or employee of a governmental body, agency or department, the engineer shall not participate, directly or indirectly, in considerations or actions with respect to services offered or provided by him, his associates or his organization to such governmental body, agency or department.

(viii) DR 2.8. When in public service as a member or employee of any governmental body, agency, or department, the engineer shall not, directly or indirectly, use or make use of any property, facility or service of such governmental body, agency or department for the benefit of any private business or activity in which such engineer also may be engaged, unless prior, proper authority is obtained in writing.

(ix) DR 2.9. When in private practice or employment the engineer shall not, directly or indirectly, use or make use of any property, facility or service of his client or employer for the benefit of said engineer, unless prior, proper authority is obtained in writing.

(4) CANON III. The engineer should act competently and use proper care in performing engineering services for clients or employers.

(A) Ethical considerations.

(i) EC 3.1. The engineer should act with competence and proper care in performing all engineering services whether as a private practitioner or as an employee. He should strive to become and remain proficient in his practice and should accept employment only in cases in which he is prepared to perform competently.

(ii) EC 3.2. The engineer is aided in attaining and maintaining competence by keeping abreast of current engineering literature and developments and participating in educational programs. He has the additional ethical obligation of assisting in improving the engineering profession, and he may do so by participating in professional activities intended to advance the quality and standards of members of the profession. Of particular importance is the careful training of his younger associates and the giving of sound guidance to all engineers who consult him. He should strive to collaborate with the engineering profession in advancing

ing the highest possible standards of integrity and competence, and to meet those standards himself.

(iii) EC 3.3. While the licensing of a professional engineer is evidence that he has met the standards then prevailing for admission to practice, the engineer should never accept or undertake to perform engineering services in any area of engineering in which he is not qualified or proficient by education or experience. The engineer may accept an assignment requiring education or experience outside his own field of competence, in those cases, only, in which his personal engineering services are restricted to such phases of the service or project as may be within the province in which he is qualified to function. All other phases of such service or project should be performed by legally qualified consultants, associates, or employees.

(B) Disciplinary rule. DR 3.1. The engineer shall not:

(i) accept any engineering employment, or undertake any engineering assignment, for which he is not qualified by education or experience to perform or carry out adequately and competently; providing and excepting, however, that an engineer may accept an assignment requiring education and experience outside his field of competence to the extent, only, that his personal engineering services are restricted solely to those phases of the service or project in which he is qualified and competent, and that all other phases of such service or project shall be performed by legally qualified consultants, associates or employees;

(ii) affix his signature or seal to any engineering plan or document dealing with subject matter on which he is not qualified by education or experience to form a dependable judgment;

(iii) express an engineering opinion before a court, administrative agency or other government forum on any subject:

(1) in which he is not qualified by education or experience, or

(II) which is contrary to generally accepted scientific and engineering principles without fully disclosing the basis and rationale for his conclusion.

(5) CANON IV. The engineer should safeguard and preserve the confidences and private information of clients and employers.

(A) Ethical considerations.

(i) EC 4.1. A fiduciary relationship exists between the engineer and his client or employer. Therefore, information or data acquired by the engineer in the performance of engineering services for a client or employer should be held in strictest confidence.

(ii) EC 4.2. In order that a client or employer may obtain full benefits from professional engineering services, the engineer should be fully informed of all the facts and circumstances concerning such engineering project or assignment; consequently, a client or employer must feel free to discuss whatever he wishes with the engineer. The observance of the ethical obligation of the engineer to hold inviolate such confidences and private information regarding facts and information essential to sound engineering also promotes the confidence of the public in the entire profession.

(iii) EC 4.3. The obligation to protect confidences and private information obviously does not preclude the engineer's revealing information when his client or employer consents after full disclosure, and when such revelation is essential to the performance of his professional function; when permitted by rules, regulations or codes promulgated by the board; or when required by law.

(iv) EC 4.4. The engineer should not use information acquired in the course of his performance of professional engineering services for a client or employer, to the disadvantage of such client or employer. Extreme care should be exercised by the engineer to prevent the disclosure of the confidences and private information of one client or employer to another, and employment which would require such disclosure should not be accepted. The engineer should avoid any arrangement or employment that gives any person, other than employees and associates responsible to him, access to the private information and confidences of any of his clients or employers. Similarly, the engineer should be diligent in his efforts to prevent the misuse of such information by his employees and associates.

(B) Disciplinary rules.

(i) **DR 4.1.** The engineer may reveal confidences or private information under the following circumstances:

- (I) when he has obtained the consent of the client or clients, employer or employers, affected, but only after full disclosure to them;
 - (II) when required by law or court order;
 - (III) when necessary to establish legal proof of his relationship with a client or employer in a court action to recover salaries, fees or other compensation due him as a result of his employment or association with such client or employer;
 - (IV) when necessary to defend himself or his employees or associates in a legal action alleging wrongful conduct.
- (ii) **DR 4.2.** Except as permitted by disciplinary rule 4.1, the engineer shall not knowingly:

- (I) reveal a confidence or private information regarding or in the possession of his client or employer;
- (II) use a confidence or private information regarding or in the possession of his client or employer to the disadvantage of such client or employer;
- (III) use a confidence or private information regarding or in the possession of his client or employer for the advantage of a third person, unless the client or employer consents after full disclosure.
- (iii) **DR 4.3.** The engineer shall exercise reasonable care to prevent his employees' and associates' unauthorized disclosure or use of private information or confidences regarding or in the possession of a client or employer.

(6) **CANON V.** The engineer should endeavor to build his practice and professional reputation solely on the merit of his services.

(A) **Ethical considerations.**

(i) **EC 5.1.** The Texas Legislature has decreed that professional engineers in this state shall be held accountable by high professional standards in keeping with the ethics and practices of other learned professions. In the learned professions, experience has demonstrated that the public is best served by requiring that practitioners be judged upon the merits of their services. The procurement of professional employment through false, misleading, or deceptive advertising and soliciting opens the door to the self-advancement of the least scrupulous practitioner.

(ii) **EC 5.2.** The selection process in a learned profession, such as engineering, should be based upon the excellence, quality, and efficacy of professional performance. The U.S. Congress has declared that the federal government will negotiate contracts for engineering services on the basis of demonstrated competence and qualifications, the selection of an engineer being subject to negotiation of fair and reasonable compensation. Reference the Federal Property and Administrative Services Act of 1949, Title IX (40 United States Code §§541-544). The Texas Legislature has recognized that competitive bidding for professional engineering services could result in the selection of the least able or qualified and the most incompetent practitioner for the performance of services vitally affecting the health, welfare and safety of the public. Therefore, it has displaced price competition with regulation for the procurement of engineering services for public entities. (Reference the Professional Services Procurement Act, Texas Civil Statutes, Article 664-4.)

(iii) **EC 5.3.** Competition for engineering engagements through unfair and dishonest practices, including the displacement of one engineer by another through fraud, deception, or other devious or undermining stratagems, is contrary to accepted professional conduct.

(B) **Disciplinary rules.**

(i) **DR 5.1.** The engineer shall not offer, or promise to pay or deliver, directly or indirectly, any commission, political contribution, gift, favor, gratuity, benefit or reward as an inducement to secure any specific professional engineering work or assignment; providing and excepting, however, that an engineer may pay a duly licensed employment agency its fee or commission for securing engineering employment in a salaried position.

(ii) **DR 5.2.** The engineer shall not solicit professional employment by advertising which is false, misleading, or deceptive.

(iii) **DR 5.3.** The engineer shall not make, publish or cause to be made or published, any representation or statement concerning his professional qualifications or those of his partners, associates, firm or organization which is in any way misleading, or tends to mislead the recipient thereof, or the public, concerning his engineering education, experience, specializations or other engineering qualifications.

(iv) **DR 5.4.** It shall be a violation of the Texas Engineering Practice Act for a registrant to submit or request a competitive bid to perform engineering services for any state agency, political subdivision, county, municipality, district, authority, or publicly owned utility of the State of Texas, or for any agency or other entity of the federal government, when the procurement of such professional services is in violation of the state's Professional Services Procurement Act or the Federal Property and Administrative Services Act of 1949, as amended, respectively.

(I) For purposes of this disciplinary rule, the board has adopted the Supreme Court of Texas' definition of competitive bidding, which in part is as follows:

"Competitive bidding . . . contemplates a bidding on the same undertaking upon each of the same material items covered by the contract; upon the same thing. It requires that all bidders be placed upon the same plane of equality and that they each bid upon the same terms and conditions involved in all the items and parts of the contract, and that the proposal specify as to all bids the same, or substantially similar specifications."

(Texas Highway Commission v. Texas Association of Steel Importers, Inc., 372 S.W.2D 525, Texas 1963); however,

(II) the engineer shall not be considered in violation of the Act in cases where his engineering services may legally be offered, furnished, or performed as an integral part of research and development programs, construction projects, manufactured products, processes, or devices, which are to be offered, performed, supplied, or obtained on the basis of competitive bids.

(v) **DR 5.5.** The engineer shall not supplant, nor attempt to supplant, directly or indirectly, another engineer in a particular engagement, after definite steps have been taken toward such other engineer's employment.

(7) **CANON VI.** The engineer should contribute to the maintenance, integrity, independence, and competency of the engineering profession.

(A) **Ethical considerations.**

(i) **EC 6.1.** It is fundamental to the professional responsibility of engineers that they ensure that the public has ready access to independent engineering judgment, competence, skill and integrity. Safeguarding the integrity of the engineering profession and its competency to meet the highest standards set by the learned professions is the ethical responsibility of every professional engineer.

(ii) **EC 6.2.** The public should be protected from those who are not qualified to function as engineers by reason of deficiency in education, experience, or moral standards. To assure the maintenance of high standards of professional performance, engineers should, in a very positive way, assist boards of examination and courts in promulgating, enforcing and improving requirements for licensure. Similarly, the professional engineer has a positive obligation to contribute to the continued improvement of all phases of engineering education.

(iii) **EC 6.3.** The public shall be provided every reason for relying upon engineers' seals, signatures, or professional identifications on all documents, designs, plans or specifications or other engineering data on which they appear, as a representation that the engineers whose seals, signatures or professional identifications appear thereon have personal knowledge thereof and that they are professionally responsible therefor.

(iv) **EC 6.4.** The integrity of the profession of engineering can be supported and maintained only if the conduct of engineers who violate the Texas Engineering Practice Act, or the rules, regulations or codes promulgated by the board, is brought to the attention of the proper officials.

(B) **Disciplinary rules.**

(i) **DR 6.1.** The engineer shall not:

- (I) violate any provision of the Texas Engineering Practice Act, general board rule, or any disciplinary rule;
- (II) circumvent or attempt to circumvent any provision of the Texas Engineering Practice Act, general board rule, or disciplinary rule through actions of another;
- (III) participate, directly or indirectly, in any plan, scheme, or arrangement attempting or having as its purpose the evasion of any provision of the Texas Engineering Practice Act, general board rule, or any disciplinary rule;
- (IV) fail to exercise reasonable care or diligence to prevent his partners, associates, and employees from engaging in conduct which, if done by him, would violate any provision of the Texas Engineering Practice Act, general board rule, or any disciplinary rule;
- (V) engage in any illegal conduct involving moral turpitude;
- (VI) engage in any conduct that discredits or tends to discredit the profession of engineering;
- (VII) make, publish or disseminate any statements, criticisms or arrangements on engineering matters connected with public policy which are inspired or paid for by an interested party or parties, unless he has prefaced such statement or comment by explicitly identifying himself, disclosing the identities of the party or parties on whose behalf he is speaking and revealing the existence of any pecuniary interest he may have in such engineering matter;
- (VIII) permit or allow himself, his professional identification, seal, firm or business name, or his services to be used or made use of, directly or indirectly, or in any manner whatsoever, so as to make possible to create the opportunity for the unauthorized practice of engineering by any person, firm or corporation in this state;
- (IX) perform any acts, allow any omissions or make any assertions or representations which are fraudulent, deceitful or misleading, or which in any manner whatsoever tend to create a misleading impression;
- (X) knowingly associate with or permit or allow the use of his name, firm name or professional identification or seal in any business venture, project or enterprise which he knows or should have known is engaged in professional practices which violate any provision of the Texas Engineering Practice Act or any disciplinary rule;
- (XI) knowingly associate with or permit the use of his name, professional identification, seal, firm or business name in connection with any venture or enterprise which he knows, or should have known, is engaging in trade, business or professional practices of a fraudulent, deceitful or dishonest nature;
- (XII) injure or attempt to injure or damage the professional reputation of another by any means whatsoever; provided and except, however, that this shall not relieve an engineer of the obligation to expose unethical or illegal conduct to the proper authorities or preclude a frank but private appraisal of engineers or other persons or firms considered for employment;
- (XIII) aid or abet, directly or indirectly, any unlicensed person in connection with the unauthorized practice of engineering; or any firm or corporation in the practice of engineering unless carried on in accordance with the provisions of section 17 of the Texas Engineering Practice Act;
- (XIV) directly or indirectly or in any manner whatsoever lend his license, seal or professional identification to any unlicensed person or to any firm or corporation carrying on the practice of engineering contrary to the provisions of section 17 of the Texas Engineering Practice Act.
- (ii) DR 6.2. The engineer shall be personally and professionally responsible and accountable for the care, custody, control and use of his engineer's seal, his professional signature and identification. The engineer whose seal has been lost, misplaced or stolen shall, upon discovery of its loss, report same immediately to the board, which may invalidate the stolen registration number of said seal, if it deems this necessary, and issue another registration number to said engineer.

(8) CANON VII. The engineer should assist in preventing the unauthorized practice of engineering.

(A) Ethical considerations.

- (i) EC 7.1. The Texas Legislature has expressly decreed that the privilege of practicing engineering shall be entrusted to those persons, only, who are duly licensed, registered and practicing under the provisions of the Texas Engineering Practice Act, and has called for strict compliance with, and enforcement of, all provisions of that Act. The public may be assured of the requisite responsibility and competency only if the practice of engineering is confined to those who are legally licensed to practice under the Act.
 - (ii) EC 7.2. The person, firm or corporation seeking engineering services often is not in a position to judge the qualifications or competence of an engineer to perform a particular assignment or project. Entrusting the performance of engineering services may well involve the confidences, the property, the safety, or even the life of the client or employer, as well as those of the members of the general public. Proper protection of those who seek and rely upon engineering services demands that no person be permitted to act in the confidential and demanding capacity of an engineer unless he is subject to the provisions and regulations of the Texas Engineering Practice Act and the rules, regulations and codes promulgated by the board pursuant thereto.
 - (iii) EC 7.3. Regulation of the practice of engineering is under the jurisdiction, principally, of the respective states. Authority to engage in the practice of engineering conferred in any governmental jurisdiction is not a grant of the right to practice outside it, per se, and it is improper for the engineer to engage in practice where he is not specifically permitted to do so under the existing laws or by court order.
- (B) Disciplinary rules.**

- (i) DR 7.1. The engineer shall not practice or offer to practice engineering in any governmental jurisdiction in which to do so would be in violation of the laws regulating the practice of professional engineering in that jurisdiction.
- (ii) DR 7.2. The revocation, suspension, or denial of a license to practice engineering in another jurisdiction, for reasons or causes which the board finds would constitute a violation of the Texas Engineering Practice Act or any rule, regulation or code promulgated by the board, shall be sufficient cause for the denial, suspension or revocation of a license to practice engineering in the State of Texas.
- (9) **Severability.** If any of the above provisions of the Code of Responsibility, or any part thereof, or any sentence, paragraph, clause, phrase or word thereof is construed by the courts to be invalid for any reason, it is the intention of the board that the remainder shall continue in full force and effect; that is, it is the intention of the board that each of the above provisions and/or any portions thereof, are severable.
- (10) **Repeal.** All rules, regulations and administrative interpretations heretofore adopted by the board are hereby repealed and rescinded insofar, only, as such rules, regulations or interpretations, or any of them, or any provisions thereof, is or are inconsistent herewith.
- (11) **Interpretation and Construction.** In all interpretations and constructions of the Code of Responsibility, the cardinal rule shall be to strive for conformity with the purposes and objectives of the Texas Engineering Practice Act. Should any conflict be found to exist between any of the provisions of the Code of Responsibility and the Act, it is the intent of the board that all its rules shall be interpreted, construed and applied in keeping with the spirit and letter of the Act. Violation of any disciplinary rule shall be considered by the board as prima facie evidence of misconduct in the practice of engineering within the meaning of section 22(b), Texas Engineering Practice Act.

COMPLIANCE AND ENFORCEMENT

§131.161. General. In carrying out its responsibilities to insure strict compliance with the enforcement of the Act, the board will make inquiries into situations which allegedly violate or abridge the requirements of the Act and board rules dealing with the practice of engineering, and those representations which imply the legal capacity to offer or provide engineering services to the public. Situations which are considered by the board to pose or have caused serious harm to the public, or cannot be readily resolved through voluntary compliance, will be disposed of by administrative, civil, or criminal proceedings as authorized by law.

XI. SUPERFUND RESPONSE ACTION CONTRACTOR
LIABILITY

"We go to gain a little patch of ground, That hath in it no profit but the name."

Lt. Col. David F. Barton
Chief, Environmental Law Division
Air Training Command
Randolph Air Force Base, Texas

RESPONSE ACTION CONTRACTOR
LIABILITY
SARA SECTION 119

Lieutenant Colonel David F. Barton
Chief, Environmental Law Division
Air Training Command
Randolph AFB, Texas

I. INTRODUCTION

- A. Background
- B. EPA Proposal
- C. Effect
- D. Outcome

II. Background of SARA Section 119

- A. In order to understand response action contractor (RAC) indemnification under section 119 it is necessary to understand the background of section 119 and pollution liability insurance generally. Therefore, most of this discussion will be an education process to allow you to decide how the material presented might fit into your day to day operations.
- B. There was a perceived need for EPA indemnification of Superfund RACs for claims that result from a release of a hazardous substance, pollutant or contaminant due to RAC negligence arising out of response action activities at a National Priority List (NPL) or removal action site due to inability to purchase adequate and affordable pollution liability insurance.
 - 1. Insurance practices of maximizing premium volume versus underwriting income caused excessive losses in 1984 and 1985 and resultant drying up of perceived high risk liability lines such as pollution liability coverage.

2. The market opened up some in 1987 but remains limited and expensive.
- C. Prior to SARA, EPA indemnification was intended to be a supplement to commercially provided insurance, was available except in cases involving gross negligence or willful misconduct, was based upon EPAs inherent contract authority as opposed to statutorily authorized provisions or funding and was limited to RACs working for EPA only.
- D. SARA Section 119
1. Removes application of strict liability to RACs (negligent, grossly negligent and intentional misconduct still apply) to provide any remedial action under SARA at an NPL site or any removal action under SARA.
 2. RESPONSE ACTION CONTRACTOR - "Any person who enters into a response action contract to provide services directly related to any release or threatened release of a hazardous substance or pollutant or contaminant from a facility, and any person hired or retained by such a person. It also includes recipients of cooperative agreements under section 311(b) and recipients of grants pursuant to section 126(g) of SARA".
 3. "A person who is a RAC with respect to any release or threatened release of a hazardous substance or pollutant or contaminant from a vessel or facility shall not be liable under this title or under any other Federal law to any person for injuries, costs, damages, expenses, or other liability (including but not limited to claims for indemnification or contribution and claims by third parties for death, personal injury, illness or loss by damage to property or economic loss) which results from such release or threatened release, except in cases of negligence, gross negligence, or intentional misconduct (i.e., no strict liability under Federal law)." (emphasis added)
 4. EPA and OTHER FEDERAL AGENCIES have discretionary authority to indemnify for RACs negligent acts as long as not grossly negligent or intentional misconduct.
 - a. "The President may agree to hold harmless and indemnify any RAC meeting the requirements of this subsection against any liability (including the expenses of litigation or settlement) for negligence arising out of the contractor's performance in carrying out response action activities under this title, unless such liability was caused by conduct of the contractor which was grossly negligent or which constituted intentional misconduct." (emphasis added)

- b. Covers RAC working for EPA, other federal agency, state or political subdivision under a contract or cooperative agreement, or PRP under section 106 (order) or section 122 (settlement).
 - (1). EPA informally determined that no other Federal agency has offered section 119 indemnification to Superfund RACs. Additionally, informal consultations with the states revealed the states were able to retain a sufficient number of qualified RACs despite some states requiring the RACs to indemnify the state.
- 5. Indemnification can be provided only:
 - a. For liability related to releases of hazardous substances or pollutants or contaminants as a result of RAC activities conducted under the Superfund program.
 - b. When a RAC has made a diligent effort to obtain insurance from non-federal sources and has found that it is unavailable, inadequate, or unreasonably priced.
 - c. As a comparable supplement or substitute for commercial insurance, to include deductibles and limits of indemnity, for adequate insurance when such insurance is either unavailable, insufficient, or unreasonably priced.
 - d. As a comparable supplement or substitute for commercial insurance, to include deductibles and limits of indemnity, for adequate indemnification of RACs by PRPs, when such indemnification, as determined by EPA, is either unavailable or insufficient. PRP cannot be RAC.
- 6. Funding of indemnification is statutory and exempted from the Anti-Deficiency Act.
 - a. Money comes from the Superfund until dry and then by specific authorization. EPA was allowing no limits on indemnification under interim policy.
 - b. It is considered a part of the EPA response costs for purposes of cost recovery.
- E. Congress enacted section 119 to assure that qualified RACs would be available to keep the Superfund program operative during the commercial liability insurance crisis of the mid-eighties. Clearly an interim vehicle.
 - 1. No RCRA coverage.

- F. An important aspect of section 119 is that EPA has the authority to indemnify RACs working for PRPs, where the PRP is conducting the cleanup pursuant to a consent decree or an administrative order. Limitations in section 119(c)(5)(C) require EPA to first determine that the combined financial resources of all PRPs at the site are inadequate to provide indemnification against the reasonable potential liability of the contractor at the site. Before EPA can pay a claim, the contractor must exhaust all administrative, judicial, and common law claims for indemnification against the PRPs. Finally, section 119(c)(6) provides for recovery from the PRPs of all indemnification costs paid by EPA.
- G. EPA has been operating on interim basis using procedures outlined in "Interim Guidance on Indemnification of Superfund Response Action Contractors Under section 119 of SARA" (OSWER Directive #9835.5), which was issued on October 6, 1987.
 - 1. The EPA interim guidance implementation came under fire from a General Accounting Office (GAO) report in October, 1989. The report said EPA was assuming the role of liability underwriter without requiring RACs to explore availability of coverage on the open market.
 - 2. The interim policy exposed the superfund trust fund to huge losses from claims if something went wrong during a cleanup. Additionally, the same contractors indemnified by EPA were doing similar work for state and private firms without indemnification.
 - 3. The interim policy of wholesale indemnification had the potential adverse effect of failing to stimulate the insurance market which appeared to be emerging.
- H. SARA does not protect the contractor where a claim is made under state law which does not provide similar immunity. Further, the statute provides no relief from worker compensation claims and provides no protection for "arranging" for transportation or disposal of hazardous substances. Only emergency contractors have been given the latter immunity.

III. The EPA Proposed Final Guidance Document for Indemnification of RACs was published in the Federal Register on October 31, 1989.

- A. EPA considered four broad options during development of the proposed indemnification policy.

1. No indemnification.
 - a. The plus of this approach, simply put, is that this would leave all superfund money available for cleanup.
 - b. The negative is if commercial insurance fails to materialize the RACs will refuse to accept the liability and get out of the business.
2. Provide indemnification subject to statutory requirements when adequate insurance is not available.
 - a. The upside of this approach would be that this would be done with reasonable limits and deductibles to encourage high quality work.
 - b. The downside of this is it would potentially use some of the superfund which could have otherwise been used for cleanup. EPA must, therefore, decide if indemnification is absolutely necessary to insure an adequate supply of RACs.
3. Offer indemnification with market incentives to purchase commercial insurance.
 - a. Although much the same as Option B, above, this approach would require that a price be put on indemnification and then the RAC could decide to take EPA coverage, seek commercial coverage or self insure.
 - b. This would probably be the most cost effective, short of no indemnification. It would be lowest cost to RAC and encourage commercial insurance development.
 - c. The downside of this is it would require EPA to be able to evaluate the risk exposure, which is an expensive and time consuming task for which EPA is ill prepared.
4. Provide reinsurance for a commercial insurance pool.
 - a. This would allow EPA to temporarily act as a reinsurer above a programmed layer of commercial pollution insurance with a view toward the commercial market increasing its coverage as it gained confidence in the field until such time as the commercial market would take over.
 - b. This option would encourage entry of commercial liability carriers to the pollution coverage business but it would not substantially decrease EPA's exposure.

- B. EPA chose option 3: Indemnification in sealed bid procurements where indemnification terms are decided as part of the procurement process.
1. The Federal Acquisition Regulations (FAR) allow for cost of insurance, either value of self-insurance or commercial policies, under cost-reimbursement contracts which will allow EPA to decide if the cost of insurance in the open market and passed on through the contract is better or worse than the cost of indemnification. If the cost of indemnification appears more favorable EPA can invoke section 119.
 - a. Since this determination will be difficult the EPA is proposing a hefty deductible and a top end limit to indemnification in order to encourage the RAC to not overstate the amount of insurance required. Under such a scheme, a RAC most concerned with the size of the deductible can request low limits of indemnification (and, consequently, be responsible for a small deductible amount), while a RAC most concerned about very large claims, while being relatively unconcerned about small (but more frequent) claims, can request large limits of indemnification (and, consequently, be responsible for a large deductible amount). The deductible amount is defined as per occurrence. Just as the deductible applies per occurrence so does the upper limits coverage, thus, the upper limit is limited only by the number of occurrences.
 - (1). Limits and deductibles will be determined by the RAC who can request indemnification limits of from \$1M with a deductible amount equal to 1% of the indemnification on a graduated scale up to indemnification limits of \$50M with a deductible amount equal to 10% of the indemnification limit in excess of \$25M, plus \$1M.
 - (2). The RAC may purchase insurance to cover the indemnification deductible amount, but the cost of that insurance is not reimbursable.
 2. Insurance is not reimbursable under fixed price contracts, therefore, EPA knows the RACs will not carry too much insurance because they will want to hold down the price of their bid as much as possible and carrying too much insurance would not be the RAC's best interest.
 - a. EPA indemnification would be available if it appeared RACs were unavailable due to certifiably unavailable, inadequate,

or unreasonably priced insurance as addressed in section 119.

3. Section 119 regards RAC's subcontractors on the same footing as the RAC for purposes of section 119 indemnification.
- C. The proposed rule requires RACs to request indemnification prior to contract submittal, as opposed to the present system of requiring submission within 30 days after signing the contract.
 1. This will allow EPA to evaluate the risk a RAC will pose if the RAC has been denied commercial liability coverage based more on risk posed by the RAC rather than availability of coverage. If the RAC poses a high risk as evidenced by refusal of commercial carriers to provide insurance EPA can factor that into their evaluation of the cost of indemnity or possibly not use the RAC due to the high risk.

IV. The EPA proposal received quick, critical response from the RAC community.

- A. Approximately 90 public comments packages were submitted. There were eleven recurring areas of concern, as follows:
 1. The 10 year limit on liability coverage is inadequate.
 2. The proposal will be too costly to RACs and force many out of the business.
 3. The cost to RACs is particularly harsh on small and minority owned RACs.
 4. The deductibles are too high.
 5. The diligent effort paperwork is too burdensome.
 6. The \$50M limit is too low.
 7. Definition of key terms is inadequate.
 8. Sureties are exposed to too much liability.
 9. Currently available insurance is poor.
 10. The policy lacks decision criteria.
 11. Sub-contractor pass-through of indemnification is poor.

- B. The Hazardous Waste Action Coalition believes the proposed rule is so deficient as to cause the EPA to go back to square one.
- V. The predicted outcome is some give and take on all sides with the result closer to the EPA proposal than the industry demands.
- A. The purpose of section 119 is to assure adequate, qualified RACs. Although this section was designed to be a temporary discretionary vehicle it will likely remain on the books due to the ebb and flow of available commercial insurance. The proposed final guidance provides very well for the expected uncertainty of commercial coverage.
 - 1. Despite the uncertainty and the poor quality coverage available there has not been a significant shortage of RACs to date. This is lucrative business which when done properly has not shown high losses to date.
 - 2. Commercial pollution liability coverage is available but the RAC has a difficult time in assembling a coverage package which meets its needs. To cover a cleanup operation it is often necessary to construct a package of different coverages (ie. commercial general liability insurance, contractor's pollution liability insurance, engineer's pollution liability insurance, worker's comp., commercial automobile liability insurance and any special hazard liability policy such as asbestos or PCB). The primary issue involved in putting together such a package is to avoid possible overlap of coverage if possible, thus, avoiding the associated increased cost due to duplicating some coverages.
 - a. As the insurance industry gains confidence in its ability in this area and if the losses become predictable, commercial insurance coverage will become more plentiful and full line products will emerge.
 - B. The GAO audit, mentioned earlier, identified problems in the interim guidance which failed to fulfill the intent of section 119. It pointed out that there were clearly ultra-hazardous activities which required use of section 119, but that for the most part, EPA was granting automatic indemnification with no justification and no limits on liability no matter what the risk. The audit also noted the interim policy failed to stimulate commercial coverage. The audit will possibly be the catalyst for the Proposed Final Guidance to overcome the bulk of the complaints issued in response to the published proposed guidance, since the Proposed Final Guidance

answers most of the GAO audit complaints. Whether the EPA or the RACs prevail will depend upon how Congress and the White House view the issue.

1. One finding of the GAO audit was that the final guidance document was being prepared at a cost of over \$1M by a RAC who was awarded two major superfund response action contracts that contained section 119 indemnification worth more than \$300M.
- C. No matter what the final guidance turns out to be less EPA indemnification will be available. RACs needing commercial insurance should start putting their insurance packages together now.
1. Insurance companies should be beyond the planning stages if they want to be ready to respond to demand. If they do not know their client's exposure they may be writing the wrong type policy. As recent cases have shown, they will face a rough day in court trying to exclude pollution damage under the standard comprehensive general liability policy exclusion clause.

VI. CONCLUSION - If you are representing private concerns or federal or state agencies where RACs come into play you need to understand section 119 indemnity and its related areas of concern. If you have been dealing with this issue under the interim guidance of wholesale EPA indemnity you can expect a significant change.

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