21 & Counting

TEXAS ENVIRONMENTAL SUPERCONFERENCE

"Viva Las Vegas"



THURSDAY-FRIDAY, AUGUST 6-7, 2009

FOUR SEASONS HOTEL ♦ 98 SAN JACINTO BLVD. ♣ AUSTIN, TX 78701

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State Bar of Texas Environmental and Natural Resources Law Section
Air & Waste Management Association, Southwest Section
Water Environment Association of Texas
Texas Association of Environmental Professionals
The Auditing Roundtable
American Bar Association Section of Environment, Energy & Resources

21 & Counting

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The Annual Texas Environmental Superconference – 21 & Counting
"Viva Las Vegas"



THURSDAY-FRIDAY,
AUGUST 6-7, 2009

TO: Attendees

FROM: Planning Committee

DATE: August 6, 2009

On behalf of the Environmental and Natural Resources Law Section of the State Bar of Texas, the Air and Waste Management Association-Southwest Section, the Water Environment Association of Texas, the Texas Association of Environmental Professionals, the Auditing Roundtable, and the American Bar Association Section of Environment, Energy & Resources, welcome to the Annual Texas Environmental Superconference, 21 & Counting, entitled "Viva Las Vegas."

As always, there are evaluation forms for the program. We appreciate your taking the time to complete them. The organizers of this program take these forms into account in planning next year's conference. In addition, if you have an interest in having a particular topic presented or in speaking on a particular topic, the evaluation form is the appropriate place to provide that information. We also would appreciate suggestions for themes for next year's conference, which is scheduled for August 5-6, 2010. Please mark your calendars.

For the fifth year, we have had a Wednesday evening program. This year our program, entitled, "Tropicana," focused on Climate Change – Statutory Interfaces. If you have suggestions for next year's Wednesday evening program, please let us know.

Please provide any comments or suggestions to any member of the Planning Committee at the conference, or, thereafter, to Jeff Civins at (512) 867-8477 or Jeff.Civins@haynesboone.com.

TEXAS ENVIRONMENTAL SUPERCONFERENCE – 21 & COUNTING
"Viva Las Vegas"
Thursday-Friday, August 6-7, 2009

THURSDAY, AUGUST 6, 2009

8:00 – 8:40 **Registration/Continental Breakfast** – *"Deal Me In"*

TAB 1 **8:40 – 9:00** **Opening Remarks** – *"Ante Up"*

Jeff Civins, Texas Environmental Superconference
Mary Koks, Environmental and Natural Resources Law Section, State Bar of Texas (SBOT ENRLS)
Cindy Smiley, Air & Waste Management Association, Southwest Section
Carol Batterton, Water Environment Association of Texas
Ed Fiesinger, Texas Association of Environmental Professionals
Michael Byington, Auditing Roundtable
Danny Worrell, ABA Section of Environment, Energy & Resources

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Moderator: Mike Nasi, Jackson Walker LLP

TAB 2 **9:00 – 9:25** **Rebirth of Nuclear Power** – *"What are the Odds?"*
Commissioner Dale Klein, Nuclear Regulatory Commission

TAB 3 **9:25 – 10:10** **Legislative Update** – *"Circus Circus"*

State – Texas State Senator Kirk Watson
Federal – Chet Thompson, Former EPA Deputy General Counsel, Crowell & Moring LLP

10:10 – 10:25 **Break** – *"Going All In"*

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[First Skit]

Moderator: Nathan Block, BP America Inc.

TAB 4 **10:25 – 11:00** **Water Supply and Energy** – *"Ocean's 11 "*

Michael Webber, The University of Texas at Austin
Amy Hardberger, Environmental Defense Fund

TAB 5 **11:00 – 12:00** **Catastrophic Releases*** – *"When the Chips are Down"*

Chemical Facility Anti-Terrorism Standards
Steve Roberts, Roberts Law Group PLLC
Planning and Response
Donna Ward, BP America Inc.
Robert A. Eckels, Eckels Law Firm

[Second Skit]

[Turn in Las Vegas Trivia Quiz]

12:00 – 1:15 **Lunch** – *"Full House"*

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[Roulette]

[Third Skit]

Moderator: Suzanne Smith, Multimedia Branch Chief, EPA Region 6

TAB 6 **1:15 – 1:40** **Case Law Update** – *"House Rules"*

Laurencia Fasoyiro, Attorney, Litigation Division, TCEQ

TAB 7 **1:40 – 2:40** **Air Quality** – *"The Stratosphere"*

Eric Schaeffer, Environmental Integrity Project
Ben Harrison, Deputy Regional Counsel, EPA Region 6
Matt Kuryla, Baker Botts

TAB 8 **2:40 – 3:10** **View from Washington/The New Administration** – *"The Golden Nugget"*

Larry Starfield, Acting Regional Administrator, EPA Region 6

3:10 – 3:30 **Break**-*"I'm out!"*

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[Fourth Skit]

Moderator: Lydia Gonzalez Gromatzky, Beveridge & Diamond, P.C.

TAB 9 **3:30 –4:30** **Climate Change – Hot Issues** – *"The Sahara"*

Climate Change Disclosure: Greg Rogers, Guida Slavich & Flores
One Company's Approach: Leslie Wong, Waste Management

TAB 10 **4:30 – 5:15** **Enforcement*** – *"The House Always Wins"*

Bryan Sinclair, Director, Enforcement, TCEQ
John Blevins, Director, Compliance and Enforcement, EPA Region 6
Tom Mariani, Assistant Chief, Environmental Enforcement, DOJ DC

[Announce Las Vegas Trivia Quiz Winners]

5:15 – 6:00 **Reception** – *"Jokers Are Wild"*

FRIDAY, AUGUST 7, 2008

8:00 – 8:30 **Continental Breakfast** – *"Sweeten the Pot"*

8:30 – 8:35 **Opening Remarks** – *"Double or Nothing"*

[Fifth Skit]

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[David Caberfield – Magician]

Moderator: Arnoldo Medina, Shell Oil Company

TAB 11 **8:35 – 9:00** **Pipelines – A Pressure Packed Presentation** – *"Going Down The Tubes"*

John Jacobi, P.E., Community Assistance/Technical Services Manager, U.S Department of Transportation

TAB 12 **9:00 – 9:25** **REACH and its Domestic Implications** – *"Monte Carlo"*

Sue Snyder, Jackson Walker

TAB 13 **9:25 – 10:10** **Clean Tech** – *"A Gamble That Could Pay Off"*

Rob Lawrence, Senior Energy Policy Advisor, EPA Region 6
Paul Dickerson, Former COO, DOE Office of Energy, Efficiency, and Renewable Energy, Haynes and Boone, LLP
Al Schuele, Sevin Rosen Funds

10:10-10:25 **Break** – *"A Fresh Deck"*

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[Sixth Skit]

Moderator: Debra Tsuchiyama Baker, Connelly, Baker, Wotring, LLP

TAB 14 **10:25 – 10:50** **Solid Waste Update** – *"What's the deal?"*

Paul Gosselink, Lloyd Gosselink Rochelle & Townsend, P.C.

TAB 15 **10:50 – 11:15** **The Future of Environmental Regulation in Texas** – *"Texas Hold 'Em"*

Larry Soward, Commissioner, TCEQ

TAB 16 **11:15-Noon** **Environmental Ethics*** -- "*What Happens in Vegas . . .*"

Jim Blackburn, Blackburn & Carter
Snehal R. Medina, Harris County Attorney's Office
David Young, Union Pacific Railroad Company

[Turn in Skit Quiz]

12:00 – 1:15 **Lunch** –"*All You Can Eat Buffet*"

1:00 – 1:15 **SBOT ENRLS Meeting** (for those who are interested)

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[Announce Skit Quiz Winners]

Moderator: Lisa Hodges, Valero Energy Corporation

TAB 17 **1:15 – 1:55** **Environmental Issues in Bankruptcy*** – *"Going for Broke"*

Hal Morris, Office of the Attorney General of Texas
Mary W. Koks, Munsch Hardt Kopf & Harr, P.C.

TAB 18 **1:55 – 2:35** **Vapor Intrusion** – *"The Mirage"*

Sam Coleman, Director, Superfund Division, EPA Region 6
Susan Litherland, Weston Solutions, Inc.

TAB 19 **2:35 – 3:20** **Water Quality** – *"Royal Flush"*

Lydia Gonzalez Gromatzky – Moderator
Kelly Keel, Diector, Water Quality Planning Division, TCEQ
L'Oreal Stepney, Assistant Deputy Director, Office of Permitting and Registration, TCEQ

William (Bill) Honker, Deputy Director, Water Quality Protection Division, EPA Region 6

TAB 20	**3:20-3:45**	**Using EPA's New Owner Audit Policy in Acquisitions* –** *"CSI"*

Tim Wilkins, Bracewell & Giuliani, LLP

[Texas Hold'Em]

3:45 **Adjourn –** *"Leaving Las Vegas"*

Ice Cream – *"The Cooler".*

[Comment Card Drawing]

MCLE

To obtain CLE credit, you must do 2 things: (1) sign the sign-in sheet, with your printed name, signature, Bar Card Number, and number of hours of participatory and ethics credits; and (2) enter your time on-line, in accordance with the instructions below.

Course Number: 901180611
Participatory Hours: 12
Ethics Hours: 2

Go to www.texasbar.com and click on the yellow **MyBarPage** tab at the top of the page.
From there, you will need to log in using your bar card number and PIN.

If you have never logged in before, click the 'Proceed' button on the page and follow the instructions.

Once you are logged in, look for the link on the left-hand side of the page that reads **'View/Update My MCLE Records.'**

On the next page, click on **'Add Course or Self-Study Credit'** (should be in a yellow box in the middle of the page).

On the next page, click **'Approved Course Credits'.**

From here, you will enter the course number provided above, **date attended [insert here], Total Hours you attended, Ethics Hours you attended.**

Confirm that you have entered the correct number of hours. You will not be able to edit this once you submit it.

Click the **Submit** button at the bottom of the page.

On the next page, you may see a **check box** asking you to confirm (swear) your attendance. Check the box, and click **Submit (or OK).**

Once you have done this, your attendance will be reflected in your records.

Jeff Civins
Haynes and Boone, LLP
600 Congress Avenue, Suite 1300
Austin, TX 78701
512.867.8477
jeff.civins@haynesboone.com

Practice: Mr. Civins has practiced all aspects of environmental law since 1975, assisting clients in compliance, transactions, and litigation. As an Adjunct Professor at the University of Texas School of Law, Mr. Civins has taught an annual seminar on environmental litigation since 1992. He is co-editor of the Thomson West Texas Practice 2-volume treatise on Texas Environmental law, a former chair of the Environmental and Natural Resources Law Section of the State Bar of Texas, and standing chair of the section's Annual Texas Environmental Superconference. He is on the Advisory Board of the law school's Center for Global Energy, International Arbitration, and Environmental Law. He is a frequent speaker and author on environmental law and climate change topics. Prior to law school, Mr. Civins taught science in New York City schools.

Education:
J.D., University of Texas, 1975, with honors; Order of the Coif
M.S., Chemistry, Pennsylvania State University, 1970
A.B. Chemistry, Brandeis University, 1967

Honors: Chambers USA: America's Leading Lawyers (2003-2009) Environment Texas (Band 1 or higher); Best Lawyers in America – Environmental Law; (1989-2009); Who's Who Legal: USA – Environment (2006-2009); Texas Super Lawyer – *Texas Monthly* (2003-2008); Top 50 Lawyers in Central and West Texas – *Texas Monthly* (2003-2008); and Top 100 Lawyers in the State – *Texas Monthly* (2008)

Recent Publications:

"The Carbon Revolution: Answering the Call," with M. Mendoza, *Texas Bar Journal* (April 2009)

"Companies Should Be Cautious When Making Green Claims," with M. Mendoza, *Executive Legal Advisor* (March/April 2009)

"Environmental Regulation and the New Administration," 2009 Annual Winter Meeting of the Association of Energy Service Companies, February 20, 2009, presentation, The Woodlands, Texas

"The Opportunities and Risks of the New Federal Stimulus Bill – Environmental Aspects," February 19, 2009, presentation

"Climate Change Disclosures – Avoid the Heat," with M. Mendoza, *Texas Lawyer*, February 2009

"Corporate Sustainability and Social Responsibility: A Legal Perspective," with M. Mendoza, *Texas Bar Journal* (May 2008).

MUNSCH HARDT KOPF & HARR PC

ATTORNEYS & COUNSELORS



713.222.4030 Direct
713.222.5830 Fax
mkoks@munsch.com

Bank of America Center
700 Louisiana Street
Suite 4600
Houston, Texas 77002-2845

Download vCard

RELATED PRACTICES

- Bankruptcy
- Business Litigation
- Energy & Environmental

EDUCATION

- University of Houston Law Center, Master of Laws in Energy, Environment, and Natural Resources Law
- South Texas College of Law, Juris Doctor
- University of South Carolina, Master of Arts in Government
- University of South Carolina, Bachelor of Arts in Political Science

MARY W. KOKS

Shareholder

OVERVIEW

Mary has more than 26 years of experience in a practice focusing on environmental compliance and litigation. Her experience includes:

- Representation of potentially responsible parties in environmental lawsuits including bankruptcy matters, toxic tort and property claims, and petitions brought under various environmental acts.
- Representation of clients in administrative and civil enforcement cases before the Environmental Protection Agency (EPA), Texas Commission on Environmental Quality (TCEQ) and State Office of Administrative Hearings (SOAH).
- Assisting and advising clients on environmental aspects in real estate related transactions as well as interpretation of federal and state environmental regulations, supervision of environmental compliance audits and the Spill Prevention Control and Countermeasures (SPCC) plans.

MEMBERSHIPS & AFFILIATIONS

- Houston Bar Association, Environmental Law Section, Former Chair
- Spondylitis Association of America, Member and Volunteer
- State Bar of Texas, Environmental and Natural Resources (Chair), Litigation and Oil, Gas and Mineral Law Sections
- Texas Board of Legal Specialization, Business Bankruptcy
- University of St. Thomas — Center for Irish Studies, Board Member

AWARDS & HONORS

- AV® Peer Rating, Martindale-Hubbell
- Best Lawyers in America in Environmental Law, Woodward/White, Inc., 2007-2009
- Best Lawyers in Texas in Environmental Law, *Texas Lawyer*, 2006-2009
- Environmental Super Lawyers — Corporate Counsel Edition, Key Professional Media, Inc., 2009
- Super Lawyers, Key Professional Media, Inc., 2008
- Top Lawyers, *H Texas*, 2009

ADMISSIONS

- Texas
- United States District Courts for the Eastern, Northern, Southern and Western Districts of Texas
- United States Supreme Court

ARTICLES & SPEECHES

- April 1, 2005 — Bankruptcy Impacts on Environmental Claims

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CYNTHIA C. SMILEY
Partner
KELLY HART & HALLMAN LLP
301 Congress Avenue, Suite 2000
Austin, Texas 78701
(512) 495-6441
cindy.smiley@khh.com



Nature of Experience:

A major part of Cindy Smiley's practice is devoted to counseling clients on federal, state, and local laws relating to water quality, water rights and waste management. She represents clients before the Texas Commission on Environmental Quality, the U.S. Environmental Protection Agency and other agencies on matters involving waste, surface water, groundwater, water quality, and other environmental and administrative law matters.

***Education*:**

J.D., The University of Texas School of Law, 1981
B.A. (with highest honors), Plan II (liberal arts honors program), The University of Texas at Austin, 1978

***Professional Experience*:**

Kelly Hart & Hallman LLP, Austin, Texas, May 2004 to present
Baker Botts L.L.P., Austin, Texas, October 1994 to April 2004
Jones, Day, Reavis & Pogue, Austin, Texas, 1988 to September 1994
Texas Water Commission/Texas Department of Water Resources, Austin, Texas, 1983 to 1988
Exxon Company, U.S.A., Houston, Texas, 1981 to 1983

***Professional Organizations*:**

Air & Waste Management Association, Southwest Section, Board Member
State Bar of Texas
Executive Committee, Environmental and Natural Resources Law Section, State Bar of Texas (2005-2008); Secretary of Executive Committee (2008-2009)
Austin Bar Association
Industry Council on the Environment

Carol V. Batterton, Executive Director, Water Environment Association of Texas

Carol Batterton currently serves as the Executive Director of the Water Environment Association of Texas. In this position, she is responsible for coordination of WEAT's legislative activities with a primary focus on promoting WEAT as a technical resource in the legislative process. She also coordinates WEAT's interaction with regulatory agencies involved with water issues.

Prior to serving as WEAT's Executive Director, Carol worked for the Texas Commission on Environmental Quality for 25 years. At TCEQ, she served in a variety of positions related to compliance and enforcement, including Director of Field Operations Division, Director of the Compliance Support Division, and Special Assistant to the Deputy Director of the Office of Compliance and Enforcement.

Carol is a past-president of WEAT, past chair of the National Environmental Laboratory Accreditation Conference, and past chair of the Institute for National Environmental Laboratory Accreditation. She also received the 2009 Water Environment Federation's Arthur Sidney Bedell award.

Carol received a B. S. in biology from Baylor University and a M. A. in biological sciences from the University of Texas, Marine Science Institute.

Edward G. Fiesinger, P.E.
Principal
Zephyr Environmental Corp.

Edward G. Fiesinger is a Principal with Zephyr Environmental Corporation in their Houston, Texas office specializing in air quality program management, NSR and Title V permit development, emissions inventory preparation, compliance issues and regulatory interpretations. He joined Zephyr in 2003 following his retirement from the chemical industry where he was employed for over 36 years by Solutia Inc (formerly Monsanto Company's chemicals business). Following an 18 year career in manufacturing operations, he transferred to the environmental group where he was responsible for air permit development, preparing annual plant emissions inventories and SARA TRI reports, compliance reporting, regulation interpretations, and regulatory advocacy on the state and federal level.

He is currently the Treasurer of the Texas Association of Professionals (TAEP). He holds the position of Fellow in the Air & Waste Management Association (AWMA). He chairs the Houston Galveston Area Emission Reduction Credit Organization (AERCO) and he is a licensed Professional Engineer in the state of Texas.

He earned a B. S. degree in Chemical Engineering from Clarkson University in Potsdam, N.Y. and a M. S. in Chemical Engineering from the University of Delaware.

Michael Byington - Byington Group LLC

P.O. Box 801085
Dallas, Texas 75380

Professional Profile

Competent individual with over 30-years of experience in environmental regulatory compliance, permitting, auditing and project management. Experience includes corporate coordinator and project manager for environmental regulatory compliance, permitting, and auditing in conjunction with solid waste, water, and air.

Areas of Expertise

Environmental Regulatory Compliance	Environmental Management Systems	Health and Safety
Environmental Auditing	Environmental Site Assessments	Research/Development
Environmental Permitting	Acquisition Due Diligence	Public Relations

Professional Experience and Responsibilities

- Currently (2003 to present) assisting in all environmental compliance programs and EMS implementation project at a major Federal installation in Texas. This involved all aspects of implementation from design and development through full system implementation and third party registration.
- Corporate coordinator and project manager for environmental regulatory compliance, permitting and auditing in conjunction with waste, water, and air; in response to U.S. EPA and State regulatory requirements. Developed corporate environmental auditing policies and procedures. Additional audit overviews of operational activities pertaining to MSHA and OSHA requirements.
- Conducted numerous Acquisition Due Diligence and Environmental Site Assessment activities and reporting; including asbestos sampling and reporting. Involved in developing Asbestos Maintenance Plans.
- Performed numerous environmental compliance audits of industrial operations and third-party waste disposal facilities.
- Manage operational issues concerning solid waste, water, and air permitting compliance and reporting. Issues include waste disposal, Hazard Materials Communication Plans, Spill Prevention and Storm Water.
- Oversee corporate technical consultant requirements and coordinated efforts with Fortune 100 companies with a wide array of technical and industry requirements.

Environmental Consultant – Byington Group LLC	**2007 to Present**
Environmental Consultant - Byington & Genuise, LLC	**2000-2007**
Environmental Consultant - J. McNutt and Associates	**1998-2000**
Senior Environmental Specialist - The North American Coal Corporation	**1991-1997**
Senior Environmental Engineer - Texas Municipal Power Agency	**1984-1991**

Education & Training

B.S. Zoology, Texas A&M University, 1977

Graduate Studies (MBA), Texas A&M University

Numerous regulatory seminars and training classes for Regulatory Compliance and Environmental Auditing

Professional Certifications and Affiliations

Level 5 Federal Security Clearance

TSA Security Clearance

Certified Professional Environmental Auditor (CPEA)

The Auditing Roundtable - Chairman, South Central Region

Previous Certifications Include:

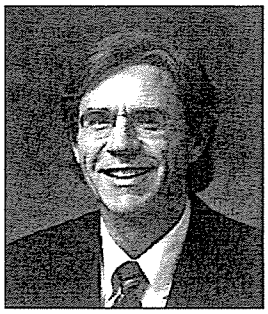
Certified Hazardous Material Manager (CHMM)

Visible Emissions Evaluation Certification

Certified Asbestos Inspector

Brown McCarroll
L.L.P.

111 Congress Avenue, Suite 1400, Austin, Texas 78701-4043
512-472-5456 fax 512-479-1101



DANNY WORRELL
Partner
Direct: 512-479-1151
Email: dworrell@mailbmc.com
www.brownmccarroll.com

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Legal Experience

Mr. Worrell's practice is concentrated in the areas of environmental permitting and enforcement; Superfund litigation; litigation and transactions involving environmental matters; and on regulatory compliance involving hazardous and municipal solid waste, air quality, injection wells, *in situ* uranium mining, underground and aboveground storage tanks, asbestos, PCBs, water and wastewater utilities, and pipelines.

Recent Accomplishments

- Lead attorney in administrative contested case hearing on an application for a Texas Pollution Discharge Elimination System permit for a municipal wastewater discharge.
- Represented client in administrative contested case hearing involving amendment to production area authorization for *in situ* uranium mining permit before the Texas Commission on Environmental Quality ("TCEQ").
- Lead attorney in administrative contested case hearing and district court appeal, successfully obtaining renewal and new Class 1 hazardous waste injection well permits from the TCEQ.
- Represented and assisted client in administrative, district court and appeals court proceedings involving a contested case hearing, successfully obtaining major modifications to its Class 1 non-hazardous injection well permits from the TCEQ.
- Lead attorney in successful effort to obtain a Municipal Solid Waste Type I landfill permit for client in state administrative proceedings, including contested case hearing.
- Represented client in successfully negotiating settlement of administrative proceedings, involving a contested case hearing, on an application for renewal and major modification of Commercial Hazardous Waste Treatment, Storage and Disposal Facility permit.
- Assisted client in successfully obtaining first Regulatory Flexibility Order from the TCEQ for use of the EPA Comparable Fuels Rule allowing substitution of fuels at chemical manufacturing facility.
- Represented clients in successfully obtaining a Single Property Designations from the TCEQ for air quality regulatory purposes.
- Represented four different clients in settling claims associated with federal Superfund litigation involving former tin smelter.
- Assisted client in successful settlement of product liability litigation relating to oil well cementing operations.

Education

- Doctor of Jurisprudence, University of Houston Law Center, 1990. Houston Journal of International Law
- Master of Science, Geology, Louisiana State University, 1984
- Bachelor of Science, Geology (Major), Petroleum Engineering (Minor), University of Texas at Austin, 1980

Professional Licenses

- Attorney at Law, Texas, 1990

Court Admissions

- United States Court of Appeals for the Fifth Circuit
- Supreme Court of Texas

Prior Professional Experience

- ARCO Oil and Gas Company, Geologist, Specialized in oil and gas exploration, 1984-1986

Speeches and Publications

- *What Happens When a Rule is Vacated? MACT Hammer, Title V Impacts,* TCC/ACIT Environmental, Health & Safety Seminar, 2009, Presentation
- Texas Chapter in Brownfields Law & Practice, Matthew Bender, 2008- 2009, Publication
- *Compliance: Confidentiality and Ethics, Changing Times Require Changing Approaches,* Texas Bar Law Center, 2007, Webinar
- *Environmental Law 101: Solid Waste*, In conference materials associated with the Texas Environmental Superconference, 2005, Article
- RCRA: Resource Conservation and Recovery Act, Co-Author with John W. Teets and Dennis P. Reis, American Bar Association, 2003, Book
- *Subsurface Trespass Claims Against Underground Injection Control Operations*, in conference materials for the Texas Natural Resource Conservation Commission 2002 Underground Injection Control Symposium, 2002, Article
- *Legal and Strategic Considerations in Risk-Based Closures,* in proceedings of Energy Week Conference and Exhibition, 1996, Article
- *Land Disposal Restrictions: Current Developments and The Corrective Action Management Unit (CAMU) Rule,* in conference materials for the Brown McCarroll & Oaks Hartline Annual Client Environmental Seminar, 1994, Article
- *Exploration and Production Wastes and Class II Injection Wells: Current Regulatory Developments (SPE 27706),* in Proceedings of the Permian Basin Oil & Gas Recovery Conference, sponsored by the Society of Petroleum Engineers, 1994, Article
- *Understanding the New Corrective Action Management Unit (CAMU) Rule and its Impact on CERCLA Projects,* in Operating Under RCRA and CERCLA Requirements, sponsored by Executive Enterprises, Inc., 1993, Article
- *Overview of Federal and Texas Class II Injection Well Regulatory Programs and New Developments in Efforts to Revise These Programs,* in proceedings of the Symposium on Class II Injection Well Management and Practices, sponsored by the Underground Injection Practices Search Foundation and the U.S. Department of Energy, 1992, Article
- *Producing Property Conveyances and Environmental Liabilities: A Mine Field for the Unwary,* with R. Kinnan Golemon, 43rd Annual Institute on Oil and Gas Law and Taxation, Mathew Bender 1992, Article
- *Permitting Injection Wells in the New Texas,* with Albert R. Axe, Jr., in Proceedings of the Underground Injection Practices Council, Winter and Summer 1991, Article
- *Recent Regulatory Changes Affecting Class I Injection Wells,* with Albert R. Axe, Jr. and R. Steven Morton, in Proceedings of the Underground Injection Practices Council, Winter and Summer 1991, Article
- *An Overview of the Use of Injection Wells for Industrial Waste Disposal,* with R. Steven Morton and Susan Thompson, 1990, Article
- *Issues and Policy Considerations Regarding Hazardous Waste Exports,* 11 Houston Journal of International Law 373, 1989, Article

Professional Memberships and Activities

- State Bar of Texas
- American Bar Association, Sections of Natural Resources, Energy, and Environmental Law
- Austin Bar Association

Honors

- Recognized in *Best Lawyers in America*, Environmental Law, 2007-2008
- Recognized in *The Texas Who's Who Legal*, 2007-2008
- "Leaders in Their Field," Environmental Law, Chambers USA 2005-2009 Guides

Community Involvement

- Austin United Capital Soccer Club, Team Manager, 2005-2008
- North Austin Soccer Alliance, Soccer Coach, 2003-2004
- West Austin Youth Association, Soccer Coach, 2000-2002
- Adult Services Council, President, Officer, and Board Member, 1991-1996

JW | JACKSON WALKER L.L.P.
ATTORNEYS & COUNSELORS



Michael J. Nasi
mnasi@jw.com
100 Congress Avenue
Suite 1100
Austin, Texas 78701
P (512) 236-2216
F (512) 236-2002
www.jw.com

Mike Nasi is a partner with the Environmental and Legislative Affairs Practice Group in the Austin office of Jackson Walker L.L.P and heads the firm's Climate Change and Carbon Management practice. Mike contributes his environmental permitting and carbon management expertise to the firm's Energy Practice Group which contains experts from several offices with expertise in corporate, tax, utility, oil and gas, transportation, and real estate law. As part of the Energy Practice Group, Mike is involved in major energy developments ranging from renewable electric power and fuels to coal-based, gas-fired, and nuclear power projects. Mike's environmental law practice primarily focuses on regulatory permitting in the air, water, injection well, mine reclamation, and waste programs for facilities in the renewable energy, electric power generation, mining, steel manufacturing, and brownfield redevelopment industries. Mr. Nasi has an active environmental and energy policy practice as well. On behalf of individual companies and associations, he coordinates Texas interests on national policy debates and works closely with Texas public officials on state energy, regulatory, and tax policy development. Mike practices before the EPA, Texas Commission on Environmental Quality (TCEQ), the Texas Railroad Commission and the Texas Legislature. Mr. Nasi authors chapters for West's Environmental Law Handbook in on Environmental Enforcement, Oil & Hazardous Substance Spill Reporting & Response and Brownfield Redevelopment. He is frequently an invited speaker at seminars and conferences related to his areas of specialty in Texas and across the U.S.

Mike received his undergraduate degree from The University of Texas at Austin and his J.D. from the University of Houston. Mike serves Chairman of the Education Committee in the State Bar of Texas Environmental and Natural Resources Law Section (ENRLS). Mike is a Board member and Treasurer of the Sustainable Biodiesel Alliance and is a Board member at the Salvation Army, where he Co-Chairs the Development Committee. Mr. Nasi has been honored in *Who's Who - Texas* for Environmental Law, in *The Best Lawyers in America* under Environmental Law, as a "Rising Star" by *Texas Monthly Magazine*, and as an "Up and Coming" leader by Chambers U.S.A. in the area of Environmental Law. Mike is married with 3 children and lives in Central Austin.

Environmental & Energy Legislative Update On The 81st Texas Legislature:

Key Victories For Clean Carbon, Quiet Victories For Renewables, And As For The Rest, A Chub To The Head

By: Michael J. Nasi & Travis W. Wussow*

Introduction: Chubbed to Death

The 81st Texas Legislature was a fascinating session that brought surprises, twists and turns, and significant difficulties for anyone interested in passing legislation. In the months leading up to the session, observers speculated that political tensions and partisanship would dominate the House of Representatives because of the drama associated with the ouster of Speaker Tom Craddick (R–Midland).[1]

This drama did not come to pass, however, as the House settled on a new speaker, Rep. Joe Straus's (R–San Antonio) with very little fanfare at the beginning of the session. The first couple of months in the House were, in fact, marked by remarkable cooperation and bipartisanship as Speaker Straus attempted to deliver on his promises to give Democrats a seat at the table.[3] The House did get off to a slow start, as new committee chairmen and chairwomen and their staffs learned the ropes of their new committees.



According to Lee Nichols, political writer for The Austin Chronicle, *Old Chub is the official beer of the 81st Legislative Session.*[2]

What drama was missing in the House at the beginning of the session was made up for in the early days of the session in the Senate, as that chamber considered a procedural rule designed to block Senate Democrats from filibustering the Voter ID bill that

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* Michael J. Nasi is a partner with Jackson Walker L.L.P. in the firm's Austin office. Mr. Nasi is the founder of the firm's Climate Change and Carbon Management group and is also active in the firm's Environmental and Energy practice groups. Travis W. Wussow is an associate with Jackson Walker L.L.P. in the firm's Austin office, where he is an associate in the Environmental & Legislative practice group. The authors would also like to thank Cassandra Quinn for her assistance in preparing portions of this article.

[1] Janet Elliott & Gary Scharrer, *House Speaker Straus Takes Seat*, HOUSTON CHRONICLE, Jan. 14, 2009.

[2] Posting of Lee Nichols to Newsdesk, The Official Beer of the 81st Legislature, http://www.austinchronicle.com/gyrobase/Blogs/News?author=oid%3A73720 (May 31, 2009 13:55).

[3] Jason Embry, *Straus Steered House with a Light Hand*, AUSTIN AMERICAN-STATESMAN, June 7, 2009 ("Straus' first legislative session was never about his own view of public policy. It was about process — the process of divesting power from the speaker and giving it to committee chairmen and other lawmakers to pursue their own goals.").

would pave the way for an early Senate vote on that highly controversial measure.[4] This procedural move injected partisan tensions that simmered in the Senate throughout the rest of the session, boiling over into the lower chamber as the House took up the Voter ID measure late in the session.[5]

Faced with the prospect of the Voter ID bill coming to a vote in the House, several House Democrats engaged in a now-infamous (or famous, depending on your position) strategy known as "chubbing."[6] Using this strategy—talking endlessly about noncontroversial bills on the local calendar—Democrats successfully prevented consideration of the Voter ID measure in the House.[7] However, because the Voter ID bill was scheduled ahead of many other pieces of legislation on the House calendar, their fates were tied together, and a number of significant Senate bills were not able to be reached on the House calendar. This launched a frenzy of behind-the-scenes legislative activity, as members tried to salvage their legislation by attaching it, in whole or in part, to House bills still pending in the Senate.

In these last few days of the session, some key initiatives, many of which are discussed below, were rescued. A disproportionate number of bills died this session. A total of 7,419 bills were introduced this session, and only 19.6%, or 1,459, passed. This passage rate is down from an average of 23% to 25% over the last several sessions.

This paper will discuss the few environmental and energy-related bills that did manage to become law this session. Some significant measures that did not survive will be addressed as well. Before moving into the details of the regular session, however, a brief update on the recently-completed Special Session is warranted because it will have major implications for major Texas environmental and energy agencies over the next 24 months.

The First (and only) Special Session: Brewing A Perfect Storm for 2011

The last days of the session were so tumultuous that the two chambers failed to agree on necessary legislation to reauthorize five Texas agencies up for sunset review: the Texas Department of Transportation, the Texas Department of Insurance, the Texas Racing Commission, the Office of Public Insurance Counsel, and the Texas State Affordable Housing Corporation.[8] This meant that Governor Rick Perry would have to call a special session to allow

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[4] Mike Ward, *Texas Senate Adopts Rules Change to Allow Voter ID Vote*, AUSTIN AMERICAN-STATESMAN, Jan. 15, 2009 ("Under the change, the bill can be brought up for a vote on the floor with the approval of only 16 senators, not the 21 required under the customary two-thirds rule. There are 19 Republicans in the Senate. With 12 members, the Democrats could block votes under the usual rule—and did so on the voter ID bill two years ago. Wednesday's action will only apply to the voter ID bill; redistricting was dropped from the resolution earlier in the day. Sen. John Carona, R-Dallas, was the only Republican to vote against the change.").

[5] Jason Embry, *Voter ID Fight Took Unexpected Turns*, AUSTIN AMERICAN-STATESMAN, May 31, 2009.

[6] *Id.*; Robert T. Garrett & Christy Hope, *House Democrats' Tactic Holds up Voter-ID Bill, Other Legislation*, DALLAS MORNING NEWS, May 23, 2009.

[7] Garrett & Hope, *supra* note 6.

[8] Mike Ward & Jason Embry, *Chaos in Last Day of Legislative Session; Special Session Could Be Coming*, AUSTIN AMERICAN-STATESMAN, June 2, 2009.

lawmakers to reauthorize these agencies through a "safety net" bill that would delay their sunset dates, or the five agencies would have expired in September 2010.[9]

On June 25, 2009, Governor Perry called a limited special session, allowing the Legislature to consider the reauthorization of these five agencies to start on July 1, 2009.[10] The special session lasted less than 30 hours, and the Legislature passed a measure that solved the present sunset crisis. The five agencies up for sunset review were given an additional two years of life, meaning that they will again undergo sunset review in 2011.[11] At the same time, however, provisions included in the safety net bill reorganized the sunset review schedule, moving several key energy and environmental agency's sunset review date up to 2011: the Texas Commission on Environmental Quality,[12] the Texas Water Development Board,[13] the Railroad Commission of Texas,[14] the Electricity Reliability Council of Texas,[15] the State Soil and Water Conservation Board,[16] the Texas Forest Service,[17] and the On-Site Wastewater Treatment Council.[18]

With the Public Utility Commission already set to undergo sunset review in 2011, the acceleration of the sunset review of every other major energy and environmental agency will make for an extremely busy interim for these agencies and will set the stage for an unprecedented amount of activity during the 82nd Texas Legislature on environmental and energy issues. Because sunset bills cover a wide range of topics and have significant momentum as they move through the legislative process (mainly because they are necessary to extend the

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[9] *Id.*

[10] Anna M. Tinsley, *For Texas Lawmakers, Special Session that Starts Today Could Be a Quick One*, FORT WORTH STAR-TELEGRAM, June 30, 2009; *see also* Proclamation, Governor of Texas, Gov. Perry Calls A Special Session for July 1, 2009, June 25, 2009, *available at* http://governor.state.tx.us/news/proclamation/12758. The special session call allowed the legislature to pass legislation related to the following issues:

> To consider legislation that provides for extending the existence of several state agencies that were subject to sunset review by the 81st Legislature and will be abolished without legislative action under the state's Sunset Act, that changes the review schedule for certain state agencies to balance the workload of the Sunset Advisory Commission.
>
> To consider legislation relating to the issuance by the Texas Transportation Commission, pursuant to Article III, Section 49-p, of the Texas Constitution, of general obligation bonds for highway improvement projects, and to the creation, administration, financing and use of a Texas Transportation Revolving Fund to provide financial assistance for transportation projects.
>
> To consider legislation relating to the date on which the authority of the Texas Department of Transportation and a regional mobility authority to enter into a comprehensive development agreement expires.

Proclamation, Governor of Texas, Gov. Perry Calls A Special Session for July 1, 2009, *supra*.

[11] Act of June 2, 2009, 81st Leg., 1st C.S., ch. —, 2009 Tex. Gen. Laws —, §§ 1.04, 1.06, 1.07, 1.11, 1.15 (2009) (Tex. S.B. 2); *see also* Mike Ward, *In Just 30 Hours, Legislature Sends 2 of 3 Bills to Perry, then Adjourns: Governor Says He's Happy with Special Session Results*, AUSTIN AMERICAN-STATESMAN, July 3, 2009.

[12] Act of June 2, 2009, 81st Leg., 1st C.S. § 1.12, 2009 Tex. Gen. Laws —.

[13] *Id.* § 1.13.

[14] *Id.* § 1.14.

[15] *Id.* § 3.02.

[16] *Id.* § 1.01.

[17] *Id.* § 1.02.

[18] *Id.* § 1.05.

life of the agencies in question), they tend to attract proposed amendments from interested parties with pet projects, issues, and causes. Without a doubt, 2011 will be an important session for the environmental and energy bar to watch closely.

Major Victories for Clean Carbon Incentives

Momentum behind clean carbon technology incentives carried forward from bills passed in the 2007 session into the 2009 legislative session with the filing of several additional clean carbon incentive bills by key members of the House and Senate. The end result was the passage of a series of measures that combined components of a few key bills to establish the most comprehensive incentive package for clean carbon projects in the nation. This sweeping legislation will help position Texas as the national leader in next-generation "clean carbon technology." By the term "clean carbon technology," the authors are referring to the use of advanced, low-pollution electricity generation from solid, carbon-based fuels, such as coal, petroleum coke, solid waste, and biomass.

Two-Tiered Sales, Property, and Franchise Tax Credits

The combination of H.B. 469 (Rep. Phil King/Sen. Kel Seliger) and key elements of S.B. 2111 (Sen. Kip Averitt/Rep. Rick Hardcastle) resulted in the final passage of H.B. 469, which establishes a two-tiered incentive package for clean carbon projects in Texas.[19] Projects that capture at least 50% of their carbon dioxide (CO_2) emissions are eligible for the first tier of incentives, which includes sales tax exemptions for the equipment that captures, transports, and stores their CO_2.[20] The first tier of projects is also eligible for key tax incentives at the local level as the bill provides local taxing authorities more freedom to defer taxes in the early years of a project's development.[21] These tax abatement agreements can fundamentally change the economics of clean carbon projects in Texas.

The first three projects in Texas able to achieve a 70% carbon capture rate are eligible for the second tier of incentives. This tier includes the 50% incentives and an additional bonus—a $100 million per-project franchise tax credit.[22]

A subtle but important change in the definition of "advanced clean energy project" will make the first tier of incentives available for retrofit projects, including slipstream carbon capture and sequestration projects.[23] A "slipstream" project is one that siphons off a percentage of the flue gas from an EGU and treats that portion of the flue gas. Slipstream projects will be critical in the early stages of the development of carbon capture and sequestration technology as this new technology is ramped-up to full commercial deployment.

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[19] Act of June 1, 2009, 81st Leg., R.S., ch. 1109, 2009 Tex. Gen. Laws —.

[20] *Id.* § 2 (to be codified at TEX. HEALTH & SAFETY CODE ANN. § 382.003(1-a)).

[21] *Id.* § 6 (to be codified at TEX. TAX CODE § 313.021(4)).

[22] *Id.* § 1 (to be codified at TEX. GOV. CODE ANN. §§ 490.351–490.352).

[23] *Id.* § 2 (to be codified at TEX. HEALTH & SAFETY CODE ANN. § 382.003(1-a)(A)).

Severance Tax Exemption

Another key incentive in H.B. 469 provides a 75%, 30-year severance tax exemption for oil recovered using CO_2 captured from a man-made emission source.[24] This process, known as enhanced oil recovery (EOR) using carbon flooding, is expected to be the first step in the development of commercial-scale carbon capture and storage technology.[25] EOR involves the injection of carbon dioxide into a depleted oil reservoir, increasing oil production from the reservoir as the carbon dioxide moves through the reservoir formation, liberating oil particles trapped in the pore spaces of the rock.[26]

EOR will be critical to the development of carbon capture and sequestration technology because it will allow CO_2 to be profitably injected underground. Indeed, the financial benefits of this incentive will play a key role in attracting the first carbon capture projects to Texas, where there are significant opportunities for enhanced oil recovery using CO_2—an established practice in Texas for over 35 years.[27]

Offshore Carbon Repository

The Texas Legislature also passed H.B. 1796 (Rep. Warren Chisum/Sen. Kirk Watson), which sets in motion an offshore carbon repository program that will ensure Texas becomes a leader in the capture and sequestration of CO_2, paving the way for the creation of a multi-billion dollar carbon sequestration industry in Texas.[28] Not only will this legislation bring cutting-edge carbon sequestration technology to the state, it will also likely trigger the construction of a network of CO_2 pipelines throughout South and East Texas that can be tapped for enhanced oil recovery. There are a number of significant opportunities for enhanced oil recovery near the Texas Gulf Coast and throughout Texas. The following figure shows CO_2 enhanced oil recovery candidate reservoirs throughout Texas and nearby states.

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[24] Act of June 1, 2009, 81st Leg., R.S., ch. 1109, § 5, 2009 Tex. Gen. Laws — (to be codified at TEX. TAX. CODE ANN. § 202.0545).

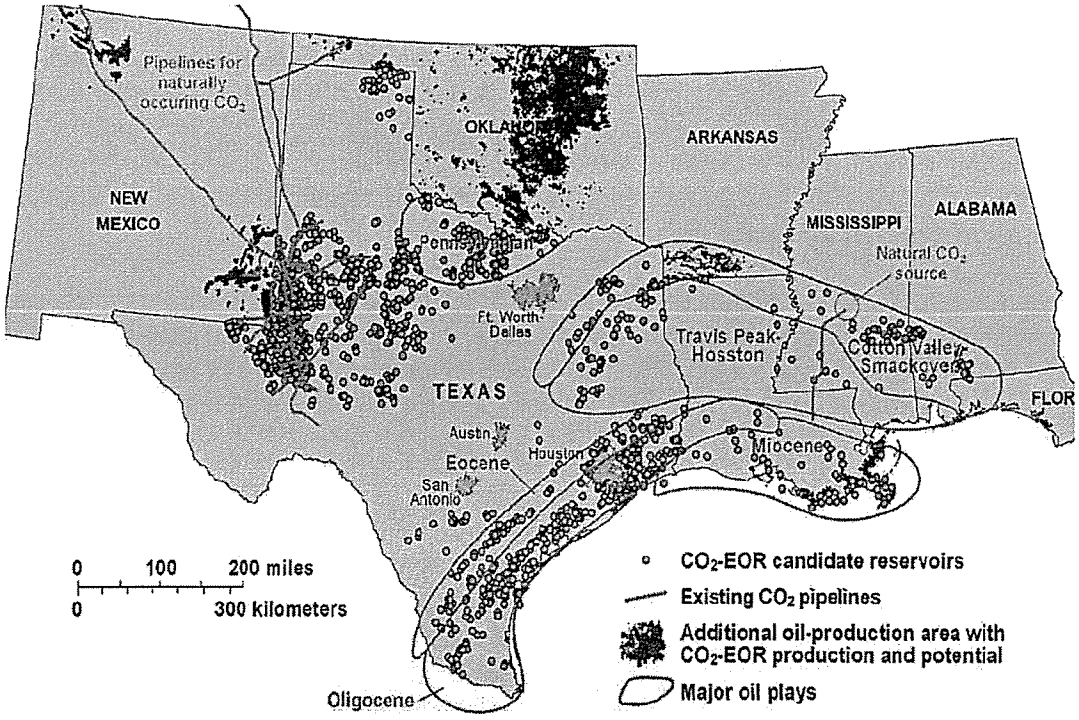
[25] *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SPECIAL REPORT ON CARBON DIOXIDE CAPTURE AND STORAGE 227 (2005).

[26] *Id.*

[27] *Id.* at 182.

[28] Act of June 1, 2009, 81st Leg., R.S., ch. 1125, § 1, 2009 Tex. Gen. Laws — (to be codified at TEX. HEALTH & SAFETY CODE ANN. §§ 382.501–382.510).

Figure 1. Areas with CO_2–EOR Potential[29]



New Technology Grant Program

H.B. 1796 (Rep. Warren Chisum/Sen. Kirk Watson), as finally passed, contains a key element of Senator Averitt's omnibus clean air legislation (most of which did not pass due to the House "Chubfest")—a grant program for the implementation of new technologies to reduce emissions from stationary sources in Texas.[30] The funding for this grant program was included in the budget for the Texas Commission on Environmental Quality (TCEQ) in the general appropriations act.[31] Clean carbon technology and carbon capture and sequestration projects are eligible projects types for grants from this new program.[32]

Other Clean Carbon-Benefitting Legislation From the 2009 Legislative Session

- **H.B. 3676 (Rep. Joe Heflin/Sen. Kel Seliger):** Extends the Texas Economic Development Act until December 31, 2014, enabling local school districts more tax freedom to attract major projects, some worth several billion dollars to their areas (313 of the Texas Tax

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[29] VANESSA NÚÑEZ LOPEZ, MARK H. HOLTZ, DEREK J. WOOD, & SUSAN D. HOVORKA, GULF COAST CARBON CENTER, BUREAU OF ECONOMIC GEOLOGY, QUICK-LOOK ASSESSMENTS TO IDENTIFY OPTIMAL CO_2 FOR STORAGE SITES (2006).

[30] Act of June 1, 2009, 81st Leg., R.S., ch. 1125, § 9, 2009 Tex. Gen. Laws — (to be codified at TEX. HEALTH & SAFETY CODE ANN. ch. 391).

[31] Act of May 29, 2009, 81st Leg., R.S., ch. 1424, § 17.81(d), 2009 Tex. Gen. Laws —.

[32] *Id.* § 9 (to be codified at TEX. HEALTH & SAFETY CODE ANN. § 391.002(b)(1)).

Code).[33] This bill is discussed in more detail below in the context of its importance to renewable energy.

- **H.B. 3896 (Rep. Rene Oliviera/Sen. Kel Seliger):** Extends the authority of cities, counties, and other taxing jurisdictions, giving them more freedom to attract major economic developments, including major energy projects. Without this legislation, this authority would have expired in September 2009. The bill extends the authority for ten years (Chapter 312 of the Texas Tax Code).[34] This bill is discussed in more detail below in the context of its importance to renewable energy.

- **S.B. 1387 (Rep. Myra Crownover/Sen. Kel Seliger):** Addresses the regulatory oversight of CO_2 capture and storage between the Railroad Commission of Texas and the Texas Commission on Environmental Quality.[35] This bill sets in motion key rulemaking that could position Texas to lead the nation in several key regulatory programs being developed to govern carbon storage, including storage that occurs as a result of enhanced oil recovery or creates incidental additional recovery. This bill also commissions several key studies that will lead certain Texas agencies to collaborate with each other and give the 82nd Legislature the foundation upon which to take further steps to address unresolved scientific, regulatory, and liability issues still facing large-scale deployment of carbon storage projects.

New Renewable Energy and Alternative Fuels Legislation

Renewable energy and alternative fuels scored critical victories in the final days of the Texas Legislative Session this year despite the much-reported failure of solar energy legislation, discussed further below. The passage of bills that extended key local property tax abatement programs, created new electricity storage incentives, and brightened the future of alternative fuels should not be underestimated when assessing how renewable energy fared during the 81st Texas Legislature.

Extension of Key Local Property Tax Abatement Programs

Chapters 312 and 313 of the Texas Tax Code could be fairly characterized as the most important state law provisions for the renewable energy industry outside of the Renewable Portfolio Standard. The local property tax abatements made available by Chapters 312 and 313 of the Tax Code are critical to the financial viability of many renewable energy projects in Texas. Many cite these tax programs as a central element in the early success of the Texas wind energy industry.[36]

Yet, early in this year's legislative session, both programs were at grave risk of being severely limited, if not terminated. These local tax agreements are sometimes controversial because some see these programs as removing too much tax revenue from the property tax rolls and the school

[33] Act of June 1, 2009, 81st Leg., R.S., ch. 1186, 2009 Tex. Gen. Laws —.

[34] Act of May 30, 2009, 81st Leg., R.S., ch. 1195, 2009 Tex. Gen. Laws —.

[35] Act of May 18, 2009, 81st Leg., R.S., ch. 224, 2009 Tex. Gen. Laws —.

[36] *See* HOUSE RESEARCH ORGANIZATION, CAPTURING THE WIND: THE CHALLENGES OF A NEW ENERGY SOURCE IN TEXAS 9 (2008).

finance system.[37] Proponents point out that these programs, implemented when Texas was losing major new commercial developments to other states, have been extremely successful in attracting large businesses to Texas.[38] Many of these businesses were instrumental in extending these programs through their testimony and personal visits with members to reiterate that, but for the tax abatement programs, they would have located their businesses elsewhere. In the end, key legislation passed that extended and, in many respects, improved these programs.

H.B. 3676 (Rep. Joe Heflin/Sen. Kel Seliger) extends and expands the school tax limitation program also known as the Texas Economic Development Act (TEDA).[39] Originally authorized in 2001, TEDA was scheduled to expire in 2011.[40] H.B. 3676 extends TEDA for three years, to 2014.[41] Among other provisions, the legislation clarifies that lessees, like most wind energy developers, qualify for the program.[42] The bill also makes a number of other refinements to the TEDA program to improve accountability and ensure the agreements add value to local communities.

H.B. 3896 (Rep. Rene Oliviera/Sen. Kel Seliger) extends the authority of cities, counties, and other taxing jurisdictions to attract major economic development, including renewable energy projects under Chapter 312 of the Texas Tax Code.[43] The Chapter 312 authority was scheduled to expire in September 2009, but H.B. 3896 extended the program for another 10 years, to 2019.[44] The bill also clarifies that lessees, like most wind energy developers, qualify for the program.[45]

Electricity Storage Incentives

A key barrier for the widespread deployment of renewable energy projects is the fact that most renewable energy sources are intermittent or insufficiently reliable to meet electricity demand at critical peak demand periods. The wind blows hardest at night, when electricity usage is lowest; winds are at their lowest when electricity demand peaks.[46] The ability to store electricity

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[37] *See, e.g.*, Danny Robbins, *Dozens of Texas School Districts to Get $248M from Wind Farm Deals*, ABILENE REPORTER-NEWS, Apr. 5, 2009 ("The Associated Press, using data compiled by the state comptroller's office, found that the agreements will allow 44 school districts, including 21 in the Big Country, to receive nearly $248 million over the next 10 years, the districts' cut of more than $700 million in tax breaks they granted wind farm operators. Another 21 school districts have made similar deals, but the agreements had not been completed when the data was collected by the comptroller.").

[38] Sanford Nowlin, *Incentives Would Pave Toyota's Road to SA: Luring Plant Cost Kentucky $325 Million*, SAN ANTONIO EXPRESS-NEWS, Oct. 6, 2002.

[39] Act of June 1, 2009, 81st Leg., R.S., ch. 1186, 2009 Tex. Gen. Laws —.

[40] TEX. TAX CODE ANN. § 313.007 (2008) (amended 2009).

[41] Act of June 1, 2009, 81st Leg., R.S., ch. 1186, § 1.

[42] *Id.* § 5.

[43] Act of May 30, 2009, 81st Leg., R.S., ch. 1195, 2009 Tex. Gen. Laws —.

[44] *Id.* § 1 (to be codified at TEX. TAX CODE ANN. § 312.006).

[45] *Id.* § 3 (to be codified at TEX. TAX CODE ANN. § 312.402(a-1)).

[46] *See, e.g.*, Michael Laughton, *Variable Renewables and the Grid: An Overview*, *in* RENEWABLE ELECTRICITY AND THE GRID: THE CHALLENGE OF VARIABILITY 1–30 (Godfrey Boyle ed. 2007); ELECTRIC POWER RESEARCH INSTITUTE & U.S. DEPARTMENT OF ENERGY, APPLICATIONS OF ENERGY STORAGE TO ENHANCE WIND GENERATION:

produced when demand is less than capacity and use this electricity when demand exceeds capacity would fundamentally change the utility of renewable electricity projects in displacing fossil fuel-generated baseload electricity supply.[47]

Energy and electricity storage research is underway around the United States and the world, with a number of technologies being researched.[48] In addition to different battery technologies, other approaches are being studied, including a process that injects compressed air into an oil or gas reservoir, later drawing the pressure from the well to generate electricity.[49] Other processes, such as storing heat in mineral oil or pig iron, are also being examined extensively in conjunction with concentrated solar projects.[50] Texas, with substantial wind developments and massive solar energy potential, would benefit significantly from major advances in electricity storage technology.

As noted above, H.B. 1796 (Rep. Warren Chisum/Sen. Kirk Watson), as finally passed, contains an important element of Senator Averitt's omnibus clean air legislation—a grant program for the implementation of new technologies to reduce emissions from stationary sources in Texas.[51] A number of new technologies are eligible for grants under this program, including electricity storage projects related to renewable energy.[52] These electricity storage projects could pave the way for utility-scale solar energy projects and further expansion of Texas wind power.

Incentives for Alternative Fuel-Powered Vehicles

The alternative fuel industry also received a boost during the 81st Legislature. The new suite of incentives will expand the market for alternative fuels and could speed the development of a supply and delivery infrastructure throughout Texas.

The Texas legislature passed H.B. 432 (Rep. Eddie Lucio/Sen. Craig Estes), which creates a mandatory requirement that all state vehicle fleets use alternative fuels, including biodiesel, electricity, propane, or natural gas.[53] Previously, the state fleet standard only required that

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SUPPLEMENT TO THE EPRI–DOE HANDBOOK OF ENERGY STORAGE FOR TRANSMISSION AND DISTRIBUTION APPLICATIONS (2004).

[47] *See* Department of Energy, Office of Electricity Delivery and Energy Reliability, Energy Storage, http://www.oe.energy.gov/storage.htm.

[48] *See* RICHARD BAXTER, ENERGY STORAGE: A NONTECHNICAL GUIDE (2005).

[49] *Id.* at 68–79.

[50] *Id.* at 151–159; *see also* Joseph Romm, *The Technology that Will Save Humanity: The Solar Energy You Haven't Heard of Is the One Best Suited to Generate Clean Electricity for Generations to Come*, SALON, Apr. 14, 2008.

[51] Act of June 1, 2009, 81st Leg., R.S., ch. 1125, § 9, 2009 Tex. Gen. Laws — (to be codified at TEX. HEALTH & SAFETY CODE ANN. ch. 391).

[52] *Id.* § 9 (to be codified at TEX. HEALTH & SAFETY CODE ANN. § 391.002(b)(3)).

[53] Act of June 1, 2009, 81st Leg., R.S., ch. 900, § 2, 2009 Tex. Gen. Laws — (to be codified at TEX. GOV. CODE ANN. § 2158.003(a)) ("A state agency may not purchase or lease a vehicle designed or used primarily for the transportation of individuals, including a station wagon, that has a wheelbase longer than 113 inches or that has more than 160 SAE net horsepower. The vehicle may have a wheelbase of up to 116 inches or SAE net horsepower of up to 280 if the vehicle will be converted so that it *uses* compressed natural gas, liquefied natural gas, liquefied petroleum gas, methanol or methanol/gasoline blends of 85 percent or greater, ethanol or ethanol/gasoline blends of 85 percent or greater, biodiesel or biodiesel/diesel blends of 20 percent or greater, or electricity, including electricity

vehicles be "capable of using" alternative fuels.[54] Practically, although the state fleets were converted to be capable of using alterative fuels, such as ethanol, the state fleets were still being run on conventional fuels. This new standard will require the use of these fuels, expanding demand for alternative fuels in Texas. Additionally, biodiesel and plug-in electric hybrids were included as options for compliance with the revised state fleet requirement.[55] Given the relief valve in the statute that enables agencies to ease into compliance if they calculate a net cost increase associated with a given alternative fuel strategy, the availability of compliance options such as using biodiesel in existing or new clean diesel technology could be a significant cost-controlling measure during these tight state budget times.

In addition, S.B. 1759 (Sen. Kirk Watson/Rep. Joseph Pickett) allows Texas businesses to tap into the Texas Emissions Reduction Plan (TERP) funding to subsidize the cost of new, clean commercial fleets run on alternate fuels.[56] TERP is a TCEQ-run program designed to reduce emissions, particularly in areas of the state that are not currently attaining EPA's National Ambient Air Quality Standards.[57] Because of amendments made by S.B. 1759, commercial vehicles that run on alternative fuels are eligible for this funding, another big win for the alternative fuels industry.[58]

Biomass Power, Biodiesel & Cellulosic Ethanol Provisions in the Texas Department of Agriculture (TDA) Sunset Bill

S.B. 1016 (Sen. Craig Estes/Rep. Dan Flynn) included three new provisions that will assist in the development of the biomass power and biodiesel and cellulosic ethanol fuel industries in Texas.[59] These provisions were added as a part of the Texas Department of Agriculture (TDA) sunset bill.

Bioenergy Policy and Research Councils: S.B. 1016 creates a Governor-appointed Bioenergy Policy Council charged with advising the Governor's Office on the development of the bioenergy industry in Texas.[60] The Policy Council is directed to appoint a Bioenergy Research Council which will advise the Policy Council on technical issues.[61] The biodiesel industry was awarded its own seat on both councils, which will help ensure that the nation-leading Texas biodiesel industry remains strong and develops sustainable feedstocks to fuel the industry for decades to come. [62] Similar seats were established for biomass-to-electricity developers and non-food based ethanol, which should help spur growth in those critical areas as well.

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to power a plug-in hybrid motor vehicle. This exception to the wheelbase and horsepower limitations applies to a state agency regardless of the size of the agency's vehicle fleet.").

[54] *See* TEX. GOV. CODE ANN. § 2158.003(a) (2008) (amended 2009).

[55] Act of June 1, 2009, 81st Leg., R.S., ch. 900, (to be codified at TEX. GOV. CODE ANN. § 2158.003(a)).

[56] Act of June 1, 2009, 81st Leg., R.S., ch. 1232, 2009 Tex. Gen. Laws —.

[57] *See* TEX. HEALTH & SAFETY CODE ANN. ch. 386.

[58] Act of June 1, 2009, 81st Leg., R.S., ch. 1232, § 4 (to be codified at TEX. HEALTH & SAFETY CODE ch. 391).

[59] Act of May 27, 2009, 81st Leg., R.S., ch. 506, 2009 Tex. Gen. Laws —.

[60] *Id.* § 4.03 (to be codified at TEX. AGRIC. CODE ANN. § 50D.001).

[61] *Id.*

[62] *Id.* (to be codified at TEX. AGRIC. CODE ANN. § 50D.011).

Federal coordination provision: The Council is instructed to coordinate with state agencies regarding the implementation and impact of federal bioenergy policies.[63] The TCEQ is specifically instructed to pursue better guidance from the U.S. Environmental Protection Agency about how to harmonize federal environmental mandates with the agency's programs designed to ensure that Texas meets federal air quality regulatory standards.[64]

TAFA financing authority: New provisions extend and expand the Texas Agricultural Finance Authority (TAFA) to finance young farmers and alternative agricultural products, including sustainable feedstocks for biodiesel[65] and other biofuels.

Summaries of Other Environmental & Energy Legislation from the 81st Texas Legislature

A number of water bills passed this session, as well as some air, fuels, enforcement, and eminent domain legislation. Brief summaries of these bills are provided below.

Water Bills

- **H.B. 1174 (Rep. Hartnett) (Water Districts):** Authorizes a municipality or river authority to pay actual property damages caused by the backup of the municipality's or river authority's sanitary sewer system regardless of whether the municipality or river authority would be liable for the damages under Chapter 101 (Tort Claims), Civil Practice and Remedies Code.[66]

- **H.B. 1922 (Rep. Martinez Fischer) (Water Districts):** Enables the TCEQ, under certain conditions and at the request of the applicant, to authorize a wastewater treatment facility operated by an agency of a home-rule municipality with a population of one million or more to contribute treated domestic wastewater produced by the facility as reclaimed water to a reuse water system and to discharge reclaimed water contributed to a reuse water system at certain outfalls.[67]

- **H.B. 2063 (Rep. Callegari) (Water Districts):** Amends Section 36.102, Water Code, to add that a groundwater conservation district could enforce its rules, set penalties, and recoup court costs against any person.[68]

- **H.B. 1295 (Rep. Aycock) (Retail Water/Certificate of Convenience and Necessity (CCNs)):** Requires the TCEQ to cause notice of a filing of an application for a new or

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[63] *Id.* § 4.03 (to be codified at TEX. AGRIC. CODE ANN. § 50D.015).

[64] *Id.* ("Not later than October 1, 2009, the Texas Commission on Environmental Quality shall request a determination by the United States Environmental Protection Agency that this state will not lose nitrogen oxide emission reduction credits currently recognized as part of the state implementation plan if: (1) this state allows the use of biodiesel and biodiesel blends with no additives; and (2) the final blend of fuel complies with state and federal standards for cetane and aromatic hydrocarbon content.").

[65] *Id.* § 1.01 (to be codified at TEX. AGRIC. CODE ANN. § 44.001).

[66] Act of May 29, 2009, 81st Leg., R.S., ch. 1119, 2009 Tex. Gen. Laws —.

[67] Act of May 21, 2009, 81st Leg., R.S., ch. 409, 2009 Tex. Gen. Laws —.

[68] Act of May 20, 2009, 81st Leg., R.S., ch. 425, 2009 Tex. Gen. Laws —.

amended CCN to be given to each county and groundwater conservation district that is wholly or partly included in the area proposed to be certified.[69]

- **H.B. 3661 (Rep. S. Turner) (Retail Water/CCNs):** Municipalities with a population of 1,000,000 or more, such as Houston, were recently required to adopt standards sufficient to maintain water pressure for service to fire hydrants adequate to protect public safety in residential areas. Some residential areas are not protected by fire hydrants. The bill requires the regulatory authority for a public utility to adopt standards for the installation of fire hydrants and maintenance of sufficient water pressure for service to such hydrants.[70]

- **H.B. 4043 (Rep. Callegari) (Retail Water/CCNs):** Provides that the requirement for a seller of real property located within the CCN of a retail public utility other than a water district to provide a purchaser with written notice regarding the property's location within a CCN does not apply to the transfer of title to property located within the corporate limits of a municipality that is served by a municipally owned utility.[71]

- **S.B. 361 (Sen. D. Patrick) (Retail Water/CCNs):** Requires certain water providers to adopt and submit for approval to TCEQ an emergency preparedness plan that demonstrates the provider's ability to provide emergency operations and to ensure the emergency operation of its water system during a power outage as soon as safe and practicable after a natural disaster.[72]

- **S.B. 1253 (Sen. Seliger) (Retail Water/CCNs):** Repeals Section 49.22055 (Use of Right-of-Way Easements for Certain Energy-Related Purposes), Water Code, which authorized the use of water district or water supply corporation right-of-way easements for certain electric transmission projects.[73]

- **S.B. 2126 (Sen. Estes) (Retail Water/CCNs):** Authorizes submetered apartment properties to partially offset some of the costs of submetering by allowing a nine percent service charge to be allocated monthly to the water and wastewater bill for each submetered dwelling. (This previously applied only to submetered manufactured home rental communities.)[74]

- **S.B. 2306 (Sen. Williams) (Retail Water/CCNs):** Authorizes water and sewer utilities to recover as a cost of service any remaining depreciation on retired assets.[75]

- **H.B. 2208 (Rep. Gonzales) (Water Rights):** Requires the Rio Grande Regional Water Authority to exclude sales between municipal water suppliers and purchasers from the

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[69] Act of May 27, 2009, 81st Leg., R.S., ch. 363, 2009 Tex. Gen. Laws —.

[70] Act of May 12, 2009, 81st Leg., R.S., ch. 122, 2009 Tex. Gen. Laws —.

[71] Act of May 21, 2009, 81st Leg., R.S., ch. 1004, 2009 Tex. Gen. Laws —.

[72] Act of May 30, 2009, 81st Leg., R.S., ch. 1349, 2009 Tex. Gen. Laws —.

[73] Act of May 7, 2009, 81st Leg., R.S., ch. 1221, 2009 Tex. Gen. Laws —.

[74] Act of May 14, 2009, 81st Leg. R.S., ch. 151, 2009 Tex. Gen. Laws —.

[75] Act of May 30, 2009, 81st Leg., R.S., ch. 1242, 2009 Tex. Gen. Laws —.

current market value formula provided for in Section 49.509 (Duty of Rio Grande Regional Water Authority to Calculate Current Market Value), Water Code.[76]

- **H.B. 3861 (Rep. Hopson) (Water Rights):** Provides a legislative finding that the development of the proposed Lake Columbia reservoir project is in the public interest and that it is reasonable for TWDB to expect that the state will recover its investments in the facility. Directs TWDB to include revenues from political subdivisions not currently under contract with the river authority to participate in paying the costs of the site acquisition stage of the project, and political subdivisions not currently under contract to purchase a portion of the water to be supplied by the project in making the determination that it is reasonable to expect that the state will recover its investment.[77]

- **H.B. 4231 (Rep. Ritter) (Water Rights):** Authorizes the issuance of a bed and banks permit to move water from a source wholly outside the state, except water that is imported from a source located in the United Mexican States, to a place of storage or diversion in Texas. Exempts these transfers from the requirements for interbasin transfers.[78]

- **S.B. 1711 (Sen. Hegar) (Water Rights):** Authorizes a person to construct or maintain a reservoir to divert or use sedimentation pond water to satisfy environmental and safety laws and regulations, including fire and dust suppression, applicable to a surface coal mining operation under the Texas Surface Coal Mining and Reclamation Act.[79]

Environmental Regulatory Bills

- **S.B. 1299 (Sen. Watson) (Water Quality):** Authorizes Travis County to implement fees and develop ordinances to carry out Storm Water Management Program (SWMP) duties.[80]

- **S.B. 1757 (Sen. Watson) (Water Quality):** Mandates a study by the TCEQ of methods for disposing of unused pharmaceuticals so that they do not enter a wastewater system. Requires the information provided to a consumer when dispensing a prescription to include the statement, "Do not flush unused medications or pour down a sink or drain."[81]

- **S.B. 876 (Sen. Averitt) (CAFOs):** Amends Section 26.504, Water Code, to require TCEQ (rather than a third-party contractor) to conduct annual soil tests for certain concentrated animal feeding operations.[82]

- **S.B. 1693 (Sen. Ogden) (CAFOs):** Amends Chapter 382, Health and Safety Code, and Chapter 26, Water Code, to address issues related to poultry facility odors, response to

[76] Act of May 27, 2009, 81st Leg., R.S., ch. 438, 2009 Tex. Gen. Laws —.

[77] Act of May 27, 2009, 81st Leg., R.S., ch. 993, 2009 Tex. Gen. Laws —.

[78] Act of May 21, 2009, 81st Leg., R.S., ch. 1016, 2009 Tex. Gen. Laws —.

[79] Act of May 6, 2009, 81st Leg., R.S., ch. 63, 2009 Tex. Gen. Laws —.

[80] Act of May 26, 2009, 81st Leg., R.S., ch. 524, 2009 Tex. Gen. Laws —.

[81] Act of May 31, 2009, 81st Leg., R.S., ch. 1231, 2009 Tex. Gen. Laws —.

[82] Act of May 27, 2009, 81st Leg., R.S., ch. 769, 2009 Tex. Gen. Laws —.

complaints, air contaminant prevention measures and the record of sale, purchase, transfer or application of poultry.[83]

- **H.B. 1433 (Rep. Lucio III) (Fees):** Increases the annual maximum amount of the consolidated water quality fee and water user fee from $75,000 to $150,000 for each permit or contract for wastewater discharge or waste treatment facility that holds a water right for the use of water by the facility.[84]

- **S.B. 184 (Sen. Watson) (Climate Change):** Requires the comptroller to develop and present a report to the legislature by December 31, 2010, that outlines strategies to reduce greenhouse gas emissions that, over the lifetime of the strategy, will result in no financial cost to businesses and consumers of the state (commonly known as the "no regrets" approach).[85]

- **S.B. 1472 (Sen. Gallegos) (Air Permitting):** Requires a permit applicant or the applicant's designated representative to attend a public meeting and to make a reasonable effort to respond to questions relevant to the permit application at the meeting.[86]

- **H.B. 3391 (Parks & Wildlife Department Sunset):** Continues the Texas Parks and Wildlife Department (TPWD) until September 1, 2021. Requires TPWD to establish an internal affairs office, adjusts current regulation of exotic aquatic plants, and allows the Texas Parks and Wildlife Commission to join the Interstate Wildlife Violator Compact for a multi-state approach to handling violations of fish and game laws.[87]

- **H.B. 472 (Rep. Hilderbran) (Liability):** Releases a common carrier or pipeline owner or operator that makes a contamination report from all liability for the contamination or the cleanup of the contamination covered by the report, except for any contamination caused by the common carrier or pipeline owner or operator.[88]

- **S.B. 1080 (Rep. M. Jackson) (Enforcement):** Offers an affirmative defense to enforcement by the TCEQ in those situations where the federal Occupational Safety and Health Act of 1970 (OSHA) general duty clause conflicts with a statute within TCEQ's jurisdiction or a TCEQ rule, order, or permit.[89]

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[83] Act of May 30, 2009, 81st Leg., R.S., ch. 1386, 2009 Tex. Gen. Laws —.

[84] Act of May 13, 2009, 81st Leg., R.S., ch. 157, 2009 Tex. Gen. Laws —.

[85] Act of May 27, 2009, 81st Leg., R.S., ch. 1343, 2009 Tex. Gen. Laws —.

[86] Act of May 27, 2009, 81st Leg., R.S., ch. 809, 2009 Tex. Gen. Laws —.

[87] Act of May 25, 2009, 81st Leg., R.S., ch. 952, 2009 Tex. Gen. Laws —.

[88] Act of May 25, 2009, 81st Leg., R.S., ch. 166, 2009 Tex. Gen. Laws —.

[89] Act of May 26, 2009, 81st Leg., R.S., ch. 513, 2009 Tex. Gen. Laws —.

Renewable Energy Legislation

- **H.C.R. 119 (Rep. Swinford):** Declares the Texas Panhandle to be an official "Natural Renewable Resource Area."[90]

- **H.B. 1822 (Rep. Solomons):** Requires PUC to adopt rule that lists uniform common electric terms for use in bills. New requirements for terms and charges to customers to be included on electricity bills are detailed.[91]

- **H.B. 1935 (Rep. Villarreal):** Establishes "Jobs and Education for Texans (JET) Fund" for the broad range of job skills and sectors, and the "Green Job Skills Development and Training Program (GJSDTP)" which specifically includes the renewable energy sector. The GJSDTP establishes at the Comptroller's office the "Texas Green Job Skills Development Fund" and the "Green Job Skills Grant Program."[92]

- **H.B. 1937 (Rep. Vilarreal):** Allows financing of renewable energy and efficiency installations through the Property Tax.[93]

- **H.B. 2318 (Rep. Swinford):** Adds "renewable methane" to the list of biofuels eligible for the Biofuels Production Incentive Program.[94]

- **H.B. 2582 (Rep. Gonzalez Toureilles):** Updates the definition of Biodiesel and makes Renewable Diesel eligible for the State's biodiesel/diesel blend Fuel Use Tax Exemption and the Biofuel Production Incentive Program.[95]

- **H.B. 2925 (Rep. Herrero):** Includes testing and standards for biofuels.[96]

- **H.B. 3031 (Rep. Keffer):** Forbids commercial wind projects in immediate vicinity of Possum Kingdom Lake.[97]

- **H.B. 3309 (Rep. Gattis):** Requires consolidation of CCN proceedings for transmission projects that share a common point of interconnection. CREZ lines are excluded. Includes entities other than utilities in CCN process.[98]

- **H.B. 3353 (Rep. Naishtat):** Allows higher education institutions to establish a student fee that may be used to fund environmental improvements on campus, including renewable energy projects.[99]

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[90] Tex. H.R. Con. Res. 119, 81st Leg., R.S. (2009).

[91] Act of May 30, 2009, 81st Leg., R.S., ch. 648, 2009 Tex. Gen. Laws —.

[92] Act of June 1, 2009, 81st Leg., R.S., ch. 654, 2009 Tex. Gen. Laws —.

[93] Act of May 26, 2009, 81st Leg., R.S., ch. 655, 2009 Tex. Gen. Laws —.

[94] Act of May 20, 2009, 81st Leg., R.S., ch. 1295, 2009 Tex. Gen. Laws —.

[95] Act of May 31, 2009, 81st Leg., R.S., ch. 1312, 2009 Tex. Gen. Laws —.

[96] Act of May 28, 2009, 81st Leg., R.S., ch. 913, 2009 Tex. Gen. Laws —.

[97] Act of May 15, 2009, 81st Leg., R.S., ch. 192, 2009 Tex. Gen. Laws —.

[98] Act of May 31, 2009, 81st Leg., R.S., ch. 1170, 2009 Tex. Gen. Laws —.

- **H.B. 4031 (Rep. McCall):** Makes "Co-Firing Biomass" eligible for the Biomass Feedstock Incentive Program.[100]

- **H.B. 4433 (Rep. Rodriguez):** Exempts gas and oil incidentally produced in production of geothermal energy from severance taxes.[101]

- **H.B. 4586 (Rep. Pitts):** Provides the University of Houston with funding for the National Large Wind Turbine Research and Testing Facility in the amount of $4,245,244.00.[102]

- **S.B. 300 (Sen. Patrick, Dan):** Requires public schools to establish a long-range energy plan.[103]

- **S.B. 1080 (Sen. Jackson):** Creates affirmative defense to TCEQ enforcement action if compliance with TCEQ regulation would have resulted in OSHA violation.[104]

- **S.B. 1495 (Sen. Williams):** Changes numerous definitions and procedures relating to taxation of motor fuels, including biofuels.[105]

- **S.B. 2182 (Sen. Shapleigh):** Allows higher education institutions to establish a student fee that may be used to fund environmental improvements on campus, including renewable energy projects. (Identical to HB 3353.)[106]

Eminent Domain

- **H.J.R. 14 (Rep. Corte) (Eminent Domain):** Authorizes the placement of a ballot before the voters in Novermber to amend Texas Constitution, Art. I, sec. 17 to restrict the taking of property to instances in which the taking, damage, or destruction was necessary for the possession, occupation, and enjoyment of the property by a common carrier, by an entity providing utility services, by the public at large, or by the state or one of its subdivisions. Also would add the term "just" in regard to compensation that must be offered as part of a taking. Limits the Legislature's ability to enact a general, local, or special law granting the power of eminent domain to an entity by requiring a two-thirds vote of all the members elected to each house.[107]

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[99] Act of May 25, 2009, 81st Leg., R.S., ch. 1325, 2009 Tex. Gen. Laws —.

[100] Act of May 30, 2009, 81st Leg., R.S., ch. 1196, 2009 Tex. Gen. Laws —.

[101] Act of May 30, 2009, 81st Leg., R.S., ch. 1036, 2009 Tex. Gen. Laws —.

[102] Act of May 29, 2009, 81st Leg., R.S., ch. 1409, 2009 Tex. Gen. Laws —.

[103] Act of May 30, 2009, 81st Leg., R.S., ch. 1347, 2009 Tex. Gen. Laws —.

[104] Act of May 26, 2009, 81st Leg., R.S., ch. 513, 2009 Tex. Gen. Laws —.

[105] Act of June 1, 2009, 81st Leg., R.S., ch. 1227, 2009 Tex. Gen. Laws —.

[106] Act of May 26, 2009, 81st Leg., R.S., ch. 1395, 2009 Tex. Gen. Laws —.

[107] Tex. H.R.J. Res. 14, 81st Leg., R.S. (2009).

Solar Bills

By far the legislative casualties of the House "Chubfest" receiving the most attention were the Texas solar bills, S.B. 541 (Sen. Kirk Watson/Rep. David Farabee/Rep. Mark Strama) and S.B. 545 (Sen. Troy Fraser/Rep. David Swinford/Rep. Mark Strama).[108]

S.B. 541 was the more controversial of the two major solar bills with life at the end of the session. Among other progressive changes to the PUC's implementation of the renewable portfolio standard and provisions related to Renewable Energy Credits (RECs), S.B. 541 proposed to expand the renewable portfolio standard by creating a "carve-out" for non-wind renewables with an emphasis on solar. Concerns expressed by industrial power consumers and legislators concerned about the fiscal burden of increased mandates slowed the bill's progress, which was the bill's ultimate doom given the state of the House calendar in the final days.[109]

S.B. 545, in contrast to S.B. 541, had garnered much more support and was well positioned on the House Major State calendar, but still fell victim to the Chubfest. S.B. 545 included a $500 million statewide rebate program for installed solar capacity, surplus electricity minimum pricing, net metering provisions, a "made in Texas" provision, restrictions on the ability of property owners' associations to prevent installation of solar equipment, a requirement that homebuilders offer the option of a solar installation, and a loan program to assist schools with installing solar equipment.[110]

When it became clear that there would not be time left on the House calendar to consider S.B. 545 after the Chubfest, the provisions were attached to another vehicle, H.B. 1243.[111] However, because the solar provisions were not directly germane to H.B. 1243, the amendment was vulnerable to a point of order, which was ultimately raised by Rep. Sylvester Turner (D–Houston).[112] When the point of order was sustained, S.B. 545 and its suite of solar incentives went quietly into the night.

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[108] Kate Galbraith, *Solar Push in Texas Fails*, N.Y. TIMES GREEN INC., June 1, 2009; Russell Gold, *Texas Kills Solar Bill on Last-Minute Motion*, WALL ST. J. ENVTL. CAPITAL, June 1, 2009.

[109] Tex. S.B. 541, 81st Leg., R.S. (2009).

[110] Tex. S.B. 545, 81st Leg., R.S. (2009).

[111] Tex. H.B. 1243, 82st Leg., R.S. (2009) ("Relating to net metering for retail electric service customers and compensation for excess electricity generated by a retail electric customer's on-site generator.").

[112] Matthew Tresaugue, *High Hopes on Solar Energy Go Unfulfilled this Session: Lawmakers' Failure to Pass Rebates Bill Seen as Missed Chance*, HOUSTON CHRONICLE, June 7, 2009, B4 ("Rep. Sylvester Turner, a Houston Democrat, raised a point about how much low-income consumers would pay to fund the rebate program and used a procedural tactic to delay a vote on the bill until it was too late. 'We can push solar, and that's great,' Turner said. 'But somebody's got to pay for it. You can't have those who can barely afford their energy bills subsidizing it.'").

Other Key Energy and Environmental Legislation not to Pass

While too many bills died this session to give each of them justice, the following is a brief summary of categories of bills that did not survive the 81st Texas Legislature:

- Increased regulations for electric generating units[113]
- Cumulative effects analysis in air quality permitting[114]
- Standards for hazardous air pollutants[115]
- Efficiency standards and renewable portfolio standards[116]
- Increased regulation for cement manufacturers[117]
- Increased permit requirements for municipal solid waste facilities[118]
- Increased regulation of industrial waste injection wells[119]
- Increased regulation of electronics recycling and mercury-containing products[120]
- Environmental flows legislation[121]
- Groundwater legislation relating to the priority groundwater management area process, planning, and permitting by groundwater districts[122]

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[113] Tex. H.B. 1450, 81st Leg., R.S. (2009); Tex. H.B. 2497, 81st Leg., R.S. (2009); Tex. H.B. 4082, 81st Leg., R.S. (2009); Tex. S.B. 16, 81st Leg., R.S. (2009); Tex. S.B. 126, 81st Leg., R.S. (2009).

[114] Tex. H.B. 290, 81st Leg., R.S. (2009); Tex. H.B. 721, 81st Leg., R.S. (2009); Tex. H.B. 2495, 81st Leg., R.S. (2009); Tex. H.B. 2588, 81st Leg., R.S. (2009); Tex. S.B. 16, 81st Leg., R.S. (2009).

[115] Tex. H.B. 769, 81st Leg., R.S. (2009); Tex. H.B. 3121, 81st Leg., R.S. (2009); Tex. H.B. 4083, 81st Leg., R.S. (2009); Tex. H.B. 4085, 81st Leg., R.S. (2009); Tex. S.B. 456, 81st Leg., R.S. (2009); Tex. S.B. 458, 81st Leg., R.S. (2009).

[116] Tex. H.B. 2210, 81st Leg., R.S. (2009); Tex. H.B. 2781, 81st Leg., R.S. (2009); Tex. H.B. 2851, 81st Leg., R.S. (2009); Tex. H.B. 2852, 81st Leg., R.S. (2009); Tex. S.B. 16, 81st Leg., R.S. (2009); Tex. S.B. 541, 81st Leg., R.S. (2009).

[117] Tex. H.B. 2174, 81st Leg., R.S. (2009); Tex. H.B. 2175, 81st Leg., R.S. (2009); Tex. H.B. 2355, 81st Leg., R.S. (2009); Tex. H.B. 3424, 81st Leg., R.S. (2009); Tex. H.B. 3942, 81st Leg., R.S. (2009); Tex. S.B. 760, 81st Leg., R.S. (2009); Tex. S.B. 1466, 81st Leg., R.S. (2009); Tex. S.B. 1467, 81st Leg., R.S. (2009).

[118] Tex. H.B. 234, 81st Leg., R.S. (2009); Tex. H.B. 433, 81st Leg., R.S. (2009); Tex. H.B. 1195, 81st Leg., R.S. (2009); Tex. H.B. 2122, 81st Leg., R.S. (2009); Tex. H.B. 2265, 81st Leg., R.S. (2009); Tex. H.B. 2704, 81st Leg., R.S. (2009); Tex. H.B. 3311, 81st Leg., R.S. (2009).

[119] Tex. H.B. 177, 81st Leg., R.S. (2009); Tex. H.B. 178, 81st Leg., R.S. (2009); Tex. S.B. 273, 81st Leg., R.S. (2009); Tex. S.B. 274, 81st Leg., R.S. (2009).

[120] Tex. H.B. 284, 81st Leg., R.S. (2009); Tex. H.B. 1355, 81st Leg., R.S. (2009); Tex. H.B. 2922, 81st Leg., R.S. (2009); Tex. H.B. 3422, 81st Leg., R.S. (2009); Tex. H.B. 4084, 81st Leg., R.S. (2009); Tex. H.B. 4056, 81st Leg., R.S. (2009).

[121] Tex. H.B. 3526, 81st Leg., R.S. (2009); Tex. S.B. 2317, 81st Leg., R.S. (2009); Tex. S.B. 2328, 81st Leg., R.S. (2009).

[122] Tex. H.B. 1818, 81st Leg., R.S. (2009); Tex. H.B. 2340, 81st Leg., R.S. (2009); Tex. H.B. 3335, 81st Leg., R.S. (2009); Tex. H.B. 4299, 81st Leg., R.S. (2009); Tex. H.B. 4655, 81st Leg., R.S. (2009); Tex. H.B. 4736, 81st Leg., R.S. (2009); Tex. H.B. 726, 81st Leg., R.S. (2009); Tex. S.B. 1386, 81st Leg., R.S. (2009); Tex. S.B. 2319, 81st Leg., R.S. (2009); Tex. S.B. 2321, 81st Leg., R.S. (2009).

Conclusion

In the end, only a few bills survived the Chubfest in the House and those that made it did so by riding on the back of late-pending House bills in the Senate. Some made it all the way through. Most did not. The few energy/environmental bills that made it through largely focused on the clean carbon and renewables fronts. All of the clean carbon and renewable energy-benefiting bills, once fully implemented, could become critically important to the Texas economy if federal climate change mandates are enacted (or even if they are not).

Rep. Henry Waxman (D–Calif.) and Rep. Ed Markey's (D–Mass.) American Clean Energy and Security Act of 2009[123] is currently working its way through the Senate, with a draft bill from Sen. Barbara Boxer (D–Calif.) expected September 8.[124] Additionally, Sen. Jeff Bingaman's (D–N.M.) Energy and Natural Resources Committee reported a sweeping energy policy measure that includes a federal renewable portfolio standard and a significant suite of energy efficiency incentives and measures, as well as carbon sequestration provisions.[125]

While it is still far too early to speculate whether the 111th Congress will pass a cap-and-trade bill this year, there is no doubt that steps taken by the 81st Texas Legislature will help speed the commercialization of carbon capture and storage technology during a critical time in our history when carbon caps could threaten an already unstable economy unless wide-scale commercially deployed CCS projects become a reality for the dominant fuel of our nation's electricity fleet - coal.

Also helping Texas cope with the potential local economic damage of carbon caps will be the under-reported victories for renewable energy in the areas of local property tax abatements and energy storage incentives. While more can and likely will be done, the tools that did pass will improve Texas's chances of attracting more utility scale solar projects and widely deployed distributed energy projects, such as rooftop solar.

The most underrated development in the area of energy and environmental law during the 81st Legislative Session might well have been what S.B. 2 from the Special Session did to the sunset review schedule and the stage it set for natural resource agencies during the interim and leading into the 82nd Session. No doubt, the next two years are likely to see an unprecedented amount of activity in the energy and environmental areas of policy development as a result of the accelerated sunset review of all the major energy, environmental and/or natural resource agencies. Stay tuned and hold on tight for the wild ride ahead!

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[123] H.R. 2454, 111th Cong. (2009).

[124] Darren Samuelsohn, *Boxer Planning Sept. 8 Rollout for Cap-and-Trade Bill*, E&E NEWS PM, July 14, 2009.

[125] Ben Geman, *Senate Committee Approves Broad Energy Package*, GREENWIRE, June 17, 2009.

JW | JACKSON WALKER L.L.P.
ATTORNEYS & COUNSELORS



Michael J. Nasi
mnasi@jw.com
100 Congress Avenue
Suite 1100
Austin, Texas 78701
P (512) 236-2216
F (512) 236-2002
www.jw.com

Mike Nasi is a partner with the Environmental and Legislative Affairs Practice Group in the Austin office of Jackson Walker L.L.P and heads the firm's Climate Change and Carbon Management practice. Mike contributes his environmental permitting and carbon management expertise to the firm's Energy Practice Group which contains experts from several offices with expertise in corporate, tax, utility, oil and gas, transportation, and real estate law. As part of the Energy Practice Group, Mike is involved in major energy developments ranging from renewable electric power and fuels to coal-based, gas-fired, and nuclear power projects. Mike's environmental law practice primarily focuses on regulatory permitting in the air, water, injection well, mine reclamation, and waste programs for facilities in the renewable energy, electric power generation, mining, steel manufacturing, and brownfield redevelopment industries. Mr. Nasi has an active environmental and energy policy practice as well. On behalf of individual companies and associations, he coordinates Texas interests on national policy debates and works closely with Texas public officials on state energy, regulatory, and tax policy development. Mike practices before the EPA, Texas Commission on Environmental Quality (TCEQ), the Texas Railroad Commission and the Texas Legislature. Mr. Nasi authors chapters for West's Environmental Law Handbook in on Environmental Enforcement, Oil & Hazardous Substance Spill Reporting & Response and Brownfield Redevelopment. He is frequently an invited speaker at seminars and conferences related to his areas of specialty in Texas and across the U.S.

Mike received his undergraduate degree from The University of Texas at Austin and his J.D. from the University of Houston. Mike serves Chairman of the Education Committee in the State Bar of Texas Environmental and Natural Resources Law Section (ENRLS). Mike is a Board member and Treasurer of the Sustainable Biodiesel Alliance and is a Board member at the Salvation Army, where he Co-Chairs the Development Committee. Mr. Nasi has been honored in *Who's Who - Texas* for Environmental Law, in *The Best Lawyers in America* under Environmental Law, as a "Rising Star" by *Texas Monthly Magazine*, and as an "Up and Coming" leader by Chambers U.S.A. in the area of Environmental Law. Mike is married with 3 children and lives in Central Austin.

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Travis W. Wussow



Biography

Travis W. Wussow is a member of the Environmental and Legislative practice areas of Jackson Walker. Mr. Wussow assists clients in the energy, steel, concrete, cement, agriculture, and mining industries. He is also a member of the Climate Change and Carbon Management practice area, and he assists clients in developing permitting and compliance strategies to maintain operational flexibility in light of uncertainty surrounding forthcoming regulation of greenhouse gases.

Mr. Wussow's practice focuses on administrative and regulatory issues before the Texas Commission on Environmental Quality, the Railroad Commission of Texas, and the U.S. Environmental Protection Agency. He has experience with environmental permitting and compliance matters, enforcement hearings, and environmental litigation matters.

Publications & Speaking Engagements

Texas Legislature Passes Clean Sweep on Clean Carbon Incentives
Renewable Energy Scores Some Key Victories in 2009 Texas Legislative Session, Despite Solar Setbacks
Solar Power Incentives: American Recovery and Reinvestment Act of 2009
U.S. Congress Passes $787 Billion Stimulus Bill
Preservation Through 'Clean Coal' Technology

Travis W. Wussow
Associate
Austin Office
100 Congress Avenue
Suite 1100
Austin, Texas 78701
512.236.2296
twussow@jw.com
www.jw.com

Practice Areas
Environmental
Legislative
Energy
Litigation
Agriculture

Community Involvement

Mr. Wussow is actively involved with the community outreach ministry at his church and volunteers in the St. John Community in East Austin.

Admitted

Texas, 2008

Education

B.B.A., Finance, The University of Texas at Austin
J.D., *with high honors*, The University of Texas School of Law

- Order of the Coif
- Articles Editor, *Texas Law Review*
- Judge Wilson Cowen Endowed Presidential Scholarship in Law

UNITED STATES
NUCLEAR REGULATORY COMMISSION
Office of Public Affairs
Washington DC 20555

COMMISSIONER DALE E. KLEIN



Dr. Dale E. Klein was sworn into the U.S. Nuclear Regulatory Commission July 2006. He was appointed Chairman by President George W. Bush and served in that role from July 1, 2006, to May 13, 2009. He is currently serving as a Commissioner.

Dr. Klein believes that the NRC must continue to ensure the safety and security of current operating reactors as it also prepares to receive more than 30 license applications for new reactors. He has insisted that the NRC remain a strong regulator that articulates its requirements clearly and holds its licensees accountable. The agency should be demanding yet responsive to legitimate needs. He is an advocate of increased coordination with international partners and has often stated "an accident anywhere is an accident everywhere." Dr. Klein also believes that the NRC should strive to hold itself to the same high standard it expects from its licensees, including modern business practices, up-to-date telecommunications technology, and efficient and transparent sharing of appropriate information.

Before joining the NRC, Dr. Klein served as the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs. He was appointed to this position by President George W. Bush and confirmed by the Senate on Nov. 8, 2001. In this position, he served as the principal staff assistant and advisor to the Secretary of Defense, Deputy Secretary of Defense, and the Under Secretary of Defense for Acquisition and Technology for all policy and planning matters related to nuclear weapons and nuclear, chemical, and biological defense.

Previously, Dr. Klein served as the Vice-Chancellor for Special Engineering Programs at the University of Texas System and as a professor in the Department of Mechanical Engineering (Nuclear Program) at the University of Texas at Austin. During his tenure at the university, Dr. Klein was Director of the Nuclear Engineering Teaching Laboratory, Deputy Director of the Center for Energy Studies, and Associate Dean for Research and Administration in the College of Engineering.

Honors and awards Dr. Klein has received include Fellow of the American Society of Mechanical Engineers and the American Nuclear Society, the Joe J. King Professional Engineering Achievement Award; Engineer of the Year for the State of Texas, the University of Missouri Faculty-Alumni Award, and the University of Missouri Honor Award for Distinguished Service in Engineering.

A native of Missouri, Dr. Klein holds a bachelor's and master's degree in mechanical engineering and a doctorate in nuclear engineering, all from the University of Missouri-Columbia. He has published more than 100 technical papers and reports, and co-edited one book.

He has made more than 300 presentations on energy and has written numerous technical editorials on energy issues that have been published in major newspapers throughout the United States.

May 2009

Kirk Watson
Texas State Senator
District 14
512-463-0114
kirk.watson@senate.state.tx.us

Kirk Watson is State Senator for District 14. He is a partner with the law firm Brown McCarroll, L.L.P. He is a lawyer, mediator, public affairs consultant, and former Austin Mayor. In addition, he is former Chair of both the Texas Advisory Board for Environmental Defense and the Greater Austin Chamber of Commerce.

Senator Watson was recognized this year by Texas Monthly magazine as one of the state's "10 Best Legislators." He also has earned numerous other endorsements, awards and recognitions, including "Austinite of the Year" by the Greater Austin Chamber of Commerce, Austin Family Magazine's "Favorite Local Hero" and the "Best of Austin – Best Citizen" Reader's Choice Award from the Austin Chronicle.

Senator Watson serves on the Senate committees overseeing Business and Commerce, Economic Development, and Jurisprudence, and he is Vice Chair of the Senate Committee on Transportation and Homeland Security. He also Chairs CAMPO, the primary transportation planning agency for Central Texas.

In 1991, Senator Watson was appointed by Governor Ann Richards to Chair the Texas Air Control Board. He was Vice-Chair of the committee that oversaw the consolidation of the Texas Air Control Board with the Texas Water Commission creating the Texas Natural Resources Conservation Commission, now known as the Texas Commission on Environmental Quality.

Senator Watson graduated first in his law school class at Baylor University Law School in 1981. He served as Editor-In-Chief of the Baylor Law Review and clerked for the U.S. Court of Appeals for the Fifth Circuit. He was elected President of the Texas Young Lawyers Association and was named Outstanding Young Lawyer of Texas in 1994. He was named Young Baylor Lawyer of the Year in 1996 and was selected by his peers to be listed in the publication Best Lawyers in America since 1997.

Senator Watson served on the original Board of Directors for the Lance Armstrong Foundation and is a former member of the Board of Directors for the American Cancer Society, local chapter. He is active with the Juvenile Diabetes Research Foundation. He has served on several boards, including KLRU, Ballet Austin, El Buen Samaritano health clinic and the Community Partnership for the Homeless.

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Memorandum

To: Texas Environmental Superconference Participants

From: Chet Thompson
Stephanie Daigle
Jessica Hall

Date: July 14, 2009

Re: Summary of H.R. 2454, American Clean Energy and Security Act

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On June 26, 2009, the U.S. House of Representatives passed comprehensive energy and climate-change legislation, the American Clean Energy and Security Act ("ACES Act"), by a vote of 219 to 212.[1] In the end, 44 Democrats voted against the bill and 8 Republicans voted in support of the final measure. President Obama actively supported passage of the bill, although he expressed concern about a border-adjustment provision included in the final bill.

The Environment and Public Works ("EPW") Committee will have primary jurisdiction over the bill in the Senate. EPW began holding hearings on July 7 on the bill, and it is expected to hold additional hearings throughout the July and early August. Chairman Barbara Boxer (D-CA) has indicated that she would like the full Committee to consider portions of the bill shortly after the August recess. Other Senate committees that are expected to be involved in the debate include Finance, Agriculture, Commerce, Foreign Relations and Energy. At this time, Senate Leaders and Committee Chairmen are still discussing who will have jurisdiction over particular sections of the legislation.

The CBO estimates that that the climate-change provisions in the legislation will cost the average household $175 in 2020, and households with incomes in the lowest 20 percent would receive a net benefit of $40 annually (through an energy refund program created under Title IV). The Environmental Protection Agency ("EPA") has estimated that the bill would cost households between $80 and $111 per year.

Below, we provide a brief summary of key provisions of the bill, which – in broad terms – does the following: (1) creates a combined efficiency and renewable electricity standard, requiring electric utilities to meet 20 percent of their electricity demand through renewable energy sources and energy efficiency by 2020; (2) invests $90 billion in new clean energy technologies and energy efficiency by 2025, $60 billion in carbon capture and sequestration, $20 billion in

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[1] The Congressional Budget Office ("CBO") has estimated that the legislation will raise federal revenues by $846 billion over ten years and increase direct spending by $821 billion, resulting in a net $24 billion reduction in the federal budget deficit. The CBO's analysis considered the creation of allowances under the bill's cap and trade program as an increase in revenues and the free distribution of allowances as an offsetting outlay.

electric and other advanced-technology vehicles, and $20 billion in basic scientific research and development; (3) mandates new energy-saving standards for certain appliances and buildings and promotes increased energy efficiency in industry; (4) and establishes a nationwide cap-and-trade system, using a combination of allowance auctions and free allowance distributions, which is aimed at reducing greenhouse gas emissions from domestic sources by 17 percent (compared to 2005 levels) by 2020 and over 80 percent by 2050.

Title I: Clean Energy Provisions

Combined Efficiency and Renewable Electricity Standard. The ACES Act requires retail electric suppliers to meet a growing percentage of their load with electricity generated from renewable resources and electricity savings. Renewable electricity is defined as electricity generated from a renewable energy resource or other qualifying renewable energy resource, including wind energy, solar energy, geothermal energy, renewable biomass, biogas derived exclusively from renewable biomass, biofuels derived exclusively from renewable biomass, qualified hydropower, and marine and hydrokinetic renewable energy.[2] The combined renewable electricity and electricity savings requirement begins at six percent in 2012 and rises to 20 percent in 2020. At least 75 percent of the requirement must be met by renewable energy, except that upon receiving a petition from the governor, the Federal Energy Regulatory Commission ("FERC") can reduce the requirement to 60 percent. In 2020, 15 percent of the electricity load in each state must be met with renewable electricity and five percent with electricity savings. Upon petition by the governor, the renewable requirement can be reduced to 12 percent and the electricity savings can be increased to eight percent.

The manager's amendment adds a new section to the bill creating a renewable electricity standard for federal agencies. It creates a schedule for the percentage of electricity consumed by federal agencies that must come from renewable sources, beginning with six percent in 2012 and reaching 20 percent for the years 2020-2039. The amendment also gives agencies authority to enter into renewable power purchase agreements for up to 20 years.

Carbon Capture and Sequestration. The bill directs EPA to establish regulations under the Safe Drinking Water Act, within one year after enactment, for the certification and permitting of carbon dioxide geologic sequestration wells. These rules would cover the development, operation, and closure of wells, and include obligations regarding financial responsibility, emergency and remedial response, well-plugging, site closure, post-injection site care, and other activities. It also directs EPA to promulgate regulations, within two year after enactment, aimed at protecting human health and the environment by minimizing the risk of escape to the atmosphere of sequestered carbon dioxide.

Section 114 of the ACES Act creates and authorizes a Carbon Storage Research Corporation to develop a program designed to accelerate the commercial demonstration of carbon capture and

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[2] The manager's amendment to the bill, added just hours before passage, expands the definition of "qualified hydropower" by changing the eligibility date for incremental hydropower from January 1, 1992 to January 1, 1998. It also enlarges the definition of "renewable biomass" by adopting the Farm Bill definition for non-federal lands, including residues and byproducts from wood, pulp, and paper products facilities, and expanding the types of biomass that are eligible from federal lands (*e.g.*, dead, severely damaged, and badly infested trees from late-successional stands).

sequestration ("CCS") technologies.[3] Investments in CCS through the Corporation will include $10 billion generated from assessments on electricity derived by the use of fossil fuels (otherwise known as a "wire charge"). The Corporation's authority to collect assessments expires 10 years and six months after enactment, and the Corporation sunsets 15 years after enactment. Under the cap-and-trade portion of the bill, described below, the EPA Administrator must also allocate a portion of allowances to be used by the Corporation. The bill requires 1.75 percent of allowances to be used for such purposes from 2014-2017, 4.75 percent in 2018 and 2019, and five percent from 2020-2025. The Corporation is authorized to award grants, contracts, and other financial assistance to entities such as electric utilities and academic institutions. Its goal would be to support at least five commercial-scale demonstration projects over the Corporation's lifetime.

The ACES Act includes regulatory requirements to ensure that new coal-fired power plants will operate with CCS technology. It directs EPA to set performance standards as follows: A plant that is permitted after January 1, 2020, must reduce its carbon dioxide emissions by 65 percent. A plant that is permitted after January 1, 2009, but before January 1, 2020, must achieve a 50 percent reduction in carbon dioxide emissions by a compliance date dependent on future developments. The compliance date will be the earlier of two possible dates: (1) four years after the date in which the equivalent of four gigawatts ("Gw") of generating capacity with commercial CCS technology are operating in the United States and sequestering at least 12 million tons of carbon dioxide annually (with certain requirements as to the sources of the 4 Gw capacity) or (2) January 1, 2025 (although, this date may be extended by EPA by up to 18 months). Finally, not later than 2025, and at five-year intervals thereafter, EPA must review the standards for new coal-fired power plants and reduce the maximum carbon dioxide emission rate for new units to a rate that reflects the degree of emission limitation achievable through the application of the best system of emission reduction which the Administrator determines has been adequately demonstrated.

Investments in Clean Energy. As described below, the ACES Act creates a cap-and-trade program that requires major sources of carbon emissions to obtain an allowance for each ton of carbon dioxide or its equivalent that they emit. Through 2025, the government will allocate 13 percent of these allowances to investments in clean energy and energy efficiency. Using EPA estimates of allowance prices, the ACES Act invests roughly $190 billion through 2025 in clean energy and energy efficiency programs, including: $90 billion in state programs to promote renewable energy and energy efficiency (through the creation of State Energy and Environment Development, or "SEED," accounts); $60 billion in CCS technologies (including through the funding of the Carbon Storage Research Corporation, described above); $20 billion in electric and other advanced technology vehicles (through the clean transportation programs described below); and $20 billion in basic research and development into clean energy and energy efficiency. Investments in clean energy continue after 2025, with five percent of allowances being devoted to renewable energy and energy efficiency and 1.5 percent to research and development.

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[3] This section of the bill is nearly identical to H.R. 1689 (the "Carbon Capture and Storage Early Deployment Act"), which was introduced by Representative Rick Boucher on March 24, 2009.

Clean Transportation. Section 121 of the ACES Act amends the Public Utility Regulatory Policies Act of 1978 to require electric utilities to develop plans to support plug-in hybrid vehicles and pure plug-in electric vehicles, including heavy-duty hybrids. It further directs state regulatory authorities and utilities to establish appropriate protocols and standards for integrating plug-in electric-drive vehicles into an electric-distribution system, including a Smart-Grid system. Section 122 requires the Secretary of Energy to create a program to provide financial assistance to state or local governments to spur the deployment and integration of plug-in vehicles. Section 123 authorizes the Secretary to provide financial assistance to automobile manufacturers to facilitate the manufacture of plug-in vehicles. The ACES Act also authorizes the Secretary of Transportation to establish an "open fuel standard," requiring automakers to produce a share of their new vehicles as flexible-fuel vehicles in model year 2016, if he determines that E85 or M85 are available in sufficient quantities, that appropriate infrastructure exists, and that such a requirement would be cost-effective.

Supporting Private Investment in Clean Energy. The ACES Act establishes a self-sustaining Clean Energy Deployment Administration ("CEDA"), within the Department of Energy ("DOE"), to support private investments in clean energy technologies, including nuclear power. CEDA shall be an independent corporation. CEDA's Administrator, who is appointed by the President with the advice and consent of the Senate for a five-year term, will act as CEDA's Chief Executive Officer and Chairman of the Board of Directors. CEDA will be advised by an Energy Technology Advisory Council made up of representatives from academic, private, and other sectors. CEDA may issue direct loans, letters of credit, and loan guarantees to deploy clean energy technologies, if the Administrator determines that deployment of the technologies would benefit or be accelerated by direct support, as well as offer indirect assistance.

Nuclear Energy. The bill amends DOE's loan guarantee program for low-carbon energy projects under Title XVII of the Energy Policy Act ("EPA"). As mentioned above, it also establishes a new Administration, CEDA, within the DOE, which would use a newly created revolving fund in the Treasury to provide financial assistance (in addition to the DOE loan guarantee under the EPA) to clean energy projects. However, no single energy technology may receive more than 30 percent of CEDA financial support. (This limitation may affect nuclear power projects, primarily, because of their large size.) The manager's amendment adds a new section to the bill requiring the DOE to publish a study on the use of thorium-fueled nuclear reactors for national energy needs.

Vehicle Standards. The ACES Act includes requirements for EPA to use its authority under Clean Air Act section 202 to promulgate greenhouse gas standards for new heavy-duty vehicles and their engines and under section 213 to promulgate such standards for new non-road vehicles and their engines.[4]

[4] The manager's amendment to the bill amends Clean Air Act Section 211(o) to address a controversial issue relating to whether greenhouse gas emissions associated with indirect land-use changes should be considered in the regulation of biofuels. The new provision expressly excludes EPA from considering indirect land-use changes that occur outside the country where a biofuel feedstock is produced from consideration in the lifecycle greenhouse gas emission analysis for renewable fuels. The EPA and the Department of Agriculture must determine, however, within five years of enactment, whether valid scientific models exist to project the emission impacts of indirect international land-use changes. If such

Aircraft. The manager's amendment adds a provision expressing the sense of Congress that the United States should work with the International Civil Aviation Organization to develop a comprehensive international framework for regulation of greenhouse gas emissions from civil aircraft and to work with other nations to avoid duplicative regulations for the industry.

Modernizing the Electricity Grid. The ACES Act includes provisions to promote the deployment of Smart-Grid technology and enhanced transmission planning. In particular, it does the following:

- Directs the Secretary of Energy and the EPA Administrator, within one year from the date of enactment, to assess the potential for cost-effective integration of Smart-Grid technologies and capabilities in all products that are reviewed for potential designation as Energy Star products (*i.e.*, "smart appliances"). Within two years after the date of enactment, the Secretary and Administrator must prepare an analysis of the potential energy savings, greenhouse-gas reductions, and electricity cost savings that could be realized for each of the products identified in the foregoing assessment in certain optimal circumstances. Within three years after the date of enactment, the Secretary and Administrator must inform manufacturers if it is found that the incorporation of Smart-Grid technology in their products appears to be cost effective under optimal Smart-Grid circumstances and submit a report to Congress that includes an assessment of the potential reduction in peak demand, as well as national energy savings and electricity cost savings, that could be realized if Smart-Grid potential were installed in the relevant product reviewed by the Energy Star program.
- Directs the Federal Trade Commission to initiate a rulemaking within one year of the date of enactment to consider adding various information to Energy Guide labels, such as information on the Smart-Grid features of products that incorporate Smart-Grid technology.
- Requires load-serving entities (*i.e.*, utilities that sell electricity directly to customers), with an applicable baseline in excess of 250 megawatts, to establish and meet goals reducing peak-electricity demand for the years 2012 and 2015. The bill sets as a minimum goal for reduction in peak demand that percentage that is "realistically achievable with an aggressive effort to deploy Smart Grid and peak demand reduction technologies and methods." There is no penalty for a failure to meet the goals.
- Expands an energy-efficiency public-information program, authorized pursuant to the EPACT, to make it into a Smart-Grid and energy-efficiency information program.
- Modifies an energy-efficiency appliance rebate program authorized by the EPACT to add appliances with Smart-Grid capabilities. It also amends the original language such that federal money can be used to fund 100 percent of the rebate amount instead of just administrative costs. Authorized funding is increased from $50 million annually to $100 million, and the authorization is extended through Fiscal Year 2015.

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methodologies exist, the agencies would promulgate a rule setting forth such methodologies and incorporating indirect land-use changes in the lifecycle greenhouse-gas calculation for renewable fuels.

- Establishes a national transmission planning policy. Within one year after the date of enactment, FERC must adopt national electricity grid-planning principles to be applied in ongoing and future transmission planning that may implicate interstate transmission of electricity. FERC's planning principles can be adopted and used by existing and new regional planning entities, which will be eligible for federal assistance. The bill also amends the EPACT to provide loan guarantees for the development and construction of transmission and related facilities using currently non-commercial technologies, including high-efficiency underground transmission lines and equipment and plants that manufacture high-efficiency underground transmission lines and equipment.

Title II: Energy Efficiency Provisions

Building Standards. The ACES Act establishes new national building code energy-efficiency targets, including, by 2014 for residential buildings and by 2015 for commercial buildings, a 50 percent reduction in energy use relative to baseline. States are offered allowances under the cap-and-trade program (discussed below), which they can use to support adoption and enforcement of the new standards. The DOE must update the national model building energy codes at least once very three years. DOE must enforce the standards in states that do not incorporate the building standards into their state building codes. The bill also directs EPA to establish a building energy-performance labeling program that would apply broadly to residential and commercial buildings. EPA must also develop model performance labels for residential and commercial buildings and use incentives and other means to spur use of labels by the public and private sector. The manager's amendment to the bill makes the labeling program applicable to new construction, only.

Community Development Block Grants/Solar Energy. The manager's amendment adds a new section to the bill creating a Community Development Block Grant program in the Department of Housing and Urban Development ("HUD") for the purpose of supporting enforcement of local building codes, including energy efficiency codes. It also adds a new section providing that a grant may be made under the program only if the grantee complies with specified limits on the cost of permit or license for construction or installation of a solar energy system. The amendment also directs the HUD to issue rules to prohibit private covenants that restrict or prohibit the installation of solar energy systems.

Clean Energy Efficiency Manufacturing and Revolving Loan Funds. The manager's amendment adds a new section directing the Secretary of Commerce to establish a program for the award of grants to states to establish revolving loan funds for small and medium-sized manufacturers to improve energy efficiency and produce clean-energy technology, such as wind turbines, solar energy, fuel cells, advanced batteries, and geothermal equipment. The purposes of the provision are to develop long-term domestic manufacturing capacity, create jobs through expansion of manufacturing facilities to produce clean-energy technologies, improve long-term competitiveness of domestic manufacturing, and assist small- and medium-sized manufacturers to diversify their operations. The manager's amendment also adds a new Section 247, which aims to provide assistance, through the creation of partnerships, to help manufacturers find new markets, improve competitiveness, reduce greenhouse gas emissions, and adopt innovative manufacturing technologies.

Appliance Efficiency Standards. The ACES Act mandates new standards applicable to four different lighting products, as well as new standards for water dispensers, commercial hot food holding cabinets, portable electric spas, and commercial furnaces. The manager's amendment makes changes to the outdoor lighting efficiency standards. The bill revises the criteria for prescribing new or amended standards to include the estimated value of reduced emissions of carbon dioxide and other greenhouse gases; the estimated impact on average consumer energy prices; and the estimated energy efficiency attributable to Smart-Grid technologies. It would require the carbon output of each covered product to be included on the Energy Guide labels. DOE is authorized to create a program to reward retailers for increasing the sales of best-in-class high-efficiency installed building equipment, high-efficiency consumer electronics, and high-efficiency household appliance models. The bill also creates a bonus program for manufacturers that develop new "super-efficient best-in-class" products. Finally, the bill amends the statutory authority for EPA's Energy Star program to do several things, including require periodic testing of marketed products.

The manager's amendment amends the Energy Policy and Conservation Act to specify that EPA and DOE must establish and implement a rating system for Energy Star products to provide consumers with the most helpful information on the products' relative energy efficiency, their cost effectiveness, and the relative length of time for consumers to recover costs attributable to the energy efficient features of those products.

Consumer Behavior Study and Industrial Energy Efficiency Education. The manager's amendment authorizes DOE to create a research program to study factors affecting consumer adoption of energy-saving practices and efficiency improvements. The program will include grants to the public and private sectors to study the effects of consumer behavior on total energy use, potential energy savings from consumption habits, the ability to reduce greenhouse gas emissions through changes in energy consumption habits, the potential to increase public awareness of adaptation and mitigation programs, and the potential for alterations in consumer behavior to further American energy independence. The amendment also adds a new provision establishing a DOE program to educate commercial and industrial consumers about mechanical insulation.

Green and Energy Efficient Housing. The manager's amendment adds a new subtitle called "Green Resources for Energy Efficient Neighborhoods," which directs the Secretary of HUD to determine standards for energy efficiency and other green-attributes of HUD-related buildings and to develop energy-efficient building demonstration projects for multi-family assisted housing projects. The provision has a number of other mechanisms designed to promote energy efficiency in housing, including enhancing and expanding the availability of energy-efficient mortgages.

Title III: Global Warming Provisions (Cap and Trade)

The ACES Act contains three primary programs for reducing carbon emissions that cause climate change: (1) a cap on large domestic sources of emissions; (2) a program to reduce tropical deforestation; and (3) an offset program. In addition, the bill caps emissions of global warming pollutants that are substitutes for ozone-depleting chemicals, and it requires EPA to set

performance standards for some uncapped sources of emissions. Taken together, these programs will reduce carbon emissions by 28 percent to 33 percent below 2005 levels by 2020. By 2050, the ACES Act will reduce carbon emissions by over 80 percent below 2005 levels through these programs.

Capping Carbon Emissions from Large Sources. Starting in 2012, the ACES Act establishes annual limits on emissions of carbon and other global warming pollutants (methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride) from large U.S. sources emitting more than 25,000 tons per year of carbon dioxide equivalent gases; as well as producers and importers of petroleum fuels; distributors of natural gas to residential, commercial and small industrial users; and producers of fluorinated gases. Regulated entities would be required to surrender allowances, offset credits, compensatory allowances (feedstock credit), and/or international emission allowances. The following entities are directly regulated:

- Electricity Sources: Any electricity source excluding emissions resulting from the combustion of petroleum- or coal-based liquid or gaseous fuel, natural gas liquid, renewable biomass, or gas derived from renewable biomass, petroleum coke, or gas derived from petroleum coke. The compliance obligation would begin in 2012.

- Fuel Producers and Importers: Any stationary source that produces or imports, for sale or distribution, petroleum- or coal-based liquid fuel, petroleum coke, or natural gas liquid that if combusted would result in 25,000 or more tons of carbon dioxide equivalent per year. The compliance obligation would begin in 2012.

- Industrial Gas Producers and Importers: Any stationary source that produces or imports, for sale or distribution, more than 25,000 tons of carbon dioxide equivalent of fossil fuel-based carbon dioxide, nitrous oxide, perfluorocarbons, sulfur hexafluoride, any other fluorinated gas, except for nitrogen trifluoride, that is a greenhouse gas as designated by the Administrator of the EPA ("Administrator"), or any combination of the greenhouse gas GHGs described above. The compliance obligation would begin in 2012.

- Nitrogen Trifluoride Sources: Any stationary source that emitted 25,000 or more tons of carbon dioxide equivalent of nitrogen trifluoride. The compliance obligation would begin in 2014.

- Geologic Sequestration Site: Any geologic sequestration site. The compliance obligation would begin in 2012.

- Industrial Stationary Sources: There are three categories of industrial sources that would be directly regulated. The regulated industrial sources would be required to surrender allowances for any greenhouse gas that is emitted with the exception of emissions resulting from the use of petroleum- or coal-based liquid fuel, natural gas liquid, renewable biomass or gas derived from renewable biomass, petroleum coke or gas derived from petroleum coke. The compliance obligation for these sectors would begin in 2014.

1) All stationary sources in the following sectors are regulated: adipic acid production, primary aluminum production, ammonia manufacturing, cement production (excluding grinding-only operations), hydrochlorofluorocarbon production, lime manufacturing, nitric acid production, petroleum refining, phosphoric acid production, silicon carbide production, soda ash production, titanium dioxide production, and coal-based liquid or gaseous fuel production.

2) All stationary sources in the chemical or petrochemical sector that produce acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, methanol, or produce a chemical or petrochemical product that would result in annual process emissions of 25,000 or more tons of carbon dioxide equivalent.

3) All stationary sources in the following sectors that emit more than 25,000 tons of carbon dioxide equivalents: ethanol production, ferroalloy production, fluorinated gas production, food processing, glass production, hydrogen production, iron and steel production, lead production, and pulp and paper manufacturing, and zinc production.

- Industrial Fossil Fuel-Fired Combustion Devices: Any fossil fuel-fired combustion device (*e.g.*, boilers) or group of such devices that emit 25,000 or more tons of carbon dioxide equivalents. When determining their compliance obligation, industrial fossil fuel-fired combustion devices would not be required to include emissions resulting from the use of petroleum- or coal-based liquid or gaseous fuel, natural gas liquid, renewable biomass, or gas derived from renewable biomass, petroleum coke, gas derived from petroleum coke, or any fluorinated gas that is a greenhouse gas except for nitrogen trifluoride. This provision only applies to sources that are not regulated under the Industrial Stationary Source provision described above. The compliance obligation for this sector would begin in 2014.

- Natural Gas Local Distribution Companies ("LDC"): Any LDC that delivers 460,000,000 cubic feet or more of natural gas, or any other gas meeting the specifications for commingling with natural gas, to customers that are not regulated entities. Any regulated entity that receives natural gas from a LDC would be required to notify the LDC in writing by September 1 of each year that they are a regulated entity. The compliance obligation for this sector would begin in 2016.

- Algae-Based Fuel: Carbon dioxide generated by a covered entity and used as an input in the production of algae-based fuel.

Although there may be some overlap with regulated entities, the bill prohibits EPA from requiring more than one allowance for the same greenhouse gas emission.

Under limits established by the bill, greenhouse gas emissions from large sources must be reduced by 17 percent below 2005 levels by 2020, 42 percent below 2005 levels in 2030, and 83 percent below 2005 levels by 2050.

The bill also establishes economy-wide goals for all sources, whether or not they are covered by the cap-and-trade program. To meet these goals, the bill directs EPA to promulgate standards of performance under Section 111 of the Clean Air Act, within three years after the date of enactment, for categories of uncapped stationary sources that emit more than 10,000 tons of carbon dioxide equivalent annually and that, in the aggregate, are responsible for emitting at least 20 percent annually of the uncapped greenhouse gas emissions. The Administrator must also specifically identify and develop standards for source categories that were responsible for at least 10 percent of uncapped methane emissions in 2005. This provision could reduce the number of projects available for the domestic offset program.

Preventing Tropical Deforestation. The ACES Act directs EPA and the State Department to use five percent of the allowances to secure agreements from developing nations to prevent tropical deforestation. This program is expected to reduce carbon emissions by an additional 10 percentage points, beyond the targets set under the cap-and-trade program, below 2005 levels by 2020.

Emission Offsets. The ACES Act allows capped sources to increase their carbon dioxide emissions if they can obtain offsetting emission reductions from uncapped sources. This mechanism is designed to reduce the overall costs of the program. Taken collectively, all capped sources may rely on offsets to acquire up to two billion tons of emission credits annually. One billion of these credits must come from domestic sources, except that if insufficient domestic offsets are available, up to 1.5 billion tons of emission credits can be obtained from international offset projects. Starting in 2018, 1.25 international offset credits would be required to be surrendered for each ton of emission compliance. In contrast, the bill does not require a discounting of domestic offsets. The discounting mechanism is expected to reduce carbon emissions by up to an additional five percentage points below 2005 levels by 2020.

The manager's amendment creates a provision to allow covered entities to meet compliance obligations with "term" offset credits, which are time-limited offset credits issued under the domestic agricultural and forestry offsets program (discussed below). These credits would expire at the end of their term, and the user of the credit would be liable for the resulting compliance obligation.

The ACES Act directs the EPA to determine a list of eligible offset projects (aside from the domestic agricultural and forestry offset projects governed by Title V, discussed below) based on recommendations of an Offsets Integrity Advisory Board. The bill contains multiple provisions to ensure the integrity of offsets, including review by an independent scientific panel. Offsets may not be obtained from sources in a foreign nation until the United States has entered into an agreement with the originating nation establishing the terms of the offset program. This particular requirement is extremely controversial because it could significantly limit the pool of available offsets.

Cost-Containment Measures. The ACES Act contains measures to contain the cost of the climate program. These include unlimited banking of allowances, a two-year compliance period (which allows borrowing one year in advance), unlimited next-year borrowing with no interest, borrowing of up to 15 percent of a compliance obligation from years 2 through 5 beyond the

current calendar year at eight percent annual interest, and a strategic reserve of allowances from future years that are available for auction if allowance prices exceed 160 percent of their three-year average. The proceeds of any sales from the reserve will be used to acquire additional international offsets, which will replenish the reserve at a low cost and result in additional reductions in carbon emissions. In addition, the bill establishes a minimum floor price for auctioned allowances of $10 (in 2009 dollars) to provide stability and investment certainty.

Allowance Allocation Provisions

As previously explained, the ACES Act requires major U.S. sources of emissions to hold an allowance for each ton of carbon dioxide or its equivalent emitted into the atmosphere. EPA estimates that in 2005 dollars, these allowances will cost $13 in 2015 and increase to $26 to $27 by 2030. These allowance price estimates are consistent with estimates by the CBO. According to the CBO, allowance prices in 2005 dollars will be $16 in 2015 and increase to $36 by 2030. At these allowance prices, the total value of the allowances created under the legislation ranges from roughly $70 to $80 billion in 2015 to $90 to $120 billion in 2030. Some analysts have criticized EPA and CBO cost estimates and believe that the cost of an allowance could approach $100.

Under the ACES Act, approximately 80 percent of the allowances are distributed without charge and 20 percent of allowances are auctioned in the early years of the program, to ease the transition to a clean energy economy. This transition period starts to phase out after 2025. By 2030 and beyond, about 30 percent of allowances are freely distributed and about 70 percent of the allowances are auctioned.

For the period from 2012-2025, 55 percent of the allowances will be used to protect consumers from energy price increases; 19 percent will be used to assist trade-vulnerable and other industries make the transition to a clean energy economy (energy intensive manufacturers such as steel, paper, and chemical manufacturers); 13 percent will be used to support investments in clean energy and energy efficiency; and 10 percent will be used for domestic adaptation, worker assistance and training, prevention of deforestation, and international adaptation. The remainder (three percent of allowances) will ensure that the ACES Act is budget neutral.

From the period from 2026-2050, up to 58 percent of the allowances will be used to protect consumers; 19 percent will be used for domestic adaptation, worker assistance and training, prevention of deforestation, and international adaptation; 12 percent will be used to support investments in clean energy and energy efficiency; seven percent will be used to ensure budget neutrality; and at least four percent will be used to assist trade-vulnerable and other industries.

Protection of Consumers. The ACES Act establishes several programs to protect consumers from energy-price increases. The following programs were established to protect consumers:

- To mitigate **electricity-price increases**, regulated utilities that distribute electricity to consumers will receive allowances according to a decreasing schedule, which begins with 43 percent of allowances in 2012 and 2013 and includes 35 percent of allowances

in 2016-2025, under a formula that distributes half of the allowances based on emissions and half based on electricity generation. Eligible recipients of allowances for purposes of protecting electricity consumers include electricity LDCs, merchant coal-fired electric generating facilities, and specifically defined power-production facilities that have entered into long-term power contracts. Utilities that receive allowances under this part must use them exclusively to keep rates low for residential, commercial and industrial users (including certain cogeneration facilities) and, to the extent they use rebates, to do so to the maximum extent practicable by reducing the fixed-rate portion of consumer electricity bills. The bill contains a provision to ensure that LDCs pass through their allowance benefit to industrial ratepayers based on their ratable share and the quantity of electricity delivered to mitigate price increases that will occur as a result of the ACES Act.

- To mitigate **natural-gas price increases**, regulated utilities that distribute natural gas to consumers will receive allowances according to a decreasing schedule that begins with 9 percent for years 2016-2025 and includes 7.2 percent of allowances in 2026. One-third of these allowances must be used for energy-efficiency programs. The remainder must be passed through to consumers through lower prices under provisions similar to those that apply to the regulated electric utilities.

- To mitigate **home heating-oil price increases**, states will receive 1.5 percent of allowances through 2025 under a formula based on each state's home heating oil use. Specifically, states would receive allowances based on the ratio of the carbon content of oilheat fuel, propane, and kerosene sold to consumers within each state for residential or commercial uses to the carbon content of oilheat fuel, propane and kerosene sold to consumers within the United States as a whole. These allowances must be used for rebates to consumers and investments in energy efficiency.

- To provide added protection for **low- and moderate-income families**, in the beginning years of the program, the bill directs the EPA Administrator to auction 15 percent of allowances and to distribute the proceeds back to consumers through a combination of **refundable tax credits** and **electronic benefit payments**. Many of the bill's allowance distribution provisions are set to be phased out starting in 2026. As more allowances are auctioned instead of given away, the bill directs that the auction proceeds be distributed to consumers through tax credits.

Protection of Trade-Vulnerable and Other Industries. As described in the next section, under Title IV of the bill, energy-intensive, trade-exposed industries, such as those that process metal ores, including iron and copper ores, soda ash, and phosphate, will receive allowances to cover their increased costs. The number of allowances set aside for this program will equal 15 percent of the allowances in 2014 and subsequently decrease based on the percent reductions in the carbon emissions cap. These allowances will phase out after 2025 unless the President decides the program is still needed.

Allowances will be distributed to entities in eligible industrial sectors based on the sum of their direct and indirect "carbon factors." Direct carbon factors are calculated by multiplying annual

output by average direct greenhouse gas emissions for the sector and indirect carbon factors are calculated by multiplying an annual electricity emissions intensity factor (using data on electricity purchases) for the facility and an electricity efficiency factor (*i.e.*, the average amount of electricity used per unit of output for all entities in the sector). An anti-backsliding provision is included which would prohibit a facility from receiving additional allowances if the facility's carbon intensity per unit of output increases or if they switch to a less carbon efficient electricity provider.

Domestic Fuel Production. Oil refiners, including small business refiners, will receive two percent of allowances starting in 2014 and ending in 2026. The legislation provides an additional 0.25 percent of allowances for small business refiners from 2014 through 2026. The EPA Administrator, in consultation with the Energy Information Administration, is charged with promulgating rules to establish a formula for distributing allowances to individual refineries, taking into consideration the "relatively complexity of refinery processes and appropriate mechanisms to take energy efficiency and greenhouse gas reductions into account."

Investments in Clean Energy and Energy Efficiency. States will receive 10 percent of allowances from 2012-2015; seven percent of allowances in 2016 and 2017; six percent of allowances from 2018-2021; and five percent of allowances thereafter for investments in renewable energy, energy efficiency, and pollution reducing transportation projects. Two percent of allowances from 2014-2017, and five percent thereafter, will be available to electric utilities to cover the costs of installing and operating CCS technologies (as described above, from 2014-2017, a small portion of these allowances will be used to offset the costs of the Carbon Storage Research Corporation, which will invest an additional $10 billion in CCS technologies). Three percent of allowances from 2012-2017 and one percent of allowances from 2018-2025 will be available for investments in electric vehicles and other advanced automobile technology and deployment. One-and-a-half percent of allowances in each year will be allocated to support research and development in advanced clean energy and energy-efficiency technologies.

Credit for Early Action. One percent of emissions allowances in 2012 would be set aside to compensate entities who have taken action to reduce carbon emissions prior to the enactment of legislation. Three quarters of the one percent of emissions allowances would go to owners of qualifying offset credits (issued by January 1, 2009 by a state or a qualifying offset program) who will receive allowances in an amount equivalent to the monetary value of the credits. The remaining one quarter of one percent of emissions allowances would be available to early actors who reduced emissions, but which do not have offset credits. To qualify, an entity claiming the credits would have had to: publicly state greenhouse gas reduction goals and publicly report against those goals; demonstrate entity-wide net greenhouse gas reductions; and demonstrate that the projects were undertaken and the reductions achieved. Only reductions or avoidance of greenhouse gas emissions achieved by activities undertaken between January 1, 2001, and January 1, 2009 may be compensated.

Domestic Adaptation. From 2012-2021, two percent of allowances will be allocated to prepare the United States to adapt to the impacts of climate change. The amount of allowances allocated for domestic adaptation will increase to four percent from 2022-2026 and to eight percent thereafter. Half of these allowances will be used for wildlife and natural resource protection and half for other domestic adaptation purposes, including public health.

Preventing Tropical Deforestation and International Adaptation. From 2012-2025, five percent of allowances will be allocated to prevent tropical deforestation and build capacity to generate international deforestation offsets. This amount will be reduced to three percent from 2026-2030 and two percent thereafter. From 2012-2021, two percent of allowances will be allocated for international adaptation and clean technology transfer. The amount of allowances allocated for these purposes will increase to four percent from 2022-2026 and to eight percent thereafter. Half of these allowances will be used for adaptation and half for clean technology transfer.

Worker Assistance and Job Training. From 2012-2021, 0.5 percent of allowances will be allocated for worker assistance and job training. This amount will increase to one percent thereafter.

Hydrofluorocarbons

The ACES Act establishes a separate program for the reduction of hydrofluorocarbons ("HFCs") and hydrofluoroolefins ("HFOs"). Within six months of enactment, the Administrator would be required to publish a list of HFCs that would create a new class II; group II classification for HFCs.[5] Production of class II, group II substances would be required to be phased down starting in 2012. The proposed phase down would be: 2012—10 percent reduction from the baseline; 2015—17.5 percent reduction from the baseline; 2020—33 percent reduction from the baseline; 2030—75 percent reduction from the baseline; and after 2032—85 percent reduction from the baseline. The baseline would be determined by the sum of the annual average consumption of all class II substances in 2004 through 2006 and the annual average quantity of all class II substances contained in imported products in 2004 through 2006 (expressed in tons of carbon dioxide equivalent).

Any producer or importer of class II, group II substances has to hold one consumption allowance or one destruction credit allowance for each carbon dioxide equivalent ton of the class II, group II substance. Two allowance pools are established to distribute allowances to interested parties. The first allowance pool would consist of 80 percent of the consumption allowances and would be limited to producers and importers, and the secondary pool would consist of 20 percent of the allowances and be open to (1) importers of products containing class II, group II substances; (2) anyone who purchased any class II, group II substance directly from a producer or importer of class II, group II substances for use in a manufactured product, manufacturing process or a reclamation process; (3) anyone who has taken significant steps to produce or import a "significant quantity" of class II, group II substances; and (4) producers and importers of any class II, group II substances in 2004, 2005, and 2006.

Allowances would be allowed to be banked and an offset program is authorized for the destruction of chlorofluorocarbons. Within 18 months of enactment, the Administrator

[5] The regulated hydrofluorocarbons include: HFC-23, HFC-32, HFC-41, HFC-125, HFC-134, HFC-134a, HFC-143, HFC-143a, HFC-152, HFC-152a, HFC-227ea, HFC-236cb, HFC-236ea, HFC-236fa, HFC-245ca, HFC-365mfc, HFC-43-10mee, hydrofluoroolefin ("HFO")-1234yf, and HFO-1234ze. The Administrator would be granted the authority to add any substance to the list if it is used as a substitute for a class I or II chemical.

would be required to establish an offset program for CFCs that would provide the destroying entity destruction offset credits equivalent to 0.8 times the number of tons of carbon dioxide equivalents of reduction achieved through the destruction. No offset credits can be established for the destruction of class II, group II substance.

Exemptions From Other Clean Air Act Programs

The following Clean Air Act programs shall not apply to any greenhouse gas regulated by the ACES Act: criteria pollutants, (Sec. 108(a)), international air pollution (Sec. 115), hazardous air pollutants unless it meets the criteria listing independent of its effect on global climate change (Sec. 112). Moreover, New Source Review shall not apply to any major facility solely on the basis of its emissions of greenhouse gas that is initially permitted or modified after January 1, 2009 (Part C of title I). finally, the permitting program would not apply to a source solely on the basis of its greenhouse gases.

Carbon Market Oversight

Market Assurance. The bill requires FERC to regulate the cash market in allowances and offsets. It provides that the Commodity Future Trading Commission shall regulate regulated allowance derivatives, and it prohibits the over-the-counter trading of such derivatives.

Regulation of Carbon Derivatives Markets. The manager's amendment provides for repeal of certain provisions of the bill upon passage of legislation that includes derivatives regulatory reform.

Interaction with State and Regional Programs

The ACES Act allows states to enact more stringent climate regulations, except for cap-and-trade programs in the near term. State trading programs could not operate from 2012 through 2017 under the bill. However, holders of allowances issued pursuant to state or regional programs before December 31, 2011 could exchange these allowances for federal allowances.

Title IV: Transitioning to a Clean Energy Economy

Title IV of the bill includes various provisions aimed at preventing "leakage" (*i.e.*, an increase in greenhouse gas emission by industrial entities located in other countries caused by the incremental cost of production increase in the United States resulting from implementation of the bill), preserving domestic competitiveness and supporting workers, providing assistance to consumers, and supporting domestic and international adaptation initiatives. The following is a brief description of just some of the key provisions of Title IV.

Rebate Allowances for Energy and Greenhouse Gas-Intensive and Trade-Exposed Industries. The bill directs the EPA Administrator to identify industrial sectors eligible for emission allowance rebates based on their "energy or greenhouse gas intensity" and their "trade intensity." Here, energy-intensity is determined by dividing the cost of purchased electricity and fuel costs by the value of shipments by the sector and greenhouse gas intensity is determined by dividing the tons of carbon dioxide equivalent emitted by the sector by the

value of the shipments of the sector. Trade intensity is determined by dividing the value of total imports and exports of a sector by the value of the shipments plus the value of imports of such sector. Certain industrial sectors that prove exceptionally energy or greenhouse-gas intense may qualify for rebates without meeting the trade-intensity requirements. The bill expressly provides that the petroleum refining sector shall not be eligible for rebates under this program. Any entity in an industrial sector may petition the Administrator to designate an entity or group of entities, representing a subsector of a six-digit section of the North American Industry Classification System Code, as eligible for rebates.

Border Adjustment. The manager's amendment provides that if the United States does not join a multilateral agreement that meets certain negotiating objectives by 2018, the President must establish an international reserve allowance program for each eligible energy-intensive, trade-exposed industrial sector (*i.e.*, a border adjustment for vulnerable industrial sectors). In order to waive use of this border adjustment program, the President must (1) determine and certify to Congress with respect to eligible industrial sectors that such program would not be in the national economic or environmental interest of the United States and (2) receive a joint resolution of Congress approving the foregoing presidential determination. Moreover, the President may exercise his discretion to use the border adjustment for sectors that are not energy-intensive and trade-exposed.

Green Jobs and Worker Transition. The bill authorizes the Secretary of Education to award grants to develop programs of study focused on emerging careers and jobs in the areas of clean energy, renewable energy, energy efficiency, climate change mitigation, and adaptation. It establishes an Energy Efficiency and Renewable Energy Worker Training Fund under the Workforce Investment Act of 1998. It directs the Secretary of Labor to develop a web-based clearinghouse for job-training programs in the renewable-energy sectors (*i.e.*, solar, wind, energy transmission, geothermal, and energy efficiency). The Secretary shall also establish a Green Construction Careers demonstration project, whose purpose is to promote middle-class careers and quality employment practices in green construction. The bill creates a program whereby workers whose employment has been adversely affected by any requirement of the ACES Act may petition the Secretary of Labor to receive adjustment assistance.

Exporting Clean Technology. Sections 441-446 of the bill provide developing countries with assistance to encourage deployment of technologies that reduce greenhouse gas emissions, and encourage countries to adopt greenhouse-gas reduction policies, by authorizing the Secretary of State to distribute allowances for qualifying activities in eligible countries. Assistance may be in the form of bilateral assistance or assistance to multilateral funds or institutions. A maximum of 15 percent of allowances available for bilateral assistance per year may be distributed within any single country. Assistance is tied to an eligible country's "nationally appropriate mitigation" strategy to achieve "substantial reductions, sequestration, or avoidance of greenhouse gas emissions, relative to business-as-usual levels." To be eligible for assistance, activities in these countries must not undermine the protection of intellectual property rights for clean technology, as formulated in the Agreement on Trade-Related Aspects of Intellectual Property Rights, as well as any applicable intellectual property provisions of bilateral trade agreements.

National Climate Service. The bill creates a National Climate Service, within the National Oceanic Atmospheric Administration, which would provide forecasts, warnings, and other information to the public on the variability and change in weather and climate that affect geographic areas, natural resources, infrastructure, economic sectors, and communities.

Title V: Agriculture and Forestry Related Offsets

The manager's amendment adds a new title to the bill authorizing the Secretary of Agriculture to create, by rule, an offset credit program for agricultural and forestry related offsets. The program must ensure that offset credits represent *verifiable* and *additional* greenhouse gas emission reductions or avoidance, or increases in sequestration, and ensures that offset credits issued for sequestration projects are only issued for reductions that result in a *permanent* new reduction in emissions. The Secretary must publish a list of domestic agricultural and forestry practice types that are eligible to generate offset credits because they avoid or reduce greenhouse gas emissions or sequester greenhouse gases. The initial list must include, at a minimum, practices such as (1) agricultural, grassland, and rangeland sequestration and management practices (*e.g.*, altered tillage practices); (2) changes in carbon stocks attribute to land-use change and forestry activities (*e.g.*, afforestation or reforestation of acreage not forested); and (3) manure management and disposal (*e.g.*, biogas capture and combustion).

Please call Chet Thompson at 202.624.2655 if you have any questions.

crowell moring



Chet M. Thompson
Partner
cthompson@crowell.com

Washington
1001 Pennsylvania Avenue, N.W.
Washington, DC 20004-2595
Phone: 202.624.2655
Fax: 202.628.5116

Chet M. Thompson is a partner in the Washington, D.C. office of Crowell and Moring and a member of the firm's Environment & Natural Resources Group. Chet is the former deputy general counsel and associate deputy general counsel of the U.S. Environmental Protection Agency (EPA), positions he held between 2004 and 2006. His practice includes counseling, litigation, and regulatory and legislative representation of a wide array of clients under the major environmental statutes, including the Clean Air Act (CAA), the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response, Compensation, Liability, and Recovery Act (CERCLA).

As EPA's deputy general counsel, Chet provided legal advice to the EPA administrator, the general counsel, and various program offices, particularly the office of air and radiation (OAR), the office of enforcement and compliance assurance (OECA), and the office of solid waste (OSW). During his tenure, Chet oversaw the agency's air and radiation law office and the legal aspects of many of the Bush Administration's hallmark CAA initiatives, including off-road engine and low-sulfur diesel standards, the Clean Air Interstate Rule (CAIR), the Clean Air Mercury Rule (CAMR), New Source Review (NSR) reforms, designations and implementation of the revised national ambient air quality standards (NAAQS) for ozone and particulate matter, and implementation of the CAA's residual risk program. He also supervised the agency's legal defense and appellate dockets and the day-to-day legal support of EPA's CAA title V, New Source Performance Standards (NSPS), NSR, and prevention of significant deterioration (PSD) programs. Additionally, Chet provided legal counseling on a number of energy issues, including permitting of oil and gas exploration and processing plants, coal-fired power plants, and liquefied natural gas (LNG) facilities.

Chet also supervised the agency's solid waste and emergency response law office, which provides legal support for CERCLA and RCRA issues. He was the United States' lead negotiator in multi-year negotiations that culminated in a landmark settlement with a Canadian mining company over the extraterritorial application of CERCLA and liability associated with the historic contamination of the Upper Columbia River in Washington State. The settlement guaranteed full-funding for a comprehensive, multi-year study of human health and ecological risks at the site and avoided years of protracted litigation between the United States and Canada that could have had negative ramifications for U.S. industries.

Prior to joining EPA, Chet was a partner in the environmental practice group of another major D.C. law firm. He represented trade associations and companies in the steel, nonferrous metals, petroleum, and forest and paper industries on a number of CAA and RCRA regulatory and litigation matters.

Chet received a B.A. in Political Science, *cum laude*, from Boston College in 1990, and his J.D. from Catholic University, the Columbus School of Law in 1993, graduating in the top five percent of his class. He is admitted to the bars of the District of Columbia and Maryland.

Education
Boston College, B.A., 1990 - *cum laude*
Catholic University of America, Columbus School of Law, J.D., 1993

Affiliations
Admitted to practice: District of Columbia, Maryland

Publications
"Climate Change: Things Are Starting to Heat Up," *Crowell & Moring Mining Law Monitor*, Vol. 23, Issue 1 (Fall/Winter 2006). Co-Authors: Ann R. Klee and Chet M. Thompson.

"Dust in the Wind: EPA Revises the PM National Ambient Air Quality Standards," *Crowell & Moring Mining Law Monitor*, Vol. 23, Issue 1 (Fall/Winter 2006). Author: Chet M. Thompson.

Speeches & Presentations
"EPA Regulation of Greenhouse Gases Under the Clean Air Act," Energy and Mineral Law Foundation Annual Institute (May 2009). Co-Presenters: Jessica A. Hall and Chet M. Thompson.

Nathan Block

Nathan Block is an attorney with the Health, Safety, Security and Environmental practice group at BP America Inc. His practice focuses primarily on environmental remediation and Superfund as well as regulatory compliance assistance. He has significant experience in handling matters involving environmental permitting, enforcement defense and environmental transactional due diligence.

Prior to joining BP, Nathan practiced environmental enforcement in the Litigation Division of the Texas Commission on Environmental Quality, worked in-house for a national environmental engineering and consulting company and practiced environmental law in private firms.

Nathan received his JD *cum laude* from Texas Tech University School of Law in 1998. While in law school, he was a member of the Legal Research Board, Board of Barristers and President of the Environmental Law Society. He has published numerous articles on environmental and administrative law topics. He has served for eleven years on the Law School Committee for the SBOT Environmental and Natural Resources Law Section. He also served as a planning commissioner for the City of Lockhart, Texas. He has twice been selected as a Texas Rising Star by Texas Monthly and as one of the Houston's Top Lawyers by H-Texas Magazine.

The Energy-Water Nexus in Texas
Michael E. Webber, Amy Hardberger
Ian J. Duncan, Ashlynn S. Stillwell, Carey W. King,
May 2009

This study sought to quantify the energy-water relationship in Texas. It examined the water requirements for various types of electricity generating facilities, both for typical systems nationwide and in Texas. It also addressed the energy requirements of water supply and wastewater treatment systems, comparing national averages with Texas-specific values. Analysis of available data for Texas reveals that approximately 157,000 million gallons (482,100 acre-feet) of water annually – enough water for over 3 million people for a year, each using 140 gallons per person per day – are consumed for cooling the state's thermoelectric power plants while generating approximately 400 terawatt-hours (TWh) of electricity. At the same time, each year Texas uses an estimated 2.1 to 2.7 TWh of electricity for water systems and 1.1 to 2.2 TWh for wastewater systems each year – enough electricity for about 100,000 people for a year. These estimates for water and wastewater combined represent approximately 0.8 to 1.3% of total Texas electricity and 2.2 to 3.4% of industrial electricity use annually.

In preparing the report, it became clear that substantially more site-specific data are necessary for a full understanding of the nature of the energy-water nexus and sustainable growth in Texas. It is recommended that the state increase efforts to collect accurate data on the withdrawal and consumption of cooling and process water at power plants, as well as data on electricity consumption for public water supply and wastewater treatment plants and distribution systems. The over-arching conclusion of this work is that implementing increased efficiency advances the sustainable use of both energy and water. Improving water efficiency will reduce power demand and improving energy efficiency will reduce water demand. Greater efficiency in usage of either energy or water will help to stretch our finite supplies of both, as well as reduce costs to water and power consumers.

Introduction

Energy and water are intimately interrelated: we use energy for water and we use water for energy. Despite the interconnections, historically these two sectors have been regulated and managed independently of one another. Planning for energy supply traditionally gave scant consideration to water supply issues and planning for water supply often neglects to fully consider associated energy requirements. [1] Failure to consider the interdependencies of energy and water introduces vulnerabilities whereby constraints of one resource introduce constraints in the other. That is, droughts and heat waves create water constraints that can become energy constraints, and grid outages or other failures in the energy system can become constraints in the water and wastewater sectors.

In this manuscript, we reveal results of our analysis of the energy-water nexus in Texas by examining the water use for electricity generation and the electricity use for water and wastewater. Texas is a suitable geographical testbed for this analysis for a variety of reasons. First, Texas is small enough to analyze, yet is suitably large to reveal useful results that will be relevant at a national scale. Second, by producing and consuming roughly 400 billion kWh of electricity annually, Texas is the largest generator and consumer of electricity in the United States. Third, Texas has extreme variability in water availability from the relatively water-rich Eastern half of the state and the arid western half of the state. Texas is the second most populated state in the United States with a population predicted to double by 2060, from the current 23 million to about 46 million by 2060. [2] In a business as usual (BAU) scenario (by which prior trends are projected forward into the future) that includes current power generation and announced future power plants, Texas' total electricity generation increases to nearly 490 TWh annually by 2018. Meanwhile, municipal water supply demand it predicted to grow to 8.3 million ac-ft/year by 2060, from a current level of about 4.5 million ac-ft/year.

Droughts, heat waves and hurricanes are not unusual experiences for Texas, and because of the energy-water nexus, they introduce a coupled cross-sectoral vulnerability. These vulnerabilities might only get more pronounced as resources become more constrained due to population growth and as water and energy suppliers confront new challenges associated with climate change. [3] Understanding and accounting for the energy-water nexus is becoming increasingly important to ensure that natural resource policies and plans lead to sustainable and affordable results. Using an integrated policymaking approach to make the system more resilient and sustainable would be a significant step forward.

Electricity Generation from Texas Power Plants

Electricity is used for many different aspects of society. As shown in Figure 1~~Figure 1~~ electricity consumption for residential purposes – lighting and heating homes, as well as powering appliances – is 37% of the total electricity use in the U.S. and a similar 33% in Texas. Though electricity powers some transportation, the amount used is negligible for both the U.S. and Texas. Since Texas is home to many energy-intensive refining, chemical and manufacturing facilities, industrial electricity use is higher, as a percentage of total use, than in the country as a whole.

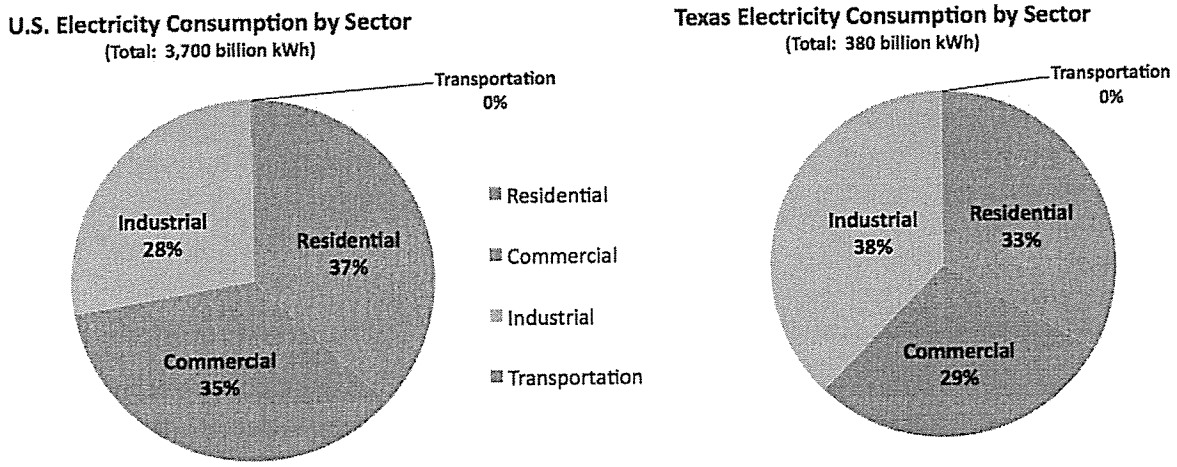


Figure 1. U.S. (left) and Texas (right) electricity consumption, in percent, by sector for 2006. Texas uses a larger percentage of electricity for industrial purposes than does the U.S. as a whole. [4, 5]

Figure 2 below shows the percentages of electricity generation by fuel source for both the U.S. and Texas. The discrepancies in total electricity between Figure 1~~Figure 1~~ and Figure 2 are due to energy losses during distribution (that is, 400 billion kWh of electricity was generated in Texas in 2006, but only 380 billion kWh was consumed because of losses between the point of generation and the point of end use). The Texas fuel mix differs from that of the U.S. with two major primary energy sources: coal and natural gas. Though coal produces nearly half of the electricity generated nationwide, coal accounts for 37% of electricity generated in Texas. Nearly half of the electricity generated in Texas is from natural gas, compared to the national average of 20%. Consequently, electricity generation in Texas is less carbon-intensive per MWh than the average generation in the rest of the nation.

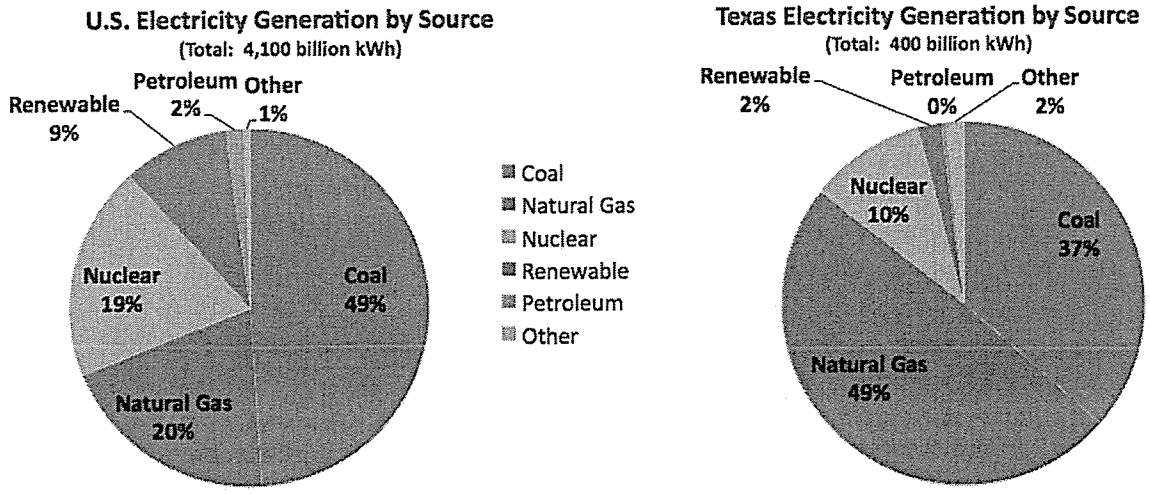
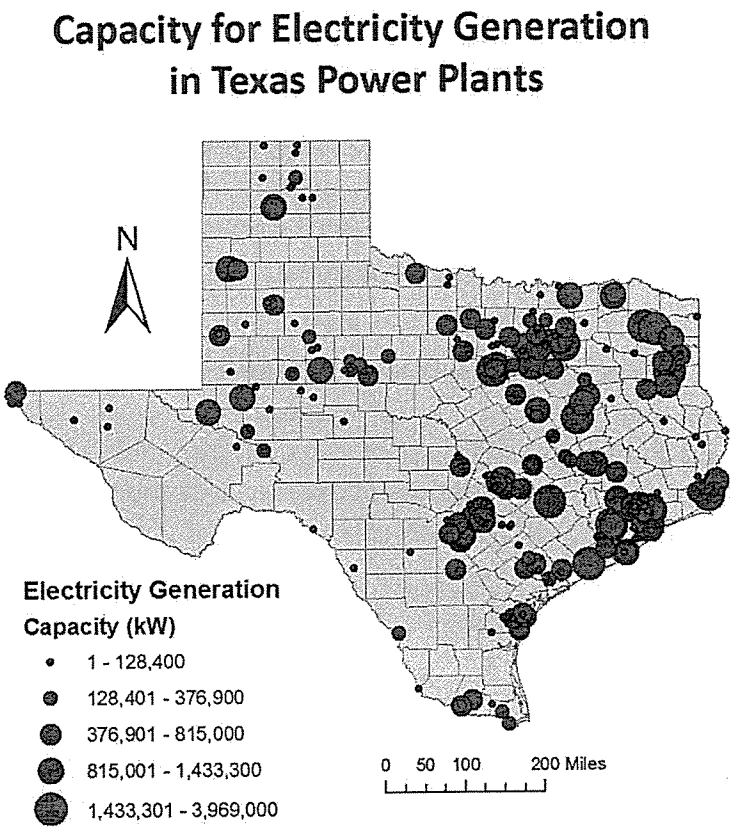


Figure 2. U.S. (left) and Texas (right) electricity generation, in percent, by primary energy source for 2006. While nearly half of the electricity generated nationwide is from coal, nearly half of the electricity generated in Texas is from natural gas. Here, the "renewable" category includes traditional hydropower, solar, and wind power. [4, 5]

This mix of sources for electricity generation changes gradually as new power plants and new power generation technologies come on-line. For example, the renewable source in Figure 2 from 2006 includes wind power, along with other sources like hydropower and solar power. In 2008, Texas wind turbines generated over 14 terawatt-hours (TWh) of electricity (3.6% of Texas total) – more than the total renewable generation in 2006. [6]

As a highly-populated, industry-intensive state, Texas requires significant amounts of both energy and water. Texas' 258 power plants have the capacity to produce over 110 Gigawatts (GW) of power. Actual generation totals about 400 terawatt-hours (TWh), or 400 x 10^9 kWh, annually. [7] These power plants, shown in Figure 3~~Figure 3~~, are



located mostly in east Texas, with a few large plants in west Texas.

Water Consumption and Withdrawals of Texas Power Plants

The typical thermoelectric power plants use nuclear or fossil fuels to heat high purity water into steam, which then turns a turbine connected to a generator, producing electricity. The steam is then condensed back into water to continue the process again in a closed loop. This condensation requires cooling either by use of water, air, or both. The energy efficiency of the turbine in converting steam into electric energy depends in part on the effectiveness of the steam condensation process. That is, the efficiency of the power plant depends on its ability to cool its steam loop. The quantity of water required for cooling depends on the type of fuel, power generation technology, and cooling technology. Figure 4~~Figure 4~~ shows a diagram of a typical coal plant and how several types of cooling technologies can be combined to result in different water consumption and withdrawal.

Figure 3. Electricity generation capacity (kW) from Texas power plants. Total electricity generation capacity statewide is over 110 GW (110,000,000 kW). [7]

The majority of water used at a power facility is used for cooling. The cooling technologies shown in Figure 4~~Figure 4~~ represent different methods of condensing steam in the power plant. Open-loop cooling, or once-through cooling, withdraws large volumes of water from a source and uses it once through a heat exchanger for cooling. As a result, open-loop cooling has small water consumption, or water evaporated such that it is not directly reusable. Closed-loop cooling using cooling towers or cooling reservoirs withdraws much smaller volumes of water and recycles it for additional cooling through evaporation. This additional evaporation results in higher water consumption rates than observed with open-loop cooling. An alternative to wet cooling is air-cooling using fans. Air-cooling, or dry cooling, blows air across steam tubes to remove heat and condense steam. While air-cooling uses no water, air is less efficient at removing heat, thus power generation efficiency decreases when using air-cooling.

Even some power plants that do not operate with a steam cycle (i.e. gas turbines) require a small amount of cooling for various components. In the case of fuels that must be mined (including coal, natural gas, and uranium), the mining process also requires water. Tables 1 and 2 list the water withdrawal and consumption ranges for various combinations of fuel and cooling technologies.

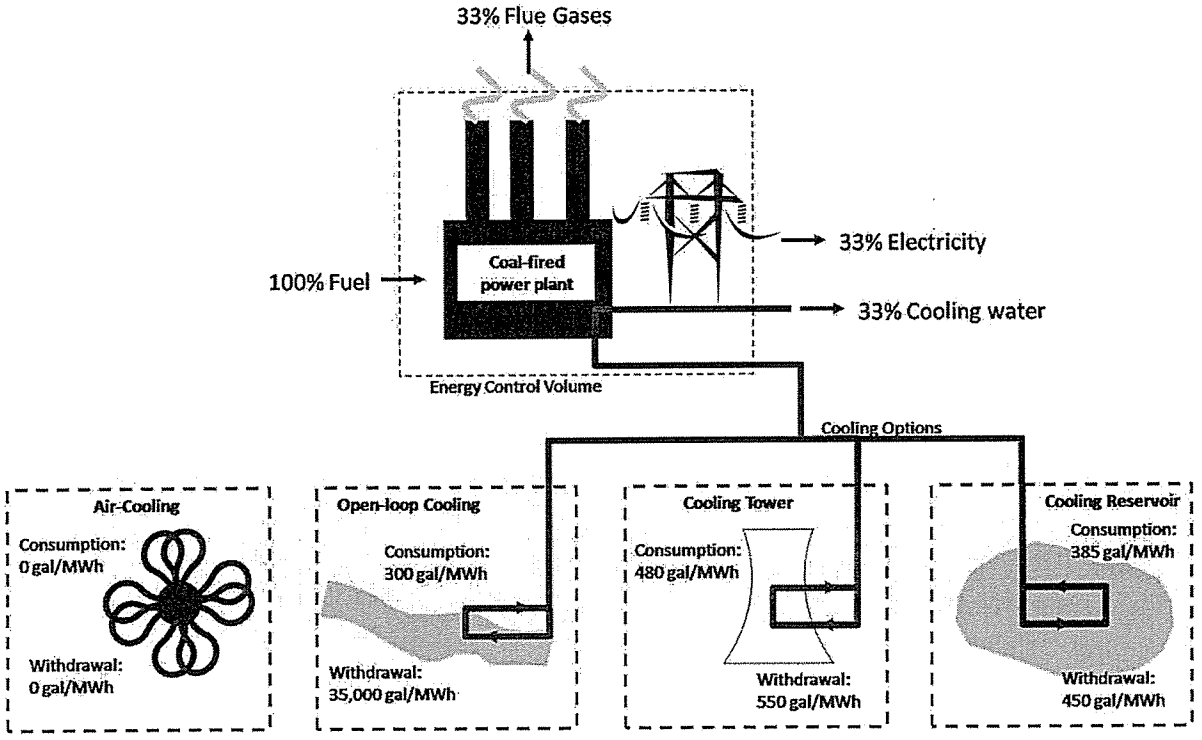


Figure 4. Basic schematic of a pulverized coal-fired power plant with percentage of energy flow and median water withdrawal and consumption for cooling per MWh of electricity generated. Only 33% of the incoming fuel is converted to electricity for a typical power plant. [8, 9]

Table 1. Water withdrawal reported volumes for different fuels and cooling technologies. Air-cooling requires negligible water and is compatible with all of the technologies listed. [8, 10-12]

			Cooling Technologies – Water Withdrawal (gal/MWh)				
			Open-Loop	Closed-Loop Reservoir	Closed-Loop Cooling Tower	Hybrid Cooling	Air-Cooling
Fuel Technology	Thermal	Coal	35,000 (±15,000)	450 (±150)	550 (±50)	between	<100
		Nuclear	42,500 (±17,500)	800 (±300)	950 (±150)	between	<100
		Natural Gas Combustion Turbine	negligible	negligible	negligible	negligible	negligible
		Natural Gas Combined-Cycle	13,750 (±6,250)	155† (±25)	230	between	<100†
		Integrated Gasification Combined-Cycle	not used	not used	400† (±110)	between	<100†
		Concentrated Solar Power	not used	not used	840† (±80)	between	<100†
	Non-Thermal	Wind	none	none	none	none	none
		Photovoltaic Solar	none	none	none	none	none

†Estimated based on withdrawal and consumption ratios

Table 2. Water consumption reported volumes for different fuels and cooling technologies. Air-cooling requires negligible water and is compatible with all of the technologies listed. [8, 10-12]

			Cooling Technologies – Water Consumption (gal/MWh)				
			Open-Loop	Closed-Loop Reservoir	Closed-Loop Cooling Tower	Hybrid Cooling	Air-Cooling
Fuel Technology	Thermal	Coal	300	385 (±115)	480	between	60 (±10)
		Nuclear	400	625 (±225)	720	between	60 (±10)
		Natural Gas Combustion Turbine	negligible	negligible	negligible	negligible	negligible
		Natural Gas Combined-Cycle	100	130† (±20)	180	between	60† (±10)
		Integrated Gasification Combined-Cycle	not used	not used	350† (±100)	between	60† (±10)
		Concentrated Solar Power	not used	not used	840 (±80)	between	80† (±10)
	Non-Thermal	Wind	none	none	none	none	none
		Photovoltaic Solar	none	none	none	none	none

†Estimated based on withdrawal and consumption ratios

As indicated in Figure 3~~Figure 3~~, most power plants are located in the eastern half of the state to be close to population centers, lignite resources, and cooling water. Texas rivers generally flow to the southeast, and east Texas receives more rainfall than west Texas, resulting in additional surface water availability in the eastern half of the state. Of Texas power plants, 22 plants with generation capacities totaling 9,400 MW – approximately 8% of total Texas generation capacity – use groundwater for cooling with cooling towers, most of those being located in the west Texas panhandle region. The rest use surface water sources or air-cooling.

Thermoelectric power plants in Texas consume water for cooling, as shown in Figure 5~~Figure 5~~. Water consumption by Texas power plants totals over 157,000 million gallons (482,100 acre-feet) annually – enough water for the municipal use of over 3 million people for a year, each using 140 gallons per person per day. This total was estimated based on data regarding water intake, diversion, and return flows from the Texas Water Development Board (TWDB) and Texas Commission on Environmental Quality (TCEQ). [7] As expected, high values of water consumption per kWh in Figure 5~~Figure 5~~ correspond to closed-loop cooling systems, which consume a large percentage of water withdrawn.

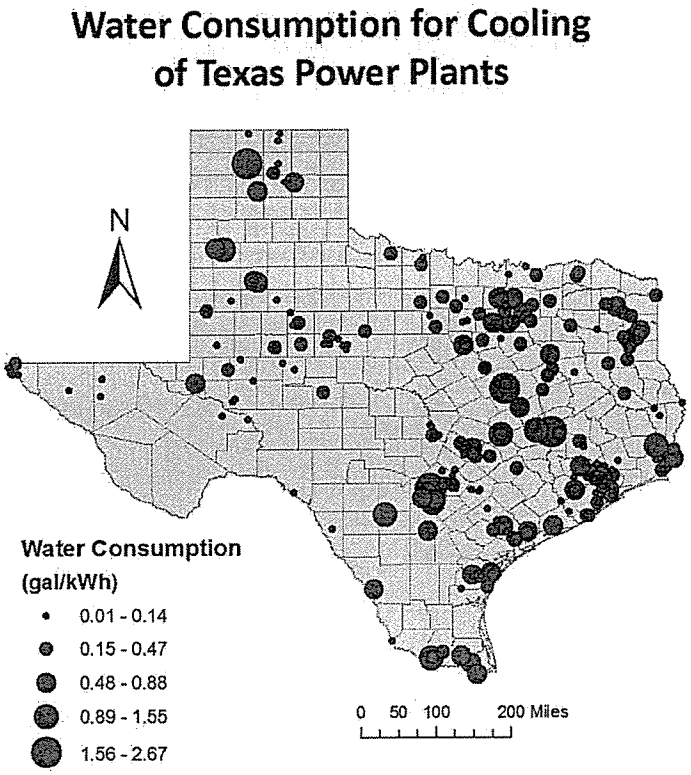


Figure 5. Water consumption rates for thermoelectric power generation in Texas. Total water consumption for electricity generation statewide is over 157,000 million gallons (482,100 acre-feet) annually. [7]

Power plants are responsible for an estimated 2.5% of the total water consumption for Texas. [2] This percentage reflects water consumption only and does not include non-consumptive water withdrawals, or water lost through natural evaporation from cooling reservoirs. Water withdrawal for cooling is much larger than water consumption, especially with open-loop cooling. Understanding and accounting for the differences between consumption and withdrawal is important for accurate planning and management. Specifically, the large amounts of water that need to be withdrawn for cooling introduce vulnerability into the system: if drought creates a water shortage, then power plants might be forced to shut down. Furthermore, reservoirs used for closed-loop cooling confine water that otherwise could be used for other purposes downstream and allow for instream flows and evaporative losses.

Energy for Water and Wastewater Treatment Systems in Texas

According to the State Water Plan, public water supply in Texas currently accounts for approximately 1,470,000 million gallons (4.5 million acre-feet) of water each year and is projected to grow to 8.3 million ac-ft/year by 2060. [2] Electricity use for Texas water and wastewater systems, however, is not currently measured directly. Consequently, electricity consumption for Texas water systems must be estimated based on national average electricity use per volume of water treated, as shown in Table 3~~Table 3~~. Using current water flow rates from the State Water Plan and national average values for energy per water volume treated, Texas uses an estimated 2.1 to 2.7 TWh/yr for public water supply systems, accounting for about 1.5 to 1.9% of Texas industrial electricity use and 0.5 to 0.7% of total electricity use annually. This percentage of Texas electricity for water treatment is lower than the national percentages for electricity use for water systems due to the overall higher electricity consumption in Texas industries. [4] Directly measuring electricity consumption of Texas water treatment plants, as well as the electricity needed for source water collection , conveyance, and in-home uses would provide a more reliable picture of energy requirements for water treatment.

Table 3. National average electricity use for water collection and treatment using different water treatment technologies. Distribution represents additional energy use. [13, 14]

Water Collection and Treatment	kWh/Mgal
Surface water treatment	220
Groundwater treatment	620
Brackish Groundwater Treatment	3,900-9,700
Seawater Desalination	9,700-16,500

Municipal wastewater treatment plants are generally distributed according to population and are thus concentrated in eastern and central Texas, as shown in Figure 6~~Figure 6~~. Over 76% of the municipal wastewater treatment plants in Texas each treat flows of 1 million gallons per day (mgd) or less. Larger wastewater treatment plants

serving cities such as Dallas, Houston, San Antonio and Austin, however, treat flows up to 200 mgd.

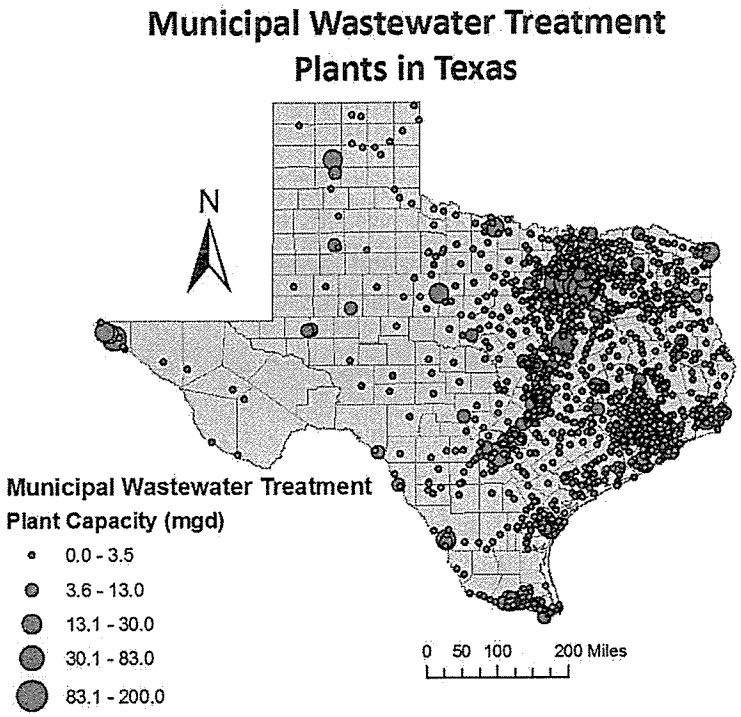


Figure 6. Municipal wastewater treatment flow for Texas wastewater treatment plants. [15, 16]

Similarly to water treatment plants, information on energy use at Texas wastewater treatment plants is not readily available. Thus, electricity for wastewater treatment must be estimated based on national average values for energy per volume of wastewater treated. Energy required per volume of wastewater treated varies with wastewater treatment plant capacity, as shown in Table 4~~Table 4~~. Using energy per volume of wastewater treated for specific plant capacities, total energy for wastewater was estimated for technologies ranging from trickling filter treatment at the low end to advanced treatment with nitrification at the high end. Using this approach, it is estimated that 1.1 to 2.2 TWh/yr is required for wastewater systems in Texas, amounting to 0.8 to 1.5% of Texas industrial electricity use and 0.3 to 0.5% of total electricity use.

Table 4. Variation in unit electricity consumption for different sizes of wastewater treatment plants. Larger wastewater treatment plants exhibit economies of scale with lower energy requirements per volume of wastewater treated. [14]

Electricity Consumption (kWh/Mgal)

Wastewater Treatment Plant Size (MGD)	Trickling Filter	Activated Sludge	Advanced Wastewater Treatment	Advanced Wastewater Treatment with Nitrification
1	1,811	2,236	2,596	2,951
5	978	1,369	1,573	1,926
10	852	1,203	1,408	1,791
20	750	1,114	1,303	1,676
50	687	1,051	1,216	1,588
100	673	1,028	1,188	1,558

Combining the estimates of electricity for water and wastewater treatment, Texas water and wastewater systems require 3.2 to 4.9 TWh of electricity annually. With current electricity generation of approximately 400 TWh/yr, water and wastewater systems use 0.8 to 1.2% of total Texas electricity and 2.2 to 3.4% of industrial electricity use. [14]. Note that this estimate for electricity consumption does not include end-uses (such as water heaters, dishwashers, pool pumps, etc.). Direct measurement and reporting of electricity use in Texas water and wastewater treatment plants would provide a more appropriate basis for planning, management, and policy.

New water supply proposals based on moving water long distances create potentially significant energy demands, though insufficient information exists at this time to quantify the increased electrical generation capacity required for specific projects. In addition, increased public water supply use (however the water is supplied) will result in increased electricity use for treatment and distribution and for wastewater treatment.

Future Energy and Water Use in Texas

The population of Texas is predicted to double by 2060, from the current 23 million to about 46 million by 2060. [2] Without implementation of significant energy and water conservation and efficiency increases, energy and water consumption are likely to grow. Under a "business as usual" scenario, this population increase will translate into greatly increased demand for both power and water. The central challenge for Texas policy makers is to determine how to balance this projected new demand with the need to ensure sustainable use of limited water resources and provide power in a manner that protects air quality and also meets the requirements of anticipated national legislation to address climate change. This challenge is made more difficult by the interconnections between water and energy and the tradeoffs involved in selecting various power and water supply options.

Electricity Demand Projections

Using the current fuel mix for power generation in Texas, a "business as usual" power demand scenario was projected to 2018 (Figure 7). This scenario does not account for significant reductions in demand that could be attained with the implementation of advanced efficiency measures, nor does it reflect changes in fuel mix that would likely result from a federally mandated carbon cap-and-trade or carbon tax system.

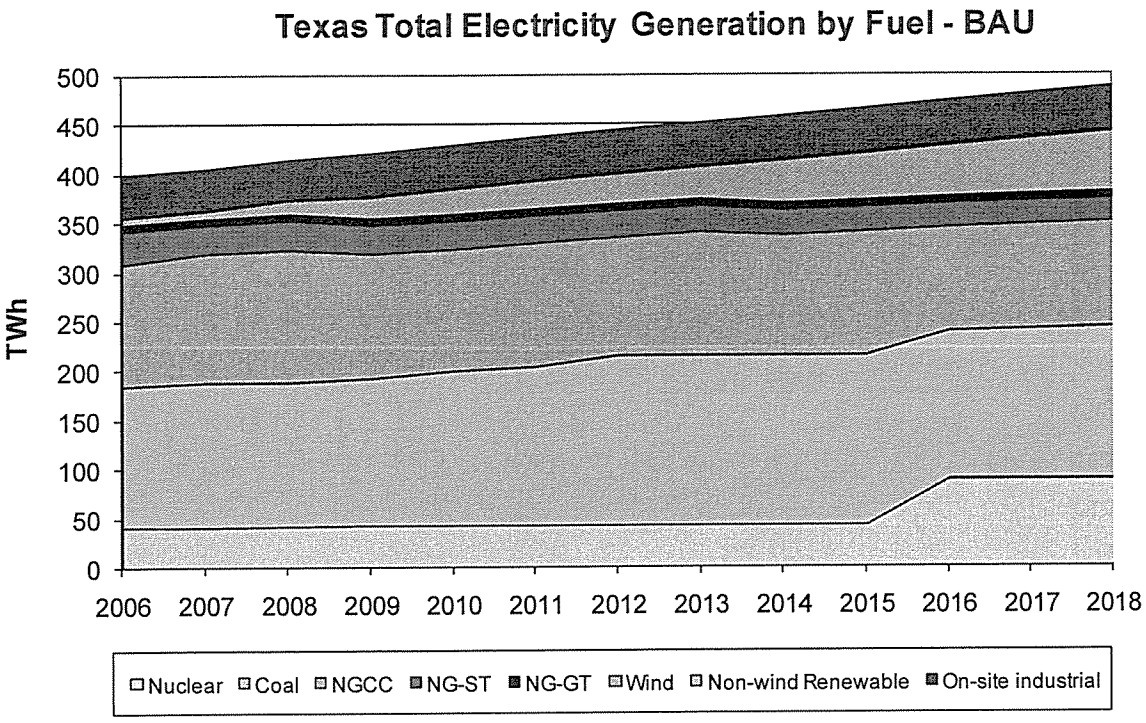


Figure 7. Projections for Texas electricity generation under a BAU scenario show growth to 490 TWh by 2018. [17]

In the BAU scenario including current power generation and announced future power plants, total electricity generation increases to nearly 490 TWh annually by 2018. The fuel mix for this scenario assumes nuclear power plants currently pursuing permitting will be built (shown as an increase in generation between 2015 and 2016). It also assumes rapidly expanding wind-generated electricity to 12.5% of total generation by 2018, avoiding approximately 24,000 million gallons of water consumption compared to thermoelectric power generation. Since natural gas power plants primarily represent peak electricity load generating potential, electricity generation from these plants remains relatively constant throughout the projected scenario, and act to mitigate intermittency of the increased penetration of wind power. The "On-site industrial" category represents electricity that is generated at industrial facilities for their own use, but the industrial sector additionally buys electricity from the electric grid.

A "high renewables" fuel mix scenario that anticipates rapid market penetration of renewable power sources is shown in Figure 8. [17] Coal-generated electricity is projected to decrease somewhat under a high renewables scenario if a cap on carbon is established, while both wind (18%) and nuclear (23%) power are projected to increase dramatically by 2018. The scenario in Figure 8 does not account for significant reductions in demand that could be attained with the implementation of advanced

efficiency measures, nor does it account for other regulatory, economic or other factors that might affect fuel mix (e.g. the availability of financing or waste disposal for nuclear plants).

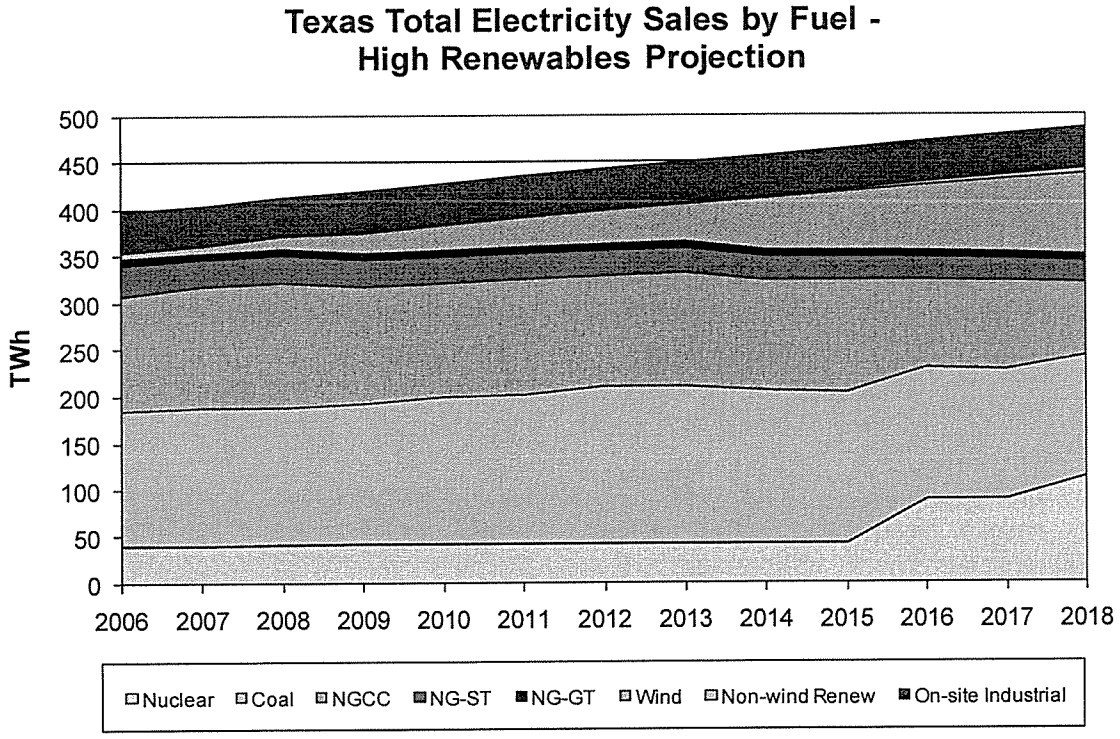


Figure 8. Projections of Texas electricity generation with a large increase in renewable energy-generated electricity is shown above. [17]

It is difficult to project how the various electricity generation scenarios in Figures 7 and 8 might affect water demand, since such demand is highly dependent not only on the fuel mix, but also on the type of cooling technology selected for particular plants. What is clear, however, is that without implementation of advanced energy efficiency measures, electricity demand in Texas will grow rapidly and there will be pressure to supply part of that new demand through nuclear plants, even under a "high renewables" scenario. This scenario could have significant implications for water supply since nuclear plants consume more water than similarly-sized fossil fuel plants. While no nuclear power plants currently use air-cooling, the Palo Verde nuclear power plant in Arizona uses reclaimed water.

Large-scale carbon capture and storage (CCS) systems are also a possibility for the future, especially in response to potential carbon legislation. Carbon dioxide (CO_2) can be captured from flue gases by retrofitting existing pulverized coal power plants with CO_2 scrubbers. Such scrubbers capture CO_2 using chemical solvents, after which the

solvent then undergoes thermal cycling to remove CO_2 that is then transported and stored. [18] CCS systems allow for power generation using coal while concurrently reducing carbon emissions to the atmosphere. These CCS systems will, however, increase water consumption rates of power plants, in terms of gallons per *net* generation, due to: 1) the parasitic power loss from the use of steam to regenerate the solvent; 2) the power required to compress CO_2 to a supercritical state for pipeline transport; 3) additional cooling requirements of the carbon stripping process; and 4) additional electricity for pumping collected CO_2 into storage. [7]

If one assumes that a traditional pulverized coal power plant with CO_2 capture produces the same net power output as an equivalent plant without capture, then there will be an approximate 50%-90% higher cooling load together with subsequent water consumption if using wet cooling. Approximately 25%-40% more power is required to operate the capture processes, and it is unclear whether this power would come from burning more coal or from other sources. Under proposed laws seeking reductions in CO_2 emissions from the power sector, the water consumption for electricity can vary tremendously depending upon the mix of fuels (See Figure 9). Assuming constant growth in electricity generation in Texas for the next 50 years, water consumption for electricity in 2060 could vary between 1,600,000 ac-ft (for a scenario where natural gas only provides 20% of total electricity) and 1,200,000 ac-ft (for a scenario where natural gas provides 40% of total). [7] Assuming no CO_2 constraint arises, using the same suite of fuel technologies results in 40% less and 25% less water consumption, respectively. Thus, tradeoffs between air quality, electricity generation, and water consumption will play an increasingly important role in the future.

For Integrated Gasification Combined Cycle (IGCC) plants based on GE Radiant-Convective (452 gallons per MWh), GE-Quench (510 gallons per MWh), Conoco-Phillips (433 gallons per MWh) or Shell (443 gallons per MWh) gasifiers, the water use is substantially less per unit of produced electricity than that of a typical pulverized coal power plant. [19] An additional 10 to 20% more water is required for adding carbon capture to these IGCC reference plants, which is small relative to that for pulverized coal plants. [20] As a result an IGCC plant with carbon capture has a water usage one third less than a traditional pulverized coal plant without capture. [12]

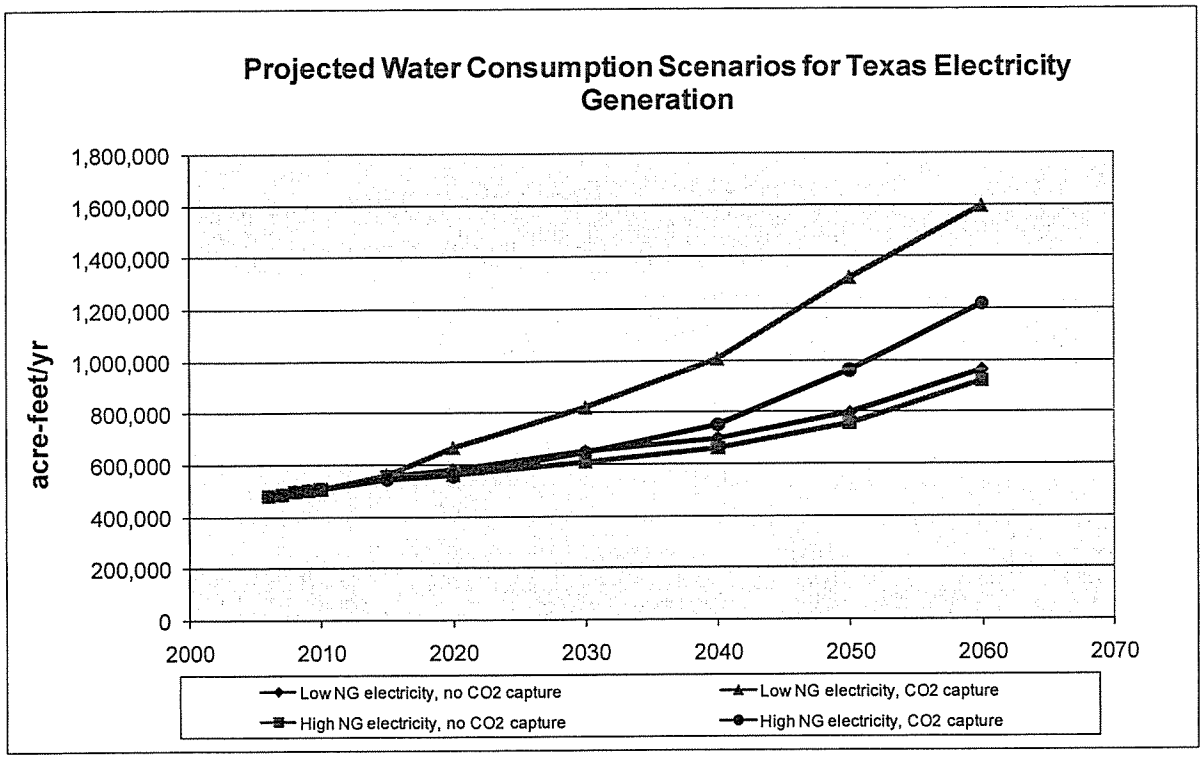


Figure 9. Projections of future water needs for Texas electricity generation vary tremendously depending upon is there is a carbon constraint ("CO2 capture") or if natural gas fired generation is near 40% of the total ("High NG electricity") or near 20% of the total ("Low NG electricity"). [7]

Conservation of Energy and Water

Given the energy-water interrelationships, water conservation and energy conservation are synonymous and are a good starting point for robust policy formulation. Specifically, conserving water reduces the electricity needed to collect, treat, and distribute water, as well as to convey, treat, and discharge wastewater, in many situations. Conserving electricity saves energy and also the water needed to cool power plants while that electricity was generated.

Because electricity consumption is approximately linear with the amount of water and wastewater that are treated, distributed and collected, it can be seen that reducing water flows through these energy-intensive steps reduces the amount of electricity that is required. If municipal water use and wastewater flows are reduced by 10%, the state's demand for electricity would go down by 320 to 490 million kWh at the water/wastewater sectors alone. Conversely, reducing energy demand also reduces demand for cooling water at power plants: reducing overall electricity generation in Texas by 10% could reduce water consumption by as much as 15,000 million gallons of water per year, depending on which power plants reduce their output to accommodate the lower demand.

In addition to increased water efficiency, water reuse is an option for saving water and energy. Some water uses, such as landscape irrigation and toilet flushing, do not require water to be treated to drinking water standards. One alternative to watering lawns and flushing toilets with drinking water is using reclaimed water. Reclaimed water is effluent from a wastewater treatment plant, treated with an additional tertiary filtration process before reuse. Though reclaimed water is not necessarily safe for drinking, additional filtration removes contaminants that pose threats to human health during unintended exposure. [21] While this additional wastewater treatment requires approximately 120 kWh per million gallons for tertiary filtration, use of reclaimed water saves approximately 1,400 to 1,800 kWh of electricity per million gallons needed for collecting, treating, disinfecting, and distributing drinking water for non-potables uses. [14] In addition to saving energy, water reuse can augment existing water supplies and is generally a more cost-effective option than acquiring new water supplies. [22] Varying levels of additional treatment are necessary, depending on the water reuse application.

Reclaimed water can also be used to artificially recharge groundwater aquifers through surface spreading and direct injection. Surface spreading – applying reclaimed water to the land surface to promote water seepage and percolation into the aquifer – requires little to no additional treatment or energy due to the natural filtration of soil. Direct injection – using wells to introduce reclaimed water into the aquifer water table – however, requires additional treatment beyond advanced wastewater treatment, usually energy-intensive membrane water treatment to remove potential pathogens. [21]

Reclaimed water can also be reused to supplement public drinking water supply. Following advanced wastewater treatment, reclaimed water is treated using membranes or other advanced technology to remove pathogens and trace contaminants and is then added to an existing surface water source, such as a reservoir, or fed directly to a water treatment plant. Though this type of water reuse has sometimes ignited adverse public perception regarding quality – the "toilet-to-tap" idea – reclaimed water has a higher quality after membrane treatment than many raw water sources. [21] In fact, drinking water sources for over 26 million people in the United States contain between 5 and 100% treated wastewater effluent from upstream discharge during low flow periods. [22] Some water-strained societies such as Singapore also use reclaimed water as a public supply without adverse health effects.

Water reuse conserves water and, in some applications, conserves energy by not treating water for non-potable uses to drinking water standards. In other applications, additional energy-intensive treatment, such as membrane filtration, is necessary to protect human health during water reuse, requiring up to 4,000 kWh per million gallons. [13] Yet this energy investment for water reuse is still less than the energy needed for

seawater desalination at 9,700 to 16,500 kWh per million gallons or long-haul water transfer when water supplies are depleted, over 6,100 kWh per million gallons for the Colorado River Aqueduct transfer system in California. [13]

Policy Discussion

As Texas confronts the challenges posed by climate change, decisions about how to supply energy and water to our state's growing population should be made in an integrated fashion.

Carbon, Water, and Energy: Tensions and Policy Tradeoffs

Because energy and water are inextricably linked, limits or increasing demands on one resource can affect the other. Furthermore, because of the power sector's carbon emissions, increasing the energy efficiency of electric power generation both lowers these emissions and reduces water consumption. Since carbon emissions in part drive climate change, which impacts the hydrological cycle, it is another linkage between energy and water. Implementation of next generation power plant technologies such as ultra-supercritical coal and integrated gasification combined-cycle plants (as well as combined-cycle natural gas technology) has the potential to increase energy efficiencies by 25 to 50% over those for traditional pulverized coal plants with pollution controls. Subsequently, the carbon emissions and water use per MWh of generated electricity would go down.

Increased efficiency in water usage also can play a role in reducing carbon emissions. Providing water for domestic, agricultural and industrial consumption requires energy, which emits carbon. Thus, lowering water usage simultaneously lowers energy consumption, which lowers carbon emissions (though such reductions have always been overwhelmed by overall growth in the usage of both water and energy). For example over the last 50 years the water efficiency of power production has steadily increased while at the same time both electric power production and the total water used for power production has steadily increased.

Despite the synergies of conservation, we are entering an era in which public policies designed to reduce water use for energy may lead to increases in carbon emissions. Conversely, policies to reduce carbon emissions might increase water use. And, energy policies, such as promotion of alternative biofuels for transportation have competing effects on water use. Moving forward, these interrelationships must be identified and understood before implementing public policy proscriptions that benefit one component of this complicated carbon-water-energy relationship while accidentally undermining another.

Energy and Carbon Policies Have Mixed Water Impacts

Analysis of current long-term priorities in U.S. energy policy suggests a mixed outlook for future impacts of the energy sector on water resources. The Energy Policy Act of 2005 (EPACT 2005) and the Energy Independence and Security Act of 2007 (EISA 2007) both prioritized development of domestic sources of energy, including renewable power, nuclear power, and unconventional transportation fuels. In addition, the U.S. House of Representatives recently passed cap-and-trade carbon legislation as part of the American Clean Energy and Security Act of 2009.

Because the electric power sector is responsible for the largest withdrawals of water in the U.S., changes to the power sector because of energy and/or carbon policies can have a significant impact on the availability of water resources. Specifically, increasing the market penetration of renewable technologies such as solar photovoltaics (PV) and wind turbines will lower the use of water (per unit of electricity that is generated) by the power sector because those technologies do not require cooling. Concentrated solar power (CSP) systems are more compatible for large-scale, centralized power generation than solar PV systems and can be considerably lower in cost per unit of electric power. The thermal conversion of radiant energy first to steam and then to electricity via a steam turbine, however, can require cooling water at rates (gallons per kWh) higher than coal and nuclear power plants if using pure wet cooling towers. However, air- and hybrid cooling systems for CSP could be implemented in Texas.

The positive water effects of renewable power might also be offset by projected increases in nuclear power installations driven by carbon limits. Nuclear power is the most water-intensive form of conventional power generation, and air-cooling is very unlikely to ever be used for nuclear power plants. Furthermore, the economic environment that is conducive to renewable sources, namely high prices for carbon emissions and natural gas, is also good for nuclear power. Thus, it is possible that these forms of power will grow in tandem. Consequently, the net effect on water resources from future changes in the electric power sector due to carbon control policies are difficult to predict.

In addition, as noted above, CCS at coal plants might be an outcome of energy or carbon policies and will also have direct impacts on water withdrawal and consumption by the electric power industry. If implementation of CCS leads to construction of new power plants (to make up for lost capacity from the parasitic load of CO_2 scrubbers), they might be based on more energy efficient power plant technologies such as supercritical coal and integrated gasification combined cycle (IGCC) plants, all of which require less water than a typical pulverized coal power plant. If climate change driven public policy results in new-build power plants being a mix of new power plant designs such as IGCC that have both higher water and energy

efficiencies, even with carbon capture, then clearly the effect on water resources will be positive.

Water Policies Might Have Detrimental Carbon Impacts

Although the impact of long-term energy policies on water consumption is not clear, some water policies under consideration may have detrimental impacts on carbon emissions. These policies include: 1) a push for new water supply from distant, low-quality sources, and 2) stricter treatment standards for water and wastewater.

Communities may turn to desalination to meet new water demand, which is a drought-resistant water supply. However with current technologies this stability comes with a large energy cost. In Texas desalination of brackish water is already underway or is being implemented as a portion of the public water supplies for the cities of San Antonio, El Paso, and Lubbock, and is under consideration by other municipalities.

Finally, more stringent treatment standards for drinking water quality and wastewater may become added to federal regulations, in particular to remediate the presence of pharmaceuticals and other contaminants for which there are no current standards. Water treatment to remove low concentration pollutants is typically an energy-intensive process. Thus, raising the treatment standards leads to increased energy consumption by water and wastewater treatment plants, which nominally yields increased carbon emissions.

Conclusions

As long as thermoelectric power plants use water cooling technologies and water and wastewater treatment plants use electricity for processes, it will be important to consider the energy-water nexus in planning and resource management. With population growth, the effects of climate change already impacting the hydrological cycle, and new carbon-pricing policies under consideration, understanding the tradeoffs between energy and water becomes vital for resource planning and management.

In preparing the report, it became clear that substantially more site-specific data are necessary for a full understanding of the nature of the energy-water nexus in Texas. Thus, it is recommended that policy focus on dictating the collection of accurate data on the withdrawal and consumption of cooling and process water at power plants, as well as data on electricity consumption for public water supply and wastewater treatment plants and distribution systems. These data will also be useful in planning for the future particularly as the impacts of climate change are better understood.

In the future, water use for electricity generation will depend on several factors, including the fuel mix for new generating capacity, the type of power plant and

cooling system technology that is deployed, and where it is located. Likewise, the amount of electricity used to pump, treat and deliver public water supply and to treat wastewater will depend on choices about water source and treatment technology. These trends, and trade-offs, still need to be better understood, but it is undeniable that there will be important implications for water and energy policy at the state and local level.

The following policy recommendations are steps that can be taken now to build the basics of a framework for more integrated energy and water planning:

- Require that applications for new power plants include an analysis of the water and efficiency implications of various types of cooling options applicable to the proposed plant. The analysis should include factors relating to local climate and air quality, regional air quality, water availability, including instream flow requirements, fuel type and plant efficiency.
- Require a clear demonstration of water availability in the siting of new fossil-fueled power plants or concentrated solar (this analysis should consider average rainfall years as well as availability during extreme drought events).
- Provide state statutory and regulatory incentives for implementation of power plant cooling technologies that are less water-intensive than traditional systems, such as air-cooling or hybrid wet-dry cooling.
- Provide state-approved guidance (from the appropriate state agency) to water suppliers and wastewater treatment providers to help quantify energy use and cost savings associated with water conservation.

The over-arching message is that implementing advanced efficiency is the key to the sustainable use of both energy and water. Improving water efficiency will reduce power demand and improving energy efficiency will reduce water demand. Greater efficiency in usage of either energy or water will help to stretch our finite supplies of both, as well as reduce costs to water and power consumers. The state and local governments should continue, and wherever possible, increase funding and technical support for water and energy conservation and efficiency programs.

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Michael Evan Webber, Ph.D.
July 2009



Michael Webber is the Associate Director of the Center for International Energy and Environmental Policy in the Jackson School of Geosciences, Fellow of the Strauss Center for International Security and Law at the LBJ School of Public Affairs, and Assistant Professor of Mechanical Engineering at the University of Texas at Austin, where he trains a new generation of energy leaders through research and education. He has authored more than 75 scientific articles, columns, books and book chapters, including a compendium of his commentary titled Changing the Way America Thinks About Energy, which was published in May 2009. A highly sought public speaker, he has given more than 100 lectures, speeches, and invited talks in the last few years, including testimony for a hearing of the U.S. Senate Energy and Natural Resources committee, keynotes for scientific conferences, and briefings for chief executives at some of the nation's leading companies. Michael holds four patents and is one of the originators of the Pecan Street Project, which is a citywide, multi-institutional effort in Austin to create the utility of the future by the innovation and implementation of smart grids, smart meters, and smart appliances. The Pecan Street Project team includes UT, the City of Austin, Austin Energy, the Environmental Defense Fund, the Austin Technology Incubator, and eleven corporate partners. Prior to joining UT-Austin, Michael studied issues relevant to energy, innovation, manufacturing, and national security at the RAND Corporation. Previously, he was a Senior Scientist at Pranalytica inventing sensors for homeland security, industrial and environmental monitoring applications. Michael's education includes a B.A. with High Honors (Plan II Liberal Arts) and B.S. with High Honors (Aerospace Engineering) from UT-Austin, and an M.S. (Mechanical Engineering) and Ph.D. (Mechanical Engineering, Minor in Electrical Engineering) from Stanford University, where he was a National Science Foundation Fellow from 1995-1998. In 2005, Michael was recognized by the College of Engineering at UT-Austin as an Outstanding Young Engineering Graduate, and in 2006 was honored as the Commencement Speaker for the spring graduation ceremony. Michael was selected as a Next Generation Fellow of the American Assembly (founded by President Eisenhower) in 2006 and an American Memorial Marshall Fellow of the German Marshall Fund for 2007, and an AT&T Industrial Ecology Fellow in 2009. From 2004 to 2006 he was a board member for the Hope Street Group, which is a non-profit bi-partisan national organization for young professionals interested in promoting policies that expand opportunity and economic growth. Webber's expertise, opinions and research have been featured in the *Wall Street Journal, New York Times, USA Today, NPR, PBS, The Daily Telegraph, BBC, ABC, CBS, Discovery, Scientific American, Popular Mechanics, MSNBC, Nature Geoscience, Earth Magazine,* and many other prominent media outlets. His commentary on American energy policy and international affairs have been published in daily and Sunday editions of the *Austin American-Statesman, Dallas Morning News, San Antonio Express-News, Fort Worth Star-Telegram,* and the *Houston Chronicle,* and featured in a documentary about biofuels by the PBS national weekly newsmagazine *NOW.* Michael lives in Austin, Texas with his wife and three children.

Amy Hardberger
Attorney, Environmental Defense

Amy Hardberger joined the Texas Office of Environmental Defense, located in Austin, in October 2006. The office is comprised of scientists, attorneys, economists, and policy analysts who address environmental issues related to climate and air, ecosystems, and oceans. Ms. Hardberger works with the Climate and Air Program and coordinated the effort against the TXU coal power plants proposed in Texas. She also works with the Land, Water, & Wildlife Program on the legal and policy issues concerning Texas water. She is a member of the State Bar of Texas and the Western District of Texas, and is a professional registered geologist in the state of Texas

Ms. Hardberger holds a bachelors degree in geology from Earlham College, a Masters of Science in Geology from the University of Texas at San Antonio, and a doctor of jurisprudence from Texas Tech University School of Law. Prior to joining Environmental Defense, Ms. Hardberger completed a judicial clerkship with the Honorable William Wayne Justice of the Western District of Texas and worked as an environmental consultant involved in the remediation of closed Air Force bases around the United States.

Chemical Facility Anti-Terrorism Standards (CFATS)

21st Annual Texas Environmental Superconference

August 6, 2009

Steve Roberts
Roberts Law Group PLLC
Houston, Texas
713-572-3600 | www.chemicalsecurity.com

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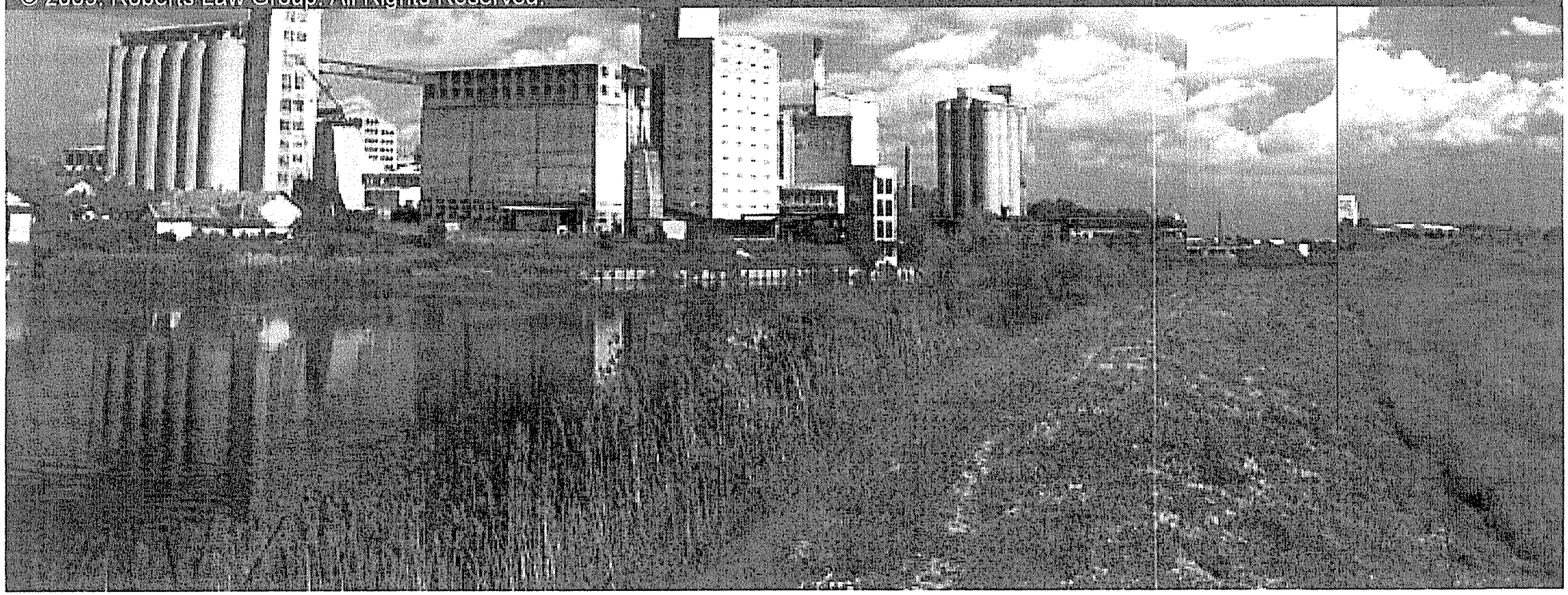
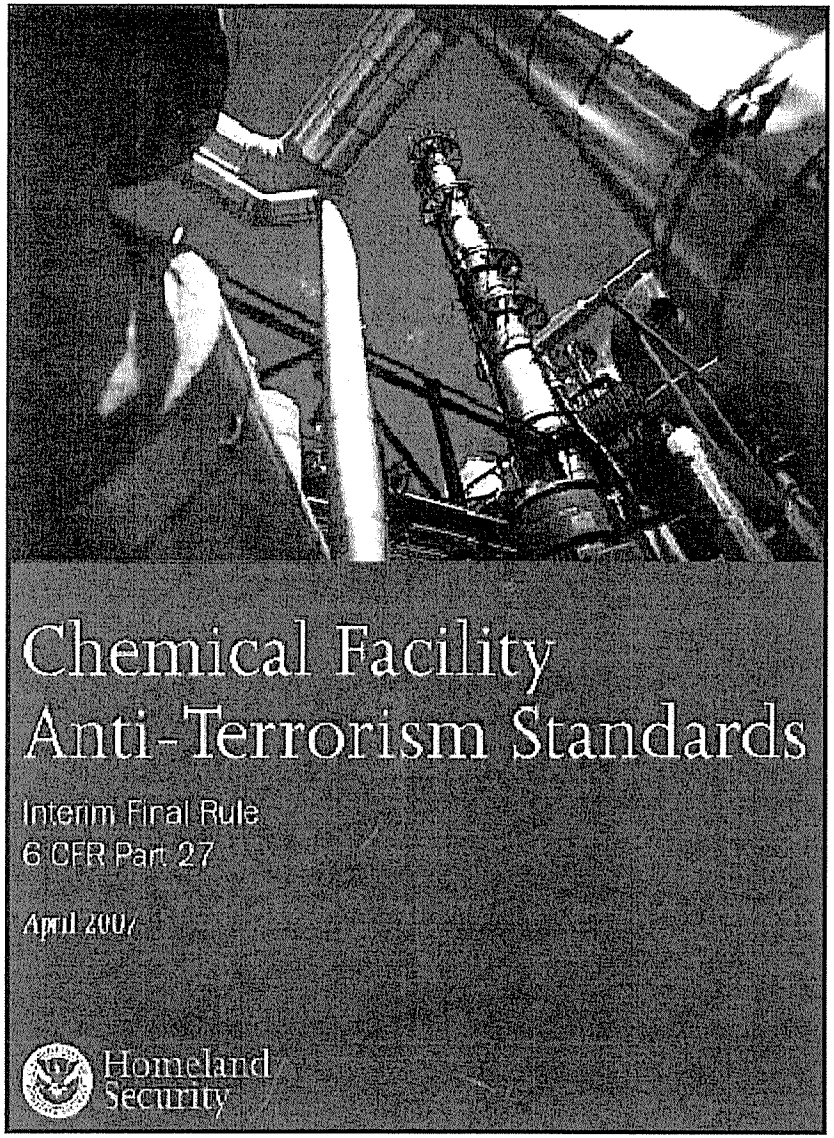
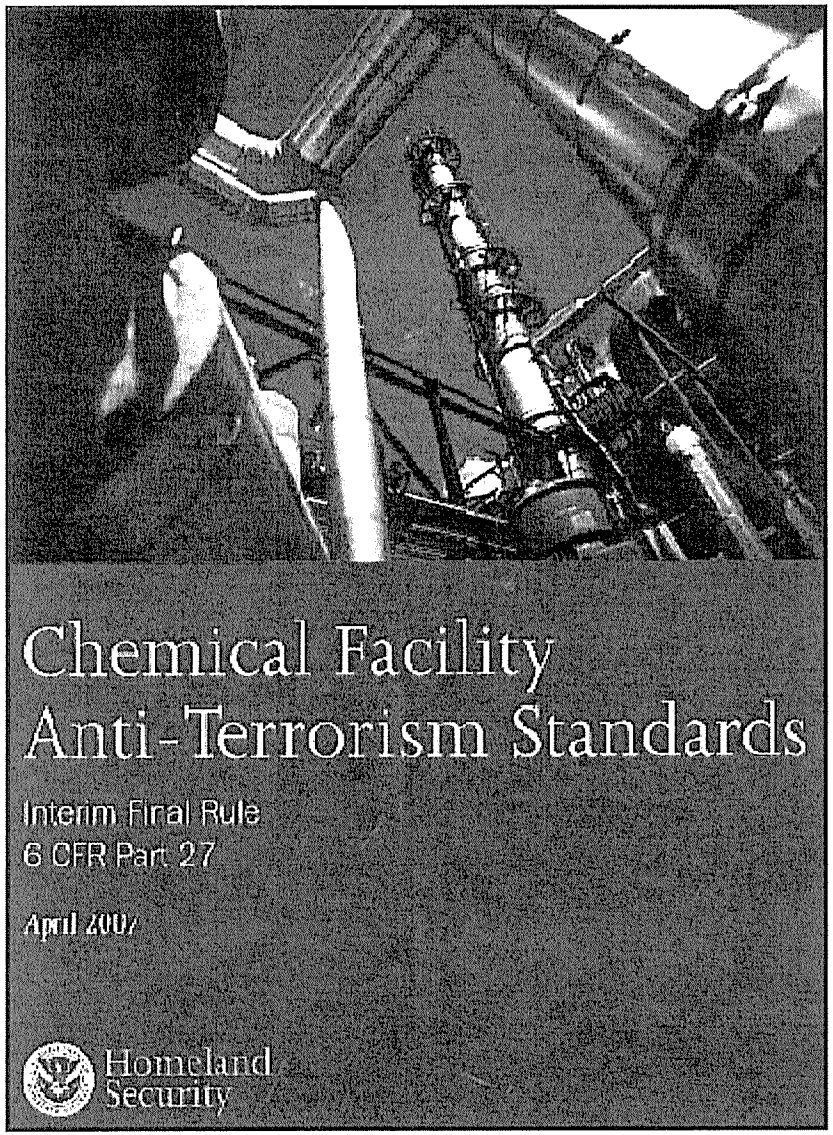


What is CFATS?



- **Pursuant to Section 550 of the 2007 Homeland Security Appropriations Act, CFATS applies to chemical facilities that "present a high level of security risk."**
- **CFATS is a staggered process consisting of four phases: Top-Screen, SVA, SSP, and ongoing compliance.**
- **CFATS compliance is based on *Risk-Based Performance Standards* rather than prescriptive measures.**
- **CFATS will expire in October 2009…but not really….**

Chemicals of Interest Drive CFATS Applicability



- **Unless exempt by statute or rule, chemical facilities that possess Appendix A Chemicals of Interest (COI) at the identified Screening Threshold Quantity (STQ) for any Security Issue must submit information to DHS for review.**
- **Definition of a "chemical facility" is broad…and could even include the local pool supply company.**

CFATS Appendix A Chemicals of Interest List

Chemicals of Interest (COI)	Synonym	Chemical Abstract Service (CAS) #	Release		Theft		Sabotage		Security Issue						
			Minimum Concentration (%)	Screening Threshold Quantities (in pounds)	Minimum Concentration (%)	Screening Threshold Quantities (in pounds unless otherwise noted)	Minimum Concentration (%)	Screening Threshold Quantities	Release – Toxic	Release – Flammables	Release – Explosives	Theft – CW/CWP	Theft – WME	Theft – EXP/EDP	Sabotage/Contamination
Acetaldehyde		75-07-0	1.00	10,000						X					
Acetone cyanohydrin, stabilized		75-86-5					ACG	APA							X
Acetyl bromide		506-96-7					ACG	APA							X
Acetyl chloride		75-36-5					ACG	APA							X
Acetyl iodide		507-02-8					ACG	APA							X
Acetylene	[Ethyne]	74-86-2	1.00	10,000						X					
Acrolein	[2-Propenal] or Acrylaldehyde	107-02-8	1.00	5,000					X						
Acrylonitrile	[2-Propenenitrile]	107-13-1	1.00	10,000						X					
Acryloyl chloride	[2-Propenoyl chloride]	814-68-6	1.00	10,000						X					
Allyl alcohol	[2-Propen-1-ol]	107-18-6	1.00	15,000					X						
Allylamine	[2-Propen-1-amine]	107-11-9	1.00	10,000						X					
Allyltrichlorosilane, stabilized		107-37-9					ACG	APA							X
Aluminum (powder)		7429-90-5			ACG	100								X	
Aluminum bromide, anhydrous		7727-15-3					ACG	APA							X
Aluminum chloride, anhydrous		7446-70-0					ACG	APA							X
Aluminum phosphide		20859-73-8					ACG	APA							X
Ammonia (anhydrous)		7664-41-7	1.00	10,000					X						
Ammonia (conc. 20% or greater)		7664-41-7	20.00	20,000					X						
Ammonium nitrate, [with more than 0.2 percent combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance]		6484-52-2	ACG	5,000	ACG	400					X			X	

CFATS Appendix A Chemicals of Interest List - Release

***Release*: If released into the atmosphere, these COIs could affect populations within and beyond the facility.**

There are three subcategories of *Release* COIs:

Release – Toxic: COIs with the potential to create a toxic cloud.

Release – Flammables: COIs with the potential to create a vapor cloud explosion.

Release – Explosives: COIs with the potential to affect populations within and beyond the facility.

CFATS Appendix A "Chemicals of Interest" List - Theft

***Theft/Diversion*: If stolen or diverted, these COIs could be used directly (or facilitate the creation of) chemical weapons, Weapons of Mass Effect (WME), or an explosive device.**

There are three subcategories of *Theft/Diversion* COIs:

Theft/Diversion – Chemical Weapons (CW)/Chemical Weapons Precursors (CWP): COIs that could be stolen or diverted and used as a chemical weapon or easily converted into one.

Theft/Diversion – WME: COIs that could be stolen or diverted and used directly as a WME.

Theft/Diversion – EXP/IED Precursors: COIs that could be stolen or diverted and used in explosives or IEDs.

CFATS Appendix A – EPA and Other Environmental Regulations are a Source of Support and Reference

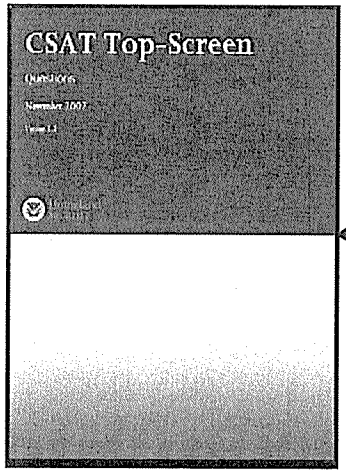
Example: "DHS has adopted several of these exclusions from the Environmental Protection Agency's (EPA) Risk Management Program (RMP) regulation.

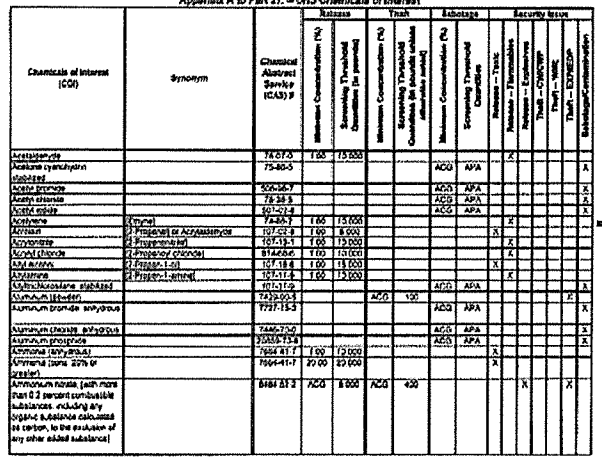
Sections 27.203(a)(1)–(5), (6), and (8) track the EPA exemptions in 40 CFR 68.115(b)(4)(i)–(iv), 68.115(b)(3), and 68.115(b)(2)(iii), respectively.

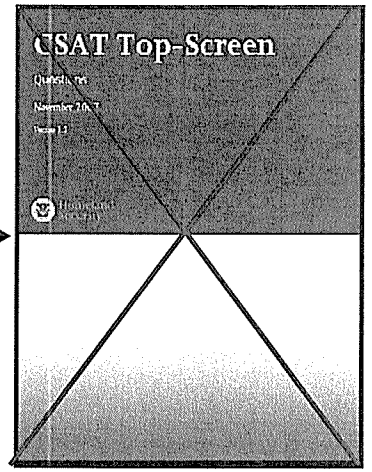
The concepts are the same, though DHS has adjusted the language to make it consistent with the language in part 27 (e.g., whereas EPA considers TQs present at a "stationary source," DHS considers STQs at a "facility").

Note that EPA applies these exemptions to release chemicals (i.e., those which it regulates under RMP), while DHS applies these exclusions to all part 27 chemicals of interest (i.e., to all chemicals associated with the security issues of release, theft/diversion, and sabotage/contamination)."

CFATS Process Flow: Appendix A to Top-Screen







DHS Analytical Review → Top Screen Notification

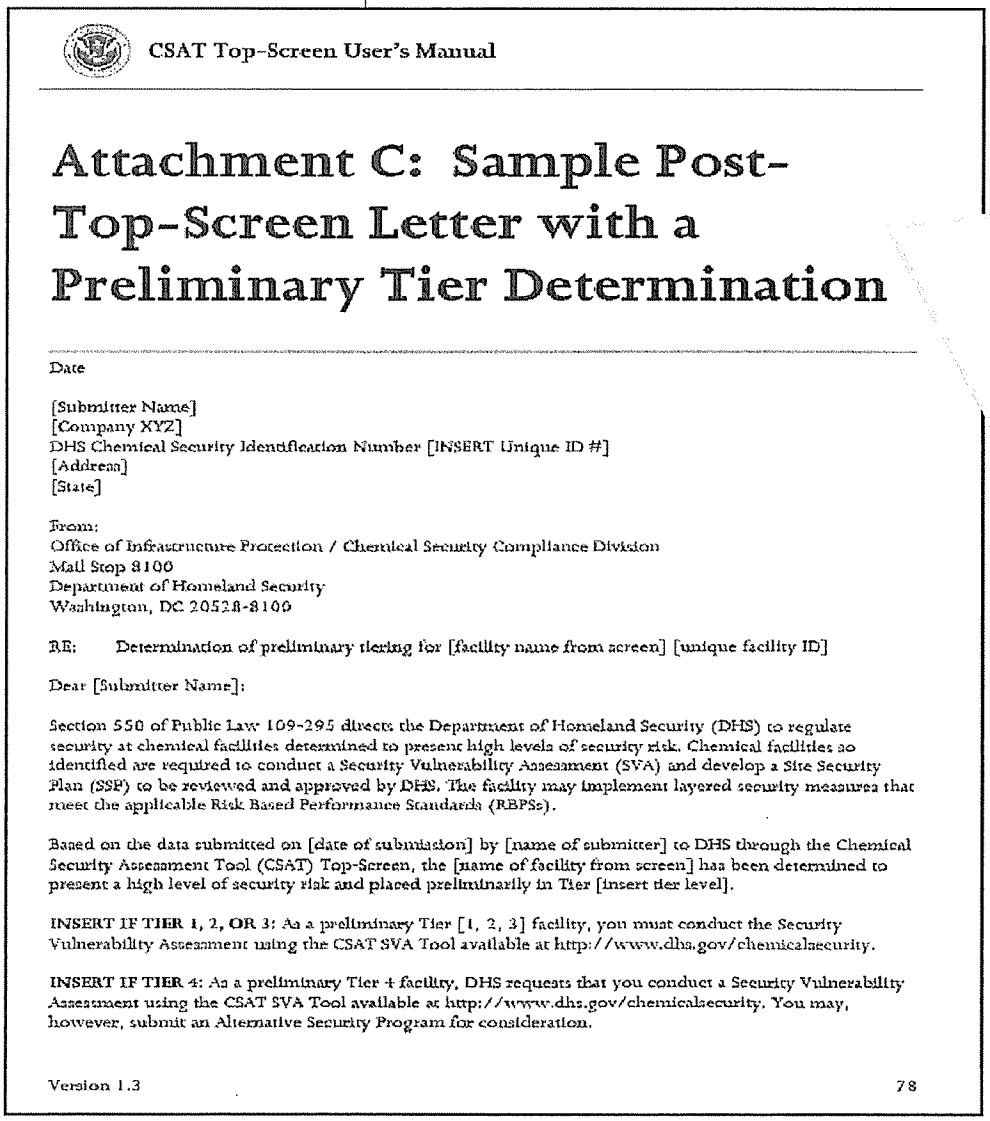
Does NOT Present a High Level of Security Risk

NOT REGULATED

Does Present a High Level of Security Risk

REGULATED "Covered Facility" Approximately 7,000

DHS Initial Notification Letters Post Top-Screen Review



CSAT Top-Screen User's Manual

Attachment C: Sample Post-Top-Screen Letter with a Preliminary Tier Determination

Date

[Submitter Name]
[Company XYZ]
DHS Chemical Security Identification Number [INSERT Unique ID #]
[Address]
[State]

From:
Office of Infrastructure Protection / Chemical Security Compliance Division
Mail Stop 8100
Department of Homeland Security
Washington, DC 20528-8100

RE: Determination of preliminary tiering for [facility name from screen] [unique facility ID]

Dear [Submitter Name]:

Section 550 of Public Law 109-295 directs the Department of Homeland Security (DHS) to regulate security at chemical facilities determined to present high levels of security risk. Chemical facilities so identified are required to conduct a Security Vulnerability Assessment (SVA) and develop a Site Security Plan (SSP) to be reviewed and approved by DHS. The facility may implement layered security measures that meet the applicable Risk Based Performance Standards (RBPSs).

Based on the data submitted on [date of submission] by [name of submitter] to DHS through the Chemical Security Assessment Tool (CSAT) Top-Screen, the [name of facility from screen] has been determined to present a high level of security risk and placed preliminarily in Tier [insert tier level].

INSERT IF TIER 1, 2, OR 3: As a preliminary Tier [1, 2, 3] facility, you must conduct the Security Vulnerability Assessment using the CSAT SVA Tool available at http://www.dhs.gov/chemicalsecurity.

INSERT IF TIER 4: As a preliminary Tier 4 facility, DHS requests that you conduct a Security Vulnerability Assessment using the CSAT SVA Tool available at http://www.dhs.gov/chemicalsecurity. You may, however, submit an Alternative Security Program for consideration.

Version 1.3 78

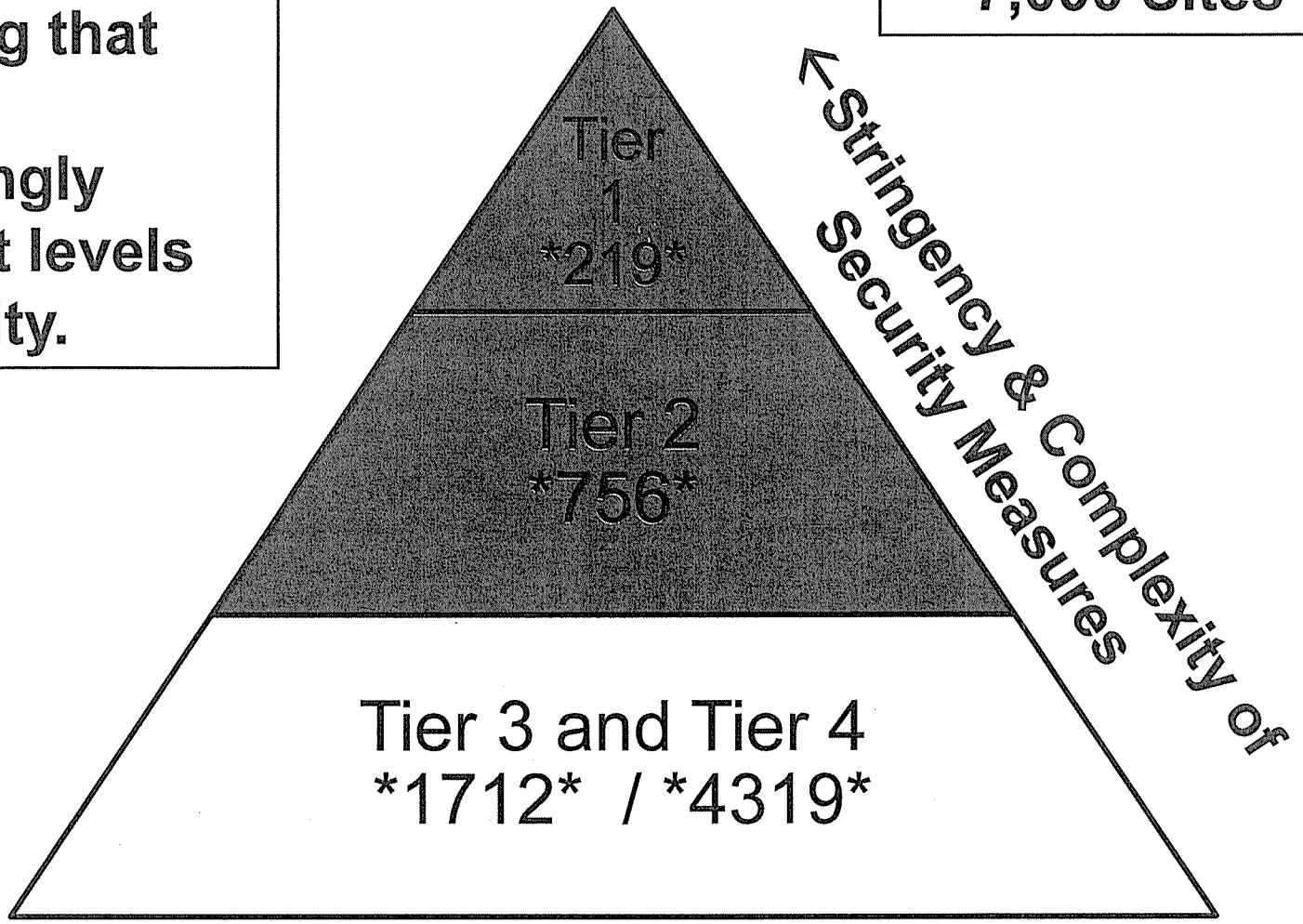
The notification letter provides a preliminary tier ranking (1 – 4) and identifies the COI(s) and the Security Issue(s) resulting in the preliminary high-risk determination.

This letter is Chemical-Terrorism Vulnerability Information (CVI) and must be protected.

DHS Initial Risk-Based Tiering (June 2008)

Each "Covered Facility" has a tier rating that requires increasingly stringent levels of security.

Approximately 7,000 Sites



CSAT Security Vulnerability Assessment

Questions

June 2008

Version 1.0

Homeland Security

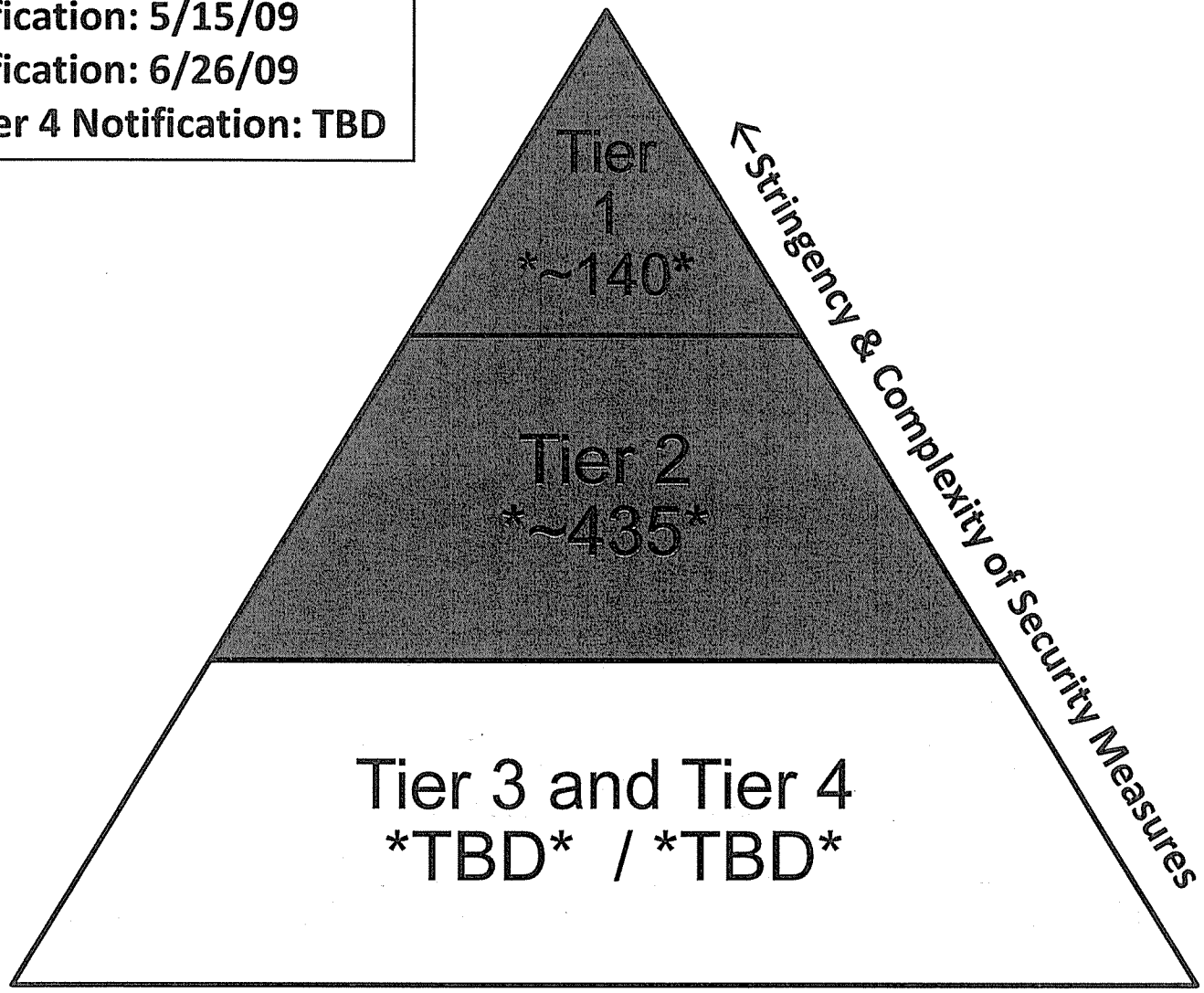
COI Driven & Asset Specific:

Each COI identified in the DHS Initial Notification Letter must be associated with at least one asset.

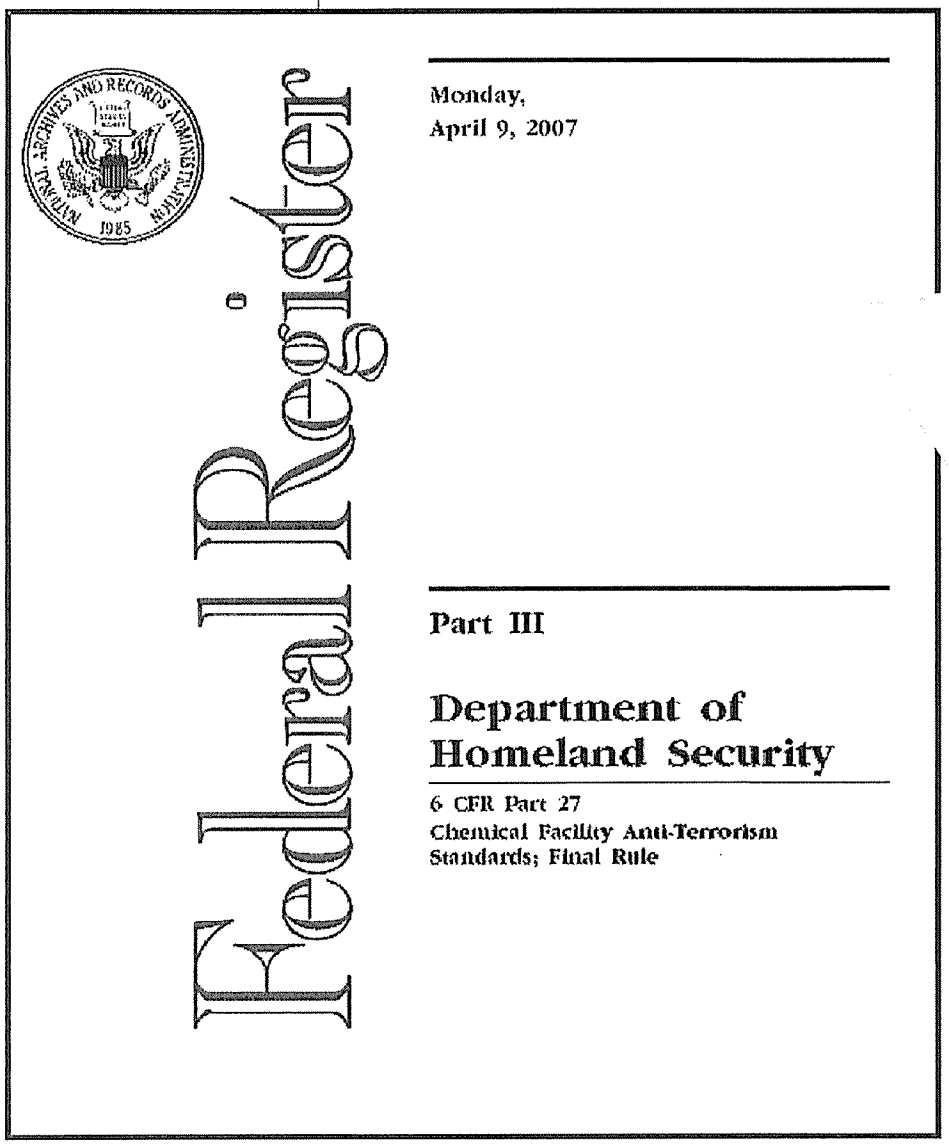
-Tier 1s: Due End of September
-Tier 2s: End of October
-Tier 3s: End of November
-Tier 4s: End of December/January 12, 2009

DHS *Final* Notification Letters Post SVA Review (Mid-2009)

Tier 1 Notification: 5/15/09
Tier 2 Notification: 6/26/09
Tier 3 & Tier 4 Notification: TBD

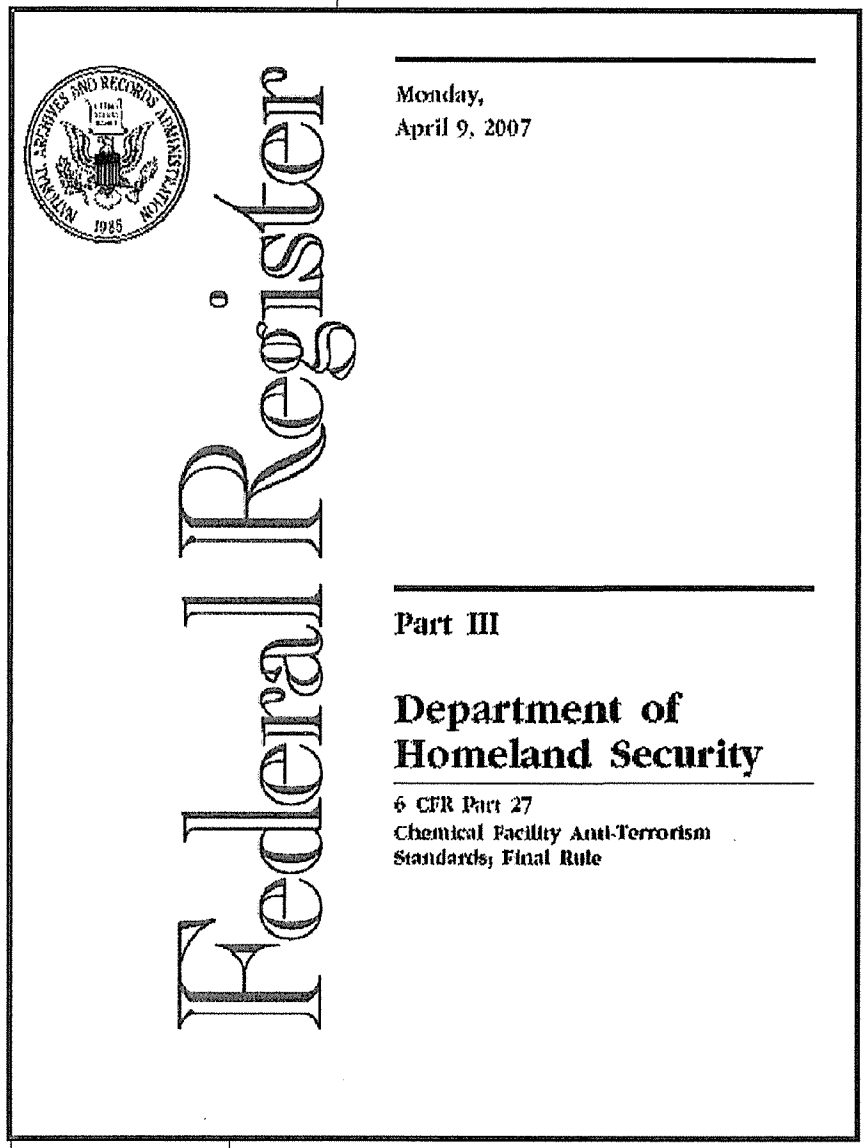


Site Security Plan Following Final Risk Tiering



Pursuant to regulation, the SSP must (1) address each vulnerability identified in the SVA, and the security measure selected to remediate the vulnerability; and (2) identify and describe how each security measure will, in fact, meet the applicable Risk-Based Performance Standards.

Site Security Plan Following Final Risk Tiering



18+1 Risk-Based Performance Standards

(1) Restrict Area Perimeter
(2) Secure Site Assets
(3) Screen and Control Access
(4) Deter, Detect, and Delay
(5) Shipping, Receipt, and Storage
(6) Theft and Diversion
(7) Sabotage
(8) Cyber
(9) Response
(10) Monitoring
(11) Training
(12) Personnel Surety
(13) Elevated Threats
(14) Specific Threats, Vulnerabilities, Risks
(15) Reporting of Significant Security Incidents
(16) Significant Security Incidents and Suspicious Activities
(17) Officials and Organization
(18) Records
(19) Anything else specified by DHS

Risk-Based Performance Standards

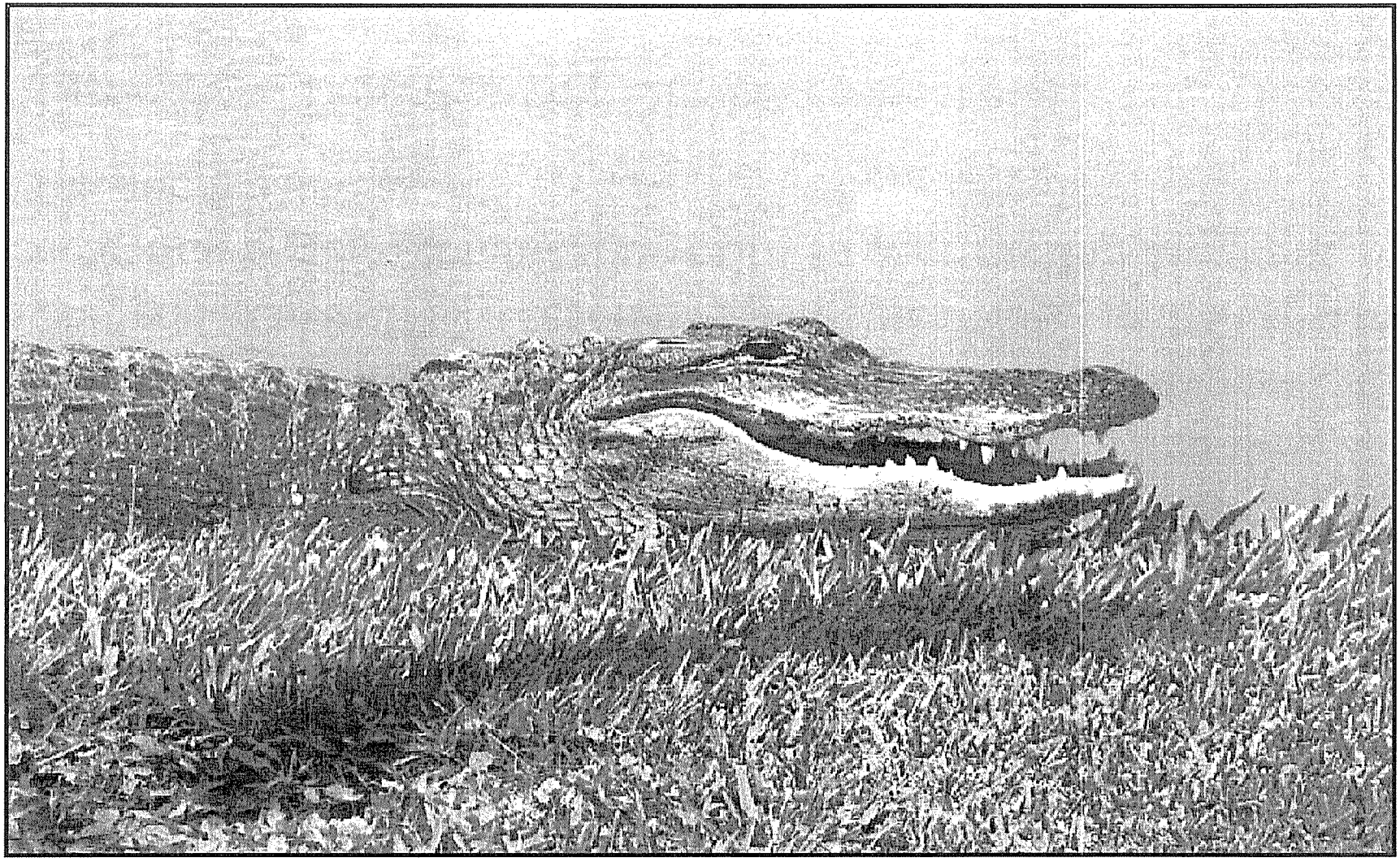
Example: Restrict Area Perimeter

Company A Tier 1 Facility: 12 foot chain-link fence, razor ribbon, microwave intrusion detection system, low-light, pan, tilt, zoom cameras with motion activation, 10 foot clear zone, vehicle cabling.

Company B Tier 1 Facility: 6 foot chain link fence with three strands of barbwire as outer perimeter fence with jersey barriers, 8 foot concrete wall as a secondary perimeter, fiber-optic intrusion detection system, combination of fixed cameras and low-light, pan, tilt, zoom cameras.

Company C Tier 1 Facility: Dig a deep moat and .....

Risk-Based Performance Standards



Risk-Based Performance Standards

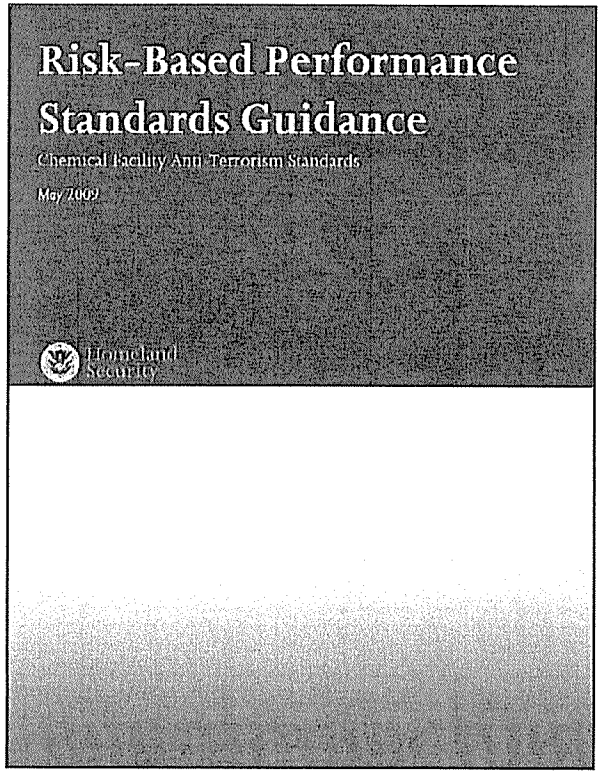
Because the Performance Standards are Risk-Based, a Tier 1 Facility Requires *More Stringent Security* Than a Tier 4 Facility:

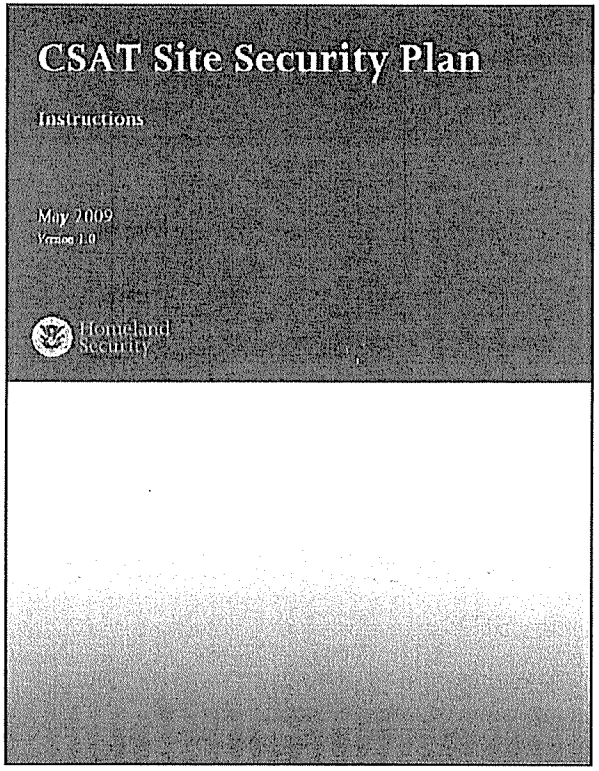
Example: Restrict Area Perimeter

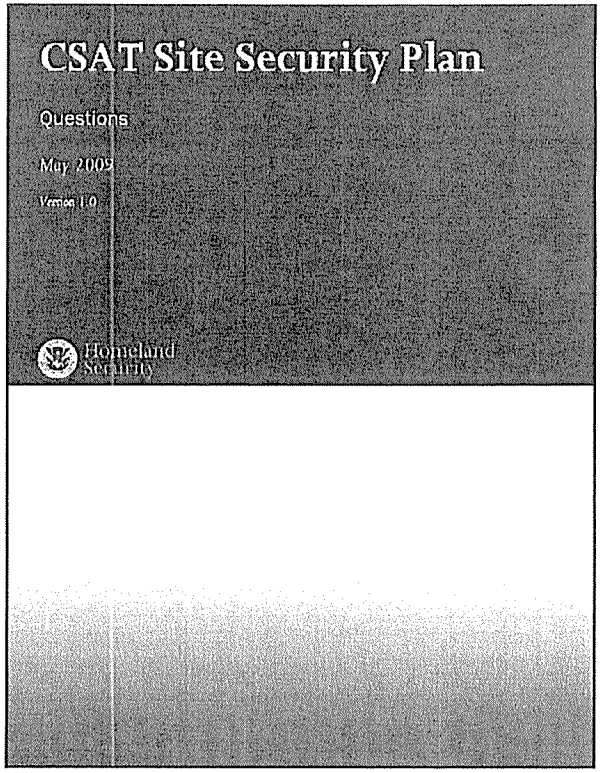
Company A Tier 1 Facility: 12 foot chain-link fence, razor ribbon, microwave intrusion detection system, low-light, pan, tilt, zoom cameras with motion activation, 10 foot clear zone, vehicle cabling.

Company B Tier 4 Facility: 12 foot chain-link fence and razor ribbon.

DHS Released 3 SSP Documents on May 15, 2009







Statutory Authority Expires in October 2009

One Hundred Ninth Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Tuesday, the third day of January, two thousand and six

An Act

Making appropriations for the Department of Homeland Security for the fiscal year ending September 30, 2007, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending September 30, 2007, for the Department of Homeland Security and for other purposes, namely:

TITLE I

DEPARTMENTAL MANAGEMENT AND OPERATIONS

OFFICE OF THE SECRETARY AND EXECUTIVE MANAGEMENT

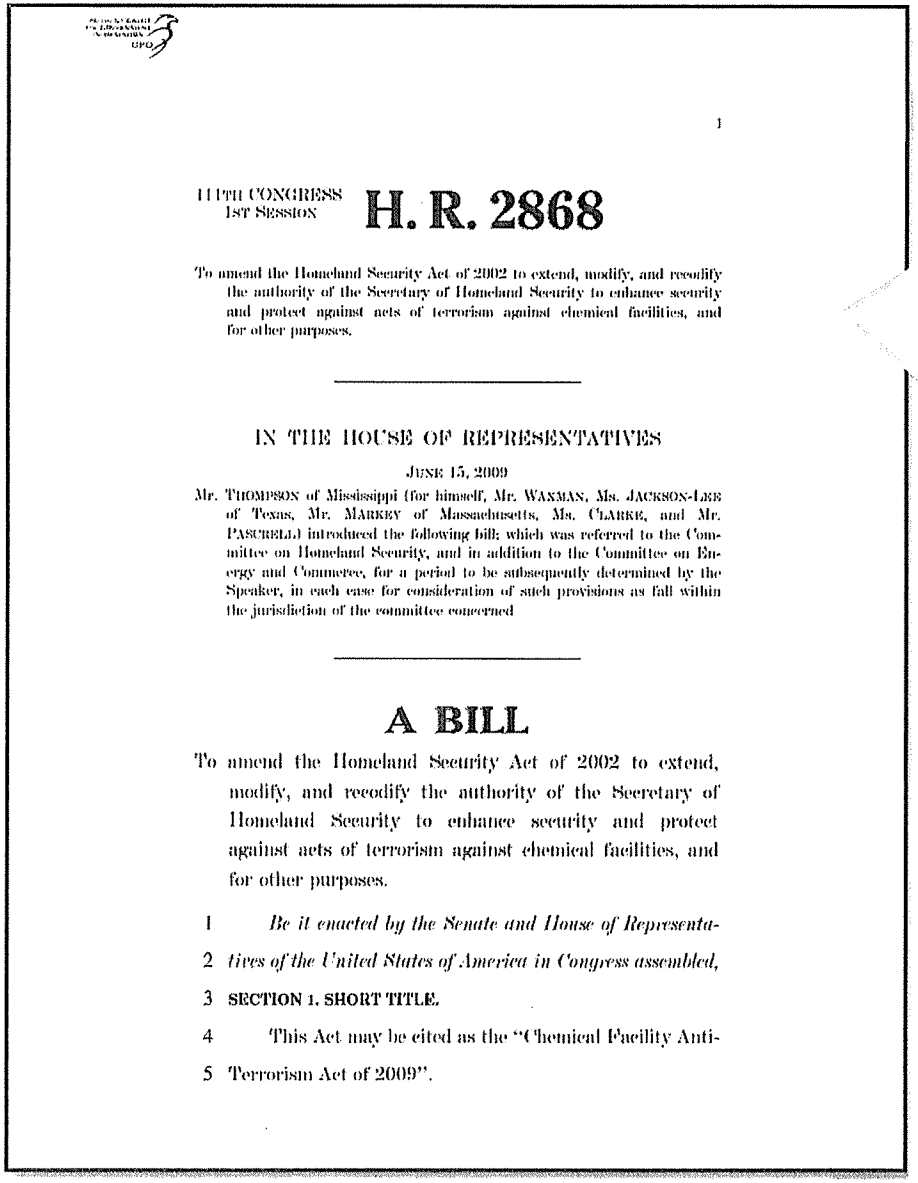
For necessary expenses of the Office of the Secretary of Homeland Security, as authorized by section 102 of the Homeland Security Act of 2002 (6 U.S.C. 112), and executive management of the Department of Homeland Security, as authorized by law, $94,470,000: *Provided*, That not to exceed $40,000 shall be for official reception and representation expenses: *Provided further*, That of the funds provided under this heading, $5,000,000 shall not be available for obligation until the Secretary of Homeland Security submits a comprehensive port, container, and cargo security strategic plan to the Committees on Appropriations of the Senate and the House of Representatives; the Committee on Homeland Security of the House of Representatives; the Committee on Homeland Security and Governmental Affairs of the Senate; and the Committee on Commerce, Science, and Transportation of the Senate that requires screening all inbound cargo, doubles the percentage of inbound cargo currently inspected, sets minimum standards for securing inbound cargo, and includes the fiscal year 2007 performance requirements for port, container, and cargo security as specified in the joint explanatory statement accompanying this Act: *Provided further*, That of the funds provided under this heading, $10,000,000 shall not be available for obligation until the Secretary submits the Secure Border Initiative multi-year strategic plan to the Committees on Appropriations of the Senate and the House of Representatives, the Committee on Homeland Security of the House of Representatives, the Committee on Homeland Security and Governmental Affairs of the Senate, and the Committees on the Judiciary of the Senate and the House of Representatives no later than December 1, 2006, that includes: a comprehensive

SEC. 550. (a) No later than six months after the date of enactment of this Act, the Secretary of Homeland Security shall issue interim final regulations establishing risk-based performance standards for security of chemical facilities and requiring vulnerability assessments and the development and implementation of site security plans for chemical facilities: *Provided*, That such regulations shall apply to chemical facilities that, in the discretion of the Secretary, present high levels of security risk: *Provided further*, That such regulations shall permit each such facility, in developing and implementing site security plans, to select layered security measures that, in combination, appropriately address the vulnerability assessment and the risk-based performance standards for security for the facility: *Provided further*, That the Secretary may not disapprove a site security plan submitted under this section based on the presence or absence of a particular security measure, but the Secretary may disapprove a site security plan if the plan fails to satisfy the risk-based performance standards established by this section: *Provided further*, That the Secretary may approve alternative security programs established by private sector entities, Federal, State, or local authorities, or other applicable laws if the Secretary determines that the requirements of such programs meet the requirements of this section and the interim regulations: *Provided further*, That the Secretary shall review and approve each vulnerability assessment and site security plan required under this section: *Provided further*, That the Secretary shall not apply regulations issued pursuant to this section to facilities regulated pursuant to the Maritime Transportation Security Act of 2002, Public Law 107–295, as amended; Public Water Systems, as defined by section 1401 of the Safe Drinking Water Act, Public Law 93–523, as amended; Treatment Works as defined in section 212 of the Federal Water Pollution Control Act, Public Law 92–500, as amended; any facility owned or operated by the Department of Defense or the Department of Energy, or any facility subject to regulation by the Nuclear Regulatory Commission.

(b) Interim regulations issued under this section shall apply until the effective date of interim or final regulations promulgated under other laws that establish requirements and standards referred to in subsection (a) and expressly supersede this section: *Provided*, That the authority provided by this section shall terminate three years after the date of enactment of this Act.

(c) Notwithstanding any other provision of law and subsection (b), information developed under this section, including vulnerability assessments, site security plans, and other security related information, records, and documents shall be given protections from public disclosure consistent with similar information developed by chemical facilities subject to regulation under section 70103 of title

H.R. 2868, as reported by the House Committee on Homeland Security in June 2009



1

111TH CONGRESS
1ST SESSION

H. R. 2868

To amend the Homeland Security Act of 2002 to extend, modify, and recodify the authority of the Secretary of Homeland Security to enhance security and protect against acts of terrorism against chemical facilities, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 15, 2009

Mr. THOMPSON of Mississippi (for himself, Mr. WAXMAN, Ms. JACKSON-LEE of Texas, Mr. MARKEY of Massachusetts, Ms. CLARKE, and Mr. PASCRELL) introduced the following bill; which was referred to the Committee on Homeland Security, and in addition to the Committee on Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

---

A BILL

To amend the Homeland Security Act of 2002 to extend, modify, and recodify the authority of the Secretary of Homeland Security to enhance security and protect against acts of terrorism against chemical facilities, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Chemical Facility Anti-Terrorism Act of 2009".

- Introduced June 15, 2009
- Reported by the House Committee on Homeland Security on June 23, 2009
- A two-panel hearing was held on June 16, 2009
- The Committee completed their mark-up session on June 23, 2009

June 16, 2009 Hearing: Main Issues of Discussion

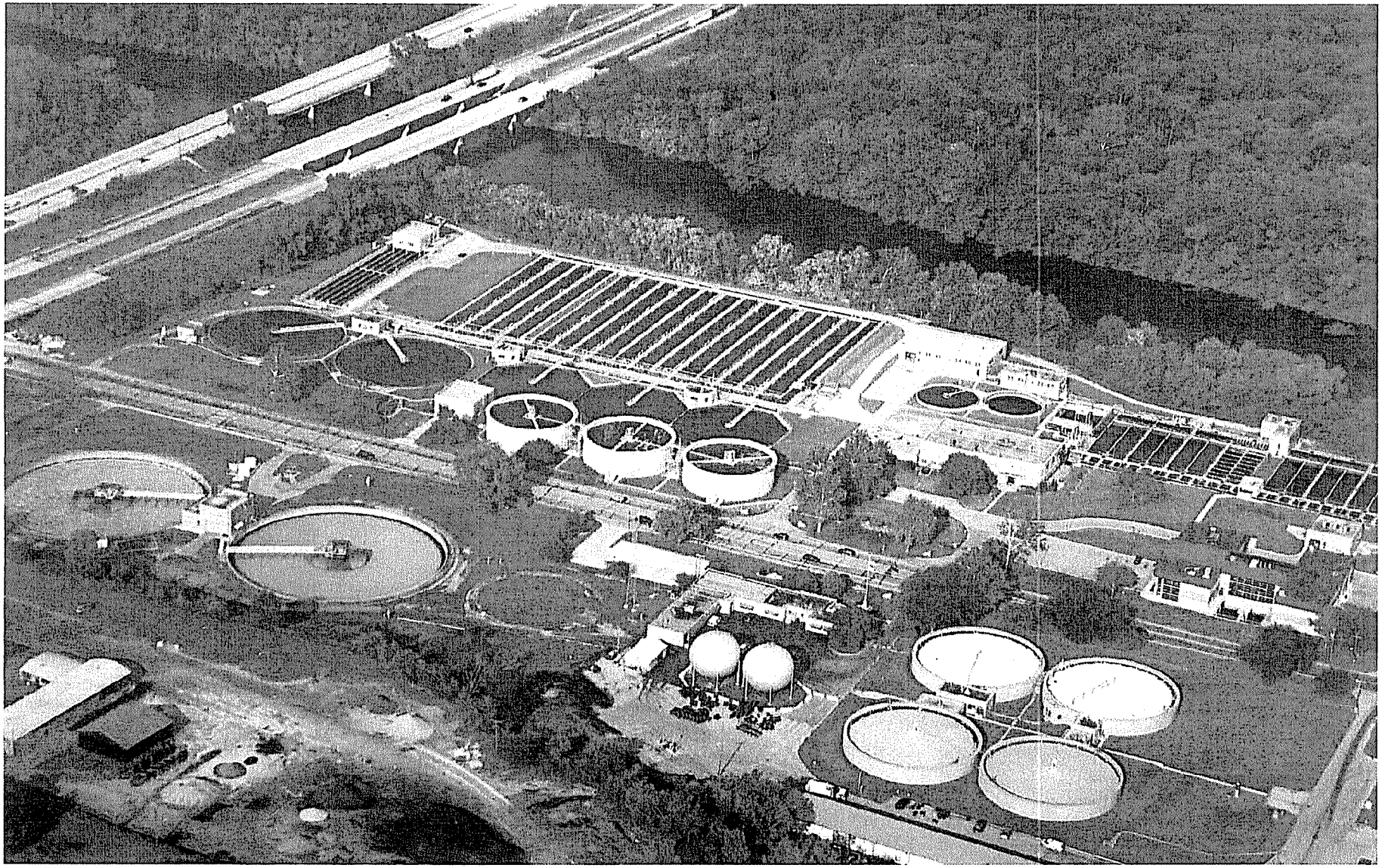
IST

New Jersey model, transfer of risk, effect on business

Citizen Suits

Effect on both resources of DHS and facilities

June 16, 2009 Hearing: Main Issues of Discussion



House FY 2010 Appropriations Bill

SEC. 548. Section 550(b) of the Department of Homeland Security Appropriations Act, 2007 (Public Law 109–295; 6 U.S.C. 121 note) is amended by striking "three years after the date of enactment of this Act" and inserting "October 4, 2010".

SEC. 548. Section 550(b) of the Department of Homeland Security Appropriations Act, 2007 (Public Law 109–295; 6 U.S.C. 121 note) is amended by striking "three years after the date of enactment of this Act" and inserting "October 4, 2010".

the conference, the amount of such excess shall be deposited into the Treasury as miscellaneous receipts.

SEC. 550. From unobligated balances for fiscal year 2009 made available for the Federal Emergency Manage-

111TH CONGRESS
1ST SESSION

H. R. 2892

AN ACT

Making appropriations for the Department of Homeland Security for the fiscal year ending September 30, 2010, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Chemical Facility Anti-Terrorism Standards (CFATS)

21st Annual Texas Environmental Superconference

August 6, 2009

Steve Roberts
Roberts Law Group PLLC
Houston, Texas
713-572-3600 | www.chemicalsecurity.com

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Roberts Law Group PLLC | Homeland Security Law & Policy

Steve Roberts is an attorney who practices in the rapidly developing area of homeland security law and policy. Steve writes and speaks frequently on the legal aspects of homeland security and counterterrorism affecting the nation's critical infrastructure. His audiences have included government departments and agencies – such as the Department of Homeland Security, the Department of Defense, the Federal Bureau of Investigation, the Secret Service, Coast Guard, and the Federal Reserve – as well as academia and industry. His written work has appeared in newspapers, magazines, and law reviews.

Steve is currently a columnist for the *National Law Journal* and for *Chemical Week* where he writes on homeland security regulation, with a special emphasis on the Chemical Facility Anti-Terrorism Standards (CFATS), rail transportation security, the Transportation Worker Identification Credential (TWIC), and critical infrastructure related public policy.

He is a regular guest instructor at the United States Department of Homeland Security's Federal Law Enforcement Training Center (FLETC) in Glynco, Georgia. At FLETC, Steve teaches in the Counterterrorism Division where he instructs on critical infrastructure protection, business continuity, and legal issues. At the Air Force Special Operations School at Hurlburt Field, Florida, Steve teaches classes associated with critical infrastructure protection and homeland security legal issues.

Steve has been a Professorial Lecturer in Law at the George Washington University Law School in Washington, D.C., and currently teaches homeland security, law, and policy as an Adjunct Professor of Law at the University of Houston Law Center.

Steve's work in homeland security and counterterrorism began in 1999. Since that time his professional experiences have included the United States Department of the Treasury's Financial Crimes Enforcement Network, the Critical Infrastructure Assurance Office, and an assignment to the President's Critical Infrastructure Protection Board formerly within the Executive Office of the President, the White House. He practiced law in the Washington, D.C. office of Alston & Bird LLP where he advised clients on homeland security legal and regulatory matters.

He is a member of the Florida Bar and the Bar of the District of Columbia and received his undergraduate degree, Cum Laude, from the School of Foreign Service at Georgetown University and his law degree, Magna Cum Laude and Order of the Coif, from the University of Florida.



Business Continuity Planning

2009 Texas Environmental Superconference

Donna B. Ward
BP America Inc.

Business Continuity Plan - Overview



- ***Business Continuity Planning*** (BCP) may be defined as "an **ongoing** management process that seeks to **periodically assess** the risk to the business associated with unforeseen or unexpected events, and put in place **appropriate contingencies** to maintain business continuity."

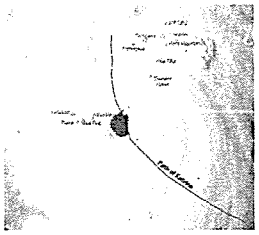
- BCP Goals are:
  - Protect revenue
  - Minimize impact to operations/costs
  - Preserve brand and customer loyalty
  - Mitigate legal liabilities
  - Comply with government regulations

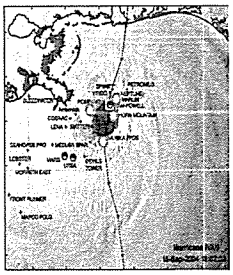
BOTTOM LINE: STAY IN BUSINESS

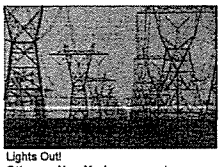
Why do we need a BCP?

bp

Events in recent years have heightened all companies' sensitivities to the business risks







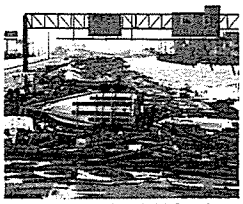
Lights Out!
Ottawa – New York power outage
August 14, 2003



Texas City Refinery



City of London, April 1993
Massive bomb killed one & damaged 72 buildings



Hurricane Ike - I-45 South



Hurricane Katrina, 2005

What's in a BCP?

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The BCP describes:

- Roles and responsibilities for invoking, operating and maintaining the plan
- Risk profile
- Critical processes and supporting assets (People, Facilities, IT, Suppliers, Records)
- Response strategies and tactical plans
- How the plan is invoked
  - covering linkages to Incident Management, Office Space Continuity Plan, People and Disaster Recovery Plans
- Details of contingency, or alternative, processes to be followed by the business in the event of an incident
- Supporting information necessary to operate those processes (e.g. contact information, location of media)

The Business Continuity Planning Process



Define Business Accountability

Analyze your business or practice

Assess the risks

Develop the Business Continuity Strategy

Build, implement & validate the Business Continuity Plan

Develop procedures for embedding the Plan

Business Accountability and Impact



Define Business Accountability

- Agree on accountability for ownership of the BCP plan and process
- Senior management support is essential to success
- BCP project team should be established with clear timeframes for project delivery

Conduct Business Impact Analysis

- Business Impact Analysis (BIA) helps company/firm estimate the impact of an interruption on its income, employees, customers and reputation
- Identify critical business processes
- Undertake a BIA to determine:
  - minimum acceptable levels of service for each critical process
  - The timeframe within which these levels of service should be restored (Recovery Time Objective)
  - The point in time to which activities/data must be restored (Recovery Point Objective)

BCP Risk Analysis & Strategy

- **Assess the risk**
  - Estimate the *likelihood* that selected threats will happen to your business
  - Estimate the *impact* on your business if those threats occur
  - Analyze the matrix of scenarios
- **Identify likely threats/risks**
  - Possible threats:
    - Natural disasters
    - Terrorism
    - Power failure
    - Software virus/ IT failure
- **Identify mitigations and risk reduction options**
- **Analyze the costs & benefits of each option and develop preferred strategy**

Build the BCP

- Identify roles and people to cover those roles
- Use checklists that can be followed easily
- Implement mitigations identified in BCP strategy (e.g., IT, office space, etc.)
- Identify activities and priorities at key phases
- Identify key resources needed to support the plan
- Validate and test the plan ("living document")
  - Table top exercise
  - Full activation test
- Obtain management sign-off and approval of the plan

Embedding the BCP

Develop training program to ensure that staff and third parties understand plan and their roles

Identify roles and accountabilities for updating the BCP

Identify triggers that require BCP updates (e.g. relocation, new threat, acquisition, etc.)

Define testing strategy (e.g., frequency and level of testing)

Implement changes to organizational procedures to support the BCP

- Integrate BCP roles and responsibilities into job descriptions

Houston Legal BCP Overview

- Business Continuity Team
- Phase I: Response to Incident
- Phase 2: Maintain Critical Operations
- Phase 3: Restoration
- Other Campus Emergency Plans
- Directory of Emergency Services
- Key Personnel
- Appendices
  - Emergency Communications Plan
  - Legal Staffing
  - Outside Counsel & External Suppliers
  - People & Office Space

Houston Legal Emergency Preparedness

bp

1 to 3 Days Prior to the Event:

All Staff will:

- Update your contact information for Legal Management and inform of your personal plans
- Copy your important data to laptops and portable storage devices
- Secure your offices and work spaces
- Take laptops home daily

Legal Management will:

- Distribute employee contact list to Leadership Team
- Develop staff plans and communicate them to department
- Distribute company information

During the Event & Immediately Following (0 to 3 days):

- Staff check in with Leadership Team regarding personal status within 4-12 hours
- Daily Team conference calls and Leadership Team conference calls

Hurricane Ike – What Went Well

bp

Staff Safety

- All staff accounted for within 36 hours after storm

Email Communications

- Regular updates
- Helpful information provided prior to storm
- Clear instructions for staff before and after storm

Conference Calls

- Daily exchange of information for LT & staff
- Alternate team call information provided pre-storm
- LT members covered other teams

Hurricane Ike - What Went Well (cont.)

bp

Alternate Communication

- Staff used text and Blackberry PIN messages

Crisis Management

- Designation of Incident Management Team & Business Support Team assignments pre-storm

Team Work

- LT and staff volunteered to locate staff unaccounted for
- LT covered other members team calls

Access to resources

- Ability to share information on contractors, generators, etc.

Donna Bostic Ward
Senior Attorney
BP America Inc.
US Legal Department – HSSE & Regulation
501 Westlake Park Blvd.
M. C. 16.160
Houston, TX 77079
Phone: (281) 366-3537
Fax: (281) 366-7578
donna.ward@bp.com

Donna Ward is a Senior Attorney in the Health, Safety, Security and Environment (HSSE) & Regulation section of the BP America Inc. Legal Department. Ms. Ward advises BP's U. S. Exploration & Production clients, with particular emphasis on Gulf of Mexico operations, on federal, state, and local environmental safety and health laws, regulations and legislation, including the Clean Water Act, the Clean Air Act, RCRA, CERCLA, the Migratory Bird Treaty Act, and the Emergency Planning and Community Right to Know Act. She also represents BP in enforcement matters before the U. S. Environmental Protection Agency and numerous state agencies. In addition, since 2004, Ms. Ward has provided leadership for the Houston Legal Department on Business Continuity and Crisis Management strategies and provides guidance to BP Legal Departments on these issues across the U. S. and globally.

Prior to joining BP's U. S. Legal Department, Ms. Ward was in private practice in the Houston office of Baker & Hostetler LLP, where she represented corporate clients in Oil & Gas litigation, environmental litigation, environmental permitting and compliance. Ms. Ward left private practice in 2001 to take a position with BP as in-house litigation counsel, focusing on upstream and commercial litigation.

Ms. Ward received her Bachelor of Business Administration, *Summa Cum Laude,* from Howard University and earned her J.D., *cum laude,* from The University of Miami School of Law. She is admitted to practice in Texas.

Robert Eckels' practice is built on decades of public service. He is best known for his role as County Judge of Harris County (Houston) where he oversaw the county's Department of Homeland Security and Emergency Management and received national recognition for the county response to Hurricanes Katrina and Rita and the shelter operations at the Harris County Astrodome for evacuees from New Orleans and the central Gulf Coast. He served on White House and Department of Homeland Security State and Local Senior Advisory Committees on Homeland Security and this year chaired the Governor's Commission on Disaster Recovery and Renewal. Robert left public service in 2007 to become a partner in the international law firm of Fulbright of Jaworski, LLP. Today he is an attorney in private practice spending most of his time on infrastructure finance, public private partnerships, government relations and disaster recovery and compliance issues.

Suzanne Murray

Suzanne Murray was appointed Regional Counsel in October of 2008 and prior to that was the Deputy Regional Counsel for Enforcement in Region 6.

She began her practice in New York associated with the firm of Rosenman and Colin and briefly as in house counsel for AIG. She graduated from the University of New Mexico Law School in 1994 and was the Editor of the Natural Resources Law Journal.

She currently lives in Dallas with her husband and three daughters. She enjoys traveling and learning languages.

Her favorite casino game is craps and she can read the racing form!

Super Conference 2009
Case Update by Laurencia Fasoyiro

Introduction

I. Standing

II. Clean Air Act

II. Clean Water Act

IV. Comprehensive Environmental Response Compensation Liability Act

V. Resource Conservation Recovery Act

VI. National Environmental Policy Act/Environmental Impact Statement

VII. Punitive Damages

VIII. Consent Decree

IX. Sovereign Immunity

Introduction

The case update includes State and Federal environmental law cases from different jurisdictions decided between 2008 and 2009. This paper was last edited on July 17, 2009.

I. Standing

***Summers v. Earth Island Institute*, 129 S.Ct. 1142 (2009)**

The doctrine of standing requires federal courts to satisfy themselves that the plaintiff has alleged such a personal stake in the outcome of the controversy as to warrant his invocation of federal-court jurisdiction. To have Article III standing to seek injunctive relief, a plaintiff must show that: (1) he is under threat of suffering injury in fact that is concrete and particularized; (2) the threat is actual and imminent, not conjectural or hypothetical; (3) the threat is fairly traceable to the challenged action of the defendant; and (4) it is likely that a favorable judicial decision will prevent or redress the injury.

The Supreme Court held that groups lacked standing to challenge Forest Service rules exempting small timber-salvage sales from notice and comment requirements.

Reversing in part a decision of the Ninth Circuit, the Supreme Court held that environmental groups failed to satisfy the injury-in-fact requirement for Article III standing, with respect to obtaining injunctive relief to prevent the United States Forest Service from enforcing its regulations exempting small fire-rehabilitation and timber-salvage projects from the notice, comment, and appeal process used by the Forest Service for more significant land management decisions, in the absence of a live dispute over a concrete application of those regulations.

Facts: Five environmental organizations brought action to enjoin United States Forest Service from applying its regulations to exempt salvage sale of timber on 238 acres damaged by a fire in the Sequoia National Forest after the Forest Service issued a decision memorandum approving the Burnt Ridge Project. The Forest Service did not provide prior notice or comment period as required in the Forest Service Decision-making and Appeals Reform Act. A group member stated in an affidavit that he had imminent plans to visit the Burnt Ridge site and that his interests in viewing flora and fauna in the area would be harmed if the Burnt Ridge Project went forward without incorporating the ideas he would have suggested if the Forest Service had provided him an opportunity to comment. An affidavit submitted by another group member asserted that the member had visited many National Forests in the past and that he planned to visit several unnamed National Forests in the future. The member did not allege that any particular timber sale or other project claimed to be unlawfully subject to the regulations would impede a specific and concrete plan by the member to enjoy the National Forests. After granting the injunction against the salvage-timber sale, the parties settled their dispute regarding the Burnt Ridge Project. The government argued that in light of the settlement, the groups lacked standing to challenge the exemption regulations as violating the Appeals Reform Act. Nevertheless, the district court adjudicated the merits of the challenges, invalidated five of the regulations, and entered a nationwide injunction against their application. The parties appealed. The United States Court of Appeals for the Ninth Circuit affirmed and remanded.

Supreme Court Holding: The Court held that the organization had failed to establish the concrete and particularized injury that Article III standing required. Though the Court recognized that the group member's interest may be harmed, if not provided with an opportunity to comment, the Court explained that the settlement between the parties remedied the member's injury-in-fact. In the words of the court "we know of no precedent for the proposition that when a plaintiff has sued to challenge the lawfulness of certain action or threatened action but has settled that suit, he retains standing to challenge the basis for the action (here, the regulation in the abstract), apart from any concrete application that threatens imminent harm to his interests."

The court rejected the argument that standing existed based on a "procedural injury" involving the past denial of the ability to file comments on some Forest Service actions, and the prospect that such denials would continue. The deprivation of a procedural right without some concrete interest affected by the deprivation was insufficient to create Article III standing, Justice Scalia said.

II. Clean Air Act (CAA)

***U.S v. BP Products North America Inc.*, 610 F.Supp.2d 655 S.D.Tex., 2009**

Facts: The Texas City refinery is the largest BP Products refinery in the United States. BP Products entered a plea of guilty to an information charging a felony violation of the federal Clean Air Act arising from a 2005 explosion at Texas refinery. The explosion killed 15 and injured at least 170 workers. The explosion occurred in the plant's isomerization unit ("ISOM unit"). BP Products pleaded guilty to violating two of the regulations promulgated under Section 7412(r)(7) of the CAA and 40 C.F.R. section 68.87(b)(2). Section 7412(r)(7) requires the owner or operator of a plant such as the Texas City refinery to establish and implement written procedures to maintain the ongoing integrity of process equipment; and 40 C.F.R. section 68.87(b)(2), requires the owner or operator of such a plant to warn contractors working on or adjacent to a "covered process" of the known potential fire, explosion, or toxic-release hazards related to the contractor's work and the process.

The plea agreement stipulates the sentence: $50 million fine and three years of probation with conditions that BP Products comply with settlement agreement reached with Occupational Safety and Health Administration (OSHA) and agreed order imposed by Texas Commission on Environmental Quality (TCEQ). When BP Products signed the plea agreement, it would have been the first company criminally convicted of knowing violations of the Risk Management Plan regulations of the Clean Air Act. At the time of the plea agreement, the $50 million fine was the largest criminal fine imposed against a single corporation under the Clean Air Act and the largest criminal fine imposed for a fatal industrial accident. According to the government and BP Products, the $50 million fine represents a reasonable estimate of twice BP Products' gross pecuniary gain derived from the Clean Air Act violations to which it pleaded guilty. The proposed probation conditions include compliance with requirements imposed after the explosion for extensive process safety and environmental improvements at the Texas City refinery. The government states that it required BP Products to plead to the highest offense that could have been charged based on the evidence, despite the fact that lesser charges were available. BP has paid over $1.6 billion to the victims to settle approximately 4,000 civil cases, and has also paid almost $21.7 million in fines to OSHA and to the TCEQ and will pay over $265 million to do the work required under the OSHA Settlement Agreement and the TCEQ Agreed Order.

As a result of inspections of the Texas City facility conducted by the Environmental Protection Agency in response to the 2005 explosion, BP Products also entered into a civil settlement under which it must implement over $161 million in new pollution controls, pay a $12 million civil penalty, and complete a $6 million supplemental project. This civil settlement addresses pollution control, maintenance and monitoring, and internal management violations at the Texas City facility unrelated to the cause of the 2005 explosion.

The United States requested that the guilty plea be accepted, and the victims objected. The victims' arguments include that the $50 million fine is far too low a measure of gross gain and

the probation conditions are too lenient. The government responds that it aggressively prosecuted BP Products.

Holding: The district Court Judge held that proposed guilty plea agreement by BP for felony violation of the Clean Air Act would be accepted. The court reasoned that the proposed plea satisfies the purposes that the law recognizes as controlling and that the victims' arguments that the plea agreement is too lenient fail to recognize the statutory constraints that apply and the risks to the government if the plea were rejected. Considering the specific facts and circumstances presented in the record, including the victims' objections, the court found the proposed plea a reasonable disposition given the available alternatives, the risks they present, and the limits inherent in the statutes that the government can use to obtain a felony conviction to punish conduct leading to an industrial accident.

***Sierra Club v. Johnson*, 541 F.3d 1257 (11th Cir. 2008)**

This is a case of first impression in that circuit, where an Eleventh Circuit panel ruled that the EPA Administrator had discretion under the CAA not to object to the issuance of Title V operating permits for two Georgia coal-fired power plants.

Evidence that the Environmental Protection Agency (EPA) had initiated proceedings to resolve applicability of prevention of significant deterioration (PSD) requirements to two Georgia coal-fired power plants, without more, was insufficient to trigger Administrator's duty to object to issuance of permits, because EPA had discretion to reasonably conclude the applicability of PSD limits to those plants was still very much unresolved; therefore, EPA Administrator did not act arbitrarily in declining to object to plants' permits, which did not contain PSD-related limits or compliance schedules. Violation notice and civil complaint are first steps in enforcement action and do not trigger Administrator's duty to object.

Facts: The Sierra Club and the Coosa River Basin Initiative (Petitioners), challenged operating permits issued to the Georgia Power Company (Georgia Power). In their challenge before the EPA Administrator, Petitioners relied on a notice of violation the agency issued against Georgia Power to force compliance with certain provisions of the CAA and a subsequent complaint filed against Georgia Power in an unresolved civil enforcement action. Petitioners believe the operating permits issued to Georgia Power are deficient and do not list all of the CAA requirements that should apply to Georgia Power plants. EPA disagreed and refused to object. EPA Administrator found the Petitioners had not satisfied their burden of demonstrating the Georgia Power permits were not in compliance with the Act.

Issue: Whether EPA's failure to object to the issuance of a Title V operating permit was arbitrary and capricious? Whether EPA's decision not to object was reasonable under *Chevron.*

Title V requirements: Title V of the CAA requires all major sources of air pollution to obtain operating permits that contain emission limitations and other conditions to ensure compliance

with air quality control standards. *See* 42 U.S.C.A. § 7661. It does not generally impose new substantive air quality control requirements; instead, in order to ensure compliance with existing requirements, Title V requires permits to contain monitoring, record keeping, reporting, and other conditions. It requires the EPA Administrator to object to an operating permit if a petitioner demonstrates to the Administrator that a permit is not in compliance with the requirements of the CAA.

***Chevron* Analysis:** Under *Chevron,* an agency's interpretation of a statute they have responsibility for administering are reviewed using a two-step analysis: (1) first, court must determine whether Congress has directly spoken to the precise question at issue and if Congress' intent is clear from the statutory language, court must give it effect, and (2) second, if statute is silent or ambiguous with respect to specific issue, court must decide whether agency based its interpretation on a permissible construction of statute. Court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency. To uphold agency's interpretation of statute, reviewing court need not conclude that agency construction was the only one it permissibly could have adopted or even that it would have interpreted statute the same way agency did; however, court must reject administrative constructions that are inconsistent with statutory mandate or that frustrate policy that Congress sought to implement.

Holding: An agency-issued violation notice and civil complaint were merely initial steps in an enforcement action and did not, by themselves, inevitably trigger the Administrator's statutory duty to object to the issuance of those permits. The subject CAA provision was ambiguous when it came to defining the type of demonstration required to trigger the Administrator's duty to object. Because CAA does not specify standard of judicial review, Administrative Procedure Act (APA) applies, and EPA's decision cannot be set aside unless it is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law. The court reasoned that the language of the CAA provision governing EPA Administrator's objection to issuance of permit contains both discretionary and nondiscretionary component and plainly mandates objection whenever petitioner demonstrates noncompliance, but requires Administrator to make judgment of whether petition demonstrates that permit does not comply with CAA requirements.

***Sierra Club v. U.S. E.P.A.*, 557 F. 3d 401 (6th Cir. 2009).**

EPA did not arbitrarily or capriciously deny environmental organization's petition to object to Clean Air Act permit.

Facts: A power company requested for a renewal of its Title V permit for one of its coal-powered steam generators, known as Unit 2, at the Spurlock Station power plant in Maysville, Kentucky. The company first obtained a permit for Unit 2 when it built the plant in the late 1970s. The company later made several changes to the plant, increased the plant's heat-input, allegedly operating above the level specified in its original permits. When the company applied for a Title V permit for unit 2, it did not identify the PSD requirements stemming from these changes and did not propose a PSD compliance schedule. The state agency granted the permit.

After discovering these changes to the plant, the EPA issued a notice of violation, informing the company that its Unit 2 permit failed to address the PSD requirements stemming from these modifications. EPA filed an enforcement lawsuit against the power company. The company argued that the changes did not amount to modifications triggering new PSD (and best-technology) obligations. While this litigation was pending, the company sought to renew its Title V permit but failed to mention the PSD requirements stemming from its previous modifications. After receiving comments from the Sierra Club, the EPA, and others, the state agency proposed the draft permit to the EPA for its review. The EPA did not object to the draft permit and the state agency issued the Title V permit. The Sierra Club petitioned the EPA to object to the permit, arguing that the proposed permit was deficient because it failed to address the PSD requirements. In support, the Sierra Club relied solely on the fact that the EPA previously had issued a notice of violation and had filed a civil-enforcement action based on the same allegations.

The EPA and the power company reached a settlement in the enforcement lawsuit and proposed a consent decree to the district court. Under the proposed decree, the company maintained that it had not violated the Act, but agreed to pay a civil penalty and perform several remedial measures, including installing pollution controls that carried a price tag of over $650 million. While the parties waited for approval of the consent decree, the EPA reached a decision on the Sierra Club's petition. Although it granted the petition in part (on an unrelated issue), it declined to object to the power company's failure to address the PSD requirements. The EPA explained that the prior notices of violations were "initial steps" in the enforcement process and did not reflect the agency's final position as to whether the Title V permit for Unit 2 needed to include a PSD compliance schedule. The district court approved the consent decree. The Sierra Club petitioned the court for review of the EPA's refusal to object to the power company's failure to address the PSD requirements.

Title V: The CAA gives both the States and the EPA a role in administering the Title V program. After a State gives the public an opportunity to comment on a proposed permit, *42 U.S.C* § 7661a(b)(6), but before it goes into effect, the State must submit the permit to the EPA, which has 45 days to review it, § 7661 d(b)(1). If the EPA concludes that the permit does not comply with federal requirements, it shall object to the permit's issuance." *Id.* But if the EPA takes no action within the exclusive-review period, "any person" may petition the agency to object. And "if the petitioner *demonstrates* to the Administrator that the permit is not in compliance with the requirements of the Act, [t]he Administrator shall issue an objection, requiring the State to modify the permit. The Act requires sources from non-attainment areas to satisfy additional anti-pollution standards known as the PSD requirement. Every new major emitting facility constructed in an attainment area, as well as every existing facility that undergoes a "major modification," must obtain a special permit identifying specific emissions limitations, *id.* §§ 7475(a)(1), 7479(1), (2)(C), and must employ the "best available control technology" for each regulated pollutant it emits. Instead of establishing universal best-technology standards, the Act directs the States to determine the best technology for each source on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs.

The Act creates several enforcement options. In addition to setting out subject-specific enforcement procedures, § 7477, and authorizing citizen suits, § 7604, the statute allows the EPA to address violations on its own, § 7413. Whenever, EPA finds that any person has violated or is in violation of any requirement or prohibition of an applicable [state] implementation plan or permit," the Act directs the EPA to issue a notice of violation apprising the source and the State of its findings. *Id.* § 7413(a)(1); *see also id.* § 7413(a)(3). After 30 days, the EPA may pursue one of three options: (1) issue an order directing the source to comply with its existing obligations, (2) impose an administrative penalty on the source (after a formal administrative hearing) or (3) file a federal lawsuit against the source. *See id.* § 7413(a)(1), (a)(4), (d).

Issue: Whether the EPA reasonably construed 7661d(b)(2) to mean that a prior notice of violation and enforcement action did not by themselves require it to object to a permit request.

Holding: Applying the *Chevron* analysis, the court held that the EPA did not arbitrarily or capriciously deny the environmental organization's petition to object to a permit issued by a state agency under the CAA. EPA reasonably construed CAA provision to mean that a prior notice of violation and enforcement action by the EPA did not by themselves require the EPA to object to a permit request. The court based its favorable holding towards the EPA on the conclusion that the CAA requirement is an ambiguous provision and EPA's decision was reasonable.

III. Clean Water Act (CWA)

***Piney Run Preservation Ass'n v. Com'rs of Carroll County*, Md., 2008 WL 2847160 (Supreme Court Oct. 6, 2008). (Case below: The Piney Run Ass'n v. The County Com'rs of Carroll County, Md., 523 F.3d 453 (4th Cir. 2008).)**

Diligent prosecution by agency as bar to citizen suits under Clean Water Act--Certiorari Denied.

The United States Supreme Court declined to grant certiorari in a case in which the Fourth Circuit Court of Appeals held that the Maryland Department of the Environment (MDE) was diligently pursuing an enforcement action against a county for violating the thermal limitation set forth in its National Pollutant Discharge Elimination System (NPDES) permit for its wastewater treatment plant, thereby precluding an organization from bringing a citizen suit against the county under the Clean Water Act (CWA).

Statutory requirement of the CWA: The NPDES requires dischargers to obtain permits that place limits on the type and quantity of pollutants that can be released into the Nation's waters. The EPA initially administers the NPDES permitting system for each State, but a State may apply for a transfer of permitting authority to state officials. If authority is transferred, then state officials have the primary responsibility for reviewing and approving NPDES discharge permits, albeit with continuing EPA oversight. The State of Maryland is authorized to administer the NPDES program and does so through MDE. Although the primary responsibility for

enforcement rests with the state and federal governments, private citizens provide a second level of enforcement and can serve as a check to ensure the state and federal governments are diligent in prosecuting CWA violations. Section 505(a) of the CWA authorizes citizens to bring suit against any NPDES permit holder who has allegedly violated its permit. A citizen suit is barred if the EPA or the state has already commenced, and is diligently prosecuting, an enforcement action.

Facts: An Organization brought action alleging that county commissioners violated the CWA by discharging treated wastewater into stream which exceeded limitation in county's NPDES permit. The organization's suit claimed that the county violated the CWA by discharging treated wastewater into a stream in excess of the permit's thermal limitation. After initiating an enforcement action, the MDE entered into a consent judgment with the county. This judgment required the county to comply with the thermal limitation of the permit and subjected the county to monetary penalties for failing to do so. The daily fine established in the consent judgment, however, was lower than the fine imposed in a prior CWA litigation, and the consent judgment did not establish a final deadline for compliance. The organization argued that the MDE's enforcement action did not constitute diligent prosecution under the CWA, and, thus, its suit was not barred. The organization contended that the consent decree gave the MDE an indefinite period of time in which to decide whether the county must ever come into compliance with its permit. The organization argued that those circuit courts that had addressed the parameters of diligent prosecution under the CWA required the polluter to address the alleged violation by a date-certain. The United States District Court granted county's motion to dismiss, and organization appealed.

Holding: The Fourth Circuit found that the consent judgment was entered into in good faith and was calculated to require the county's compliance with the CWA. The circuit court noted that the MDE's acceptance of a lower fine was made in exchange for further obligations imposed on the county and that it owed deference to such discretionary decisions. The court also noted that the open-ended nature of the consent judgment reflected the fact that the county had applied to the MDE for a less stringent temperature restriction, and the MDE's decision on this application could significantly change the county's obligations under the consent judgment.

***Entergy Corp. v. Riverkeeper, Inc.*, 129 S.Ct. 1498 (2009)**

Facts: Environmental groups, states, and industry associations (Petitioners) petitioned for review of final rule promulgated by EPA pursuant to CWA, regulating cooling-water intake structures at existing power plants. The regulations were promulgated after nearly three decades of making the "best technology available (BTA)" determination on a case-by-case basis. The "Phase I" regulations govern new cooling water intake structures, while the "Phase II" rules at issue apply to certain large existing facilities. In the latter rules, the EPA set "national performance standards," requiring most Phase II facilities to reduce "impingement mortality for [aquatic organisms such as fish ad shellfish by 80 to 95 percent from the calculation baseline," and requiring a subset of facilities to reduce entrainment of such organisms by "60 to 90 percent from [that] baseline." 40 CFR § 125.94(b)(1), (2). However, the EPA expressly declined to mandate adoption of closed-cycle cooling systems, or equivalent reductions in impingement and

entrainment, as it had done in its Phase I rules, in part because in part because of the generally high costs of converting existing facilities to closed-cycle operation, and because of its belief that other technologies approached the performance of the closed-cycle option. The Phase II rules also permit site-specific variances from the national performance standards, provided that the permit-issuing authority imposes remedial measures that yield results "as close as practicable to the applicable performance standards." § 125.94(a)(5)(i), (ii).

Court of Appeals Holding: Concluding that the site-specific cost-benefit analysis and variance provision is impermissible and unlawful under 33 U.S.C. § 1326(b), the Court of Appeals set regulations aside and remanded the regulations to the EPA for it to clarify whether it had relied on cost-benefit analysis in setting the national performance standards.

Supreme Court Holding: Reversing the Second Circuit decision, the United States Supreme Court held that the EPA permissibly relied on cost-benefit analysis in setting national performance standards requiring power plant operators to reduce harms to aquatic organisms caused by cooling water intake structures. The EPA's view, that the BTA standard permitted consideration of the technology's costs and of the relationship between those costs and the environmental benefits produced, would govern if it was a reasonable interpretation of the statute. The court explained that the EPA's view was not required to be the only possible interpretation or even the interpretation deemed most reasonable by the courts so long as it was not arbitrary or capricious.

The Second Circuit concluded that cost-benefit analysis was precluded under two of the tests, and that the BTA test was to be treated the same as those two. The Second Circuit interpreted the BTA to mean the technology that achieves the greatest reduction in adverse environmental impacts at a cost that can reasonably be borne by the industry. Justice Scalia indicated that it was certainly plausible to consider the "best technology" to be the one that produces the most of some good, here a reduction in adverse environmental impact. However, it might also describe the technology that most efficiently produces some good. However, the Supreme Court stated that in common parlance one could use the phrase "best technology" to refer to that which produces a good at the lowest per-unit cost, even if it produces a lesser quantity of that good than other available technologies.

The environmental groups and states contended that the latter reading was precluded by the statute's use of the phrase "for minimizing adverse environmental impact." "Minimizing," they argued, meant reducing to the smallest amount possible. But Justice Scalia reasoned that "minimize" is a term that admits of degree and is not necessarily used to refer exclusively to the "greatest possible reduction," and that various other provisions of the CWA supported this view.

***Friends of Everglades v. South Florida Water Management District.*, 2009 WL 1545551 (11th Cir. June 4, 2009)**

Facts: Two organizations, the Friends of the Everglades and the Fishermen Against the Destruction of the Environment (Plaintiffs) filed this lawsuit seeking injunction against South Florida Water Management District (the Water District). The plaintiffs sought an injunction to force the Water District to get a permit under the CWA's National Pollution Discharge Elimination System (NPDES) before pumping the polluted canal water into Lake Okeechobee (the lake). Asserting that the pollution of the Lake threatens its way of life, the Miccosukee Tribe joined on the plaintiffs' side. The United States, on behalf of the EPA and the Corps, joined on the defense side, as did the U.S. Sugar Corporation. In an amended complaint, the plaintiffs added the Water District's executive director as a defendant. The Water District based its central argument on the "unitary waters" theory. The district court decided that the Water District was immune under the Eleventh Amendment and dismissed it from the case, but the court kept the executive director in the lawsuit under the *Ex parte Young* doctrine. *See Ex parteYound,* 209 U.S. 123 (1908). None of the parties dispute that the executive director of the Water District has been properly sued under the *Ex parte Young* doctrine. The plaintiffs were satisfied that the remedies sought by Plaintiffs can be obtained against the Executive Director of the District. The District Court concluded that operating the pump stations without an NPDES permit violated the Clean Water Act. The court granted an injunction against the executive director of the Water District that required her to "apply ... for a NPDES permit. During the course of this litigation, the EPA adopted a regulation addressing this specific matter of whether transfer of a pollutant from one navigable body of water to another is an addition to navigable waters of that pollutant. The EPA regulation explains that it was adopted to: clarify that water transfers are not subject to regulation under the NPDES permitting program. This rule defines water transfers as an activity that conveys or connects waters of the United States without subjecting the transferred water to intervening industrial, municipal, or commercial use. 73 Fed. Reg. 33,697-708 (June 13, 2008). Although the CWA defines "discharge of a pollutant," the meaning of that definition is disputed in this case. As such, the court had to determine whether the newly adopted EPA regulation was entitled to deference under *Chevron U.S.A, Inc. v. Natural Res. Defense Council, Inc.,* 467 U.S. 837 (1984).

The Unitary Waters Theory: The unitary waters theory holds that it is not an addition to navigable waters to move existing pollutants from one navigable water to another. An addition occurs, under this theory, only when pollutants first enter navigable waters from a point source, not when they are moved between navigable waters.

The Clean Water Act bans the "discharge of any pollutant" without a permit. 33 U.S.C. §§ 1311, 1342(a)(1). "Discharge" is defined as "any addition of any pollutant to navigable waters from any point source." 33 U.S.C. § 1362(12).

Ex parte Young doctrine: That doctrine provides an exception to Eleventh Amendment immunity for lawsuits against state officials as long as the plaintiffs seek only prospective injunctive relief to stop ongoing violations of federal law.

Issue: Whether the transfer of a pollutant from one navigable body of water to another is an addition to navigable waters of that pollutant and a discharge of a pollutant within the meaning of the CWA. Specifically, whether addition to navigable waters, meaning addition to the waters of the United States refers to waters in the individual sense or as one unitary whole.

Court of Appeals Holding: The Court agreed that to enjoin the executive director of the Water District is for all practical purposes to enjoin the Water District. As such, the court considered the allegations against the water district moot and did not attempt to address it. The court held that operation of the pumps without NPDES permits, did not violate CWA.

In reaching its decision, the court reviewed the metaphor the Supreme Court has adopted to explain the unitary waters theory which is: "If one takes a ladle of soup from a pot, lifts it above the pot, and pours it back into the pot, one has not 'added' soup or anything else to the pot." Under that metaphor the navigable waters of the United States are not a multitude of different pots, but one pot. Ladling pollution from one navigable water to another does not add anything to the pot. So no NPDES permit is required to do that. The court noted that the statutory context of the CWA indicates that sometimes the term "navigable waters" was used in one sense and sometimes in the other sense. Having concluded that the statutory language is ambiguous, the final issue for the court was whether the EPA's regulation, which accepts the unitary waters theory that transferring pollutants between navigable waters is not an "addition to navigable waters," is a permissible construction of that language. The court noted that it may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency. Because the EPA's construction is one of the two readings the court deemed as reasonable under the *Chevron* analysis, the court did not find EPA's construction as "arbitrary, capricious, or manifestly contrary to the statute."

The court concluded by stating that "...the CWA's language about "any addition of any pollutant to navigable waters from any point source," is ambiguous. The EPA's regulation adopting the unitary waters theory is a reasonable, and therefore permissible, construction of the language. Unless and until the EPA rescinds or Congress overrides the regulation, we must give effect to it."

***Peconic Baykeeper, Inc. v. Suffolk County*, 585 F.Supp.2d 377 (E.D.N.Y. 2008) – Citizen Suit**

The insecticides that were used by a county's vector control division to control adult mosquitoes, in compliance with the requirements of the Federal Insecticide and Rodenticide Act (FIFRA), were not "pollutants" under the Clean Water Act; trucks and helicopters used by county to spray insecticides into air were not "point sources" under CWA; and county's maintenance of mosquito grid ditch system built approximately 70 years earlier fell within statutory exemption from CWA's pollutant discharge provisions and did not require permit. Therefore, the county was not required to have a permit under New York's state pollutant discharge elimination system (SPDES) for its aerial applications of those adulticides.

Facts: Environmental group and two individual plaintiffs brought citizen suit under Clean Water Act (CWA) against county and vector control division of county's public works department, alleging that defendants violated CWA by discharging dredged spoils and other materials without permit, discharging pollutants from ditches and culverts without permit, and spraying pesticides into United States waters without permit. The plaintiff PBK is a not-for-profit corporation organized under the laws of the State of New York. PBK's members are residents of Long Island who live near the Peconic and South Shore estuary systems and use the waters and wetlands to fish, boat, bird watch, and for other recreational activities. The plaintiff McAllister is President of Peconic Baykeeper, Inc. and is a member of its Board of Directors. Plaintiff Alfred Chiofolo is a bayman who has made his living for forty-five years fishing these waters, who suffered a decline in his catch and is economically adversely affected, allegedly by the illegal conduct of the defendants.

The defendant Vector Control is a unit of Suffolk County with offices in Yaphank, New York. Vector Control is responsible for controlling mosquito infestations, which it accomplishes largely through the practice of "water management." Water management makes up about 70 percent of defendant Vector Control's mosquito control operations, and consists of the maintenance of 4,000,000 feet of ditches and 50,000 feet of pipelines. Vector Control's entire network consists of approximately 660 miles of "mosquito control ditches," fish reservoirs, and pipes, the majority of which are located in the wetlands of the Peconic and South Shore estuary systems. In addition to the operation of drainage ditches, Vector Control also conducts spraying activities which target mosquitoes at their larval stage, and spraying of pesticides to kill adult mosquitoes.

The plaintiffs allege that in the course of these Vector Control activities the defendants "discharged pollutants into waters of the United States" by (1) spreading "dredge spoil" over the wetlands that are adjacent to the defendants' mosquito control ditches; (2) discharging "fecal coliform bacteria" into Moriches Bay and other bodies of water; and (3) spraying "Scourge" and "Anvil," powerful pesticides that target adult mosquitoes, directly into or over open water.

In July, 2003 the EPA issued a memorandum entitled "Interim Statement and Guidance on Application of Pesticides to Waters of the United States in Compliance with FIFRA" (Interim Statement) to address this issue. The Interim Statement asserts that the "EPA has evaluated whether pesticides applied consistent with FIFRA fall within any of the terms in section 506(2) [defining the term 'pollutant'], in particular whether they are 'chemical wastes' or 'biological materials.' EPA concluded that they do not fall within either term."

Statutory provision: Under the provisions of the Clean Water Act, it is unlawful to discharge "pollutants" in the waters of the United States without an appropriate permit. The statute prohibits "discharge" of "any pollutant" into "navigable waters" without a permit issued by the EPA under the National Pollution Discharge Elimination System (NPDES) or under a federally approved state permit system. 33 U.S.C. §§ 1311, 1342(a)(1). New York State created the "State Pollutant Discharge Elimination System" (SPDES), in compliance with the CWA. The phrase "discharge of a pollutant" is defined as "any addition of any pollutant to navigable waters from any point source." 33 U.S.C. § 1362(12). The term "pollutant" is defined as "dredged spoil,

solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." 33 U.S.C. §1362(6). The term "point source" is defined as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling floating craft, from which pollutants are or may be discharged." 33 U.S.C. §1362(13). Section 404 of the Clean Water Act relates specifically to "permits for [the discharge of] dredged or fill material" into waters of the United States. This section authorizes the "Secretary of the Army, acting through the Chief of Engineers," to issue permits for "the discharge of dredged or fill material into the navigable waters at specified disposal sites." 33 U.S.C. §1344(a), (d).The Secretary of the Army may issue general permits on a State, regional, or nationwide basis covering categories of activities, but general permits may not last for a period longer than five years. 33 U.S.C. §1344(e). There are exceptions to the Section 404 permit requirement. Among the exceptions is an exclusion for the "discharge of dredged material ... for the purpose of the construction or maintenance of farm or stock ponds or irrigation ditches, or *the maintenance of drainage ditches.*" 33 U.S.C. §1344(f)(1)(C). Under the regulations, the "[c]construction or maintenance of farm or stock ponds or irrigation ditches, *or the maintenance (but not construction) of drainage ditches* " fall within the exception. 33 CFR 323.4(a)(3). The Clean Water Act contains a "citizen suit" provision providing that any "person or persons having an interest which is or may be adversely affected" may sue to enforce any limitation in a Clean Water Act permit. 33 U.S.C. §1365(a)(g); *Friends of the Earth, Inc. v. Laidlaw Environmental Services, Inc.,* 528 U.S. 167 (2000).

Further, the Clean Water Act contains two permitting provisions that form the basis of the plaintiffs' claims: (1) Section 402 relates to the "discharge of a pollutant," and (2) Section 404 relates to the discharge of "dredged or fill material."

Holding: In applying the definition of the term "pollutant," the court stated that the only possible terms in that definition that could apply to the pesticides used here is that of "chemical wastes" and "discarded material." The Court reviewed the meaning of the term "chemical waste," including dictionary definitions and concluded:

A plain meaning analysis of the phrase "chemical waste" suggests that a pesticide that is intentionally applied to the water and leaves no excess portions after performing its intended purpose is not a "chemical waste." The court concluded that pesticides that are applied to water for a beneficial purpose and in compliance with FIFRA, and that produce no residue or unintended effects, are not "chemical wastes," and thus are not "pollutants" regulated by the CWA. Because intentionally applied and properly performing pesticides are not "pollutants," a potential discharger is not required to secure a NPDES permit for such pesticides before discharge.

IV. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

***Cannon v. Gates*, 538 F.3d 1328 (10th Cir. 2008), cert. denied, 129 S.Ct. 1669 (2009)**

The United States Supreme Court denied certiorari from a Tenth Circuit decision that the government's efforts to monitor, assess, and evaluate hazardous substances on property owners' land qualified as an "ongoing removal action," for purposes of the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA's) jurisdictional bar, which prohibits courts from reviewing challenges to removal or remedial actions during the pendency of a CERCLA plan.

Facts: Plaintiffs-Appellants F. Douglas Cannon, Allan Robert Cannon, and Margaret Louise Cannon (the Cannons) brought suit against the Defendants-Appellees the United States, Department of the Army, Department of Defense, and Secretary of Defense (the Government), alleging that the government violated the Solid Waste Disposal Act and the Administrative Procedures Act by failing to clean up unexploded ordnance and poisonous chemical agents on their land. The Cannon's land was adjacent to the Army's Dugway Proving Grounds. The Cannons entered into a six-month lease with the United States War Department, which provided that, in return for one dollar, the Cannons would permit the Government to enter onto their land "in order to survey and carry out such other exploratory work as may be necessary in connection with the property; to erect buildings and any other type of improvement; and to perform construction work of any nature." The Government agreed that, at the expiration of the lease, it would "leave the property of the owner in as good condition as it is on the date of the government's entry." Government officials then entered onto Cannon's land to conduct World War II era weapons tests. As part of that testing, the Government used incendiary weapons, including aviation fuel, butane, gasoline, napalm, PT jell, and napalm-gas mixtures. The Government also used chemical weapons, such as phosgene, hydrogen cyanide, mustard gas, and defoliants. Finally, the Government dropped conventional bombs on Cannon's property, including 12,000-pound Fall Boy bombs and Tiny Tim rockets. In all, the Government used at least 3,000 rounds of ammunition and twenty-three tons of chemical weapons in the tests it conducted on Cannon's property. After completing its tests, "[t]he Army failed to keep its promise to clean up Cannon's property." The Cannons unsuccessfully requested that the Government clean up the property. The Government initiated efforts to study the contamination at the adjacent Dugway Proving Grounds, and included the Cannon property in some of these efforts. The Government, however, did not clean up the Cannon property at that time, and has yet to do so. The Cannons alleged that the government had violated the Solid Waste Disposal Act (SWDA) and the Administrative Procedures Act (APA) by failing to clean up unexploded ordnance and poisonous chemical agents on their land. The district court dismissed the case for lack of subject matter jurisdiction pursuant to the jurisdiction-stripping provision at 42 U.S.C. § 9613(h). The Cannons appealed. Denying that they were "challenging" a CERCLA response action, the landowners urged the Supreme Court to clarify that CERCLA does not bar preenforcement review in cases in which an injured party seeks to compel the federal government to clean up a hazardous waste site. They argued the federal government should not be permitted to use CERCLA's timing-of-review provision as a shield against the timely cleanup of hazardous wastes when the federal government itself was the polluter and has continued to

refuse to clean up a contaminated site. In their petition for certiorari the Cannons argued that the government had failed to meet its obligations for more than 63 years. The Cannons assert that the Government's conduct up to this point does not trigger section 9613(h) because the Government has not officially selected a removal or remedial action pursuant to the applicable regulations. The Cannons specifically contend that the Government has not selected a removal action until it has complied with the full panoply of the applicable regulations, which require the Government to conduct a site inspection, issue an engineering evaluation and cost assessment report, take public comments, and finally make a decision about the removal action based on the administrative record. *See 40 CFR sect. 300.415.*

Statutory Requirement: Under CERCLA's jurisdictional bar, prohibiting courts from reviewing challenges to removal or remedial actions during pendency of a CERCLA plan, when a remedy has been selected, no challenge to the cleanup may occur prior to completion of the remedy. CERCLA's jurisdictional bar, prohibiting courts from reviewing challenges to removal or remedial actions during pendency of a CERCLA plan, does not preclude actions to challenge a remedial plan after that plan has been completed. The statutory definition of a removal action dictates that a removal action is ongoing, for purposes of CERCLA's jurisdictional bar, prohibiting courts from reviewing challenges to removal or remedial actions during pendency of a CERCLA plan, even if the government has only begun to monitor, assess, and evaluate the release or threat of release of hazardous substances. 42 U.S.C.A. Sect. 9613(h).

Court of Appeals Holding: The Court of Appeals held that the district court properly dismissed, for lack of subject matter jurisdiction. According to the Tenth Circuit, the government's efforts amounted to an ongoing removal action even if it had not yet completed a substantial portion of its removal proceedings. The government had completed a preliminary assessment of the property, it had determined that the property was highly contaminated, and it was planning its site inspection, the Court of Appeals reasoned. Furthermore, the relief requested by the Cannons would undoubtedly interfere with the government's ongoing removal efforts. The Government's removal actions are therefore sufficient to trigger Sect. 9613(h) because the Government had already undertaken several steps toward determining how it will address the contamination present on the Cannons' property. First, the Government completed a preliminary assessment of the property by conducting an "Archive Search Report" that compiled historical records, interviews, and site surveys to determine the exact nature of the military testing conducted on the Cannons' property. Based on the Archive Report, the Government then prepared and issued a "Draft Formerly Used Defense Site Engineering Evaluation/Cost Analysis Report." This draft report indicated that the Cannons' property was in fact highly contaminated. Finally, the record also indicates that the Government was planning its site inspection while this suit was pending before the district court. These steps constitute the Government's efforts thus far to "monitor, assess, and evaluate" the hazardous substances on the Cannons' land, and therefore qualify as an ongoing removal action. Accordingly, the court concluded that the Government had selected a removal action and thus triggered Sect. 9613(h).

The Court of Appeals was not persuaded by the Cannons contention that that the Government had not selected a removal action until it has complied with the full panoply of the applicable regulations, which require the Government to conduct a site inspection, issue an engineering evaluation and cost assessment report, take public comments, and finally make a decision about

the removal action based on the administrative record. According to the court, Sect. 9613(h) is a "blunt withdrawal" of the jurisdiction of federal courts, which applies once the Government has begun its removal action. Nothing in the statutory language suggests that Congress intended this jurisdiction-stripping provision to apply only once the Government has completed a substantial portion of its removal proceedings. Therefore, the court remained convinced that the district court properly concluded that the Government had selected a removal action pursuant to its authority under section 9604 and therefore the action by the Cannons was statutorily barred.

Supreme Court denied certiorari.

***Burlington Northern and Santa Fe Ry. Co. v. U.S.*, 129 S. Ct. 1870 (2009)**

The U.S. Supreme Court held that Shell Oil Co. could not be held liable as an "arranger" under the Superfund law for incidental spills that occurred while a pesticide it was selling was being transferred to a distributor. As a result, Shell will not have to pay damages for the cleanup of a Superfund site in Arvin, California, but the two railroads that own the site will have to pay 9 percent of the government's $8 million in cleanup costs.

Facts: Railroads that owned portion of land where agricultural chemical storage and distribution facility was located filed an action against facility's owner and operator seeking contribution for costs incurred in the cleanup of land ordered by the Environmental Protection Agency (EPA). Subsequently, EPA and California's Department of Toxic Substances Control (DTSC) each filed CERCLA actions against facility owner, railroads, and manufacturer of certain agricultural chemicals for reimbursement of their investigation and cleanup costs. The cases were consolidated.

In 1960, Brown & Bryant, Inc. (B & B) began operating an agricultural chemical distribution business, purchasing pesticides and other chemical products from suppliers such as Shell Oil Company (Shell). Using its own equipment, B & B applied its products to customers' farms. B & B opened its business on a 3.8 acre parcel of former farmland in Arvin, California, and in 1975, expanded operations onto an adjacent .9 acre parcel of land owned jointly by the Atchison, Topeka & Santa Fe Railway Company, and the Southern Pacific Transportation Company (now known respectively as the Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company) (Railroads). Both parcels of the Arvin facility were graded toward a sump and drainage pond located on the southeast corner of the primary parcel. Neither the sump nor the drainage pond was lined until 1979, allowing waste water and chemical runoff from the facility to seep into the ground water below. During its years of operation, B & B stored and distributed various hazardous chemicals on its property. Among these were the herbicide dinoseb, sold by Dow Chemicals, and the pesticides D-D and Nemagon, both sold by Shell. When B & B purchased D-D, Shell would arrange for delivery by common carrier, f.o.b. destination (meaning the seller must at his own expense and risk transport the goods to [the destination] and there tender delivery of them). The District Court found that B & B assumed "stewardship" over the D-D as soon as the common carrier entered the Arvin facility. When the product arrived, B & B transferred the product from tanker trucks to a bulk storage tank located on B & B's primary parcel. From there, B & B transferred the chemical to bobtail trucks, nurse

tanks, and pull rigs. During each of these transfers leaks and spills could-and often did-occur. Although the common carrier and B & B used buckets to catch spills from hoses and gaskets connecting the tanker trucks to its bulk storage tank, the buckets sometimes overflowed or were knocked over, causing D-D to spill onto the ground during the transfer process.

Aware that spills of D-D were commonplace among its distributors, in the late 1970's Shell took several steps to encourage the safe handling of its products. Shell provided distributors with detailed safety manuals and instituted a voluntary discount program for distributors that made improvements in their bulk handling and safety facilities. Later, Shell revised its program to require distributors to obtain an inspection by a qualified engineer and provide self-certification of compliance with applicable laws and regulations. B & B's Arvin facility was inspected twice, and in 1981, B & B certified to Shell that it had made a number of recommended improvements to its facilities. Over the course of B & B's 28 years of operation, delivery spills, equipment failures, and the rinsing of tanks and trucks allowed Nemagon, D-D and dinoseb to seep into the soil and upper levels of ground water of the Arvin facility. Although B & B undertook some efforts at remediation, by 1989 it had become insolvent and ceased all operations.

Investigations of B & B by the DTSC and the EPA revealed significant soil and ground water contamination and in 1989, the Governments exercised their CERCLA authority to clean up the site, spending over $8 million by 1998. Seeking to recover their costs, the Governments initiated legal action against Shell and the Railroads.

Statutory provisions: CERCLA imposes strict liability on 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. CERCLA liability under the arranger provision would attach for environmental contamination if an entity were to enter into a transaction for the sole purpose of discarding a used and no longer useful hazardous substance. An entity could not be held liable as an arranger for disposal of hazardous substances under CERCLA merely for selling a new and useful product if the purchaser of that product later, and unbeknownst to the seller, disposed of the product in a way that led to contamination.

An entity may qualify as an "arranger" of the disposal of hazardous substances, for purpose of liability provision of CERCLA, when it takes intentional steps to dispose of a hazardous substance. 42 U.S.C. § 9607(a)(3). Apportionment of environmental cleanup costs under CERCLA looks to whether defendants may avoid joint and several liability by establishing a fixed amount of damages for which they are liable, while contribution actions allow jointly and severally liable potentially responsible parties (PRPs) to recover from each other on the basis of equitable considerations. 42 U.S.C. § 9613(f)(1).

Issue: Whether Shell took intentional steps to dispose of a hazardous substance to qualify him as an "arranger" within the meaning of 42 U.S.C. § 9607(a)(3) in order to qualify for liability for the cleanup cost of the contaminated Arvin site as a PRP.

District Court's Holding: The District Court ruled in favor of the Governments, finding that both the Railroads and Shell were PRPs under CERCLA because the Railroads owned part of the facility and because Shell had "arranged for disposal ... of hazardous substances," through its sale and delivery of D-D. The District Court apportioned liability, holding the Railroads liable for 9% of the Governments' total response costs, and Shell liable for 6%.

Court of Appeals Holding: On appeal, the Ninth Circuit agreed that Shell could be held liable as an arranger under 42 U.S.C. § 9607(a)(3) and affirmed the District Court's decision in that respect. Although the Court of Appeals agreed that the harm in this case was theoretically capable of apportionment, it found the facts present in the record insufficient to support apportionment, and therefore held Shell and the Railroads jointly and severally liable for the Governments' response costs.

Supreme Court Holding: To determine whether Shell may be held liable as an arranger, the court began with the language of the statute. Under 42 U.S.C. § 9607(a)(3)'s plain language, an entity may qualify as an arranger when it takes intentional steps to dispose of a hazardous substance. To qualify as an arranger, Shell must have entered into D-D sales with the intent that at least a portion of the product be disposed of during the transfer process by one or more of § 6903(3)'s methods. The facts found by the District Court do not support such a conclusion. The evidence shows that Shell was aware that minor, accidental spills occurred during D-D's transfer from the common carrier to B & B's storage tanks after the product had come under B & B's stewardship; however, it also reveals that Shell took numerous steps to encourage its distributors to *reduce* the likelihood of spills. Thus, Shell's mere knowledge of continuing spills and leaks is insufficient grounds for concluding that it "arranged for" D-D's disposal. The court held that Shell is not liable as an arranger for the contamination at the Arvin facility because an entity could not be held liable as an arranger merely for selling a new and useful product if the purchaser of that product later, and unbeknownst to the seller, disposed of the product in a way that led to contamination. Having concluded that Shell was not liable as an arranger, the Court determined whether the Railroads were properly held jointly and severally liable for the full cost of the Governments' response efforts.

The Court held that the District Court reasonably apportioned the Railroads' share of the site remediation costs at 9%.

Avail Services, Inc. v. Cooper Industries, LLC Slip Copy, 2009 WL 498133 (Feb. 27, 2009).

The court revisits this case to address liability issues under § 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that the court in Aviall Services, Inc. v. Cooper Industries, LLC,* 572 F. Supp. 2d 676 (*Aviall III*) addressed. At issue is whether plaintiff Aviall Services, Inc. (Aviall), a land purchaser, has established the liability of defendant Cooper Industries, LLC (Cooper), the seller, for cost recovery under CERCLA § 107(a) as to remedial investigation costs that Aviall incurred at the Love Field Facility (Love Field) for the period March 1996 through February 1997, and as to response costs incurred at the Carter Field Facility (Carter Field). The court held that Aviall is not entitled to recover the Love Field remedial investigation costs, that it is entitled to recover response costs incurred at Carter Field, and that the question of compliance with the national contingency plan (NCP) in cleaning up Carter Field remains to be decided at trial.

Love Field Facts: Aviall discovered chlorinated solvent groundwater contamination at Love Field through a February 1996 due diligence assessment of MLT Development Company, (MLT), which owned a nearby land parcel and later purchased part of the Love Field property from Aviall. In March 1996 Aviall notified the Texas Natural Resource Conservation Commission now known as the Texas Commission on Environmental Quality (TNRCC) of the contamination. Between March 1996 and February 1997, Aviall conducted a remedial investigation and uncovered the existence of contaminants at Bachman Lake Park. To determine the extent of contamination, Aviall sought permission to install monitoring wells and sample groundwater on nearby land owned by the following entities: MLT, City of Dallas Aviation Department (Dallas Aviation), and City of Dallas Parks and Recreation Department (Dallas Parks/Recreation) (which owned Bachman Lake Park). Aviall forwarded the results of its investigative activities to the landowners. Aviall communicated with Cooper and Greenwich Air Services, Inc. (Greenwich), another subsequent purchaser of part of the Love Field property, regarding the Love Field investigation and remediation issues. Aviall's investigation culminated in a May 1997 Groundwater Monitoring and Sampling and Analysis Plan (groundwater monitoring plan) and a June 1997 Remedial Investigation and Groundwater Monitoring Report (remedial investigation report), which Aviall provided to the TNRCC, Dallas Aviation, Dallas Parks/Recreation, and Greenwich. In October 1997 Aviall enrolled the Love Field site in the TNRCC's Voluntary Cleanup Program (Cleanup Program) and proceeded to undertake remediation subject to the TNRCC's oversight. In November 1997, as required by the Cleanup Program but after completion of its remedial investigation, Aviall notified 12 other nearby landowners or lake users, who were located down gradient of Love Field to the north or northwest and roughly between Love Field and Bachman Lake, that contamination potentially had migrated onto their properties. In 1999 Aviall began publishing newspaper notices regarding the ongoing cleanup at Love Field.

Aviall maintains that MLT, Dallas Aviation, Dallas Parks/Recreation, Greenwich, and Cooper were the only parties foreseeably affected by the remedial investigation. Aviall contends that the other nearby landowners had a merely "speculative" interest and that they "foreseeably could have a real interest in Aviall's groundwater delineation only after confirmation that their properties were likely to be contaminated." Cooper counters that Aviall excluded from the remedial investigation two discrete categories of foreseeably affected parties: the 12 down

gradient landowners whom Aviall first contacted in November 1997, and recreational users of Bachman Lake, who learned of the response action through the 1999 newspaper notices. Aviall asserts that it notified the down gradient landowners or lake users when "it became reasonably clear that the contamination likely had affected their properties and that it provided the landowners a meaningful opportunity to protect their interests despite their tardy notification. First, Aviall points to the offer that it made to each landowner to obtain at its own expense a certificate from the TNRCC's Innocent Owner's Program (IOP) that would relieve the landowner of personal liability for any contamination. Aviall contends that these certificates ensured that down gradient properties would not lose market value due to contamination, and it cites an expert article to support this view. Second, Aviall maintains that even though the remedial investigation was complete when it first contacted the landowners, it would still have considered any landowner's request for additional investigation or testing, but no requests were made. Cooper maintains that Aviall discovered early in the investigation that the gradient of the Love Field groundwater was toward the north or northwest-in the direction of the 12 landowners and Bachman Lake. Cooper further asserts that the investigation revealed that contaminants had in fact migrated to down gradient properties and the area around Bachman Lake long before Aviall notified the landowners or lake users. This late notice, Cooper argues, denied these foreseeably-affected parties a meaningful opportunity to comment on Aviall's investigatory decisions and thereby precludes Aviall from recovery of remedial investigation cost..

Carter Field Facts: Aviall discovered groundwater contamination at Carter Field through a May 1996 due diligence assessment of Greenwich, the prospective purchaser of the property. Aviall reported the contamination to the TNRCC and commenced an investigation. Greenwich's due diligence assessment had detected chlorinated contaminants in at least two monitoring wells located at the Carter Field site and one monitoring well on adjacent land owned by Centreport. Aviall's investigation, however, indicated that the contamination was limited to just one monitoring well at the Carter Field site. Aviall's investigation produced two reports, one that summarized investigative results and one that proposed closure of the response action through a deed certification that alerted potential purchasers to the presence of groundwater contamination. Aviall submitted these reports to the TNRCC, Greenwich, and (Aviall maintains) to Centreport. The TNRCC approved closure through deed certification and did not require Aviall to take further action to remove or remediate the contamination. Aviall forwarded a draft deed certification to the TNRCC and Greenwich, and the final version was recorded in Tarrant County in August 1997. During the Carter Field response action, Aviall also communicated with Cooper regarding the costs incurred and proposed closure. Aviall maintains that Greenwich and Cooper constituted the only foreseeably-affected parties. It contends that, because the contamination was contained within Carter Field's boundaries, no other landowner, including Centreport, could have been foreseeably affected. Aviall never informed the eastern, down gradient landowner of the Carter Field response action. Cooper responds that not only Centreport, but at least one additional adjacent landowner, was foreseeably affected by Aviall's response action. Cooper argues, and cites supporting expert opinion evidence, that the presence of contamination on one property creates "environmental stigma" that tends to depress the market values of surrounding, uncontaminated properties. Cooper therefore contends that Aviall's neighbor located adjacent and down gradient to the East was a foreseeably affected party. To controvert Cooper's "environmental stigma" argument, Aviall cites an expert article that opines that it is unwarranted

to assume that environmental contamination reduces property values and that such conclusions must be based on supportive market data.

Issue: Whether plaintiff Aviall Services, Inc. (Aviall), a land purchaser, complied with the National contingency plan's public participation requirement and is entitled to recovery of remedial cost from seller (Defendant) Cooper.

Statutory Requirement: For private party to substantially comply with public participation requirement of National Oil and Hazardous Substances Pollution Contingency Plan (NCP), as required for party's recovery of response costs in cost recovery action under CERCLA, (1) there must be sufficient oversight, either by the public or by a government agency charged with protecting the public environmental interest, to protect the public's shared interest in an "environmentally sound" cleanup, and (2) parties who might foreseeably be affected by the private party's decisions must be given a meaningful opportunity to participate in them. Private party's obligation to give those foreseeably affected by its environmental cleanup decisions a meaningful opportunity for comment, pursuant to public participation requirement of NCP, requires, at a minimum, that affected party's views must be considered before any final decisions are reached on key issues, and also typically requires that some type of public notice be issued advising of opportunity to comment. Whether private party seeking response costs in cost recovery action under CERCLA has substantially complied with NCP is a mixed question of law and fact; once factual details regarding private party's cleanup efforts have been established, court decides, as a matter of law, whether those efforts substantially comply with NCP, although expert opinion may assist court in establishing relevant facts. 42 U.S.C.A. § 9607(a), (a)(4)(B).

Love Field Holding:
Aviall is not entitled to recover the Love Field remedial investigation costs that it otherwise would be entitled to recover, because it was not substantially consistent with the national contingency plan's public participation requirement.

a. Because Aviall failed to provide foreseeably affected parties with a meaningful opportunity to participate in the Love Field remedial investigation.
b. Moreover, a reasonable trier of fact could not find that Aviall gave the 12 down gradient landowners an equivalent opportunity to protect their interests and influence Aviall's decisions. Aviall's assistance in obtaining IOP certificates was not a substitute for the opportunity to comment on and possibly to influence, an ongoing remedial investigation. The IOP certification process did not afford the landowners an avenue to express, and Aviall to consider, their views on the nature, duration, and extent of the investigation.
c. Although Aviall posits that it would have taken into account a landowner's request for additional testing or investigation, Aviall cites no evidence that indicates that the landowners were aware of this purported opportunity. Rather, a reasonable trier of fact could only find that the letters that Aviall sent to the landowners gave the impression that the investigation was closed. *See, e.g.,* D.App. 267 (letter to Amlie LTD) ("[Aviall] has conducted an environmental investigation [.] (emphasis added)). An unknown opportunity to participate cannot be a meaningful one.
d. Because Aviall failed to provide foreseeably affected parties with a meaningful opportunity to participate in the Love Field remedial investigation, it did not

substantially comply with the NCP's public participation requirement. Although it may appear unfair to excuse Cooper from paying for this tranche of the cleanup costs at Love Field, this result flows from Congress' policy judgment to limit CERCLA's remedy to costs that are consistent with the NCP.

Carter Field Holding:

Aviall is entitled to recover response costs incurred at Carter Field. A reasonable trier of fact could find that the eastern landowner was not a foreseeably affected party due to the limited extent of the contamination at Carter Field, which was limited to one well. A reasonable trier of fact could find that the risk of property value decline in these circumstances was simply too remote to render the eastern neighbor foreseeably affected.

***Friedland v. TIC-The Indus. Co.*, 566 F.3d 1203 (10th Cir. 2009)**

Facts: Plaintiff, Mr. Friedland is the former director and president of Summitville Consolidated Mining Company, Inc. (SCMCI) in Colorado. TIC helped construct the Summitville mine. GeoSyntec provided quality assurance regarding the mine's heap leaching system, a process in which a cyanide solution is sprayed on gold-bearing ore to precipitate the gold. In December 1992, SCMCI declared bankruptcy and abandoned the mine. That same month the EPA took over management of the Summitville mine and instituted response actions to address actual or threatened releases of contaminated water from the mine into the environment. The EPA and the State of Colorado sued Mr. Friedland under CERCLA § 107, 42 U.S.C. § 9607, to recover their response costs. As part of that lawsuit (the cost-recovery action), Mr. Friedland filed a third-party contribution complaint under CERCLA § 113, 42 U.S.C. § 9613, against twelve separate PRPs, including an entity called Industrial Constructors Corp. (ICC) but did not name TIC or GeoSyntec in that complaint.

Mr. Friedland, the United States, and Colorado reached a $20,723,181 settlement agreement in the cost-recovery action. Mr. Friedland initiated this CERCLA contribution action against TIC and GeoSyntec in 2004, seeking contribution for the $20,723,181 he agreed to pay to settle the cost-recovery action brought against him by the United States and Colorado. Mr. Friedland received payments from two insurance companies, USF & G and Travelers to resolve the CERCLA liability. The district court granted summary judgment to defendants, and plaintiff appealed.

Rule: Under the collateral source rule, injured parties may recover damages from wrongdoers even when they have already received compensation from other "collateral" sources. The rationale for the rule is that even though an injured party may receive a double recovery or windfall in some cases, such a **result is better** then allowing a wrongdoer to escape liability just because money was received from another source.

Issue:

1. Whether the collateral source rule applies to the CERCLA contribution action

2. Whether damages recoverable in contribution would be reduced by full amount that plaintiff previously obtained in settlements with two insurers, under the satisfaction rule.

Analysis:

1. The Court reasons that if Plaintiffs were allowed to recover for those costs "again" from Defendants, it would be equivalent to Plaintiffs being allowed to profit from their own and prior contamination. The purpose of the Contribution element of CERCLA was to reallocate the remedial cost to those who were ultimately responsible for the pollution, not to provide a windfall recovery for parties who happen to be in the chain of title. In addition, the plaintiff in this case is not the kind of "innocent" injured party that the rule was designed to help. According to the court, the plaintiff is a "culpable" or liable party who has contributed to the site's contamination. Thus the court refused to apply the collateral source rule.
2. The court agrees with the District Court that if Mr. Friedland's injury and the damages he alleges in this lawsuit are the same as those addressed by the USF & G and Travelers settlements, then the defendants are entitled to a full credit in the amount of the settlements. That is the case here since Mr. Friedland his costs only referenced the $20,723,181 settlement figure, not his own personal legal fees.

Plaintiff (Mr. Friedland): Wants DOUBLE RECOVERY

- Plaintiff argued that despite receiving settlement money from two insurers (USF & G and Travelers) for the full amount it had paid the federal and state governments to resolve its CERCLA liability at a mining site in Colorado, it could still pursue two potentially responsible parties (PRPs) for some amount of cleanup costs under the collateral source rule.
- Alternatively, he urged the district court to allocate the settlement money to his $28 million defense costs, rather than the $20,723,181 settlement amount. In this way, Mr. Friedland argued that he still has recoverable damages. The district court rejected both arguments and granted the summary judgment motion against Mr. Friedland. Mr. Friedland maintains the same two positions on appeal.

Holding: The court held that common-law tort rule known as the collateral source rule is NOT applicable in a CERCLA section 113 contribution action and damages recoverable in contribution action would be REDUCED by full amount that plaintiff previously obtained in settlements with two insurers, under the one satisfaction rule because the Plaintiff's alleged injury and damages in this lawsuit are the same as those addressed in the USF and Travelers settlements Plaintiff already received. Thus Defendant does not owe Plaintiff any additional payment. Affirm.

V. Resource Conservation and Recovery Act (RCRA)

***Incorporated Village of Garden City v. Genesco, Inc., Gordon-Atlantic Corp.*, 596 F.Supp.2d 587 (E.D.N.Y. 2009)**

A claim brought by a village against potentially responsible parties (PRPs), stemming from the alleged release of toxins into a water supply, was not barred by the provision of the Resource Conservation and Recovery Act (RCRA) prohibiting citizen's suits where a state is "diligently prosecuting" an action. Although the EPA had approved the PRP's remedial investigation and subsequently issued a preliminary plan, neither the EPA nor any state agency had brought suit against the PRP.

Facts: Village brought action under federal and state law against PRPs, stemming from alleged release of toxins into village water supply. PRPs moved for dismissal. The Village, a municipal corporation organized under the laws of the State of New York, delivers drinking, or "potable" water to an estimated 21,650 residents of Long Island from an aquifer which draws water from underground public supply wells. Between approximately 1965 and 1969, a former subsidiary of Genesco operated a fabric cutting mill at 150 Fulton Avenue in Garden City Park, New York (the Site), a 0.8 acre parcel of land located directly upgradient of three of the public supply wells. The operations of the mill included a dry cleaning machine utilized to clean fabrics, which used significant amounts of tetrachloroethylene (PCE), a volative organic compound (VOC) which is a toxic substance, hazardous waste and suspected carcinogen. The operations used an underground Class V injection well, as defined by 40 C.F.R. § 146.5(e), to inject wastes into the subsurface formation which included PCE. When Genesco's lease expired, it did not properly close the Site's injection well so as to prevent further contaminants from entering the well and into the underground source of Village drinking water. Gordon-Atlantic, the current owner of the Site, also failed to close the well and as such PCE continues to flow from the Site into the underground sources of drinking water at levels that violate the New York State Department of Health (NYSDOH) primary drinking water standards and the New York State Department of Environmental Conservation (NYSDEC) groundwater quality standards.

Between 1986 and 1996, the Nassau County Department of Health (NCDOH) and the Nassau County Department of Public Works (NCDPW), along with the NYSDEC, investigated the area within and around the Site to determine the source of VOC impact to a number of area supply wells; these investigations concluded that the Site was a source of VOC contamination of the aquifer from which the Village draws its drinking water. Since 1996, such investigations have been overseen primarily by the NYSDEC and the United States Environmental Protection Agency (EPA). In connection with the initial investigation, Genesco retained an environmental consulting firm which conducted further investigation into the PCE contamination; as a part of that inquiry, the NYSDEC, the NYSDOH and Genesco documented that Genesco released a substantial amount of PCE into the environment from the dry cleaning machine and associated injection well at the Site. Genesco has further submitted reports to the NYSDEC demonstrating that, as a result of the use and disposal of PCE on the Site, the soil, soil vapors, groundwater and

sediments at the Site have been heavily contaminated by PCE, which has impacted the supply wells.

In order to address the PCE contamination at the Site, the Village has hired professionals to assess the contamination, installed a water treatment system and upgraded the technology therein, at a cost in excess of $2,500,000. The Village estimates that the present day value of past and potential future costs could exceed $41,000,000. Neither defendant has agreed to reimburse the Village for costs incurred or assume responsibility for effectuating a permanent solution to the contamination.

In May of 1993, the NYSDEC placed the Site on the Registry of Inactive Hazardous Waste Disposal Sites in New York State and designated it as a "Class 2" site, meaning that hazardous wastes disposed of therein present a significant threat to public health or the environment, warranting action. The NYSDEC identified Genesco as a PRP under CERCLA and entered into an Administrative Order on Consent (Consent Order) with Genesco that required it to perform a Remedial Investigation and Feasibility Study (RI/FS) and permitted it to design and implement an Interim Remedial Measure (IRM) if necessary. Genesco has not admitted liability nor committed to any permanent remedial measures.

On April 1, 1998, the EPA placed the Site on the National Priority List (NPL) under CERCLA. Between August 1998 and December 2001, Genesco conducted an IRM to remove contaminants from the injection well and installed a soil-vapor extraction system to address residual soil contamination. In November of 2005, the NYSDEC and EPA approved Genesco's RI/FS. In or about 2007, the EPA assumed management responsibility for the Site investigation and remediation from the NYSDEC and announced a proposed interim remedial plan (Interim Plan) in February of 2007 that called for the installation of a groundwater extraction and treatment system, the application of chemical oxidation technology, and improving the wellhead treatment for Supply Well Nos. 13 and 14, with an estimated total cost of approximately $10,700,000. Plaintiff argues that because defendants disposed of PCE, a hazardous waste, at the Site and failed to remediate the effects of that action, it is entitled to injunctive relief from this Court ordering that defendants investigate and remediate the discharge of PCE into the groundwater underneath the Site in order to eliminate the danger to the environment and the public health. Plaintiff further contends that defendants should bear the past and future costs and expenses borne by the Village associated with the treatment of that discharge. defendants argue that plaintiff's RCRA claim is barred by the EPA and the NYSDEC's respective "diligent prosecution" of the action, *i.e.*, the EPA's 2005 approval of Genesco's remedial investigation and the agency's subsequent issuance of a preliminary plan and accompanying Administrative Order, and the NYSDEC's Consent Order requiring Genesco to perform an RI/FS and IRM. Plaintiffs respond that "prosecution" as termed in subsection (b)(2)(B)(i) necessarily means an action brought in district court, as set forth in 42 U.S.C. § 6973 and 42 U.S.C. § 9606. Plaintiff argues that (b)(2)(C)(i) also requires a court action. As neither the EPA nor the NYSDEC has brought suit against either defendant in federal or state court, respectively, plaintiff submits, neither agency is "diligently prosecuting" an action such that it would bar plaintiff's RCRA citizen suit.

Statutory Requirement: RCRA has a "citizen suit" provision, allowing claimants to obtain a "mandatory injunction, *i.e.,* one that orders a responsible party to 'take action' by attending to the cleanup and proper disposal of toxic waste, or a prohibitory injunction, *i.e.,* one that 'restrains' a responsible party from further violating RCRA." Any person may commence a civil action on his own behalf against any person, ... including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment. 42 U.S.C. § 6972(a)(1)(B). However, "[t]o ensure that citizen suits are not duplicative or disruptive of federal or state remediation efforts, [RCRA] § 7002(b)(2)(B) bars citizen suits in certain instances where the U.S. or a State has acted to address the alleged endangerment." The RCRA provision under which plaintiff brings its claim states that:

[N]o action may be commenced under subsection (a)(1)(B) of this section if the Administrator, in order to restrain or abate acts or conditions which may have contributed or are contributing to the activities which may present the alleged endangerment-

(i) Has commenced and is diligently prosecuting an action under section 6973 of this title or under section 106 of CERCLA. Subsection (b)(2)(C)(i) bars a citizen suit in the event that the *state* is "diligently prosecuting" an action under "subsection (a)(1)(B)." 42 U.S.C. § 6972(b)(2)(C)(i).

Holding: The RCRA provision barring citizen's suits where the state is "diligently prosecuting" action did not bar the plaintiff's claim because although EPA had approved PRP's remedial investigation and subsequently issued preliminary plan, neither EPA nor state agency had brought suit against PRP in connection with the Site.

VI. National Environmental Policy Act/ Impact Statement (NEPA –EIS)

***Winter v. Natural Resources Defense Council, Inc.,* 129 S.Ct. 365 (2008)**

Facts: Environmental organizations (Plaintiffs), which were concerned that the Navy's use of mid-frequency active (MFA) sonar in training exercises would cause serious harm to various species of marine mammals present in the southern California waters, sought a preliminary injunction based on alleged violations of the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Administrative Procedure Act (APA), and the Coastal Zone Management Act (CZMA). The Navy planned to engage in a series of 14 antisubmarine warfare-training exercises off the coast of southern California (SOCAL). Plaintiffs sued the Navy, seeking declaratory and injunctive relief on the grounds that the training exercises violated NEPA and other federal laws; in particular, plaintiffs contend that the Navy should have prepared an Environmental Impact Statement (EIS) before conducting the latest round of SOCAL exercises. The Navy disputes that claim, noting that MFA sonar training in SOCAL waters has been conducted for 40 years without a single documented sonar-related injury to any

marine mammal. The District Court entered an injunction, imposing six restrictions on the Navy's use of sonar during its SOCAL training exercises and required the Navy to shut down MFA sonar when a marine mammal was spotted within 2,200 yards of a vessel, and to power down sonar by 6 decibels during conditions known as "surface ducting." The Navy sought and obtained authorization from Council on Environmental Quality (CEQ) to implement "alternative arrangements" to NEPA compliance in light of "emergency circumstances." The CEQ allowed the Navy to continue its training exercises under voluntary mitigation procedures that the Navy had previously adopted. The Navy moved to vacate the District Court's preliminary injunction in light of the CEQ's actions. The District Court refused to do so, and the Court of Appeals affirmed. The Court of Appeals held that there was a serious question as to whether the CEQ's interpretation of the "emergency circumstances" regulation was lawful, that plaintiffs had carried their burden of establishing a "possibility" of irreparable injury, and that the preliminary injunction was appropriate because the balance of hardships and consideration of the public interest favored the plaintiffs. The Court of Appeals emphasized that any negative impact of the injunction on the Navy's training exercises was "speculative."

Issue:

1. Whether the plaintiffs had carried their burden of establishing a "possibility" of irreparable injury,
2. Whether the preliminary injunction was appropriate considering the balance of hardships and consideration of the public interest favored the plaintiffs

Supreme Court Holding: The Supreme Court held that plaintiffs seeking preliminary relief are required to demonstrate that irreparable injury is likely in absence of injunction. The court concluded that the balance of equities and consideration of the overall public interest in this case tip strongly in favor of the Navy. The court reasoned that for the plaintiffs, the most serious possible injury would be harm to an unknown number of the marine mammals that they study and observe. In contrast, forcing the Navy to deploy an inadequately trained antisubmarine force jeopardizes the safety of the fleet. Active sonar is the only reliable technology for detecting and tracking enemy diesel-electric submarines, and the President-the Commander in Chief has determined that training with active sonar is "essential to national security." The Supreme Court vacated the preliminary injunction to the extent challenged by the Navy.

***Ohio Valley Environmental Coalition v. Hurst*, 604 F.Supp.2d 860 (S.D.W.Va. 2009)**

The Army Corps of Engineers' determination with respect to the issuance of a nationwide permit (NWP), under the Clean Water Act (CWA), reauthorizing discharge of dredged and fill material associated with surface coal mining activities, that cumulative impacts would be minimal was deficient under the National Environmental Policy Act (NEPA).

Facts: Environmental groups brought action challenging Army Corps of Engineers decision to issue nationwide permit (NWP) authorizing the discharge of dredged and fill material associated with surface coal mining activities. After environmental groups' motion for summary judgment was granted, the Court of Appeals reversed and remanded. On remand, the environmental groups renewed their motion for summary judgment and filed a supplemental complaint challenging

reauthorized permit, which was issued after the original permit expired. Corps' defendants cross-moved for summary judgment.

This case involves several environmental groups' challenge to the Army Corps of Engineers' (Corps) decision to issue a nationwide permit, NWP 21, authorizing the discharge of dredged and fill material associated with surface coal mining activities, which includes mountaintop mining. The Corps indirectly manages this process through a nationwide permitting process. A nationwide discharge permit authorizes discharges from all activities, nationwide, within an identified category. In the course of issuing NWP 21 in the year 2007, the Corps determined, as required by CWA, that the activities authorized by that permit would only have minimal cumulative environmental impacts. The Corps also decided not to prepare an environmental impact statement, as required by NEPA, because it determined that the permitted activities would not result in significant environmental impacts.

Statutory Requirements: Section 404 of the CWA requires the Corps to determine that the activities in the authorized category would only have minimal environmental impacts, both individually and cumulatively. NEPA requires federal agencies to prepare environmental impact statements (EIS) for actions that will have a significant impact on the environment. 42 U.S.C. § 4332(2)(C). To determine whether an action will have a significant environmental impact and thus require an EIS, an agency first decides whether the action is one that normally does require an EIS, or is categorically excluded from requiring an EIS. 40 CFR Sect. 1501.4(a). If the agency cannot readily determine whether an action will significantly affect the environment, then it must prepare an environmental assessment (EA) that discusses the proposed action, alternatives, and the environmental impacts of the proposed action and its alternatives. 1508.9. An EA is a "concise public document" that "provides[s] sufficient evidence and analysis for determining whether to prepare an [EIS] or finding of no significant impact. 40 CFR Sect. 1501.4(a), 1508.9(a). The EA must address the direct, indirect, and cumulative impacts of the proposed action. Section 1508.9(a). If the EA reveals that the project will have a significant effect on the quality of the human environment, then the Corps must prepare a detailed, written EIS. 42 U.S.C § 4332(2)(C). If the Corps determines that its proposed action will not have a significant effect on the environment, then it need not prepare an EIS but may instead issue a Finding of No Significant Impact (FONSI). A FONSI must be supported by a statement of reasoning and evidence. 40 CFR Sect. 1501.4(a), 1508.13

Holding: The court found the Corps' determinations that the activities authorized by the permit would only have minimal cumulative environmental impacts were arbitrary and capricious under the APA, for the following reasons: The Corps failed to consider the ongoing effects of past actions, including information on the past use of NWPs. Also, after the Corps appeared to implicitly concede that the permit would cause significant cumulative environmental impacts, without discussing the nature of those impacts, the Corps relied exclusively on the presumed success of compensatory mitigation and later regional determinations in deciding the cumulative impacts of the permit would be minimal. The Corps failed to consider the ongoing effects of past actions, including information on the past use of NWPs. Also, after the Corps appeared to implicitly concede that the permit would cause significant cumulative environmental impacts, without discussing the nature of those impacts, the Corps relied exclusively on the presumed

success of compensatory mitigation and later regional determinations in deciding the cumulative impacts of the permit would be minimal. The Corps also provided no evidence that the mitigation process would be successful or adequately enforced. Accordingly, the Corps' determinations were unsupported by the administrative record and were arbitrary and capricious. Therefore, the Corps' decision not to complete an EIS following its FONSI was arbitrary and capricious under the Administrative Procedure Act (APA). NWP 21 (2007) and the court vacated and remanded to the Corps for further proceedings.

VII. Punitive Damages

Exxon Valdez v. Exxon Mobil, 568 F.3d 1077 (9th Cir. 2009)

Class members' entitlement to punitive damages from oil company for massive oil spill from supertanker that ran aground was meaningfully ascertained on date that original judgment awarding punitives was entered, as required for award of post-judgment interest running from date of original judgment rather than date of remitted judgment that substantially reduced punitives, since neither evidentiary basis nor legal foundation for award was disturbed after dozen years of subsequent litigation.

Facts: This is a punitive damage litigation arising from the 1989 wreck of the Exxon Valdez. The supertanker Valdez ran aground on a reef in Alaska's Prince William Sound March 23, 1989, spilling 11 million gallons of oil. Thousands of residents, the state and others sued ExxonMobil, alleging severe economic losses and environmental damage to the state's waterways and wildlife. Most of the cases were consolidated into a class action with 32,000 members who were eligible to seek compensatory and punitive damages. Following a trial in 1994 a jury in the District Court awarded the plaintiffs $287 million in compensatory damages and $5 billion in punitives. At the time it was the largest punitive damages award in U.S. history. Parties filed cross-appeals. The United States Court of Appeals for the Ninth Circuit, 490 F.3d 1066, vacated and remanded for reduction of punitive damages award to $2.5 billion, a 5-1 ratio, and certiorari was granted. The Supreme Court determined that maritime law required punitive damages award to be reduced to maximum of 1:1 ratio with compensatory damages, thus amounting to $507.5 million, and vacated and remanded regarding interest and appellate costs. In that ruling the high court reduced a $2.5 billion punitive damages award over the 1989 Exxon Valdez oil spill to $504 million after finding the original amount excessive under maritime common law. The parties stipulated to the entry of judgment against the defendant Exxon and in favor of the plaintiffs Baker *et al.* in the amount of $507.5 million, representing the amount the plaintiffs were awarded as compensatory damages for the income they lost as a result of the massive oil spill.

Exxon Mobil Corp. argues that the accrual of interest should run only from Sept. 10, 2008, the date the appeals court entered judgment for the plaintiffs in light of the U.S. Supreme Court's ruling in *Exxon Shipping Co. v. Baker,* 128 S. Ct. 2605(2008). Exxon contends that the legal basis for an award was not sound in 1996 when the U.S. District Court for the District of Alaska entered its original judgment, arguing that until the Supreme Court handed down its 2008

decision in this case, the law did not allow vicarious liability for punitive damages in maritime cases. Instead of using the amount of compensatory damages to determine punitive damages, courts sometimes find the "actual harm" the plaintiffs incurred and use that figure to calculate punitives. The District Court did so here and put the actual harm at about $504 million. It reached that figure by adding the $287 million compensatory award to payments and settlements the plaintiffs received before the litigation along with judgments in related cases. Costs became a point of contention in this case because of the size of the supersedeas security bond that Exxon posted to sustain its appeals, and also because of the length of time the case took. Exxon's total costs approached $70 million. Plaintiffs argue that in a case of mixed judgment, where each side wins something, the Court usually orders each party to bear its own costs. However, Exxon contends that it is essentially the winner of the litigation and that plaintiffs should bear all, or at least 90%, of Exxon's appellate costs.

Issue: whether interest on the $507.5 million should run from the date of the original judgment, entered in 1996, or whether interest should run only from the 2008 date that the Court entered judgment for plaintiffs in the wake of the Supreme Court's decision. Whether each party should bear its own cost.

Statutory Requirements: Interest shall be allowed on any money judgment in a civil case recovered in a district court.... Such interest shall be calculated from the date of the entry of the judgment, at a rate equal to the coupon issue yield equivalent (as determined by the Secretary of the Treasury) of the average accepted auction price for the last auction of fifty-two week United States Treasury bills settled immediately prior to the date of the judgment. 28 U.S.C. § 1961. Where a damages award has been remitted, 28 U.S.C. § 1961 gives an appellate court discretion as to whether to allow interest to run from the date of the original judgment, or from the date of the remitted judgment. If the [appellate] court modifies or reverses a judgment with a direction that a money judgment be entered in the district court, the mandate must contain instructions about the allowance of interest. Federal Rule of Appellate Procedure 37(b). Where a judgment is affirmed in part, reversed in part, modified or vacated, costs are taxed only as the court orders. Federal Rule of Appellate Procedure 39(a)(4).

Holding: The Court of Appeals held that post-judgment interest award ran from date of original rather than remitted judgment. The court concluded that plaintiffs' entitlement to punitives was "meaningfully ascertained" when the original district court judgment was entered in 1996 because neither the evidentiary basis for the award nor the legal foundation for an award has been disturbed after nearly a dozen years of subsequent litigation. The plaintiffs were entitled to interest from that date on the principal amount they ultimately are entitled to receive, $507.5 million. As to the rate, the parties agreed that the "average accepted auction price for the last auction of fifty-two week United States Treasury bills" was 5.9% on September 12, 1996. The court noted that it did not have the discretion to deviate from § 1961's instructions on the calculation of interest. Interest on the $507.5 million judgment, noted the Court, shall, therefore, run from September 24, 1996 at the rate of 5.9% because the evidentiary and legal bases for the original judgment of punitive damages have not been overruled. Because the amount of the original $5 billion judgment has been substantially reduced, the court ordered that each party bear its own costs. The court reasoned that in this case, neither side is the clear winner for the following reasons: the defendant owes the plaintiffs $507.5 million in punitives-according to

counsel at oral argument the fourth largest punitive damages award ever granted; yet that award represents a reduction by 90% of the original $5 billion. In light of this mixed result, and mindful that the equities in this case fall squarely in favor of the plaintiffs-the victims of Exxon's malfeasance- the court exercised its discretion by requiring each party to bear its own costs.

The case was remanded to the district court for entry of the final judgment in accordance with this opinion.

VIII. Consent Decree

***Env't Tex. Citizen Lobby v. Shell Oil Co.*, 29 No. 21 ANENVLR 10, May 13, 2009**

Shell Oil Co. settled a Clean Air Act citizen lawsuit brought by a Texas environmental group and the Sierra Club over the alleged release of millions of pounds of air pollutants from its Houston-area refinery over the past five years.

A Texas environmental group and the Sierra Club sued Shell Oil and two affiliates in 2008 for allegedly releasing millions of pounds of air pollutants from the Deer Park facility since 2003. Under a proposed consent decree filed in the U.S. District Court for the Southern District of Texas, Shell will pay a $5.8 million in civil penalty for past violations of the Clean Air Act. The penalty will be used to fund environmental, public health and education projects in Harris County. The agreement calls for a mandatory reduction in "upset" emissions over a three-year period at Shell's refinery in Deer Park, Texas. The reductions are supposed to be achieved through extensive plant upgrades and enhanced monitoring of air emissions.

***United States v. SB Building Associates et al.*, No. 08-5928, 2009 WL 1559793 (D.N.J. June 1, 2009).**

The United States can seek $25,000 in daily civil penalties for violations of a Superfund order even though the Environmental Protection Agency entered into a consent decree with a company that provided for lower penalties.

Facts: Defendant SB Building owns the Algro Knitting Mills Superfund Site (Site) in Milltown, New Jersey. The Site consists of Building 13 (approximately 38,000 square feet) and an associated loading dock located on a seven-acre tract within the former Michelin Tire industrial area. In October 2001, the Hazardous Materials Unit of Middlesex County, New Jersey, responded to a report of a leaking drum of toluene sulfonic acid at the Site. In October 2003, Middlesex County requested that the EPA evaluate the Site for removal action eligibility pursuant to CERCLA. The EPA's investigation revealed numerous containers of flammable or toxic industrial waste, some of which were leaking, bulging, or rusted. Also, combustible debris was found near the containers. Further, Building 13 was in disrepair and the Site was not secure from public entry. The EPA notified SB Building of its potential CERCLA liability and asked SB Building to undertake a removal action. On September 15, 2004, SB Building and the EPA

entered into an Administrative Order of Consent (AOC), requiring SB Building to submit to the EPA work plans, reports, and financial assurance of its ability to perform a removal of the waste. The AOC also stated SB Building would pay stipulated penalties to the federal government for the failure to comply with the terms of the AOC. SB Building did not submit a final report with the requisite accompanying documentation to the EPA until August 22, 2008.

On October 27, 2008, Plaintiff filed a Complaint [1] alleging violations of CERCLA for failing to comply with the AOC by failing to timely submit a required revised work plan, failing to timely obtain the required financial assurance, failing to submit various required reports, and failing to reimburse EPA costs it agreed to pay under the AOC. Plaintiff sought (1) recovery of all costs incurred by the United States in connection with the Site; (2) civil penalties of up to $32,500 per day for SB Building's failure to comply with the AOC; (3) stipulated penalties and interest due under the AOC; and (4) a lien on the Site pursuant to CERCLA. SB Building brings the instant motion seeking dismissal of Plaintiff's second claim for relief, namely the accrual of civil penalties in amounts of $25,000, and greater, for its purported violations of the AOC. SB Building argued that the terms of the AOC regarding stipulated penalties operate as a binding contract, and abrogate the government's right to seek civil penalties under CERCLA for violation of the AOC. SB Building also argued that the AOC should govern the imposition of penalties if, in fact, penalties must be assessed. Specifically, SB Building relied on Paragraph 80 of the AOC which provides that if SB Building fails to comply with any of the material requirements or time limits set forth in the agreement, SB Building is to pay stipulated per diem penalties of $50 to $200 per violation, depending on the nature and length of the violation.

Plaintiff responded that it was not precluded from seeking civil penalties under the CERCLA because the EPA reserved its rights to seek additional legal relief, including the imposition of civil penalties in addition to those specified in the AOC. Plaintiff, in support of this position, pointed to three paragraphs of the AOC. Paragraph 83 of the AOC states, "Notwithstanding any other provision of [the AOC], failure of [SB Building] to comply with any provision of [the AOC] may subject SB Building to civil penalties of up to twenty-seven thousand five hundred dollars ($27,500) per violation, per day, as provided in the CERCLA ... unless such failure to comply is excused by the EPA under the [AOC's force majeure clause]." Plaintiff then directed the Court's direction to Paragraph 84 of the AOC which states "[N]othing herein shall prevent the EPA from seeking legal or equitable relief to enforce the terms of [the AOC] ..." Finally, Plaintiff pointed to Paragraph 86 of the AOC, which states "Nothing in the AOC constitutes or shall be construed as a satisfaction of, or release from, any claim or cause of action against [SB Building] ... for any liability that [SB Building] or other persons may have under CERCLA ... including but not limited to any claims for injunctive relief, costs, damages, and interest under [relevant provisions] of the CERCLA."

Plaintiff allege that, despite SB Building's reliance on Paragraph 80's recitation of stipulated penalties for violations of the AOC, they retained the right to seek the maximum civil penalties available for violations under CERCLA as stated in the AOC. SB argued that the consent decree's stipulated penalties constitute a binding contract that should trump the government's right to seek civil penalties under CERCLA.

Statutory Requirement: CERCLA requires that any person who violates CERCLA or refuses to comply with an order addressing contaminants may be fined $25,000, or more, for each day in which such violation occurs or such failure to comply continues. 42 U.S.C. § 9606(b).

Holding: The penalties sought in this action for violation of the AOC are authorized by Section 106 of the CERCLA. Furthermore, the Court explained that the plain language of Paragraphs 83 and 84 of the AOC preserved federal government's right to seek the higher $25,000-per-day civil penalties for violations of the order under the CERCLA.

IX. Sovereign Immunity: (Case of first impression)

***U.S. v. Metropolitan St. Louis Sewer Dist.*, 567 F.3d 1003 (8th Cir. 2009).**

State of Missouri, by choosing to proceed as plaintiff in enforcement action against metropolitan St. Louis Sewer District under the Clean Water Act, waived its Eleventh Amendment sovereign immunity from District's counterclaim that State must indemnify it for costs of complying with any adverse judgment, even though state did not add any state law claims to those brought by the United States.

Facts: United States and State of Missouri filed enforcement action against the metropolitan St. Louis Sewer District (The District) under the Clean Water Act, seeking federal civil penalties and injunctive relief to limit discharges of untreated wastewater and sewage by the District. The District raised several affirmative defenses claiming financial inability to comply with the Act's requirements and filed two counterclaims. The State then moved to strike the District's affirmative defenses and to dismiss its counterclaims, arguing that they were barred by sovereign immunity and the Eleventh Amendment. The district court denied the motion and the State appeals, arguing that it did not waive its sovereign immunity by filing this action since the Act requires its participation. The court said the state had waived its immunity by joining the federal government as a plaintiff in the suit. The State contended that it did not waive its immunity by joining the federal action because it was compelled to do so by § 309(e) of the CWA. Specifically, the State contended that the Clean Water Act compelled it to become a party to any action in which one of its municipalities is a party. It pointed out that it had not added any state law claims to the complaint. The district court concluded that the State had waived its sovereign immunity by initiating the action as one of the plaintiffs and denied the motion to dismiss.

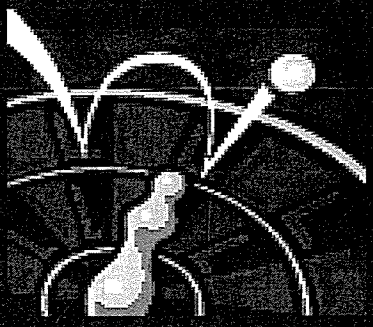
Statutory Requirements: Eleventh Amendment provides states with immunity from suit by private citizens in federal court seeking retroactive relief for violations of federal law that would require payment of funds from a state treasury. A state can waive Eleventh Amendment immunity defense by voluntarily invoking federal jurisdiction. In addition to joining in the removal of a case to federal court, a state can also waive its Eleventh Amendment immunity by filing a federal complaint or a proof of claim in a bankruptcy action. U.S.C.A. Const. Amend. 11.

§ 309(e) of the Clean Water Act states:

Whenever a municipality is a party to a civil action brought by the United States under this section, the State in which such municipality is located shall be joined as a party. Such State shall be liable for payment of any judgment, or any expenses incurred as a result of complying with any judgment, entered against the municipality in such action to the extent that the laws of that state prevent the municipality from raising revenues needed to comply with such judgment.

Holding: State waived immunity by filing a federal complaint. The court reasoned that exercising the rights of a plaintiff while invoking sovereign immunity against a counterclaim amounts to an unfair, selective use of that defense by the state. Moreover, State was not reluctant to proceed as a co-plaintiff with United States, having participated in filing the original complaint rather than being forcibly joined at a later time, and state participated in development of a joint proposed scheduling plan for the litigants.

SUPERCONFERENCE 2009
CASE UPDATE



PRESENTED BY:
LAURENCIA FASOYIRO

Introduction

I. Standing
II. Clean Air Act
III. Clean Water Act
IV. Comprehensive Environmental Response Compensation Liability Act
V. Resource Conservation Recovery Act
VI. National Environmental Policy Act/Environmental Impact Statement
VII. Punitive Damages
VIII. Consent Decree
IX. Sovereign Immunity

2

STANDING



3

Standing

Summers v. Earth Island Institute - 129 S.Ct. 1142 (March 2009) Supreme Court Decision

Article III standing to seek injunctive relief, plaintiff must be able to show:

- He/she is under threat of suffering injury
- Threat is actual and imminent
- Threat is traceable to challenged action
- Favorable judicial decision will prevent or redress injury
- U.S.C.A. Const. Art. 3 § 2, cl.1

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Standing (cont.)

Ninth Circuit Court Reversal, in Part

Environmental groups failed to satisy injury-in-fact requirement for Article III standing

FACTS:

- Environmental organizations brought action enjoining U.S.F.S. from applying regulations to exempt salvage sale of timber
- Burnt Ridge Project
- Five regulations were invalidated by the U.S. District Court and issued injunction against salvage-timber sale
- Appeals Reform Act violated
- District Court adjudicated merits of the challenges

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Standing (cont.)

Supreme Court Holding

Organizations did not retain standing

- To challenge regulations
- Based on members intent to visit the National Forests in the future
- Based on alleged procedural injury

"We know of no precedent for the proposition that when a plaintiff has sued to challenge the lawfulness of certain action or threatened action but has settled that suit, he retains standing to challenge the basis for the action…apart from any concrete application that threatens imminent harm to his interests," Justice Scalia wrote.

- Court rejected "procedural injury" argument
- Without concrete interest affected, Article III standing was insufficient, per Justice Scalia.

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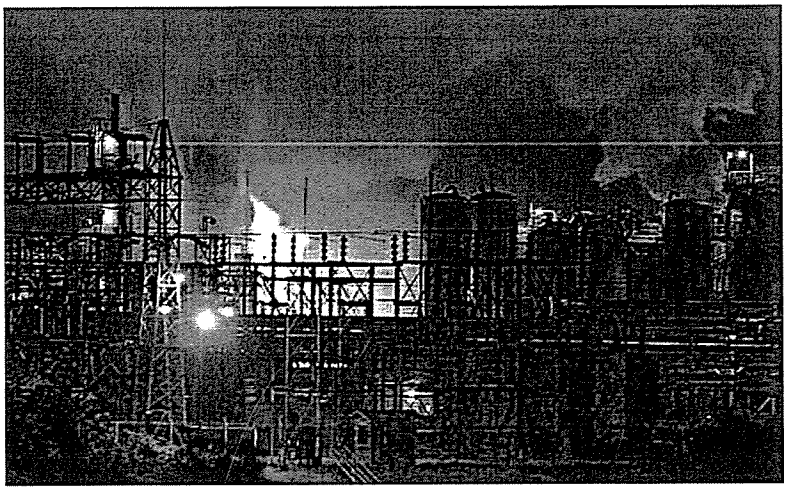
CLEAN AIR ACT



CAA

U.S. v. BP Products North America, Inc., 610 F.Supp.2d 65 S.D.Tex., 2009

- 2005 explosion at BP Texas City Refinery
- 15 dead and 170 people injured
- Explosion at the isomerization unit
- BP pleaded guilty to felony violation of the CAA
- Guilty plea agreement: $50 million fine and 3 year probation
- Compliance with OSHA agreement and TCEQ Agreed Order
- BP first company criminally convicted for knowing violation of the risk management plan regulation of the CAA, at time of settlement
- $50 million fine, largest criminal fine against a single corporation at time of settlement under CAA; largest fine for fatal industrial accident
- Over $1.6 billion paid in settlement of approximately 4,0900 civil cases
- Almost $21.7 million paid to OSHA and TCEQ
- Will pay over $265 million to perform work required under OSHA and TCEQ agreements

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CAA (cont.)

- EPA civil settlement
- $161 million in new pollution controls
- Pay $12 million civil penalty
- Complete a $6 million SEP
- Address pollution control, maintenance & monitoring

Proposed probation for felony plea:

- Compliance with req. imposed after the explosion for extensive process and environmental improvements at the refinery

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CAA (cont.)

- Victims
- Objection to guilty plea
- Argue $50 million fine is too low and probation too lenient
- District Court: Guilty plea agreement reasonable given available alternatives, risks involved and statutory restraint in obtaining felony conviction to punish conduct leading to an industrial accident

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CAA (cont.)

Sierra Club v. U.S. E.P.A., 557 F.3d 401, C.A.6, 2009

EPA did not arbitrarily deny environmental organization's petition to object to Clean Air Act permit.

FACTS:

- Environmental Organization petitioned for review of an order
- PSD requirements not identified
- Kentucky agency granted the permit
- EPA issued notice of violation
- Company argued obligation
- State proposed draft permit
- Sierra Club objected
- EPA and power company reached settlement
- District Court approved Consent decree
- Sierra Club petitioned Court to review EPA's refusal to object

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CAA (cont.)

Chevron - Two-Step Analysis

Court must determine if:

- Congress has addressed precise question and intent is clear
- Statute is silent or unclear regarding specific issue, and whether interpretation was based on a permissible construction of statute
- Court must reject constructions inconsistent with statutory mandate or that upset policy Congress sought to implement

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CAA (cont.)

Title V

- Allows states and EPA a role in administering the Title V program.
- State submits permit to the EPA
- 42 U.S.C. § 7661a(b)(6)
- Prevention of Significant Deterioration (PSD)
- Major new emitting facilities receiving major modifications MUST obtain a special permit
  - Specific emissions limitation
  - Best Available Control Technology (BACT) for each regulated pollutant emitted
  - Best technology, on case by case basis

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CAA (cont.)

The CAA creates several enforcement options:

- Statute allows EPA to address violations on its own.
- Act directs EPA to issue a notice of violation apprising the source

ISSUE: Can the EPA object to a permit request?

- § 7661d(b)(2)

HOLDING: Chevron Analysis

- CAA requirement is an ambiguous provision
- Prior notice of violation
- § 7661d(b)(2) reasonably construed

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CLEAN WATER ACT



Clean Water Act (CWA)

Entergy Corp. v. Riverkeeper, Inc., 129 S.Ct. 1498, April 1, 2009
(Judge Sotomayor)

- Power plants threaten environment
- Best technology standards/Best technology available
- Cooling-water intake structures at existing power plants
- Phase II rules
- Adoption of closed-cycle cooling systems
- Site-specific variances - § 125.94(a)(5)(i)(ii)

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CWA (cont.)

Court of Appeals Holding

- Site specific/cost-benefit analysis permissible under 33 U.S.C. § 1326(b)

Supreme Court Holding

- Second Circuit decision reversed
- Supreme Court granted certiorari
- Interpretation of "best technology" from Second Circuit and Justice Scalia
- Minimizing adverse environmental impact

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CWA (cont.)

Friends of Everglades v. South Florida Water Management District, 2009 WL 1545551



- Permit to be obtained under National Pollution Discharge Elimination System (NPDES)
- Unitary Water Theory
- Ex parte Young Doctrine

ISSUE: Discharge of pollutants from one body of water to another.

- Chevron, U.S.A., Inc. v. Natural Res. Defense Council, Inc., 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984)
- Court of Appeals Holding - "If one takes a ladle of soup from a pot, lifts it above the pot, and pours it back into the pot, one has not 'added' soup or anything else to the pot."

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CWA (cont.)



Peconic Baykeeper, Inc. v. Suffolk County, 585 F.Supp.2d 377 E.D.N.Y., 2008 – Citizen Suit

The insecticides that were used by a county's vector control division to control adult mosquitoes, in compliance with the requirements of the Federal Insecticide and Rodenticide Act (FIFRA), were not "pollutants" under the Clean Water Act.

Facts: Citizen suit against county and vector control division of county's public works department.

- Alleged CWA violation by discharging dredged spoils; spraying pesticides into United States waters without permit in the course of the vector control activities
- Defendant is responsible for controlling mosquito infestations, which it accomplishes largely through the practice of "water management
- "Discharge of a pollutant" is defined as "any addition of any pollutant to navigable waters from any point source

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CWA (cont.)

Insecticides used to control mosquitoes were not "pollutants" under CWA.

Statutory Provision:

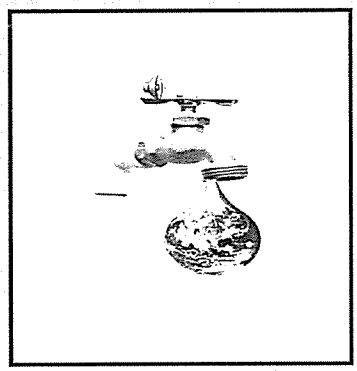
- Unlawful to discharge pollution in waters of the U.S. without permit
- §§ 402 and 404

HOLDING:

- In applying the definition of the term "pollutant," the court stated that the only possible terms in that definition that could apply to the pesticides used here is that of "chemical wastes" and "discarded material"
- Pesticide that is intentionally applied to water and leaves no excess portions after performing the intended purpose is not a "chemical waste" and not a pollutant
- Because intentionally applied and properly performing pesticides are not "pollutants," a potential discharger is not required to secure a NPDES permit for such pesticides before discharge

20

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)



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CERCLA



Burlington Northern and Santa Fe Ry. Co. v. U.S. 2003 WL 25518047, 129 S.Ct. 1870, May 4, 2009

- Brown & Bryant, Inc. (B & B) operated an agricultural chemical distribution business was purchasing pesticides and other chemical products such as the chemical D-D from Shell
- Shell arranged for delivery by common carrier, f.o.b. destination (seller must, at his own expense and risk, transport goods to [destination] and there tender delivery of them)
- Some spills due to equipment failures. Although the common carrier and B & B used buckets to catch spills from hoses and gaskets connecting the tanker trucks to its bulk storage tank, the buckets sometimes overflowed or were knocked over, causing D-D to spill onto the ground during the transfer process

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CERCLA (cont.)

- Using it's own equipment, B & B applied pesticides to customers' farms such as Burlington Northern and Santa Fe
- B & B stored and distributed various hazardous chemicals on it's property which included chemicals sold by Shell
- Soil and ground water contamination detected
- Governments sought action against Shell and other PRPs to recover $8 million in clean up

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CERCLA (cont.)

Statutory Provisions

- Liability imposed regarding disposal of hazardous substances
- Supreme Court and 42 U.S.C. § 9607(a)(3)

ISSUE: Did Shell take intentional steps to dispose of a hazardous substance to qualify him as an "arranger" within the meaning of § 9607(a)(3) in order to qualify for liability for the cleanup cost?

Holding: Shell not liable as an "arranger" under the Superfund law for incidental spills that occurred while a pesticide it was selling was being transferred to a distributor.

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CERCLA

- An entity may qualify as an arranger when it takes intentional steps to dispose of a hazardous substance
- Shell must have entered into D-D sales with the intent that at least a portion of the product be disposed of during the transfer process
- Shell took numerous steps to encourage it's distributors to reduce the likelihood of spills
- Shell's mere knowledge of continuing spills and leaks is insufficient grounds for concluding that it "arranged for" D-D's disposal

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CERCLA (cont.)

Aviall Services Inc. v. Cooper Industries, LLC Slip Copy 2009 WL 498133

- Whether plaintiff Aviall, land purchaser, has established the liability of defendant Cooper Industries, seller, for cost recovery under CERCLA § 107(a) as to remedial investigation costs that Aviall incurred and as to response costs incurred
- Whether Aviall provided all PRPs with a meaningful opportunity to participate in the remedial investigation

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CERCLA (cont.)

FACTS:

Lovefield Site: Aviall discovered groundwater contamination and notified TNRCC (TCEQ).

- Aviall sought permission from regulatory agencies to install monitoring wells and conduct sampling to determine extent of contamination
- Aviall forwarded results of investigative activities to landowners, TNRCC and regulatory agencies
- Aviall enrolled site in TNRCC's VCP and proceeded with cleanup
- Aviall did not notify 12 downgradient landowners of contamination until after completion of remedial investigation

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CERCLA (cont.)

Aviall's argument:

- Down gradient landowners and recreational users of nearby lake had speculative interest
- Their interest was foreseeable based on confirmation of contamination
- Notification of contamination given when contamination was "reasonably clear"
- Cooper: Def. Cooper argues the late notice of the contamination denied foreseeable affected parties a meaningful opportunity to comment on Aviall's investigatory decisions

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CERCLA (cont.)

Statutory Req: National Oil and Hazardous Substance Pollution Contingency Plan (NCP) Publ. Participation Req.

- For recovery of response cost in cost recovery action under CERCLA, parties who might be foreseeable affected must be given meaningful opportunity to participate
- Affected party's views must be considered before any final decisions are reached

Holding: Aviall not entitled to recover remedial investigation costs that it would otherwise be entitled to recover because it was not substantially consistent with the NCP's publ. participation req.

Aviall failed to provide participation opportunity to foreseeable affected parties

Cooper excused from paying clean up cost at Lovefield

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Resource Conservation Recovery Act (RCRA)



Resource Conservation Recovery Act (RCRA)

Incorporated Village of Garden City v. Genesco, Inc., Gordon-Atlantic Corp., 596 F.Supp.2d 587, E.D.N.., 2009 (Citizen Suit)

- Injunctive relief sought by village against PRPS for relief of toxins in water supply
- Village sought recovery of past and future costs and expenses for treatment of contamination
- Village delivered drinking water to residents from an aquifer which drew water from underground public supply well (PWS)
- A PRP Genesco operated a mill with an injection well and dry cleaning machines located close to three of the PWS wells
- Genesco failed to close the well when the lease expired

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RCRA (cont.)

- Genesco failed to close the well when it's lease expired
- Current owner of the site (PRP) also failed to close the well
- Hazardous waste from the well seeped into the PWS

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RCRA (cont.)

- EPA, local agencies and consultant hired by GENESCO, conducted investigations and concluded the injection wells contaminated the PWS
- No gov't agency initiated any enforcement proceeding against Genesco compelling it to properly close the site
- EPA placed the site on National Priority List
- New York State environmental agency entered into a consent order with Genesco and required it to perform remedial investigation and feasibility study

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RCRA (cont.)

PRPS:

- Suit barred by diligent prosecution of EPA and local agencies
- Village:
  - Suit not barred because diligent prosecution means an action brought in district court
  - RCRA § 7002(b)(2)(B) bars citizen suit if administrator of the EPA has commenced and is "diligently prosecuting" an action

HOLDING: Claim is not barred by RCRA citizen suit provision.

- Although EPA issued a preliminary plan, neither EPA nor state agency had brought suit against PRP

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National Environmental Policy Act/Environmental Impact Statement (NEPA-EIS)



National Environmental Policy Act/Environmental Impact Statement (NEPA-EIS)

Ohio Valley Environmental Coalition v. Hurst, 2009 WL 819230 (S.D.W. Va.)

- Environmental group sought injunction against Navy
- Group alleged Navy's use of mid-frequency active sonar in training exercises would harm various species of mammals
- Group alleged violation of NEPA for failure to prepare Environmental Impact Statement (EIS)
- District court injunction
- Navy sought and obtained authorization from Council on Environmental Quality (CEQ) to implement alternative arrangements

NEPA (cont.)

- Navy moved to vacate District Court's injunction
- Court of Appeals upheld District Court's decision because plaintiff established possibility of irreparable injury
- Supreme Court vacated preliminary injunction
- Alleged irreparable injury to marine mammals from the Navy's training exercise is outweighed by public interest and Navy's interest in effective, realistic training of sailors
- Irreparable injury has to be "likely" in the absence of an injunction, not merely "possible"
- Forcing Navy to deploy an inadequately trained submarine force jeopardized safety of the fleet

Punitive Damages



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Punitive Damages (cont.)

Exxon Valdez v. Exxon Mobil, 2009 WL1652256, July 15, 2009

- Punitive damage suit from the 1989 wreck of the Exxon Valdez spill
- Supertanker Valdez ran aground on a reef in Alaska spilling 11 million gallons of oil
- Residents, state and others sued ExxonMobil alleging severe economic losses and environmental damage to state's waterways and wildlife
- District Court award: $287 million in comp. damages and $5 billion in punitive
- Court of Appeals: Reduced punitive damages to $2.5 billion
- Supreme Court: Reduced damages to $507.5 million

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Punitive Damages (cont.)

Issue: Whether interest should accrue from date of original judgment in 1996 or 2008 after Supreme Court's reduction.

- 28 U.S.C. § 1961: Interest on money judgment calculated from date of entry of judgment. Appellate court has discretion
- Exxon: Interest should accrue from 2008 after court entered final judgment for plaintiffs

Court's Holding: Plaintiff's entitlement to punitive damages was ascertained when original judgment was issued in 1996.

- Evidentiary and legal basis for original judgment has not been disturbed after nearly a dozen years of litigation

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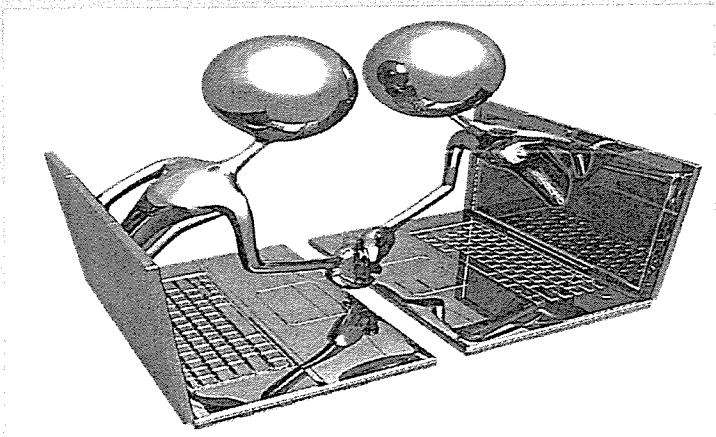
Consent Decree



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Consent Decree

Env't Tex. Citizen Lobby v. Shell Oil Co., 29 No. 21 ANENVLR 10

- Citizen suit by Texas Environmental group and Sierra Club against Shell and two affiliates
- Alleged release of millions of pounds of air pollutants from Deer Park facility since 2003
- Under proposed consent decree, Shell to pay $5.8 million in civil penalties for CAA violations
- Penalties will be used to fund environmental, public, and educational projects in Harris County
- Mandatory reduction in upset emissions over 3 year period
- Extensive plant upgrades and enhanced monitoring of air emissions

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Consent Decree (cont.)

United States v. SB Building Assoc., 2009 WL1559793 (June 2009)

- Defendant SB entered into an Administrative Order of Consent (AOC) with the EPA related to removal action of hazardous material from its site
- Consent Decree:
- Submit work plans
- Financial assurance for removal of waste
- Payment of stipulated penalties for failure to comply with AOC
- SB failed to submit final compliance report to EPA
- EPA filed complaint alleging violation of CERCLA

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Consent Decree (cont.)

- EPA Complaint:
- Failing to timely submit reports
- Recovery of all costs incurred in connection with site
- Civil penalties of up to $32,500 per day
- Despite stipulated penalties, AOC allowed recovery of civil penalties
- Stipulated penalties and interest due under the AOC and
- Lien on site
- Defendant SB:
- Seeks dismissal of civil penalties
- Argues stipulated penalties constitute binding contract
- AOC allowed stipulated penalties of $50 to $200 per violation

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Consent Decree (cont.)

42 U.S.C. Sect. 9606(b)

- $25,000 fine or more a day for failure to comply with an order addressing contaminants

Holding: Civil penalties recoverable under section 9606(b)

- Plain language of consent decree permitted gov't right to recover civil penalties in addition to stipulated penalties

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Sovereign Immunity



Sovereign Immunity

U.S. v. Metropolitan St. Louis Sewer Dist., 567 F.3d 1003 C.A.8 (Mo.) 2009

- Suit by U.S. and State of Missouri against metropolitan St. Louis Sewer District
- Seeking civil penalties and injunctive relief for discharges of untreated wastewater
- District filed counterclaim
- State moved for dismissal of counterclaim (barred by sovereign immunity and 11th amendment; compelled by CWA to become party to suit)
- District: Sovereign immunity waived by joining in the suit

Sovereign Immunity (cont.)

- 11th Amendment: State immune from suit by private citizens in Federal Court seeking retroactive relief for violation of federal law that would requirement payment of funds from state treasury
- Immunity waived by voluntarily invoking federal jurisdiction
- Waived by filing federal Complaint or Proof of Claim in bankruptcy action
- CWA § 309(e): Whenever a municipality is a party to a civil action brought by the US, state in which the municipality is located shall be joined as a party
- Court holding: State waived sovereign immunity by choosing to join in lawsuit
- State reluctant and participated in filing original complaint rather than being forcibly joined
- Exercising rights of plaintiff while invoking immunity amounts to unfair, selective use of defense

Laurencia Fasoyiro is a Staff Litigation Attorney for the Texas Commission on Environmental Quality ("TCEQ") where she provides legal representation and support to the Office of Compliance and Enforcement, the Financial Administrative Division, and the Remediation Division. She received her Bachelor of Art degree from the University of Houston; her law degree from Thurgood Marshall School of Law; and her Masters of Law ("LL.M") in Energy, Environmental and Natural Resource Law from the University of Houston Law Center. She was an adjunct professor at Thurgood Marshall School of Law and a former council member of the Houston Bar Association's Environmental Law Section. In addition to her legal training, she has Basic Mediation training from University of Houston Law Center's A.A. White Dispute Resolution Center and Binding Arbitration training from Worklife Institute Center for Mediation and Conflict Resolution.

What's Wrong with TCEQ Air Permitting and What Needs to Be Done to Fix It

Ilan Levin and Eric V. Schaeffer
Environmental Integrity Project
Texas Environmental Superconference
August 6-7, 2009

What's Wrong with the Texas Air Permitting Program?

Pursuant to the federal Clean Air Act, EPA is required to review, approve or disapprove, and oversee implementation and enforcement of, State Implementation Plans (SIPs) and federal operating permit, or "Title V," programs. Unfortunately EPA has allowed the Texas air program to spin out of control, for years implementing rules and policies that are inconsistent with the federal Clean Air Act ("CAA" or "Act") and the approved state implementation plan ("SIP").

This paper is primarily about the state's noncompliance with certain federal requirements, and the conclusions are mainly about much needed EPA oversight. However, the deficiencies discussed in the paper – and many more that have not been raised here – are evidence that the program fails to live up to the promises of the Texas Clean Air Act as well. And so, while most of the recommendations are directed at the EPA, the Texas Legislature, especially with the TCEQ's upcoming Sunset Review, has an important role to play as well.

Texas is currently implementing and enforcing New Source Review ("NSR"), prevention of significant deterioration ("PSD") and Title V operating permitting rules and/or policies that have not been approved by EPA, are inconsistent with the federal Clean Air Act, and jeopardize attainment and maintenance of air quality standards. The problems with the preconstruction NSR and PSD permitting programs are carried over into Texas' operating permits, such that the operating permits also fail to assure compliance with the Act. For years, EPA has raised concerns, submitted comments, and identified a number of the TCEQ's air program deficiencies, and for years, the TCEQ has disregarded EPA.

EPA and the State need to take actions that go well beyond addressing the so-called "SIP Gaps." More than patches will be needed to bring the Texas air program into compliance with the federal Clean Air Act and protect the state's air quality.

1. <u>SIP Gap: unapproved TCEQ regulations that conflict with or are weaker than federal requirements.</u>

EPA has a clear obligation to timely act on state SIP submittals. EPA is required to approve or disapprove state SIP submittals within 12 months of the determination that the state's submittal is complete. 42 U.S.C. §§7410(k)(1)(B) and (k)(2). EPA failed to act on at least 30 Texas' SIP submittals, many because they do not meet minimum federal requirements. This impasse has resulted in many state air quality regulations that are in a legal limbo: industries that rely on TCEQ approvals such as, for example, flex permits and qualified facilities authorizations put themselves at risk of enforcement for failing to comply with stricter federal requirements.

TCEQ submitted the flexible permit rules ("Flex Permits") to EPA for approval in 1994. EPA has not acted on that submittal. This is because the Flex Permit rules, and many others, do not meet minimum federal standards and should have been disapproved by EPA. Meanwhile, Texas has violated federal regulations by proceeding to implement its rules without waiting for EPA approval. As a result, Texas is currently operating a state air permitting program based on regulations that are not EPA approved and do not meet minimum Clean Air Act requirements for protecting air quality. In addition, Texas air pollution sources are operating and obtaining permits pursuant to Texas' rules, rather than the federally approved SIP rules. For example, a source currently permitted under a TCEQ-issued flex permit is currently operating *without* a federally-approved permit, and in violation of the federally-approved Texas SIP.

EPA has failed to act on the approximately 30 Texas regulations that are the subject of a recent consent decree between EPA and an industry group. Under the agreement, EPA will act to approve, disapprove, or conditionally approve these regulations in order to close these SIP gaps.

2. Additional Deficiencies: TCEQ rules that conflict with or are weaker than federal requirements.

In addition to the better known "SIP Gaps" – those approximately 30 state regulations that may or may not meet with EPA approval – there are many vaguely worded provisions already *in* the federally-approved SIP that have resulted in permits that are clearly inconsistent with the federal Clean Air Act and EPA guidance,

One example is the use and abuse of "permits by rule."While EPA approved the general standards for PBRs into the SIP, it has not reviewed or approved the actual PBRs. Although EPA has repeatedly notified TCEQ that several of its PBRs violate the Clean Air Act and Texas SIP, TCEQ continues to allow sources to authorize emissions through these PBRs. In particular, EPA has clearly stated that TCEQ should not allow the use of PBRs to authorize emissions from major sources. In addition, each PBR must be source-category specific, so that detailed emission limits and monitoring can be included in each PBR. Many of TCEQ's current PBRs are not practicably enforceable, can interfere with attainment and maintenance, and lack adequate public participation.

Another example is TCEQ's lax interpretation of "alterations" under 30 TAC §116.116(b). A permit amendment is not required for changes at a facility unless the changes involve: (1) a change in the method of control, (2) a change in the character of emissions, or (3) an increase in the emission rate of any air contaminant. A facility can proceed with changes under the alteration provisions if the changes: (1) result in a decrease in allowable emissions or (2) do not involve a change in the method of control or character of emissions, or an increase in the emission rate of any contaminant. 30 TAC §116.116(c).

Permit alterations are issued by the Executive Director and do not allow for any public notice or opportunity to comment. Many require no pre-authorization review. Further, there are no provisions for monitoring, reporting, recordkeeping or otherwise assuring compliance with the representations made to obtain an alteration. Alterations have been used to authorize facility changes that have greater than *de minimis* impacts, and in some cases clearly significant impacts,

on the environment. They are also used to authorize changes involving case-by-case discretionary determinations.

3. Implementation Deficiencies: TCEQ guidance and policies violate the federal Clean Air Act.

While EPA's recent settlement with industry over outstanding SIP submittals is a step forward, acting pursuant to that settlement alone will not address the numerous implementation deficiencies in the Texas program. While EPA works on the Texas SIP, it cannot ignore its statutory duty to ensure that each federal air permit issued in Texas complies with the Act.

TCEQ's reliance on its "Three Tier" BACT guidance (RG-383) routinely leads to inadequate BACT analyses that fail to consider all available control options and thwart the technology-forcing provisions of the Act. TCEQ allows applicants to conduct only "Tier I" evaluations, which – as even TCEQ's own guidance notes – may not be appropriate as a technology-forcing analysis. Consequently, Texas BACT in far too many cases is far from a searching analysis. In a recently-issued Proposal for Decision, two SOAH Judges noted:

> "Although the ALJs somewhat agree that the EPA's top-down BACT approach may be better designed to be technology-forcing, the ALJs also conclude that the TCEQ's tiered methodology is the proper method for analyzing BACT in this case. Although there may be legitimate concerns with whether the TCEQ's three tier BACT methodology actually ensures the technology-forcing purposes behind the BACT requirement, the methodology has been approved by the Commission in prior cases. Specifically, this same methodology has been used by the TCEQ in evaluating BACT at least since 2001, when the guidance document was issued."[1]

In addition, TCEQ allows inadequate air quality impacts analyses. TCEQ allows applicants to rely on modeling that fails to comply with Appendix W and under-predicts actual air quality impacts. Problems include: (1) the failure to require the modeling of worst-case emissions, (2) routine reliance on *de minimis,* or Significant Impact Level (SIL), culpability analyses to allow permits to be issued for projects in areas with predicted ambient standard exceedances, , (3) the routine use of non-representative or low quality air quality data and airport meteorological data, for major source permits for which a year of on-site air quality and meteorological data should be required, (4) the routine discounting of low-level fugitive emissions.

As with BACT, these TCEQ modeling policies are deficient not only on the technical merits, but also because they are non-EPA approved practices. In the recent NRG Power case, the TCEQ supported the applicant's failure to model haul road emissions based on an unspecified promise to use "best management practices," and supported the discounting of low-level fugitive emissions by forty percent, despite prior EPA objection to such policy in other cases. The NRG Proposal for Decision stated:

"The ALJs defer to the well-established Commission policy. The ED's practice is

[1] Proposal for Decision, NRG Power Texas Power LLC for State Air Quality Permit 79188, PSD Air Quality Permit PSD-TX-1072, and MACT HAP-14 Permit, June 23, 2009, Page 24.

supported by clear and recent Commission precedent. Moreover, there is no compelling environmental reason for overturning the ED's policy of using a 0.6 modeling factor for fugitive emissions. It is reasonably supported by technical merit. The ALJs are somewhat concerned by the lack of EPA approval of these adjustments, but the EPA was made aware of the adjustments in this case and did not file any objection to them.

The ALJs further recognize the difficulty in enforcing a permit term based upon "best management practice". The road haul emissions are excluded in the modeling with the presumption that NRG will perform road watering, but no watering schedule or other measurable performance is specified. Thus, the ALJs are not certain of the intended management practices that will be used to ensure that road emissions are reduced. Nevertheless, the Commission's adoption of this policy is well-established and the ALJs have no basis for disregarding it."[2]

4. Title V: Texas permits do not meet monitoring or compliance certification requirements.

Operating a large pollution source without adequate emissions monitoring is like driving without a speedometer. Many Clean Air Act Title V permits in Texas do not include monitoring sufficient to assure compliance, violating statutory requirements that were recently reaffirmed in a decision by the U.S Court of Appeals for the DC Circuit. *Sierra Club v. EPA,* 536 F.3d 673 (DC Cir. 2008). Some large facilities, e.g., coal-fired power plants, have not stack tested for particulate matter in many years, and have not identified surrogates – such as opacity – that can be used to verify that pollution control equipment is working. Many other large sources, such as petrochemical plants, are subject to hourly emission limits, but test for compliance so infrequently that neither the public nor the facility itself understands how much pollution is being released.

Annual emission estimates – which can be used to "net out" of New Source Review permit and pollution control requirements – are based on emission factors developed many years ago that EPA itself has determined are woefully inaccurate. Title V requires facilities to certify that they are in compliance with each requirement, and to identify the specific monitoring method used to determine compliance. TCEQ guidance allows facilities to certify compliance based on unspecified "credible evidence," a clear violation of 40 CFR 70.6(a)(3).

EPA recently partially granted two petitions alleging that the Valero refinery in Port Arthur and the Citgo refinery in Corpus Christi failed to meet Title V monitoring requirements. In both cases, EPA is requiring TCEQ to more adequately respond to petitioners' comments regarding these deficiencies. Last summer, Mayor Bill White of Houston filed a Data Quality Act petition asking the USEPA to revise outdated and inaccurate emission factors, and replace these with direct monitoring wherever possible. Meanwhile, if TCEQ continues to issue Title V permits that fail to meet the minimum

[2] Proposal for Decision, NRG Power Texas Power LLC for State Air Quality Permit 79188, PSD Air Quality Permit PSD-TX-1072, and MACT HAP-14 Permit, June 23, 2009, Page 75.

standards of federal law, expect environmental groups to file an increasing number of petitions asking EPA to object.

5. Air Quality Monitoring: TCEQ modeling is biased and inaccurate.

EPA and the Texas Legislature should take clear action to require TCEQ and permit applicants to conduct reliable air impact assessments, to include preconstruction on-site monitoring for major sources, and consistent with EPA guidance. The modeling currently conducted in Texas is frequently results-based, allowing applicants to continually refine modeling inputs – for example by using less than worst-case emissions or weather conditions, discounting certain emissions, or using averaging periods that are not reflective of the air quality standard – until the applicant achieves the desired modeling output results. Such modeling does not assure that new sources or modifications will not cause or contribute to exceedances of the NAAQS or PSD Increments.

TCEQ is also failing to implement federal MACT requirements, such as, for example, in the recent Aspen Power contested case hearing, in which the TCEQ Executive Director's permitting engineer testified, "I decided just to use their [PSD] application as – also as the case-by-case MACT application."

EPA action on pending SIP proposals, pursuant to its recent settlement with industry, is unlikely to resolve the numerous implementation issues with the state's air program. Meanwhile, TCEQ continues to issue permits to major sources of air pollution, such as new power plants, under policies and practices that fail to live up to the promises of the federal Clean Air Act.

Won't the Consent Decree in the BCCA v. EPA ("SIP Gap" lawsuit) set EPA and Texas on a Schedule to Address these Issues?

No. The extent of the problem goes well beyond the approximately 30 Texas rules that have not been approved or disapproved into the Texas SIP by EPA. The consent decree does not address all the TCEQ's regulations (including some that have been SIP-approved), policies, and practices that fail to live up to Clean Air Act requirements. In addition, the consent decree does not address the scores of permits that have been issued under un-approved state rules. When EPA acts to disapprove certain TCEQ rules – as they must – then many TCEQ-issued permits will need to be re-evaluated and re-issued. During this time, operators face uncertainty as to the legal status of their TCEQ-issued permits. Preconstruction authorizations are rolled into a source's Title V operating permit. EPA may not approve these permits if they contain illegal provisions or fail to assure compliance with the Act.

Permitting and enforcement go hand-in-hand. Poorly written permits with insufficient monitoring requirements make determining compliance more challenging. In Texas, many large primarily lignite-fired power plants have never been stack tested for emissions of particulate matter (PM) since they were first constructed in the 1970's and 1980's. In a recent TCEQ

decision, the commission authorized construction at a facility while its PSD and MACT permits were pending, in violation of federal law.[3]

What is Needed to Fix Texas' Air Program?

Texas needs a complete top-to-bottom review of its air program, and both EPA and the State have a role in fixing the program. EPA and the Texas Legislature have an obligation to ensure state regulations, policies, and practices meet federal requirements. Not surprisingly, states frequently resent the exercise of EPA authority within their jurisdiction, and managing those sensitivities requires tact and skill. Nonetheless, EPA must step up its oversight of the Texas air program.

EPA has an obligation to ensure that states adopt, implement, and enforce SIPs that are sufficient to assure compliance with the Act. Because the SIP is substantially inadequate to comply with the CAA, EPA should require the state to revise the plan. 42 U.S.C. §7410(k)(5). In addition, EPA should act unilaterally to correct past SIP actions that were in error. 42 U.S.C. §7410(k)(6). Further, because Texas is failing to enforce its approved SIP and permit program, EPA should formally notify TCEQ and, if the problems are not corrected, begin to enforce the state's program though administrative penalties, the issuance of orders and/or a civil action. 42 U.S.C. §7413(a)(2).

EPA also has an obligation to ensure that the individual permits issued by the state are in compliance with the approved SIP. If the state's failure relates to compliance with requirements for construction of new sources or modification of existing sources, EPA should issue an order prohibiting the construction or modification of major sources. 42 U.S.C. §7410(a)(5). The "CAA § 167 instructs EPA to 'take such measures, including issuance of an order, or seeking injunctive relief, as necessary to prevent the construction' of a major pollutant emitting facility that does not conform to the PSD requirements of the Act. 42 U.S.C. §7477. *Alaska Dept. of Environmental Conservation v. EPA*, 540 U.S. 461, 469, 124 S.Ct. 983, 991, 157 L.Ed.2d 967 (2004). Texas has a large percentage of the nation's major Clean Air Act sources. EPA may not allow permits to be issued under a BACT process that is broken. EPA or the Texas Legislature should clarify that an adequate BACT analysis requires a searching review of potentially applicable technologies, and may not rely solely on a review of permitted limits. Further, to the extent a best available technology is not selected as BACT, EPA or the Texas Legislature should make clear that an applicant bears the burden of demonstrating in its BACT analysis the technical or economic infeasibility of the top control technology for its facility.

Finally, EPA has a similar duty to ensure that states are properly implementing their Title V operating permit programs. When the EPA Administrator determines a state is "not adequately administering and enforcing" its federal operating permit program in compliance with the Act, the Administrator must notify the state and provide sanctions if the program deficiencies are not corrected within eighteen months. 42 U.S.C. §7661a(i). Likewise, if EPA determines that a draft operating permit contains provisions not in compliance with Title V of the Act, EPA should object to the permit's issuance. 42 U.S.C. §7661d(b)(1). If EPA determines that cause

[3] Matter of Aspen Power. The Aspen Power permit itself also provides a glaring example of the inadequacy of TCEQ's Three Tier BACT process.

exists to terminate, modify, or revoke and reissue a permit, it should notify the state and require revision. 42 U.S.C. §7661d(e).

Texas Environmental groups have at least two pending petitions to EPA, asking for a major overhaul of the state's air quality program. In January 2008, Environmental Defense and Sierra Club filed a petition, asking EPA for a top-to-bottom review of the state's preconstruction NSR and PSD programs, citing deficiencies in the TCEQ's implementation of the federal best available control technology ("BACT") analysis, and several other concerns. The groups asked the EPA Administrator to issue an order finding that requirements of the approved Texas SIP are not being implemented, and that the State of Texas is not acting in compliance with certain requirements and prohibitions of the Act relating to the construction of new sources or the modification of existing sources.

A subsequent petition to EPA, filed in August 2008, by several environmental groups, details additional deficiencies in the TCEQ air permitting program. The petition states:

> "Texas' failure to implement an adequate air pollution control program is due in part to the Environmental Protection Agency's ("EPA's") failure to exercise meaningful oversight of the Texas program. State and local pollution control authorities are given much responsibility under the federal Clean Air Act for adopting specific pollution control measures and permitting program requirements in order to ensure that air quality meets the National Ambient Air Quality Standards (NAAQS) and that public health is protected from criteria and hazardous air pollutants. While SIP and Federal Operating Permit (FOP) programs are adopted by states, EPA has responsibility for reviewing and approving or disapproving such plans and for ensuring that they are adequately implemented and enforced.
>
> "EPA has failed to take action on numerous Texas SIP program submittals. Approximately thirty SIP submittals are pending. Some have been pending for over ten years. The flexible permit rules, for example, were submitted for approval in 1994. Many of these submittals do not meet minimum federal standards and should have been disapproved. Meanwhile, Texas has violated federal regulations by proceeding to implement its new programs and rules without waiting for EPA approval. As a result, Texas is currently operating a state air permitting program based on regulations that are not EPA approved and do not meet minimum Clean Air Act requirements for protecting air quality. In addition, Texas air pollution sources are operating and obtaining permits pursuant to Texas' rules, rather than the federally approved SIP rules.
>
> "These problems are then carried over into sources' Title V permits. Texas' operating permit rules incorporate by reference the provisions of the Texas Administrative Code, rather than the provisions of the current SIP. In addition, state operating permits incorporate by reference the air permits applicable to the source, including permits such as flexible permits and permits-by-rule, which do not meet federal requirements.
>
> "EPA should act immediately to fulfill its obligations pursuant to the Clean Air Act to ensure that Texas has adopted and is enforcing approved SIP and FOP programs meeting minimum Clean Air Act requirements."

***

The petitioners ask EPA take the following action:

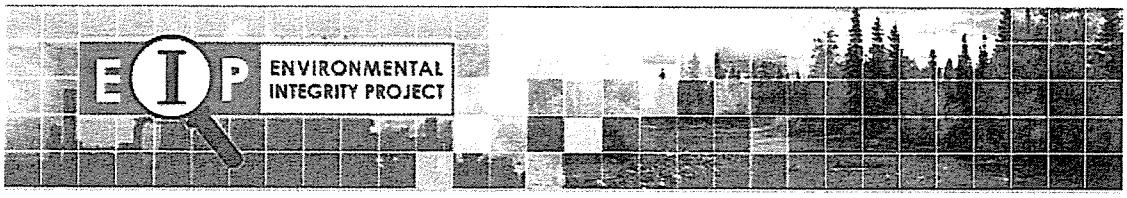
"EPA should address the substantial inadequacies in Texas' air pollution control program by: (1) conducting a thorough review of Texas' permitting program to identify program elements that are inconsistent with Texas' approved state implementation plan ("SIP") and/or the Clean Air Act, (2) issuing a written notice calling for program revisions addressing the Texas program deficiencies identified in this petition and starting the relevant sanctions clocks, (3) proposing action on Texas' pending SIP submittals as identified below, (4) prohibiting construction of new major sources pursuant to any non SIP approved permitting provisions, and (5) establishing a process for correcting and amending the numerous Texas air permits that have been issued in violation of the Texas SIP and Clean Air Act requirements."

The Texas Legislature, through the Sunset Review process, can help address agency-wide issues, such as limiting the role of the Executive Director in contested case hearings and strengthening enforcement. Specific to air permitting, both EPA and the Texas Legislature have an obligation to:

- Hold TCEQ to minimum standards to protect the integrity of the federal preconstruction air permitting programs to meet the technology forcing provisions of the Act. Texas should not be allowed to use any BACT process that results in a BACT determination that is clearly not based on the best pollution control technology available for the source.

- Ensure that permits are not issued until such time as sources obtain valid NSR, PSD and MACT, or "HAP" permits consistent with the federal Clean Air Act.

- Ensure permits are not issued when evidence of PSD increment or NAAQS exceedances exists. The State, with EPA oversight, should conduct a PSD Increment "SIP Call."



Eric V. Schaeffer

Executive Director

Eric V. Schaeffer has served as director of the non-profit Environmental Integrity Project (EIP) since he co-founded the organization in March of 2002. EIP combines policy analysis, media outreach and litigation to advocate for more effective enforcement of environmental laws still drives all of EIP's work. Previously, Eric served as director of EPA's Office of Civil Enforcement from 1997 to 2002, where he received a Presidential Rank Award, as well as the John Marshall award from the Justice Department for his leadership in negotiating an industry-wide cleanup of petroleum refineries. Eric's career at EPA began in 1990, and included an appointment as special assistant to the Deputy Administrator. Prior to his service at EPA, Eric worked as an environmental attorney for two and a half years at Morgan, Lewis & Bockius, and spent six years on Capitol Hill working for various members of Congress. Eric received his law degree from Georgetown University in 1987, and graduated from Vanderbilt University in 1976.

Ben Harrison

Ben Harrison is the Deputy Regional Counsel for Region 6. In his almost 20 years with EPA, he has served as the Regional Judicial Officer, Indian Law Advisor, and Air Enforcement Attorney practice group leader. Ben has been involved in enforcement issues related to Superfund, RCRA, Safe Drinking Water Act, Clean Water Act, FIFRA and Air. He has been a member of the Multimedia Counseling Branch where he handled NPDES permitting, TMDL's, and State program approvals under the Clean Air Act and Clean Water Act.

He is a graduate of Hendrix College in Conway, Arkansas where he received his BA in Theatre and earned his J.D. at the University of Arkansas at Little Rock.

Ben J. Harrison
Deputy Regional Counsel
US EPA, Region 6
(214) 665-2139

CLEARING THE AIR ON TEXAS FLEXIBLE AIR PERMITS

By Matthew L. Kuryla and James P. Rizk

July 17, 2009

Abstract

The Texas air quality permitting program is among the most stringent and protective in the nation. Texas implements a comprehensive minor new source review ("NSR") program, in large part federally-approved as part of the Texas state implementation plan ("SIP"). In 1994, Texas added a flexible permit program to minor NSR, and submitted it for EPA review as a SIP revision. EPA has delayed action on this and over 30 other Texas submittals, resulting in a widening gap between the rules in the Texas SIP and those in Texas regulations, commonly known as the "SIP gap."

However, EPA is now preparing action on the Texas submittals, under a schedule established in a litigation settlement. EPA provided strong indication in its May 26, 2009 presentation to TCEQ that it intends to at least partially disapprove the Texas flexible permit program submittal. TCEQ responded in a June 5, 2009 letter to EPA reaffirming the approvability of the Texas SIP submittals and proposing clarifications and limited changes as part of a constructive framework for closing the SIP gap.

This article takes an in-depth look at the Texas flexible permitting program. The article examines the legal standard for EPA approval of the program, clears misconceptions about the program, and outlines how the program compares with prior EPA benchmarks. Put simply, the Texas flexible permit program has resulted in substantial emissions reductions, meets applicable requirements in the federal Clean Air Act ("CAA") and EPA rules, and does not preclude applicable major NSR compliance obligations. Accordingly, the program meets the standard for federal approval and should be approved.

EPA and TCEQ should expedite work to achieve the prompt closure of the SIP gap. In the interim, while any pending rule revision remains unapproved, or is partially or conditionally approved, EPA should continue to review permits case-by-case for SIP consistency as part of its statutory role in implementing federal NSR and Title V. EPA has exercised this role for several decades, reviewing hundreds of valid, protective and NSR and Title V permits. Texas flexible permits are an integrated part of the federally-enforceable air quality compliance regime at many Title V-permitted sites. Continuation of the SIP gap is neither legally supportable nor fair or responsible in light of the program history and the real, measured and sustained improvements seen, and acknowledged, in Texas air quality.

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I. Overview of Texas Air Permitting

A. Preconstruction Air Permit

Texas has a well-developed and protective air permitting program that predates preconstruction permitting requirements in the CAA. Accordingly, the Texas permitting program is relatively complex, consisting of numerous preconstruction authorization mechanisms for both minor sources and SIP-approved authorization mechanisms for major sources. Under this program, any person who plans to construct a new facility or engage in the modification of an existing facility which emits air contaminants must obtain an authorization from the TCEQ, using one or more of the following mechanisms:[1]

Minor NSR:

1) **Permit by rule authorization**: 30 TAC Chapter 106 contains 120 permits by rule ("PBR") that can be claimed to authorize minor sources or minor modifications if both general and specific PBR conditions are met.

2) **Standard permit:** 30 TAC Chapter 116, Subchapter F contains standard permits that are either issued by rule or by the commission pursuant to established public participation requirements. Standard permits are currently available for qualifying minor source projects for: air quality pollution control projects; animal carcass incinerators; boilers; concrete batch plants; electric generating units; hot mix asphalt plants; and rock and concrete crushers.

3) **New source review permit:** 30 TAC Chapter 116, Subchapter B contains the requirements for the authorization of minor sources or minor modifications on a case-by-case basis.

4) **Flexible permit:** 30 TAC Chapter 116, Subchapter G contains the requirements for the authorization of sources or modifications with the establishment of pollutant-specific flexible emission caps. While flexible permits may be issued to major sources and major modifications, they do not replace the requirement to obtain a major NSR permit for such projects. Under the flexible permit program, a permittee can seek pollutant-specific caps that cover certain facilities at the site. These caps are established based on the application of BACT to all of the facilities contributing to the emissions cap.[2] In exchange for this greater level of control, sites are provided with an alternative to individual facility emission limits (for the covered facilities) as long as the site complies with the emission limits set by the cap.

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[1] TCEQ has defined a limited subset of sources and conditions which constitute *de minimis* facilities or sources that are not required to obtain a preconstruction authorization under the Texas Clean Air Act. This list is generally more restrictive than similar exemptions in other state minor NSR programs that we have reviewed.

[2] 30 TAC § 116.716(a). Note, however, that a site may have an implementation period to install the new control devices. Under this period, an initial cap will be higher than the final cap, which is based on BACT.

Major NSR:

1) **Nonattainment permit:** Major sources and major modifications in nonattainment areas for a criteria pollutant are required to obtain a nonattainment new source review permit which satisfies the requirements in 30 TAC Chapter 116, Subchapter B, Division 5.

2) **PSD permit:** Major sources and major modifications in areas that are in attainment of the NAAQS are required to obtain a prevention of significant deterioration ("PSD") new source review permit which satisfies the requirements in 30 TAC Chapter 116, Subchapter B, Division 6.

Qualified Facility Flexibility:

While not technically a permit authorization mechanism, Senate Bill 1126, enacted in 1995, provides a mechanism for excluding certain projects from minor NSR permitting requirements.[3] Senate Bill 1126 and implementing regulations (the "qualified facility" rules) change the definition of "modification of an existing facility" by adding three types of physical or operational changes that are not considered to be modifications (for purposes of minor NSR). Under the qualified facility rules, a facility is a "qualified facility" if it: 1) was issued a permit or permit amendment or was exempted from pre-construction permit requirements within the last 10 years or 2) uses air pollution control methods that are at least as effective as the BACT that was required or would have been required for the same class or type of facility by a permit issued in the last 10 years. Facilities that meet either of these criteria may make physical or operational changes without obtaining a permit or other approval from the TCEQ if the change will not result in a net increase in allowable emissions of any air contaminant or the emission of an air contaminant not previously emitted.

B. Operating Permit

Separate from the requirement to have a preconstruction air permit, major sources are also required to obtain a Title V operating permit. Texas implements its own SIP-approved Title V permit program. Title V permits contain or incorporate applicable requirements from all forms of preconstruction permit. Under section 505(b) of the federal Clean Air Act, EPA is authorized to review state operating permits issued pursuant to Title V and to veto permits that fail to comply with the applicable requirements. In particular, under section 505(b)(1) of the federal Clean Air Act, EPA may object to the issuance of a Title V permit if it determines that the permit is "not in compliance with the applicable requirements of this Act, including the requirements of an applicable implementation plan." EPA has exercised its review role under Title V for many years, reviewing hundreds of valid, protective and federally enforceable Title V permits.

[3] The qualified facility rules have no effect on a permit holder's compliance obligations under the federal PSD or nonattainment NSR programs. *See e.g.*, TCEQ Guidance Document No. RG-223, *Guidance for Air Quality: Qualified Changes under Senate Bill 1126* at p. 3 (Dec. 2000 Draft).

II. The Texas NSR SIP Gap: An Overview

As suggested by their name, *state* implementation plans consist of state regulations. Once promulgated, the state regulations that constitute the proposed SIP are submitted to EPA for approval, at which time the SIPs become federally enforceable.[4] Because state promulgation and federal approval do not occur simultaneously, the currently-applicable state regulations often differ from the SIP-approved regulations. This difference, commonly referred to as the "SIP gap," generally becomes larger and more significant the longer it takes EPA to act on state SIP submittals.[5]

A. SIP-Approval Status of Key Texas NSR Rules

1. Approved Programs

Key Texas air permitting rules that have received EPA approval in largely their present form include:

(a) Permit by Rule Program

PBRs are minor source permits adopted under 30 TAC Chapter 106 of TCEQ's rules, which authorize the construction of new and modified facilities or changes within facilities that TCEQ has determined will not result in a significant contribution of air contaminants.[6]

(b) Standard Permits

Standard Permits are minor source permits adopted under 30 TAC Chapter 116, Subchapter F of TCEQ's rules, which authorize the construction of certain other categories of sources and changes.[7]

2. Key Texas air permit rules for which approval remains pending include:

(a) Flexible Permit Program

Submitted on November 29, 1994 and codified in 30 TAC Chapter 116, Subchapter G, the flexible permitting program is the basis for authorization of emissions at 120 industrial sites.

(b) Public Participation Program

Enacted by the Texas Legislature in 1999, HB 801 provided for enhanced public participation in Texas air quality permit proceedings. Implementing rules at 30 TAC Chapter 39

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[4] 42 U.S.C. §7410.

[5] The CAA requires EPA to determine within a six-month period whether state plan submittals meet minimum criteria, and to approve or disapprove such submittals within 12 months of the initial determination of completeness. 42 U.S.C. §7410(k)(1)(B) and (k)(2).

[6] *See* 68 *Fed. Reg.* 64,546 (Nov. 14, 2003).

[7] *Id.*

were submitted on October 25, 1999. On November 26, 2008, EPA issued a proposed limited approval, limited disapproval of TCEQ's public participation SIP submittal, noting that the submittal would strengthen the existing SIP regulations, but also noting that additional changes would be required to avoid potential sanctions and the development of a federal implementation plan.[8]

(c) Qualified Facility Flexibility

Enacted by the Texas Legislature in 1995, SB 1126 revised the Texas Clean Air Act ("Texas CAA") definition of "modification" to exclude changes below current allowable levels at "qualified facilities" that employ up-to-date control technology. Implementing rules at 30 TAC § 116.116(e) were submitted on March 13, 1996, and remain pending.

(d) NSR Reform Rules

In 2006, TCEQ adopted and submitted to EPA a rule package modeled on EPA's 2002 NSR Reform Rule. TCEQ's rules, housed mainly at 30 TAC §§ 116.12 and 116.150 - 161, await SIP-approval. The prior versions of these sections were approved by EPA in 2002.

EPA maintains the current text of the last SIP-approved versions of TCEQ's air permit regulations on its website. See EPA webpage, http://www.epa.gov/earth1r6/6pd/air/sip/sip.htm.

B. Timeline for EPA Action on SIP Gap Programs

In 2008, the BCCA Appeal Group, Texas Association of Business, and Texas Oil and Gas Association brought suit to establish deadlines for action on an array of Texas air permitting SIP revisions, some of which have been pending for more than 14 years. On July 1, 2009, the United States lodged a proposed consent decree and settlement agreement in *BCCA Appeal Group v. EPA*, Case No. 3:08-CV-1491-G, in the U.S. District Court for the Northern District of Texas. The settlement establishes the following schedule for EPA final action on pending SIP submittals.

Table 1: Agreed Schedule for EPA Final Action on Pending Texas SIP Submittals[9]

RULE	ACTION DATE
Public Participation Chapter 39, 55 (Rule Project No. 88030-039-AD and 99030-039-AD)(submittal of 12/15/95, as modified 7/22/98, 10/25/99).	November 30, 2009
MECT (Chapter 101, Sub H, Division 3) August 2007 Revisions	January 31, 2010

[8] 73 *Fed. Reg.* 72,001 (Nov. 26, 2008).

[9] Adapted from Exhibit 1 to Consent Decree and Exhibit A to Settlement Agreement, *BCCA Appeal Group v. EPA*, Case No. 3-08CV1491-G (N.D. Tex. -- Dallas).

RULE	ACTION DATE
Qualified Facilities Chapter 116 (submittal of 3/13/96, as modified on 7/22/98, 9/11/00, 7/31/02, and 9/4/02) Offset Certification, NSR, Permit Review Process & Extensions for Construction (Rule Project No. 2003-003-116-AI), and Air Fees (Rule Project No. 2002-041) (submittal of 9/25/03, as modified on 10/4/02)	March 31, 2010
ERCs/DERCs (October 2006 Revisions and August 2007 Revisions)	April 30, 2010
Flexible Permits (submittal of 11/29/94, as modified on 7/22/98, 9/11/00, 4/12/01, 9/4/02, 10/4/02, 9/25/03)	June 30, 2010
NSR Reform Chapter 116, Revisions to 8-Hour Ozone NAAQS—Phase 1 (Rule Project No. 2005-009-116-AI), and Pollution Control Project Standard Permit Chapter 116 (submittal of 6/10/05, as modified on 2/1/06) Emissions Banking and Trade (HGA) (Rule Project No. 2000-047-116-AI)	August 31, 2010
Emissions Event and Maintenance, Startup and Shutdown (MSS) revisions to Chapter 101 Subchapter F	October 31, 2010
Senate Bill 7 Trading Program (Chapter 101, Sub H, Division 2) and Texas Chapter 116 NSR Rule Revisions; Electric Industry Restructuring (SB7) (Rule Project No. 99033-116-AI)(submittal of 1/3/00, as modified 7/31/02) System Cap Trading Program (Chapter 101, Sub H, Division 5) and Chapter 101, Subchapter H, Division 5—System Cap Trading Program (Rule Project No. 2000-046-101-AI)	December 31, 2010
1993 Recodification of Chapter 116 NSR Rules Revisions; 112(g) Revisions (Rule Project No. 98001-116-AI) (excepting those portions of the rule acted on at earlier dates with the flexible permit, qualified facilities, public participation, and permit renewals actions; see Exhibit 1 to Consent Decree in the above-captioned matter) Permit Renewals and Standard Permits (submittal of 12/15/95, as modified 4/19/96, 7/22/98, 10/25/99, 9/4/02)	October 31, 2011
Emergency and Temporary Orders (Rule Project No. 97142-035-AD), and Revisions to Provisions for Emergency Orders (Rule Project No. 2005-070-035-LS). Air Permits (SB 766)—Phase I (Rule Project No. 99029A-116-A1) and Phase II (Rule Project No. 99029B-116-A1).	December 31, 2012
Rule Project No. 2001-043-122-AD Grandfathered Facilities (Rule Project No. 2001-076-116-AI) Shipyard Facilities and Maintenance Emissions (Rule Project No. 2001-043-116-AI) HB 638: Pipeline Facility Reimbursement (Rule Project No. 2003-043-116-AI) FutureGen Rules (Rule Project No. 2005-053-091-OR) House Bill 3732, Advanced Clean Energy Project Permitting (Rule Project No. 2007-023-116-PR) Senate Bill 1673 Concurrent Review of Permit Renewals and Permit Amendments (Rule Project No. 2007-024-116-PR)	December 31, 2013

III. Approval of NSR Programs Under the CAA and EPA Regulations

A. Introduction to SIP Approval of NSR Programs

In response to increasing concerns about air quality, Congress enacted the CAA amendments of 1970, which restructured the CAA and established National Ambient Air Quality Standards ("NAAQS") in order to protect air quality. The 1970 amendments provided for the application of these NAAQS to individual sources of air pollution through SIPs that were to be approved and made federally enforceable by EPA.

In the context of NSR, the original requirements for an approvable SIP were very general, and provided broad discretion for states to identify the types and sizes of facilities subject to NSR. In 1977, Congress added the requirement for EPA to specify more stringent and prescriptive NSR provisions for major sources. Neither the CAA nor EPA regulations have ever specified similarly prescriptive requirements for minor sources and modifications.

The general requirements for the adoption and approval of SIPs for national primary and secondary ambient air quality standards are established in Section 110 of the CAA. Section 110(a)(2)(A)-(M) provides the elements of an initial SIP. Sections 110(k) and (l) detail EPA's procedures and standards for evaluating initial SIP submittals and revisions, respectively. The provisions for SIPs in section 110 are general in nature, and reflective of the overall policy behind the SIP approach—that EPA sets the standards, but leaves states with the discretion to determine their own individual path for attaining those standards. In fact, as the Fifth Circuit U.S. Court of Appeals recently phrased it, "the EPA has no authority to question the wisdom of a State's choices of emissions limitations if they are part of a SIP that otherwise satisfies the standards set forth in 42 U.S.C. § 7410(a)(2)"[10] Rather, the proper test for determining whether a SIP revision can be approved is whether the plan interferes with the attainment of the NAAQS (*i.e.* that the plan does not make air quality worse).[11]

B. Major NSR Program Review

In addition to the general SIP approvability standard outlined above, section 110(a)(2)(C) of the CAA requires SIPs to:

> include a program to provide for the enforcement of the measures described in subparagraph (A) [regarding control techniques], and regulation of the modification and construction of any stationary source within the areas covered by the plans as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C [regarding PSD] and D [regarding nonattainment NSR] of this subchapter.[12]

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[10] *CleanCoalition v. TXU Power,* No. 07-50685 slip op. at 5 (5th Cir. July 21, 2008); *See also Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997) (holding that section 110 of the CAA does not give EPA the authority to condition approval of a state's plan on the state's adoption of control measures chosen by EPA).

[11] *Galveston-Houston Assoc. for Smog Prevention v. EPA*, 289 Fed.Appx. 745, 754 (5th Cir. 2008).

[12] 42 U.S.C. § 7410(a)(2)(C).

Section 110(a)(2)(C) gives states broad discretion to develop "*a program*" to regulate the modification and construction of sources "*as necessary*" to assure compliance with the NAAQS.[13] However, CAA Section 161 (added as part of the 1977 CAA amendments) adds the more specific requirement that implementation plans:

> . . . contain emission limitations and such other measures as may be necessary, ***as determined under regulations promulgated under this part*** to prevent significant deterioration of air quality . . . .[14]

In accordance with this provision, EPA promulgated Title 40, section 51.166 of the Code of Federal Regulations ("CFR"), which contains the elements of an approvable prevention of significant deterioration ("PSD") permitting program.[15] However, while the language in 40 CFR § 51.166 is detailed and prescriptive, EPA has indicated that certain deviations from its model program are approvable if the state demonstrates that the submitted provisions are at least as stringent as the EPA rule language.[16]

EPA recently re-affirmed this approach in its 2002 NSR reform rules. In that rulemaking, EPA decided against a "menu approach" for the reform mechanisms where states would have been able to choose which elements of the reform rules they wanted to incorporate. Instead, EPA incorporated the new provisions into the base NSR program requirements, but indicated that states could elect not to implement the new applicability provisions in the reform rules if they could show that the state program was as stringent as the revised base program. In making this decision, EPA emphasized that "even without the menu approach, State and local jurisdictions have significant freedom to customize their NSR programs."[17]

C. Minor NSR Program Review

Section 110(a)(2)(C) of the CAA also serves as a basis for most states' decisions to include minor NSR programs in their implementation plans. That section requires that implementation plans include a program addressing "regulation of the modification and construction of ***any*** stationary source within the areas covered by the plans ***as necessary*** to assure that national ambient air quality standards are achieved."[18] Unlike the PSD program, the statute does not require EPA to promulgate rules prescribing requirements for minor NSR, and EPA has not done so.

In 1973, EPA promulgated rules to implement NSR requirements in general. These rules were intended to address NSR requirements before there was a PSD program.[19]

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[13] Parts C and D of the CAA were added as part of the 1977 amendments to the CAA. Prior to that time, the CAA contained only general requirements for NSR.
[14] 42 U.S.C. § 7471 (emphasis added).
[15] Technical and procedural requirements for a SIP submittal are contained in 40 CFR Part 51, Appendix V.
[16] *See e.g.* 40 CFR §§ 51.166(a)(7)(iv) and 51.166(b).
[17] 67 *Fed. Reg.* 80,186, 80,241 (Dec. 31, 2002).
[18] 42 U.S.C. § 7410(a)(2)(C) (emphasis added).
[19] 38 *Fed. Reg.* 15,834 (June 18, 1973).

Despite their broad original purpose, these rules (currently located at 40 CFR §§ 51.160 - .164) have been cited to apply to minor NSR permitting programs.[20]

The requirements in these sections are significantly less detailed than the PSD requirements in 40 CFR § 51.166, and simply require that plans include enforceable procedures to enable states to determine whether projects will result in a violation of the control strategy or will interfere with attainment of the NAAQS. Moreover, section 51.160(e) provides:

> The procedures must identify the types and sizes of facilities, buildings, structures, or installations which will be subject to review under this section. The plan must discuss the basis for determining which facilities will be subject to review.[21]

This provision provides states with considerable discretion to determine which, if any, sources are subject to minor NSR.[22]

D. Recent EPA Considerations in Minor NSR Program Review

While section 51.160(e) provide states with broad discretion to determine which sources are subject to minor NSR programs, in the mid-1990s EPA began to enumerate criteria that purport to limit states' discretion. These principles were never codified in rule, and are not expressed in the CAA. The following sections discuss these concepts in more detail.

1. *De Minimis* Limitations as Set Forth in *Alabama Power Co. v. Costle*

In several SIP approval actions, EPA has suggested that a state's ability to exempt sources from minor NSR requirements is limited by *de minimis* principles outlined in *Alabama Power Co. v. Costle*, 636 F.3d 323 (D.C. Cir. 1979). In that decision, the D.C. Circuit interpreted the scope and validity of PSD regulations promulgated under the 1977 amendments to the CAA, which established the PSD program. In the case, EPA sought to justify: 1) its interpretation that the proper test to determine which sources were subject to PSD review was based on potential emissions without consideration of reductions from control devices; and 2) its 50-ton threshold for exempting certain sources from certain PSD requirements. In its ruling, the court determined that: 1) the proper test for determining major source status should be based on post-control emissions; and 2) EPA's regulation exempting facilities emitting less than 50 tons per year of a pollutant was inconsistent with the CAA. In remanding the issue to EPA, the court included *dicta* outlining a general *de minimis* principle under which agencies could create limited PSD exemptions despite the absence of express statutory authority.

Importantly, the discussion of *de minimis* authority in *Alabama Power* is in the context of exemptions from ***PSD review***. However, it appears that EPA has taken the position that the *de minimis* principles in *Alabama Power* limit the scope of what states can exempt from

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[20] *See e.g.*, 63 *Fed. Reg.* 16,751, 16,752 (April 6, 1998) (proposing limited approval of Delaware SIP submittal); *see also*, 71 *Fed. Reg.* 48,695, 48,700 (Aug. 21, 2006) (proposing regulations for new source review in Indian Country).

[21] 40 CFR § 51.160(e).

[22] The preambles to the rules containing this requirement do not elaborate on the scope of this provision.

their minor NSR programs under 40 CFR § 51.160(e).[23] This approach applies the principle where it is not strictly needed. Unlike the PSD program at issue in *Alabama Power*, under which EPA has no express statutory authority to exempt sources, both CAA Section 110 and 40 CFR § 51.160(e) expressly provide states with broad authority to define the scope of their minor NSR programs.

2. Environmental Significance

In 1995, EPA issued a proposed rulemaking that sought to define the approval criteria for state minor NSR programs.[24] That proposal recognized the authority of states to determine the scope of their minor NSR programs as follows:

> Under the applicable Federal regulations, States have broad discretion to determine the scope of their minor NSR programs as needed to attain and maintain the national ambient air quality standards. Indeed, States may exempt categories of changes from minor NSR altogether on de minimis grounds (i.e., the change is trivial in size and of no importance in safeguarding ambient standards). States have exercised this discretion to subject some or many, but generally not all, minor source changes to their minor NSR programs. * * * The EPA recognizes that States may also structure their minor NSR program to limit the public process afforded during preconstruction review consistent with the environmental significance of the change.[25]

The rulemaking proposal would have revised 40 CFR § 51.161 to clarify the scope of state discretion in determining the scope of public participation requirements. The proposal relied on the concept of "environmental significance" and proposed to divide changes potentially subject to review into two categories: 1) those that are more environmentally significant; and 2) those that are less environmentally significant. Under the proposal, changes that were more environmentally significant could not be exempted from the public participation requirements in 51.161(e). This proposal was never adopted.

The "environmental significance" concept re-emerged in subsequent SIP-approval actions. The concept was used as a basis for granting less than full approval in SIP submittals by West Virginia and Delaware. EPA granted limited approval to Delaware's SIP submittal, which contained a 15-day comment period for minor NSR applications. EPA stated that the approval would convert to a full approval if the procedures were determined to be consistent with the final rule revisions in 40 CFR § 51.161.[26] With regard to West Virginia, EPA partially disapproved

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[23] It is worth noting that the requirement in 40 CFR § 51.160(e) was originally codified in 1973--six years before the court's decision in *Alabama Power* and well before the 1977 amendments to the CAA at issue in that case. *See* 38 *Fed. Reg.* 15,834 (June 18, 1973) (language contained in then existing 40 CFR § 51.18(f)).

[24] 60 *Fed. Reg.* 45,530 (Aug. 31, 1995). Notably, the proposed changes to 40 CFR Part 51 were not adopted.

[25] *Id.* at 45,536.

[26] *See* 63 *Fed. Reg.* 16,751, 16,753 (April 6, 1998).

the SIP because limited public participation procedures for temporary permits were insufficient and were not properly tied to the environmental significance of the matter.[27]

However, EPA did not apply the "environmental significance" concept in other actions. For example, in EPA's 2006 proposal for the review of new sources and modifications in Indian Country, the agency proposed minor NSR thresholds without discussion of environmental significance.[28] Notably, the proposed Indian Country program was designed to serve as a model that was representative of other approvable state minor NSR programs. EPA explained:

> [W]e seek to establish a flexible preconstruction permitting program for minor stationary sources in Indian country that is comparable to that which applies outside of Indian country, in order to create a more level regulatory playing field . . . . [T]his can serve as one example of a program that meets the objectives and requirements of the Act.[29]

The Indian country proposal would establish numeric review thresholds that "represent a reasonable balance between environmental protection and economic growth."[30]

EPA has also proposed approval of other minor NSR programs as consistent with 40 CFR Part 51 without discussion of whether the exemptions satisfied the "environmental significance" concept. For example, EPA approved Alaska's minor NSR program, which requires a permit prior to a modification if "(1) the stationary source already has the potential to emit more than the emission thresholds for construction of new minor sources requiring permits, and (2) the modification would cause an increase greater than 10 tpy of PM-10, 10 tpy of NO_x, 10 tpy of SO_x, or 100 tpy of CO."[31]

IV. Flexible Permit Program Approval

A. Applicable Standard

As discussed in Section III.C., the fundamental legal standard for approving a minor NSR program simply requires that implementation plan include a program that addresses "regulation of the modification and construction of ***any*** stationary source within the areas covered by the plans ***as necessary*** to assure that national ambient air quality standards are achieved."[32] This general standard supports a holistic review of the program to evaluate the stringency of the program and its ability to help ensure compliance with NAAQS.[33]

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[27] *See* 63 *Fed. Reg.* 5484, 5486 (Feb. 3, 1998).
[28] 71 *Fed. Reg.* 48,696 (Aug. 21, 2006).
[29] *Id.* at 48,700.
[30] *Id.* at 48,701.
[31] *See* proposed approval at 72 *Fed. Reg.* 5232, 5235 (Feb. 5, 2007). The final approval was published at 72 *Fed.Reg.* 45,378 (August 14, 2007).
[32] 42 U.S.C. § 7410(a)(2)(C) (emphasis added).
[33] As discussed above, EPA takes the position that its regulations at 40 CFR §§ 51.160 - .164 contain additional requirements for the approval of minor NSR programs. This applicability, however, is unclear because the rules were promulgated to address NSR requirements *before* there was a PSD program. Nonetheless, the requirements are

B. Overview of Texas Flexible Permit Program

The TCEQ's flexible permit regulations in 30 TAC Chapter 116, Subchapter G were promulgated in 1994 as a flexible mechanism to comply with State minor NSR permitting requirements. This alternative to a traditional permit was established as a way to encourage facilities to install controls that would not otherwise be required in exchange for operational flexibility associated with emission caps. Under the flexible permit program, a permittee can seek pollutant-specific caps that cover certain facilities at the site. These caps are established based on the application of BACT to all of the facilities contributing to the emissions cap.[34] In exchange for this greater level of control, sites are provided with an alternative to individual facility emission limits (for the covered facilities) as long as the site complies with the emission limits set by the cap.

The flexible permit also allows for the use of individual emission limitations in certain situations.[35] Individual limits are used when it is necessary to control off-property impacts, such as impacts from air toxics or to meet the NAAQS. Specific emission limits that an individual facility cannot exceed may also be established to ensure that federal permitting requirements are not circumvented.[36]

The flexible permit program has been quite successful in achieving emission reductions. For example, flexible permitting has resulted in more than a 25,000 tons per year (tpy) reduction in SO_2 and more than a 10,000 tpy reduction in NO_x at a coal and petroleum coke fired power plant and a reduction of more than 4,800 tpy of SO_2 and CO from a petroleum refinery.[37] In addition, the flexible permit program has served as a successful precursor to other emission cap permitting programs, such as the federal Plantwide Applicability Limit ("PAL") established as part of federal NSR reform.[38] However, unlike PALs, which are a *major* NSR tool, flexible permitting is an alternative to *minor* NSR permitting. Issuance of a flexible permit has no impact on the permit holder's obligation to comply with federal PSD or nonattainment NSR requirements. In fact, for projects that constitute major sources or modifications, TCEQ issues a major source permit (PSD or NNSR) in addition to the state flexible permit.

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generally non-prescriptive and provide discretion for states to determine which minor sources are subject to review. Accordingly, the regulations are not necessarily inconsistent with a holistic approach to review and approval of minor NSR program submittals.

[34] 30 TAC § 116.716(a). Note, however, that a site may have an implementation period to install the new control devices. Under this period, an initial cap will be higher than the final cap, which is based on BACT.

[35] 30 TAC § 116.715(b) and 116.716(b).

[36] 30 TAC § 116.715(d).

[37] Letter from Richard Hyde, Director, Air Permits Division, TCEQ to Jeff Robinson, Chief, Air Permits Section, EPA Region 6 (August 30, 2007).

[38] In response to the federal NSR reform rules, TCEQ promulgated its own PAL program in 2006. This program codified at 30 TAC Chapter 116, Subchapter C, is based on the federal model and applies to major NSR. The Texas flexible permit program is not intended to be, and need not be, equivalent to the PAL permit program. The flexible permit program is a state permitting program that establishes a flexible mechanism to comply with State minor NSR permitting requirements. Moreover, the flexible permit rules were adopted in 1994, long before EPA codified PAL requirements.

C. Comparison of Texas Flexible Permitting to EPA Benchmarks

The flexible permit program was intended, and has served, as a useful tool to help Texas assure compliance with the NAAQS. By encouraging the voluntarily installation of modern emission controls in exchange for operational flexibility, flexible permits have resulted in significant emission reductions that would not have otherwise been required under traditional permitting programs. Moreover, neither the CAA nor EPA regulations at 40 CFR §§ 51.160 - .164 prohibit such operational flexibility in minor NSR permits. To the contrary, as outlined above, 40 CFR § 51.160(e) expressly provides states with broad authority to define the scope of their minor NSR programs.

EPA has recently recognized and encouraged state authority to issue minor NSR permits that accommodate operational flexibility. For example, in its Indian Country proposal, EPA proposed a minor source PAL program that shares some similarities with--but is less stringent than--the Texas program.[39] The Indian Country minor PAL program requires control technology and emission limitations that are determined on a case-by-case basis. Under this determination, control technology can range from "technology that is less stringent than reasonably available control technology (RACT) . . . to technology that is the BACT level of control."[40] However, in Texas, BACT is required for all preconstruction permits.[41] Applicants must also demonstrate that the proposed project will be protective of both public health and property.[42]

Similarly, EPA's proposed flexible permitting rule recognizes and encourages state authority to issue minor NSR permits that allow for operational flexibility.[43] Moreover, EPA intentionally decided against any changes to its rules governing minor NSR programs in order to leave application of existing flexible state programs undisturbed. The preamble provides:

> Because of the diversity of existing State minor NSR programs . . . we are not proposing any revisions to the rules governing State minor NSR programs at 40 CFR 51.160 through 51.164.[44]

In finalizing this rule in January 2009, EPA reaffirmed the states' existing authority:

> Comments received on the proposal affirmed that the relevant pilot experience was broadly applicable and that states, in general, have sufficient existing authority to advance approve minor NSR, where they

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[39] *See* 71 *Fed. Reg.* 48,696 (Aug. 21, 2006).
[40] *Id.* at 48,704.
[41] TEX. HEALTH & SAFETY CODE § 382.0518(b)(1).
[42] *Id.* § 382.0518(b)(2).
[43] *See* 72 *Fed. Reg.* 52,206 (Sept. 12, 2007) ("We recognize that many States' minor NSR and part 70 programs may already provide for the flexible permitting approaches proposed and that such States are currently able to implement these approaches.") In January 2009, EPA released a rule that would finalize elements of the 2007 flexible permitting proposal. That rule is currently under review, as part of the Obama administration's efforts to review all rules issued in the final days of the Bush administration.
[44] *Id.*

determine it appropriate to do so, and to incorporate the permit terms accomplishing this approval into title V permits as applicable requirements. As a result, we continue to believe revisions to our part 51 minor NSR regulations are not necessary.[45]

Application of the Texas flexible permitting program does not interfere with compliance with NNSR and PSD review requirements for major sources. In fact, the application requirements for a flexible permit explicitly require compliance with applicable requirements for NNSR and PSD review.[46] And for projects that constitute major sources or modifications, TCEQ issues a major source permit (PSD or NNSR) that is separate from the state flexible permit. Accordingly, all new major sources and major modifications in Texas must have a PSD or NNSR permit.

D. Clearing Misconceptions About Flexible Permits

1. Misconception: Flexible Permitting Circumvents Major NSR

The distinction between flexible permit and federal NSR requirements, and a flexible permit holder's obligation to comply with those federal NSR requirements, is made explicit throughout the flexible permit rules:

- § 116.711(1) states that a flexible permit application must demonstrate that "[t]he emissions from the proposed facility, group of facilities, or account . . . will comply with all rules and regulations of the commission," which includes Division 5 (nonattainment NSR) and Division 6 (PSD) of Subchapter B.[47]

- § 116.711(8): "Nonattainment review. If the proposed facility, group of facilities, or account is located in a nonattainment area, each facility shall comply with all applicable requirements concerning nonattainment review of this chapter."[48]

- § 116.711(9): "Prevention of Significant Deterioration (PSD) Review. If the proposed facility, group of facilities, or account is located in an attainment area, each facility shall comply with all applicable requirements in this chapter concerning PSD review."[49]

- § 116.718 states that the emissions increase at a facility covered by a flexible permit that does not exceed the emission cap is insignificant *"for the purposes of state new source review under this subchapter."* The flexibility provided flexible

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[45] Operating Permit Programs; Flexible Air Permitting Rule, p. 26, Final Rule, _____ Fed. Reg. _____ (signed January 15, 2009, held for publication pending further review) (hereafter "Final FAP Rule"). While this final rulemaking action has been held pending review of the associated changes to EPA's Title V rules at Parts 70 and 71, the preamble statements as to the scope of states' existing minor NSR authority remain true.

[46] *See* 30 TAC § 116.711(8) and (9).

[47] 30 TAC § 116.711(l).

[48] *Id.* § 116.711(8).

[49] *Id.* § 116.711(9).

permit holders to make physical or operational changes under the cap is limited to minor NSR.[50]

In light of these safeguards, any concern about a site's contravention of federal NSR requirements through use of a flexible permit is properly a compliance issue, not a program adequacy issue.

2. Misconception: Flexible Permits are Not Federally Enforceable

The terms of flexible permits, where integrated into sites' Title V permits, are federally enforceable "applicable requirements," as that term is defined in the EPA-approved Texas Title V rules. TCEQ administers a federally approved Title V operating permit program. EPA granted full approval of the Texas Title V program effective November 30, 2001.[51] EPA's decision to approve the Texas Title V program was upheld by the U.S. Court of Appeals for the Fifth Circuit.[52] As such, the EPA-approved Texas Title V definition of "applicable requirement" governs here. Other definitions, such as that in EPA's Part 70 rule, do not govern the meaning of that term.

Flexible permits that have been incorporated into a Texas Title V permit are Title V applicable requirements. The Texas Title V rules define "applicable requirement" to include:

> all of the requirements under Chapter 106, Subchapter A of this title (relating to Permits by Rule), or Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) and any term or condition of any preconstruction permit.[53]

The incorporated terms and conditions of preconstruction permits issued under *any part* of Chapter 116 are Title V applicable requirements.[54] EPA explicitly approved this definition and its incorporation of all Chapter 116 preconstruction permit terms and conditions as Title V "applicable requirements" in the December 2001 *Federal Register* notice approving the Texas Title V program.[55]

Consistent with this approach, in 2003, EPA also approved the following provision of TCEQ's rules:

> "Emission rates in new source review permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification) and certified registrations for

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[50] *Id.* § 116.718.
[51] *See* 66 *Fed. Reg.* 63,318 (December 6, 2001).
[52] *Public Citizen, Inc. v. EPA*, 343 F.3d 449 (5th Cir. 2003).
[53] 30 TAC § 122.10(2)(H).
[54] Likewise, permit application representations in a flexible permit application are also federally enforceable. 30 TAC § 116.721(a) ("All representations with regard to construction plans and operation procedures in any application for a flexible permit, as well as any general and special provisions attached, become conditions upon which the subsequent permit is issued.").
[55] *See* 66 *Fed. Reg.* at 63,322.

> Chapters 106 or 116 of this title are also federally-enforceable emission rates."[56]

Because flexible permits are new source review permits issued under Chapter 116, it is clear that emission rates in flexible permits are federally enforceable. More generally, all applicable requirements of Texas Title V permits are federally enforceable.[57] This federal enforceability is established in Title V of the federal Clean Air Act, which provides:

> After the effective date of any permit program approved or promulgated under this subchapter, it shall be unlawful for any person to violate any requirement of a permit issued under this subchapter.[58]

The federal enforceability of flexible permits is evidenced by EPA's historical review of Texas Title V permits. Under section 505(b) of the federal Clean Air Act, EPA is authorized to review state operating permits issued pursuant to Title V and to veto permits that fail to comply with the applicable requirements. In particular, under section 505(b)(1) of the federal Clean Air Act, EPA may object to the issuance of a Title V permit if it determines that the permit is "not in compliance with the applicable requirements of this Act, including the requirements of an applicable implementation plan." However, despite this review authority, it appears that EPA has never raised an objection to any permit based on the permit's express incorporation of a flexible permit as an applicable requirement.[59] To the contrary, EPA recently affirmed the integration of flexible air permits in Title V permits:

> Part 70 already requires incorporation into a title V permit of the terms of any state minor NSR permit, including those issued to advance approved changes. These permit terms are themselves applicable requirements as defined in 40 CFR 70.2.[60]

3. Misconception: Flexible Permits are Not Practically Enforceable

Flexible permits at Title V sites are subject to the comprehensive compliance demonstration regime under Title V, including semiannual deviation reporting and annual compliance certification. Under the federally-approved Title V program, permittees are required to certify compliance based on "reasonable inquiry." Concerns as to practical enforceability typically go to the adequacy of terms limiting potential to emit for purposes of establishing federal insignificance of changes, or non-applicability of major source requirements. The Texas program rules contain an array of tools to establish such limits. An individual site's status with

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[56] 30 TAC § 122.122(a) (emphasis added) (TCEQ rule approved by EPA at: 68 *Fed. Reg.* 64,543 (November 14, 2003)).

[57] *See* 30 TAC § 122.143(4) ("any noncompliance with either the terms or conditions codified in the permit or the provisional terms and conditions, if any, constitutes a violation of the FCAA and the TCAA and is grounds for enforcement action"), approved at 66 *Fed. Reg.* 63,318.

[58] *See* 42 U.S.C. § 7661a(a).

[59] On May 28, 2009, EPA objected to two Title V permits, based on environmental group petitions. However, neither of these petitions nor EPA orders dealt with the federal enforceability of flexible permit requirements.

[60] Final FAP Rule at 42.

respect to practical enforceability should properly be addressed by applying these existing rules, not by challenging the flexible permit program.

4. Misconception: Texas is Unwilling to Refine the Flexible Permitting Program

The flexible permitting program meets legal requirements for SIP approval. Nonetheless, TCEQ signalled a willingness to make certain revisions to the program to address EPA concerns and to facilitate approval. In a letter dated June 5, 2009, TCEQ outlined the following potential changes to the flexible permitting program:

- Propose rulemaking to remove the insignificant emission factor (9 % total allowable emissions);
- Propose rule revisions to reflect existing TCEQ practice regarding:
  - applying netting during technical review
  - ensuring federal NSR requirements are met if triggered
  - basing emission limitations on a 12-month rolling average
  - requiring public notice for initial issuance
- Propose rule revisions to ensure that terms and conditions of previous permits are added to the flexible permit.[61]

While each of these issues needs further clarification as to its scope and need, they evince a clear intent to continue a dialogue to accommodate valid EPA concerns as to the program's adequacy and protectiveness.

Flexible permits are protective, Title V-incorporated elements of many Texas sites' air quality compliance regime. Because Texas' flexible permit program meets the requirements in 40 CFR §§ 51.160-.164 and does not preclude applicable major NSR compliance obligations, the program meets the standard for federal approval. The flexible permit program should be promptly approved. Continuation of the SIP gap is neither legally supportable nor fair or responsible in light of the program history and the real, measured and sustained improvements seen, and acknowledged, in Texas air quality.

[61] Letter dated June 5, 2009 from Mark Vickery, TCEQ to Larry Starfield, EPA. The authors note that, the treatment of earlier permit terms in issuing a flexible permit is a site-specific issue rather than program adequacy issue. Wholesale restoration of prior permit terms is unnecessary and counterproductive, as many would be neither meaningful to air quality nor relevant to current operations.

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 5, 2009

Mr. Lawrence E. Starfield
Acting Regional Administrator
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

Dear Mr. Starfield:

I am writing to continue the Texas Commission on Environmental Quality's (TCEQ's) desire to work with the U.S. Environmental Protection Agency (EPA) on the many outstanding issues related to Texas' air permitting program, we have developed a list of possible actions that the TCEQ and the EPA could work on collaboratively while EPA finalizes proposed notices on the pending rulemakings. The list includes changes to public participation, an overall programmatic issue for which TCEQ has filed formal comment with EPA in January 2009. The list also includes some changes to three additional specific air permitting program areas that are of particular importance to both agencies. As you are aware, we have had several meetings and correspondence that identified our options for bridging the perceived gaps in our permitting program. The following list serves as a reminder of the issues we have already identified and could serve as a comprehensive roadmap for eliminating these gaps. The TCEQ Executive Director would either propose the following to the TCEQ Commission (such as rulemaking) or initiate the following changes within the program, as appropriate.

Public Participation

- Update Best Available Control Technology (BACT) guidance to state that documentation of the application of BACT is located in the Preliminary Determination Summary and is available for review and comment during second notice for federal New Source Review (NSR) permits.

- Propose rulemaking and revision to the State Implementation Plan (SIP) to reflect the TCEQ's existing practice by:
  - Specifically identifying which applications are subject to public notice.
  - Requiring public notice for initial issuance of flexible permits.
  - Specifying that increment consumption, if required in the Prevention of Significant Deterioration (PSD) permit review process, is a required element of public notice.

- Specifying the public notice process for Plantwide Applicability Limit (PAL) applications.
- Specifying that notice must be provided to local air pollution control agencies and governments and to Federal Land Managers for projects that will affect Class I areas.
- Updating reference to require public notice for certain concrete batch plant standard permits.
- Clarifying rule references, such as definitions of APA (Texas Administrative Procedure Act) and SOAH (State Office of Administrative Hearings).

Qualified Facilities

- Clarify, in rule or guidance document, existing TCEQ practices of:
  - Applying netting during the technical review of a qualified facility by clarifying this in rule or guidance document.
  - Ensuring federal NSR requirements are met when triggered. If federal NSR is triggered, qualified claim will be denied.
  - Providing that emission limitations are based on a 12-month rolling average instead of a calendar average.

Flexible Permits

- Propose rulemaking to remove the insignificant emissions factor (i.e., 9 percent of total allowable emissions).

- Propose rulemaking and revision to the State Implementation Plan (SIP) to reflect the TCEQ's existing practice by:
  - Ensuring that terms and conditions of previously issued permits or more stringent terms and conditions (including additional testing, monitoring, recordkeeping and reporting requirements needed to ensure compliance with emission limitations) are added to the flexible permit.
  - Applying netting during the technical review of a flexible permit.
  - Ensuring federal NSR requirements are met if triggered.
  - Providing that emission limitations are based on a 12-month rolling average instead of a calendar average.
  - Requiring public notice for initial issuance of flexible permits.

NSR Reform

- Update BACT guidance to indicate that Texas is properly implementing the NSR program:
  - The TCEQ reviews RACT/BACT/LAER Clearinghouse (RBLC) data and recently issued permits as part of its BACT review of major sources and major modifications.
  - By including the RBLC and recently issued permit analyses, TCEQ's three-tiered approach is equivalent to EPA's top down approach as has been agreed to by EPA.

- Reconsider proposing rulemaking and revision to the SIP that references EPA rules for nonattainment and maintenance area definitions and removes rule language indicating that the one-hour thresholds and offsets are not effective unless the EPA promulgates rules.

- Propose rulemaking and revision to the SIP to reflect the TCEQ's existing practice by:
  - Applying netting as appropriate during the technical review of a permit by rule at a major source.
  - Providing that emission limitations are based on a 12-month rolling average instead of a calendar average.
  - Including EPA's definition of BACT.

- Document practice of tracking and certifying permit by rule sources to emission limits below major source thresholds by clarifying this in rule or guidance document.

Enclosed is a copy of the slides that EPA presented at the May 26, 2009 meeting. We cannot verify much of the information, and we would like to take this opportunity to respond to some of the slides that you presented at the meeting.

Flexible Permits vs. PAL

The first issue is the comparison of the Texas flexible permitting program to the EPA's PAL. There is a perception that these programs are similar and can be compared. As we have stated to EPA in many meetings and letters, this comparison is not accurate because of the different goals of the two programs. The federal PAL rule provides a procedure, which includes public participation, for establishing plantwide emission limits used to determine the future applicability of federal NSR (also called "Major NSR").

Texas' flexible permit program, which predates the PAL, establishes an emissions cap. An emissions cap is calculated using the maximum expected activity or operating level of a facility and the current BACT applied to each facility. In other words, the emissions cap is a potential to emit (PTE). These BACT emission rates are then summed together as an "emissions cap". Emission caps are generally calculated for each specific criteria pollutant and other pollutants as necessary or desired by the company obtaining the flexible permit. The emission caps allow the permit holder to over-control some facilities while not necessarily adding additional control to other facilities emitting the same pollutant. The existing level of control cannot be relaxed or reduced. The company obtaining a flexible permit is required to meet BACT as if it were applied to all facilities individually contributing to a particular emission cap. Although additional control technology may not be added to some facilities, over-controlling other facilities beyond current BACT results in an emission rate to the atmosphere which is equivalent to all facilities having BACT actually or physically applied.

Many companies have used the flexible permit as a means to have operational flexibility. In addition to flexible permits issued to chemical plants and refineries, a flexible permit was recently issued to the United States Department of Energy (Pantex). Also, many flexible permits

have resulted in actual emissions reductions. The flexible permit emission cap is not intended and not allowed to supersede or replace federal NSR requirements. Federal NSR concepts such as modification, major project, netting, and major modification still apply. Major project determinations are conducted on either a baseline actual to potential or baseline actual to projected actual (depending on how the permit applicant represents their comparison) for the facilities involved. If the project is a major project, contemporaneous netting is initiated, and the net is determined on a baseline actual to potential basis. If the contemporaneous net equals or exceeds the federal threshold for the pollutant and program under evaluation (PSD and/or Nonattainment), federal NSR is triggered.

Insignificant Emissions Factor
In addition, there seems to be some confusion concerning the 9 percent factor used in some of the flexible permits (also known as the insignificant emissions factor). Please note that the 9 percent factor, although allowed by the flexible permit rules, is included in the emission caps (and is not in addition to the emission caps). Also, any increased emissions resulting from a 9 percent (or less) factor are counted when determining federal applicability. Not all companies use the 9 percent factor in their flexible permit cap calculations. The concept of the insignificant emissions factor was explained, in detail, in the letter dated August 30, 2007, to Mr. Jeff Robinson [specifically Item 4(O) located on Page 15]. There is no basis to assert that the 9 percent cap would allow any modifications without undergoing a federal applicability review of any associated project.

The EPA also included slides regarding the Shell Deer Park, Exxon Mobil-Baytown, and Magellan plants, each of which contain facts and analyses that we simply cannot verify. Below we have provided a description of these issues, and as always, are willing to work with EPA to clarify any issues or questions that you may have with permitted operations within the State of Texas.

Shell Deer Park Refinery
First, in a combination of slides, EPA compared the Shell Deer Park flexible permit relating to potential projects that could represent significant operational changes without federal NSR; other slides reference the 2007 renewal of that permit.

The Shell Deer Park refinery was issued a flexible permit in 1995. The flexible permit has been amended three times (1999, 2004, and 2007) since the flexible permit was issued. This site does not have a PAL. In the 1999 amendment, Shell installed some new units, expanded some of its existing units, and authorized several grandfathered units. The flexible permit amendment project was PSD for nitrogen oxides (NO_x), carbon monoxide (CO), and particulate matter of 10 microns and smaller (PM_{10}). In part due to the reduction in emissions from the grandfathered units, this was not a major modification for volatile organic compounds (VOC), and therefore, nonattainment review was not triggered. The level of control for fugitive emissions in benzene service was increased by specifically monitoring flanges using a leak detection instrument (this is in addition to the monitoring that is normally conducted for piping fugitive components).

The permit was amended again in 2004 to address the production of ultra low sulfur diesel and resulted in modifications to several units at the plant. This flexible permit amendment triggered PSD for sulfur dioxide (SO_2) and CO. There was a 0.19 tons per year (tpy) increase in benzene emissions; however, there was also a 0.96 tpy decrease in VOC emissions. Federal review is based in changes in VOC, not benzene specifically. However, benzene is a VOC, and if the benzene changes alone equal or exceed the VOC significance level, federal NSR applicability would be triggered.

In the 2007 amendment, the benzene cap was actually reduced when compared to the 2004 authorized levels, contrary to your assertion that the benzene emissions were increased by 18 percent. The 2007 amendment also reduced NO_x. There was a 1,230 tpy NO_x reduction between 2004 and 2007. This permit amendment also contained emission limits required by Shell's consent decree with EPA. The EPA's slide presentation indicated that the NO_x cap was increased; however, our file research does not confirm this point. In addition to the permit amendment, the permitting action also included the renewal of the permit. In this same slide, you provided a bullet that describes "as you go permitting." The TCEQ does not understand the term "as you go permitting." In order to address this issue, the TCEQ recommends EPA review the Shell permit file along with a TCEQ representative to fully understand the permit history. Additionally, the TCEQ does not agree that state BACT process is less stringent than the federal BACT process for the Shell permitting actions or any other permitted operation in the State of Texas as discussed in prior meetings and correspondence.

Exxon Mobil Baytown Refinery

In another slide, EPA made comparisons regarding the Exxon Mobil Baytown refinery's flexible permit and what you perceive the PAL cap limits to be. The EPA stated that the EPA PAL VOC limit would be 3,098 tpy, and the flexible permit VOC limit is 6,245 tpy. The TCEQ could not determine the basis for the 3,098 tpy PAL cap represented by the EPA. The TCEQ file research shows that the Exxon Baytown Refinery was issued a flexible permit on March 30, 2000. The permit included a number of grandfathered (i.e., previously not permitted) facilities and large actual emission reductions that were obtained as a result of controlling these grandfathered facilities. On October 30, 2006, Exxon Mobil applied for a PAL. As a result of this application, a PAL was issued for several pollutants, including VOC. The PAL was calculated using baseline actual emissions plus 39 tpy (one tpy less than the significance level for the 8-hour ozone rules in place at the time the PAL was issued). At the time the PAL was issued, the final flexible VOC cap and the PAL were both set at 5,783.68 tpy. The flexible permit emissions cap was set equivalent to the baseline actual emission rate used to develop the PAL. At the time of PAL issuance, Exxon Mobil reduced its VOC emission caps from 6,238.84 tpy to 5,783.68 tpy. We are unable to find or develop a calculation method which yields the PAL limit of 3,098 tpy that the EPA presented in its slide.

Magellan Terminal

Lastly, EPA had a slide that discussed emissions from the Magellan Terminal. Emissions from the Magellan plant site are authorized through a combination of four NSR permits and several permits by rule (PBR). Magellan is currently authorized for a total of 447 tpy VOC. Emissions

Inventory data (Contaminant Summary Reports 2005, 2006, and 2007) was also reviewed. The total VOC emissions including scheduled MSS reported in each of these years are 665.1 tpy, 701 tpy, and 912 tpy, respectively. It appears that EPA compared emissions from a single permit to all plant wide actual emissions (104 tpy vs. 700 tpy). Permit Number 4850 is in the final stages of an amendment review. The amended permit will incorporate all remaining authorizations into this one document, and the total VOC allowable will increase to 861 tpy. Some of these emissions from the other permits are considered to be unauthorized until the pending amendment is approved. Federal review is being addressed for these emission changes, and the emissions are contained in the company's emission inventory. The pending permit amendment was subject to the public notice process, BACT analysis, and will be thoroughly evaluated with all applicable law prior to approval.

In addition, the plant site participated in the Self-Audit program. This self audit resulted in a Compliance Agreement to authorize emissions from tank landings through a permit amendment. Even though tank landing emissions are addressed for the facilities authorized in the current version of Permit Number 4850, tank landing emissions from the facilities located in the other permits at the plant site were not addressed. It is the tank landing emissions from these other facilities that are the subject of the currently pending permit amendment. The TCEQ is aware of the issues surrounding the Magellan operations and is working with the company to ensure that these operations will be in compliance with applicable law.

Except for EPA's notice in November 2008 regarding TCEQ's public participation rules, EPA has not provided the TCEQ with Federal Register notices which identify the specific deficiencies (and the legal bases for each) in the TCEQ rules that need to be addressed for EPA to approve TCEQ's air permitting rules. The TCEQ needs these notices to understand fully the deficiencies EPA has identified. The TCEQ appreciates the opportunity to discuss the programmatic concerns and looks forward to reaching a position of clarity on the remaining issues related to public participation, qualified facilities, flexible permits, and NSR reform. The TCEQ has made an attempt with this letter to describe possible collaborative efforts that can be undertaken with EPA. In addition, we have attempted to clarify possible errors or misunderstanding associated with the slides from the May 26, 2009 meeting.

Sincerely,



Mark R. Vickery, P.G., Executive Director
Texas Commission on Environmental Quality

Enclosures

cc: Carl E. Edlund, Director, Multi-media Planning and Permitting Division
John Blevins, Director, Compliance Assurance and Enforcement Division

EPA/TCEQ Meeting Goals

- Review status of:
  - BCCA litigation
  - Petitions
- Summarize EPA's
  - Issues with TX permits SIP
  - Concerns regarding environmental and legal impacts
- Solicit TCEQ input on the potential for a collaborative approach to renovate the permitting program

Response to BCCA

- EPA has 30 Texas SIPs to act on (BCCA Litigation)
- BCCA agreement will call for action on 4 Texas SIPs this year
  1. Public Participation *(Proposed Dec; Final - November 2009)*
  2. Qualified Facility *(Propose June?; Final - March 2010)*
  3. Flexible Permit *(Propose June?; Final – June 2010)*
  4. NSR Reform *(Propose August?; Final – August 2010)*
- EPA cannot enforce the biggest Texas air permits; only directly enforce federal rules
- EPA proposed actions will disapprove in part the state's permitting program (with an option for Texas to correct before sanctions/FIP).

Texas Permit SIPs
Major Issues

1. Public Participation – Limited public right to information, e.g., no right to comment unless the public files a formal hearing request. (Limited Approval/Limited Disapproval)

2. Qualified Facilities – Facilities are allowed to make permit modifications without formal review or public notice.

3. Flexible Permits – Allow emissions cap with poor accounting or record-keeping of individual emissions sources; federally unenforceable.

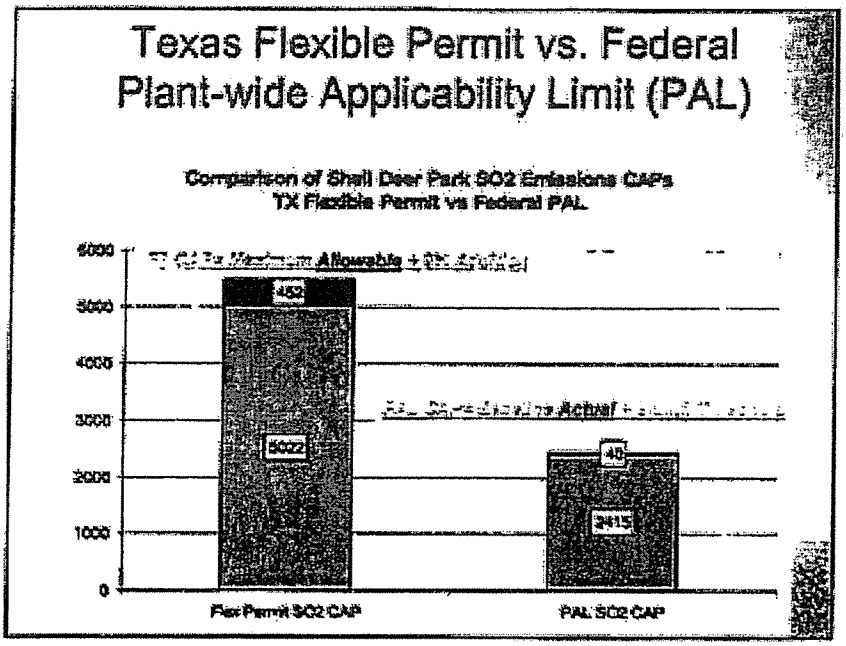
4. NSR Reform – Flexibility exceeds that allowed in current federal rules

Environmental Impacts

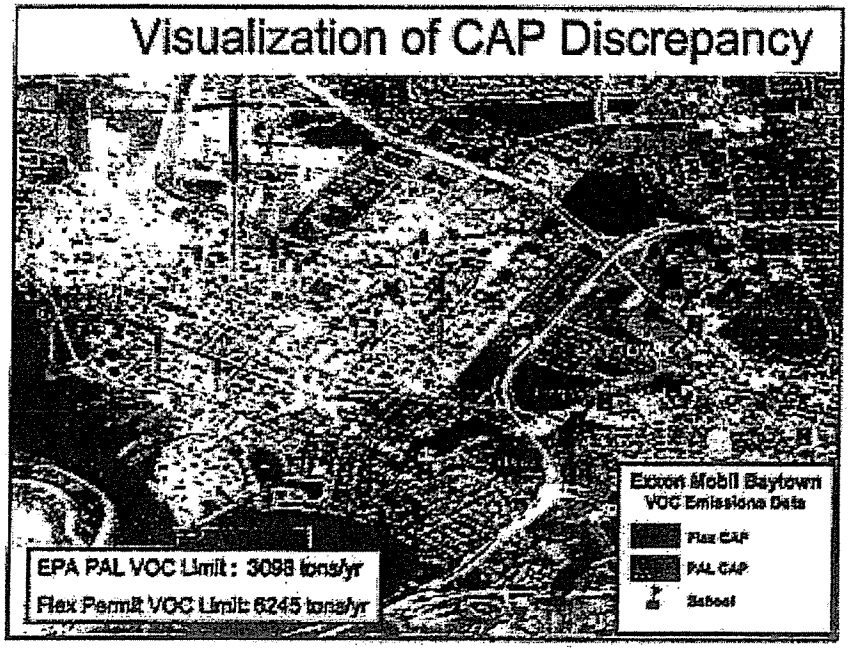


30,000 Total Sources
3,000 – 5,000 Qualified Facilities
1,461 Major Sources of Air Pollution
- *25 Petroleum Refineries*
- *160 Chemical Facilities*

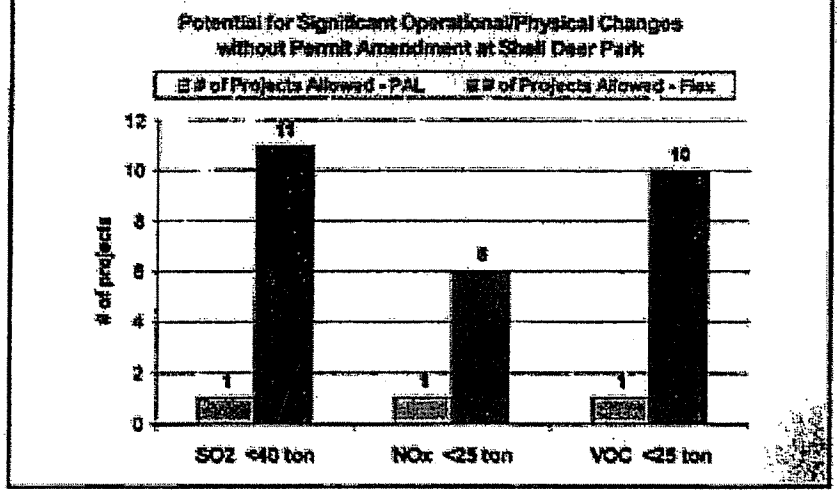
Texas Flexible Permit vs. Federal Plant-wide Applicability Limit (PAL)



Visualization of CAP Discrepancy

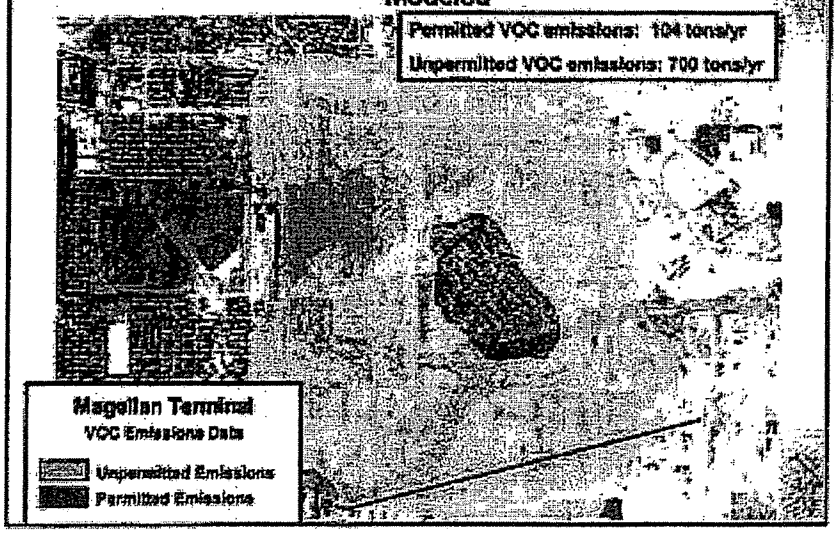


9% Addition: Major NSR Concern



Unpermitted Emissions

Modeled



Shell Deer Park 2007 Flexible Permit Renewal

- Texas allowed for 18% increase in benzene emissions solely based on company's request
- Dropped BACT limit
  - Unit specific BACT limit replaced with Flex Cap
- As-you-go Permitting allowed
  - 1998 PSD permit
    - Less stringent State BACT used to set NOx limits on heaters
    - Shell agreed to offset increases under Flex Permit NOx Cap
  - 2007 Flex Permit
    - Shell reversed its 1998 position
    - TCEQ raised Cap to accommodate

Concerns

1. Transparency - Permits are a difficult-to-navigate because of facility cap, incorporation by reference and lack of unit specific controls
2. Public Participation - Inadequate public notice for minor and major NSR; large universe of facilities
3. Enforceability – Current PSD/NSR state permitting rules are not incorporated in the SIP; lack of adequate monitoring and compliance calculations; traded emissions reductions for pass on future enforcement
4. Community Concerns – Environmental Groups have petitioned EPA to withdraw permitting program; Houston Mayor White campaign against air toxics
5. Environment – Missed opportunities for pollution reductions

Potential for Collaboration

- EPA will need to propose action on the 4 major provisions
- Discussions will need to occur with the other stakeholders as actions are proposed.
- Can TCEQ:
  - Take action to prevent the widening of the SIP gap while repairs are under way?
    - Legal Patch?
    - Restrain from new qualified facility and flex permits?
  - Parallel process 'patch' as part of action on 3 SIP revisions
  - Adopt and submit revised packages before sanctions would take effect?
  - [?? withdraw NSR Reform SIP package ??]

PSD/NNSR 'Patch' description

- Texas incorporates by reference Federal PSD rules; this action would allow Texas to operate an air permitting program
- Texas revises NSR definitions so that state program meets federal requirements

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUN 24 2009

Mr. Mark R. Vickery, P.G.
Executive Director
Texas Commissioner on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Dear Mr. Vickery:

Thank you for your letter of June 5, 2009, regarding unresolved issues related to the Texas' air permitting program. I appreciate your willingness to work collaboratively towards addressing the outstanding concerns.

We have tried to provide clarity on our concerns with your proposed State Implementation Plan (SIP) rules through a series of letters over the past years, including our communication to you of March 12, 2008, concerning Flexible Permits. Summaries of these communications are contained in our more recent letters to State Senator Kirk Watson and State Representative Lon Burnam, dated March 19 and April 7, 2009, respectively, of which you were sent copies.

You point out that EPA "has not yet issued Federal Register notices which identify the specific deficiencies (and the legal basis for each) in the TCEQ rules that need to be addressed for EPA to approve TCEQ's air permitting rules." As you are aware, we did propose limited approval/limited disapproval of your Public Participation SIP this past November. In a meeting in Austin on May 26, our senior Region 6 managers indicated that we anticipate issuing Federal Register proposals over the next couple of months identifying our concerns for possible disapproval of the Qualified Facilities, Flexible Permits, and NSR Reform SIPs.

We will, of course, continue working with TCEQ on these issues, but it is important to note that EPA is preparing to sign a Consent Decree with industry plaintiffs requiring action on the Texas permitting SIPs on a tight schedule; thus, this will limit the time available to informally resolve these issues.

You and I have already discussed the idea of my coming to Austin to discuss these issues with each of the Commissioners; I look forward to that opportunity. To the extent those contacts leave issues unclear or unresolved, we can discuss them in even greater detail once the Federal Register notices are published.

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In addition, on May 28, 2009, the Administrator granted two citizen petitions which raised concerns about transparency, public participation and monitoring in TCEQ-issued Title V permits for the Citgo and Premcor facilities. The concerns raised in those actions may apply more broadly to other facilities as well, and thus we would hope to discuss those categories of concerns with you, as well as the SIP concerns.

I appreciate your written response to the draft briefing materials our senior managers discussed during the May 26 meeting in Austin, and I especially value your willingness to explore resolution of issues that have been at an impasse for some time. The changes outlined in your June 5 letter provide a good foundation for our discussions, although I would be remiss not to point out that additional changes will be needed to fully address the programmatic and regulatory changes necessary for full EPA approval.

With specific regard to the draft power point slides shared at the Austin meeting, we acknowledge that it is difficult to make direct comparisons between the Texas permitting program and the federal regulatory system. Recognizing that we may not agree on the precise level of emissions described in the slides, our analysis strongly suggests that the Texas air permitting program authorizes emissions significantly above levels allowed by federally authorized permitting programs. We believe this is also supported by an analysis conducted by the City of Houston evaluating benzene emissions in similar states (see letter from Mayor White, dated September 29, 2008; copy is available at http://www.greenhoustontx.gov/reports/refiningpermitmatter.pdf).

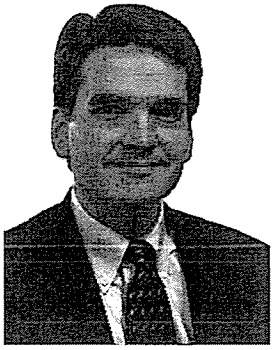
It will be important in the coming months to work together to ensure that the Texas air permitting program is one that is transparent and understandable to the communities we both serve, and that meets the legal requirements of Federal as well as State law. Just as we made progress to reduce ozone pollution, I am confident we can accomplish this work in a manner that protects public health and the environment, while allowing Texas businesses to thrive.

Please call me anytime to discuss these issues, or have your staff contact Jeffrey Robinson at (214) 665-6435.

Sincerely yours,

Lawrence E. Starfield
Acting Regional Administrator

BAKER BOTTS L.L.P.



MATTHEW L. KURYLA

Partner, Environmental

One Shell Plaza
910 Louisiana Street
Houston, Texas 77002-4995
United States of America

Phone: 713.229.1114
Fax: 713.229.2714
matthew.kuryla@bakerbotts.com

Education and Honors

J.D., University of Virginia School of Law, 1989
Executive Editor, *Virginia Environmental Law Journal*

B.A. (with highest distinction), University of Virginia, 1986
Phi Beta Kappa

Listed in *The Best Lawyers in America*, 2008

Recognized as a Leading Lawyer by Chambers USA, *America's Leading Business Lawyers*, 2005 - 2009

Named by *Law & Politics* as a "Texas Rising Star," 2004

Listed in *Who's Who Legal: Texas*, 2008

Admissions and Affiliations

State Bar of Texas

United States Courts of Appeals for the Fifth and Sixth Circuits

United States District Courts for the Northern District of Ohio and the Northern and Southern Districts of Texas

United States Supreme Court

Houston Bar Association, Environmental Section, Governing Council Member

Concentration

Environmental compliance, enforcement, and litigation

Summary

Matt Kuryla's broad-based environmental practice encompasses regulatory counseling, transactional advice, litigation, and alternative dispute resolution.

Mr. Kuryla represents clients before state and federal courts in a variety of environmental actions. He has coordinated multiclient litigation and regulatory negotiation and rulemaking as counsel to several Texas industry coalitions formed to respond to emerging air quality requirements, including revisions to the Houston/Galveston ozone plan, the Beaumont/Port Arthur ozone plan, and the Texas Title V operating permits program. He has counseled and represented clients in environmental criminal investigations, explosions, releases, and other corporate crises.

Mr. Kuryla's practice also encompasses environmental review, and permitting of energy infrastructure projects. He currently serves as environmental counsel for three separate onshore liquefied natural gas (LNG) terminal projects and one offshore Gulf of Mexico LNG project, and has advised on permitting of several wind power and landfill-gas-to-energy development projects.

Mr. Kuryla has handled federal and state agency proceedings under the National Environmental Policy Act (NEPA), the Clean Air Act, the Toxic Substances Control Act (TSCA), the Clean Water Act, and the Emergency Planning and Community Right-to-Know Act (EPCRA or SARA), among other environmental laws.

Publications, Speeches, and Presentations

Houston Bar Foundation, Fellow

Houston/Galveston Area Emissions Reduction Credit Organization, Board Member

Houston/Galveston Regional Air Quality Planning Committee, Board Member

- "Regulation of Greenhouse Gases Under the Clean Air Act: Issues and Implications," Air and Waste Management Association Annual Hot Air Topics Conference, January 12, 2009
- Moderator, "Carbon Capture and Cap and Trade," Carbon Capture Status and Outlook, Houston, October 2008
- "Seeking Certainty in the Wake of *Massachusetts v. EPA*: Federal and State Options for Addressing Stationary Source Greenhouse Gas Emissions," *Bloomberg Corporate Law Journal*, Winter 2008 (Steve McMillen and Matt Paulson, co-authors)
- "Houston Businesses Preparing to Live in 'Carbon-Capped' World," *Houston Business Journal*, April 20-26, 2007 (Steve McMillen, co-author)
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- "Release Reporting in the Era of Criminal Enforcement," Conference on Environmental Law, American Bar Association, Environment, Energy and Resources Section, Keystone, Colorado, March 2001
- "Criminal Environmental Enforcement Trends," Baker Botts Annual Environmental Law Seminar, Houston, January 2000

Lawrence E. Starfield

Acting Regional Administrator

Larry Starfield is the Deputy Regional Administrator for the U.S. Environmental Protection Agency, Region 6, in Dallas, Texas, currently acting as Regional Administrator. As Deputy Regional Administrator, he is responsible for the efficient management of the 900-person regional office, and for the effective implementation of EPA programs in the South-Central United States.

From 1997-2001, Mr. Starfield served as the Regional Counsel for Region 6 where he managed an office of 60 lawyers that provided legal advice to the Regional Administrator and Region 6 program offices regarding the interpretation and implementation of federal environmental laws.

Before joining Region 6 in 1997, Mr. Starfield spent ten years with EPA's Office of General Counsel in Washington, D.C., where he served as an attorney-advisor, Assistant General Counsel for RCRA, and Acting Associate General Counsel for Solid Waste and Emergency Response.

Before coming to EPA, he worked in Paris, France, from 1985 to 1987 as the correspondent for the "Bureau of National Affairs" on French environmental issues. From 1981 through 1985, he was an Associate with the law firm of Skadden Arps Slate Meagher & Flom, in Washington, D.C. He is a graduate of Wesleyan University and Yale Law School.

For more information, please
contact the EPA Region 6
Office of External Affairs at
214 665-2200

BEVERIDGE & DIAMOND PC



Lydia González Gromatzky

Of Counsel
98 San Jacinto Boulevard
Suite 1420
Austin, TX 78701-4039
(T) (512) 391-8005
lgromatzky@bdlaw.com

PRACTICES
- Administrative Law
- Air
- Clean Water Act
- Environmental Audits and Compliance Assessments
- Hazardous Waste/RCRA
- Latin American Practice
- Solid Waste and Resource Recovery

EDUCATION
- University of Texas at Austin (B.A.)
- University of Texas School of Law (J.D.)

BAR ADMISSIONS & MEMBERSHIPS
- Texas (1986)
- American Bar Association
- Austin Bar Association, Environmental Section

LANGUAGES
- Portuguese
- Spanish

Lydia González Gromatzky is Of Counsel in the Austin, Texas office of Beveridge & Diamond, P.C. with a practice that includes both domestic and international law. Her experience includes advising and representing entities on a broad range of permitting, compliance, enforcement, remediation and other regulatory, transactional and litigation matters. As a member of the Firm's Latin American practice group, she assists clients with compliance and regulatory issues in Latin American countries including Argentina, Brazil, Chile, Colombia, Mexico and Peru.

Prior to joining the firm, Ms. González Gromatzky served as chief legal advisor to the Executive Director of the Texas Commission on Environmental Quality (TCEQ). In that capacity, she provided legal advice and counsel on all matters within the agency's jurisdiction. During her seventeen-year tenure at the TCEQ, she served as lead counsel on numerous contested agency proceedings, managed litigation involving the TCEQ, and provided legal representation on a wide variety of complex and controversial issues facing the state in all environmental media.

In private practice, Ms. González Gromatzky has broad experience counseling clients in a number of different sectors regarding regulatory compliance, defense of environmental enforcement actions, permitting issues and environmental transactions. She has also assisted multinational corporations and trade associations with compliance and regulatory issues arising under Latin American domestic laws including the tracking and analysis of pending and enacted chemicals, waste and product stewardship laws.

Ms. González Gromatzky is a graduate of the University of Texas School of Law.

PUBLICATIONS

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Texas Environmental Updates

Latin American Region Environmental Quarterly

Brannen McElmurray

Brannen McElmurray works in Evolution Market's global merchant banking group on activities within the environmental, energy and clean technology sectors. His work includes carbon origination and finance, private placements, project finance, mergers and acquisitions, and other merchant banking activities. Brannen focuses on carbon offset projects as well as renewable energy projects. Brannen joined Evolution from Goldman Sachs' investment banking group, where he worked on a wide range of equity, convertible and debt financings, M&A transactions and financial restructurings. Previously, Brannen worked at Cravath, Swaine and Moore LLP focusing on M&A and acquisition financing. Prior to joining Cravath, Brannen was an officer in the U.S. Navy.

EVOLUTION
MARKETS

Brannen McElmurray - Merchant Banking
Evolution Markets Financial Services LLC

104 West 40th Street :: Suite 1800 :: New York, NY 10018
P: +1 646.200.7744
F: +1 646.200.7711 :: M: +1 914.282.9610
bmcelmurray@evomarkets.com

21st Annual
Texas Environmental Superconference

August 6-7, 2009
Austin, Texas

Climate Change – Hot Issues

"Climate Change Disclosure"

by

C. Gregory Rogers
Guida, Slavich & Flores, P.C.
Dallas, Texas

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This paper describes the accounting and legal framework for financial disclosure of liabilities and risks related to greenhouse gas emissions and climate change (herein referred to as "climate risk"). When evaluating climate risk disclosure policy, in addition to the accounting and legal framework described in this paper, corporations and their legal advisors should consider the key legal variables underlying an entity's climate risk disclosure policy, the extent to which these variables lend themselves to management discretion, and the impact of recent developments on these variables, as well as potential bases for liability arising from mismanagement of climate risk, including securities fraud and breach of fiduciary duty, and the steps the Board and senior management can take to mitigate these risks.

I. Climate Risk

According to the Intergovernmental Panel on Climate Change (IPCC), climate change refers to a change in the state of the climate that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use. Climate change may affect the frequency and severity of climate-related hazards, including avalanches, coastal flooding, erosion, sea level rise, drought, extreme heat, freezes, and severe weather and storms.

Greenhouse gases (GHG) are gases in an atmosphere that absorb and emit radiation. This process is the fundamental cause of the greenhouse effect. Common greenhouse gases in the Earth's atmosphere include water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

The primary risks facing U.S. corporations relating to GHG emissions and climate change are widely cited as—(1) risks associated with present or future regulation of GHG emissions (herein called "regulatory risk"); (2) risks associated with climate change and climate-related hazards (herein called "physical risk"); and (3) legal liability arising out of, based upon or attributable to past or continuing emissions of GHG, climate change, or climate-related hazards (herein called "liability risk"). Each of these risks is further described below.

A. Regulatory Risk

Regulatory risk encompasses all financial risks associated with present or future regulation of GHG emissions. The imposition of government-mandated costs for GHG emissions, in the form of a carbon tax or emission allowances, is the most obvious direct financial impact of GHG regulation. Regulation of GHG emissions, however, can impose a far wider range of indirect impacts on both regulated and non-regulated entities. For example, higher carbon costs may increase the costs or decrease the supply of products or services on which the entity depends, decrease demand for the entity's products or services, decrease the value of the assets used to produce products or services that are no longer in demand, and increase the entity's cost of capital as investors move their money to different sectors of the economy.

B. Physical Risk

Physical risk encompasses risks all financial associated with climate change and climate-related hazards. Climate change and climate-related hazards have the potential to impact nearly every imaginable aspect of business. Widely cited risks include impacts to water availability and quality, assets located in coastal areas, oceans, or atop permafrost, the operating efficiency of temperature-sensitive equipment, and the health of the workforce. Direct impacts associated with global or regional climate change may vary widely depending upon an entity's location and the nature of its facilities and operations. Similar to regulatory risk, the indirect impacts of climate change—physical impacts to vendors, suppliers, and customers—have the potential to affect a wider range of entities located throughout the world. For example, climate-related hazards to coastal property may pose a material credit risk for banks whose borrowers are located in at-risk areas.

C. Liability Risk

Liability risk encompasses all financial risks associated with legal liability arising out of, based upon or attributable to past or continuing emissions of GHG, climate change, or climate-related hazards. Private suits to hold corporations liable for the alleged effects of global warming may become a fertile ground for civil litigation. A handful of such suits against private parties have already been filed.[1] Plaintiffs have brought climate change suits against GHG-emitting entities seeking relief for injuries they have allegedly incurred or expect to incur as a result of climate change. Some of these suits have primarily sought injunctive relief, while others have sought money damages. Thus far, these suits have been largely unsuccessful. Some legal experts predict climate change litigation will become the next "big thing". Other experts contend that these suits face a number of procedural and substantive barriers that likely will hinder their success on a large scale.

Insurance companies have special exposure to liability risk through contracts insuring the climate-related losses of others. Pennsylvania Insurance Commissioner Joel Ario, who chairs the National Association of Insurance Commissioners (NAIC) Climate Change and Global Warming Task Force has speculated that climate change will have a huge impact on the insurance industry.[2]

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[1] *Comer v. Murphy Oil USA, Inc.*, No. 1:05-CV-436 (S.D. Miss. 2006) (dismissed August 2007) (appeal pending; oral argument scheduled for Nov. 2008); *California v. GM Corp.*, No. 3:06-CV-05755 (N.D. Cal. 2006) (dismissed Sept. 2007) (appeal pending); *Native Village of Kivalina v. ExxonMobil Corp.*, 08-CV-1138 (N.D. Cal. Feb. 2008); and *Steadfast Ins. Co. v. The AES Corp.*, No. 2008/858 (Arlington Co. Cir. Ct., filed July 2008).

[2] http://www.naic.org/Releases/2009_docs/climate_change_risk_disclosure_adopted.htm.

II. Disclosure

Climate risks may be subject to disclosure under U.S. generally accepted accounting principles (GAAP), federal and state securities laws, or both. In addition, there are several voluntary programs for disclosure of climate risk.

A. GAAP

Climate-related loss contingencies and emission allowances are within the scope of accounting and disclosure standards under GAAP.

1. Contingent Liabilities

Assuming certain criteria are met, contingent liabilities arising from pending or threatened climate change litigation and actual or possible claims and assessments relating to past GHG emissions will be subject to quantification and disclosure under GAAP.[3] Conversely, physical risks associated with possible future uninsured damage to property from fire, flood, wind or other climate-related hazards generally will not be subject to quantification and disclosure under GAAP.[4] Such events are random in their occurrence and prior to the occurrence of the event there is no diminution in the value of the property. Also, unlike an insurance company, which has a contractual obligation under policies in force to reimburse insureds for losses, an entity can have no such obligation to itself and, hence, no liability. Prospective losses associated with future GHG regulation likewise generally will not meet the definition of an accounting impairment or liability because prior to the change in law, no legal obligation exists.

2. Emission Allowances

As discussed under Recent Developments below, the U.S. Congress is currently considering enactment of GHG cap-and-trade program. Cap-and-trade programs operate over defined (often annual) compliance periods. Credits are allocated (or auctioned) to the participants at the beginning of the compliance period. During the period, participants may buy or sell allowances directly with other participants or through a broker or on an exchange. At the end of a compliance period, the participant must deliver emissions credits equal to its actual emissions. If a participant fails to deliver the required credits, it may be required to pay fines (or receive a smaller financial incentive) and it may receive a smaller allocation of emissions allowances in the future. In some cases, unused (or excess) credits may be carried forward to future compliance periods.

For a compliance period, a participant has three options:

1. It may emit designated pollutants to the level of its allocated credits.

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[3] FASB Statement 5, ¶¶ 2-4.

[4] FASB Statement 5, ¶¶ 27-28.

2. It may emit pollutants to a lower level than is represented by the allocated credits and it may sell or bank the excess credits.

3. It may emit pollutants to a higher level than is represented by the allocated credits and either buy additional credits or pay a penalty.

In the extreme, a participant may sell all of its credits at the beginning of the compliance period with the expectation of either buying credits to cover emissions at a later date, or ceasing emissions, or paying regulatory penalties. Typically, brokers and other nonparticipants are also allowed to buy and sell emissions credits, which may increase market liquidity.

Currently, there is no consensus under GAAP on how to account for participation in emission control schemes that use marketable credits. The FASB and the IASB are presently engaged in a joint project to provide comprehensive guidance on accounting issues related to emissions trading schemes, including asset recognition, measurement and impairment, liability recognition and measurement, timing of profit and loss recognition, accounting for vintage year swaps, presentation, and disclosure.[5]

B. Securities Laws

The SEC imposes certain specific and implied disclosure obligations, with registration statement and prospectus disclosure requirements for companies registering securities for sale or for issuance in business combination transactions under the Securities Act of 1933 (Securities Act), and with periodic and other reporting requirements for companies under the Securities Exchange Act of 1934 (Exchange Act). Reporting requirements must be addressed in quarterly reports on Form 10-Q and annual reports on Form 10-K under the Exchange Act. The filing and reporting requirements arise sooner in the event of a specifically required current report on Form 8-K and in connection with the registration of securities for sale or for issuance in business combination transactions (such as mergers and exchange offers), tender offers or proxy solicitations.

Although timing may vary, sooner or later a public company must assess its disclosure obligations and consider both those disclosure requirements in which the SEC calls for specific information and the disclosure requirements that are driven by a registrants' duty not to mislead, generally relating to the need to disclose all "material" information and to provide "complete" disclosure.

SEC Regulation S-K describes the narrative and quantitative information to be included in the nonfinancial statement portions of SEC reports. Item 101 (Description of Business), Item 103 (Legal Proceedings), Item 303 (Management's Discussion and Analysis of Financial Condition and Results of Operations, a/ka MD&A), and Item 503(C) (Risk Factors) bear the greatest relevance to climate risk disclosure. In addition, the antifraud provisions of the federal securities

[5] See http://www.fasb.org/project/emissions_trading_schemes.shtml.

laws may impose implied disclosure obligations (beyond that specifically required by Regulation S-K) to ensure that reported information is not otherwise misleading.

1. Item 101 Description of Business

Under Item 101, issuers must disclose, among other things, the material effects of compliance with federal, state, and local environmental provisions on their capital expenditures, earnings, and competitive position. Section (c)(1)(xi) of Item 101 requires registrants to disclose:

> the material effects that compliance with Federal, state and local provisions which have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, may have upon the capital expenditures, earnings and competitive position of the registrant and its subsidiaries. The registrant shall disclose any material estimated capital expenditures for environmental control facilities for the remainder of its current fiscal year and its succeeding fiscal year and for such further periods as the registrant may deem material.

There are several important observations to be made about the relevance of Item 101 to climate risk. First, public companies that are presently subject to regulations governing emissions of greenhouse gases must disclose the material effects of compliance with such regulations under Item 101. Second, Item 101 does not explicitly call for disclosure of indirect effects other than legal compliance. Reduction in demand for an entity's products and services due to GHG regulations, for example, does not fall within the plain language of Item 101. Finally, Item 101 does not call for disclosure of anticipated impacts relating to laws that have yet to be enacted. Thus, Item 101 does not require entities to speculate about the impacts of future federal legislation to regulate GHG emissions.

2. Item 103 Legal Proceedings

Under Item 103, registrants must describe certain administrative or judicial legal proceedings arising from federal, state, or local environmental provisions. Item 103 directs registrants to briefly describe:

> any material pending legal proceedings, other than ordinary routine litigation incidental to the business, to which the registrant or any of its subsidiaries is a party or of which any of their property is the subject. Include the name of the court or agency in which the proceedings are pending, the date instituted, the principal parties thereto, a description of the factual basis alleged to underlie the proceeding and the relief sought.

Registrants must also disclose similar information as to any such proceedings known to be contemplated by governmental authorities.

Instruction 5 to Item 103 specifically addresses environmental legal proceedings, providing that "an administrative or judicial proceeding arising under any Federal, State or local provisions that have been enacted or adopted regulating the discharge of materials into the environment or primarily for the purpose of protecting the environment shall not be deemed 'ordinary routine litigation incidental to the business.'" Environmental legal proceedings must be described if the proceeding:

> (A) Is material to the business or financial condition of the registrant;
>
> (B) Involves primarily a claim for damages, or involves potential monetary sanctions, capital expenditures, deferred charges, or charges to income and the amount involved, exclusive of interest and costs, exceeds 10 percent of the current assets of the registrant and its subsidiaries on a consolidated basis; or
>
> (C) Involves potential monetary sanctions by a governmental authority, unless the registrant reasonably believes that such proceeding will result in no monetary sanctions, or in monetary sanctions, exclusive of interest and costs, of less than $100,000, regardless of materiality.

There are several important observations to be made about the relevance of Item 103 to climate-related legal proceedings. First, Item 103 explicitly applies only to pending legal proceedings. The SEC indicated in a 1979 release that a *proceeding* includes any administrative or judicial proceeding pending or contemplated by a governmental authority with respect to environmental matters.[6] Item 103 presumably does not call for disclosure of foreseeable, but as yet unasserted non-governmental claims. Trends relevant to liability risk may be subject to disclosure under Item 303 or 503(C). Second, due to the novelty of climate-related claims, for the foreseeable future such claims are unlikely to be considered ordinary and routine. Third, climate-related litigation will often arise under common law rather than environmental statutes. It is not clear whether common law claims would fall within the scope of Instruction 5 to Item 303. Finally, it is not apparent that climate-related legal proceedings present novel disclosure issues that are substantially different from considerations applicable to other types of litigation.

3. Item 303 Management Discussion and Analysis

The purpose of the Management Discussion and Analysis (MD&A) is to provide investors information relevant to an assessment of the financial condition and results of operations of the registrant as determined by evaluating the amounts and certainty of cash flow from operations and from outside sources. At its best, the MD&A provides investors with an inside view of the state of the business through the eyes of management. Although Item 303 contains no specific

[6] SEC Release No. 33-6130, 1979 WL 169925 (Sept. 27, 1979).

environmental requirements, climate risk disclosure may be necessary to understand the registrant's financial condition and results of operations.

Of relevance to climate risk, Item 303 requires disclosure of known trends, events, or uncertainties that have affected, will affect, or are reasonably likely to affect the registrant's liquidity, capital resources, or results of operations. Disclosures should focus specifically on material events and uncertainties known to management that would cause reported financial information not to be indicative of future operating results or of future financial condition. The registrant should describe both matters that are expected to have an impact on future operations, but that have not had an impact in the past, and matters that have had an impact on reported operations and are expected to have a continuing impact on future operations.

Mandatory disclosure of climate risks arising from the future impact of presently known trends, events, or uncertainties and voluntary disclosure of forward-looking information about climate risks (or opportunities) both may involve some prediction or projection. In a 1989 Release,[7] the SEC clarified that the distinction rests with the nature of the prediction required. Required disclosure is based on currently known trends, events, and uncertainties that are reasonably expected to have material effects. In contrast, optional forward-looking disclosure involves anticipating a future trend or event or anticipating a less predictable impact of a known event, trend, or uncertainty.

Entities are required to disclose material risks when a trend, demand, commitment, event, or uncertainty is both presently known to management and reasonably likely to have material effects on the issuer's financial condition or results of operation. SEC Release No. 33-6130 provides the following step-by-step instructions:

> When a trend, demand, commitment, event, or uncertainty [having the potential to materially affect the entity][8] is known, management must make two assessments:
>
> 1. Is the known trend, demand, commitment, event, or uncertainty reasonably likely to come to fruition? If management determines that it is not reasonably likely to occur, no disclosure is required.
>
> 2. If the known trend, demand, commitment, event, or uncertainty is reasonably likely to come to fruition, management *must evaluate objectively the consequences of the known trend, demand, commitment, event, or uncertainty, on the assumption that it will come to fruition.* Disclosure is then required unless management determines that a material effect on the registrant's

[7] SEC Release No. 33-6835, 54 Fed. Reg. 22427 (May 24, 1989) (emphasis added).

[8] This bracketed text is implied as it is self-evident that an entity does not need to analyze every known trend and uncertainty.

financial condition or results of operations is not reasonably likely to occur.

Each final determination resulting from the assessments made by management must be objectively reasonable, viewed as of the time the determination is made.[9]

In a January 2002 Release, the SEC indicated its view that "reasonably likely" is a lower disclosure threshold than "more likely than not."[10]

There are several important observations to be made about the relevance of Item 303 to climate risk. First, the criteria for disclosure under Item 303 require judgment and thus allow for some degree of management discretion. Management must determine that a future outcome is *reasonably likely* to occur and that such outcome is *reasonably likely* to have a *material* effect on the entity's financial condition or results of operations. Second, informed disclosure of climate risk under Item 303 requires an objective evaluation of the potential future effects on the entity's financial condition and results of operations. If management determines that GHG regulation, changes in the climate, or successful climate-related litigation are reasonably likely to occur, it must evaluate objectively the consequences. Third, Item 303 does not require management to explicitly state its determination that new GHG regulations or changes in the climate are not reasonably likely to occur. Thus, in that instance, management is free to say nothing at all about climate risk.[11]

Finally, disclosure of information sometimes can adversely affect a company's business and financial condition because of the competitive harm that could result from the disclosure. SEC regulations seek to balance investors' needs for transparency with the possibility that disclosure will result in competitive harm to the registrant.[12] As climate risk becomes more relevant to business performance, companies will conduct increasingly sophisticated and detailed climate risk assessments and develop increasingly sophisticated and detailed business strategies.

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[9] SEC Release No. 33-6835, 54 Fed. Reg. 22427 (May 24, 1989).

[10] *See* SEC Release No. 33-8056 (Jan. 22, 2002).

[11] *But see* the SEC's guidance regarding Y2K issues where registrants are instructed to disclose the status of any ongoing risk assessment.

[12] *See e.g.*, SEC Release No. 33-8182, *Final Rule: Disclosure in Management's Discussion and Analysis about Off-Balance Sheet Arrangements and Aggregate Contractual Obligations* ("The likelihood that competitors could infer proprietary information must be weighed against investors' needs for transparency of financial arrangements and resultant risk exposures."); SEC Release No. 33-8098, *Proposed Rule: Disclosure in Management's Discussion and Analysis about the Application of Critical Accounting Policies* ("If the proposed disclosure would involve competitive or other sensitive information, are there any mechanisms that would ensure full and accurate disclosure while reducing a company's risk of competitive harm?"); SEC Release No. 33-8995, *Final Rule: Modernization of Oil and Gas Reporting* ("A company would not be required to disclose proprietary technologies, or a proprietary mix of technologies, at a level of specificity that would cause competitive harm. Rather, the disclosure may be more general.").

Management is likely to regard such information as sensitive and proprietary and question the materiality of such information to investors. SEC Staff Legal Bulletin No. 1 (February 28, 1997)[13] describes views of the SEC Division of Corporation Finance regarding the requirements a registrant must satisfy when requesting confidential treatment of information that otherwise must be disclosed in documents filed with the SEC. The guidance, which generally tracks the criteria for shielding information from release under FOIA, states that required and/or material information generally must be disclosed, even if confidential.

> In some instances the Commission's specific disclosure requirements cover information that could be withheld under FOIA. Except in unusual circumstances, disclosure required by Regulation S-K or any other applicable disclosure requirement is not an appropriate subject for confidential treatment, regardless of the availability of an exemption under FOIA.

4. Item 503(C) Risk Factors

As set forth in Item 503(C) of Regulation S-K, the SEC has long required issuers to consider, where appropriate, including in prospectuses filed pursuant to the Securities Act, disclosure of factors that make the offering to which the prospectuses relate "risky or speculative." In 2005 the SEC adopted a requirement that certain issuers include risk factor disclosures in their annual and quarterly reports.[14] Affected issuers must use the standard for risk factor disclosure found in Item 503(C). Disclosures must be updated quarterly to reflect material changes from previously disclosed risk factors.

There are several important observations to be made about the relevance of Item 503(C) to climate risk. First, unlike Item 303, Item 503(C) does not require management to assess the likelihood of future outcomes. This avoids the need for management to determine that a future outcome is *reasonably likely* to occur and that such outcome is *reasonably likely* to have a *material* effect on the entity's financial condition or results of operations. Rather, management can simply state, for example, that *if* the U.S. adopts a federal GHG regulatory program, the entity *could be* materially affected. Second, by removing the probability criterion, Item 503(C) effectively avoids the need for an objective assessment of the probability and severity of the risk factor in question.

5. Implied Disclosure Requirements

In addition to the specific disclosure requirements in Regulation S-K, there are additional "implied" disclosure requirements arising under the antifraud provisions of the federal securities laws. The primary implied disclosure obligation is Rule 10b-5.[15] Rule 10b-5 prohibits deceptive

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[13] www.sec.gov/interps/legal/slbcf1.txt.

[14] SEC Release No. 33-8591.

[15] 17 C.F.R. § 240.10b-5.

or manipulative practices in connection with the purchase or sale of securities. In particular, issuers are prohibited from disseminating public information that is false or that fails to include material facts necessary to make the statements, in light of the circumstances in which they are made, not misleading.

In the administrative proceeding *In re United States Steel Corp.*, Exchange Act Release No. 16223, the SEC noted that "compliance with the [SEC's] specific environmental disclosure rules does not necessarily constitute full compliance with the disclosure requirements of the federal securities laws." It cites its general disclosure rules (*i.e.*, Securities Act Rule 408 and Exchange Act Rules 12b-20 and 14a-9), which require disclosure of any material information beyond that for which disclosure is specifically required necessary to make required statements not misleading. The SEC goes on to note that:

> In the context of its environmental releases, the Commission has interpreted these rules as requiring that all material information relating to environmental matters must be disclosed. *See*, Release 5171, *supra*, at 1; Securities Exchange Act Release No. 5627 (Oct. 14, 1975, at 2). This approach reflects the [SEC's] belief that omissions of material environmental information would render misleading the required disclosures concerning financial matters and the nature of a registrant's business.

6. Issue-Specific SEC Guidance

In the lead up to the new millennium, the SEC provided specific disclosure guidance on Y2K issues. This guidance is illustrative of how the SEC might interpret issues involving climate risk disclosure. In Release No. 33-7558, the SEC offered guidance on determining whether Y2K issues are known material events, trends, or uncertainties that should be disclosed under Item 303. The SEC described the problem this way:

> As the end of this century nears, there is worldwide concern that Year 2000 technology problems may wreak havoc on global economies. No country, government, business, or person is immune from the potential far-reaching effects of Year 2000 problems. President Clinton recently stated that "all told, the worldwide cost will run into the tens, perhaps the hundreds of billions of dollars, and that's the cost of fixing the problem, not the cost if something actually goes wrong.

In the SEC's view, the uncertainties presented by the Y2K technology issue generally were material and certain to occur, but predicting specific impacts for the overall economy and individual registrants was more problematic:

> Only one thing is certain about the impact of the Year 2000 -- it is difficult to predict with certainty what truly will happen after December 31, 1999. To reduce

> the impact of this potentially serious, widespread problem, many public officials and private commentators have spoken out about the need to plan properly now.

The SEC found that public companies had ample incentive to provide meaningful disclosure, but that many were failing to do so.

> We believe that companies have sufficient incentive to provide meaningful disclosure to investors and meet their Year 2000 disclosure obligations. These incentives include business reasons, investor relations concerns, and possible referrals to our Division of Enforcement.
>
> ...
>
> The task force discovered that companies were providing a wide variety of Year 2000 disclosures. While the number of companies disclosing Year 2000 issues has increased dramatically, the task force survey shows that many companies are not providing the quality of detailed disclosure that we believe that investors would expect.

The SEC's guidance on Y2K issues set forth a four-step process as follows. Note the SEC implicitly assumed that the first step of the process had already been decided in the affirmative for all public companies.

1. Determine whether the Y2K problem (a known trend, demand, commitment, event or uncertainty that could materially affect the entity) is reasonably likely to come to fruition.

2. Conduct an assessment of the Y2K compliance status of the entity and any third parties, including vendors, suppliers, and customers, with whom the entity has material relationships.

3. Determine whether the consequences of Y2K issues, including potential liability to third parties, will have a material effect on the entity's business, results of operations, or financial condition, without taking into account the entity's efforts to avoid those consequences.

4. Provide Y2K disclosure under Item 303 if Y2K issues are reasonably likely to have a material effect or if the assessment is not complete.

If disclosure was required, the SEC advised registrants to address four categories of information in their MD&A—(1) the company's state of readiness; (2) the costs to address the company's Y2K issues; (3) the risks of the company's Y2K issues; and (4) the company's contingency plans. The SEC's detailed guidance on each of these areas is discussed below.

State of Readiness. A company should describe its Y2K issues in sufficient detail to allow investors to fully understand the challenges that it faces. The description should be similar to that provided to a company's board of directors, which typically is non-technical plain English and answers the important questions such as "will we be ready?" and "how far along are we?" The description should address, at minimum, both information technology—the obvious problem—and non-information technology systems—the non-obvious problem many companies appeared to be overlooking, the status of the company's Y2K risk assessment, identified by phase, including the estimated timetable for completion of each remaining phase, and a description of the company's Y2K issues relating to third parties with which it has a material relationship.

Actual and Estimated Costs. A company should disclose material historical and estimated future costs of remediation. This includes costs directly related to fixing Y2K issues, even if the company had planned to undertake the action without regard to Y2K and merely accelerated the expenditure.

Reasonable Worst Case Scenarios. A company should describe its most reasonably likely worst case Y2K scenarios. If a company does not know the probability and severity of its Y2K risks, it should disclose this uncertainty, as well as its efforts to analyze the uncertainty and how it intends to handle this uncertainty.

Contingency Plans. A company should describe how it is preparing to handle the most reasonably likely worst case scenarios. This information will help investors evaluate the company's Y2K exposure by answering the important question -- "what will the company do if it is not ready?" The company should describe its contingency plan. If it has not yet established a contingency plan, the company should disclose that it does not have a contingency plan, whether it intends to create one, and the timetable for doing so.

The SEC cautioned that these disclosures should be specific to each company (avoiding generalities and boilerplate) and quantified to the extent practicable.

7. State Blue Sky Laws

Although most regulation of securities in the United States is carried out by the federal government, the Securities and Exchange Act of 1933 permits states to enact their own securities regulations. Most states have adopted their own laws to regulate securities and these laws are commonly referred to as Blue Sky Laws. As discussed under Recent Developments below, the New York Attorney General recently used his authority under the Martin Act,[16] New York's 1921 Blue Sky Law, to subpoena information from five electric utility companies about the increased financial, regulatory and litigation risks associated with GHG emissions from new coal-fired power plants.

[16] N.Y. Gen Bus. Law, Art 23-A, § 325.

III. Conclusion

For many investors and shareholder activists, the accounting and legal framework described in this paper affords too much management discretion and produces too little meaningful disclosure. A report released last month by CERES and two environmental groups found that 76 percent of S&P 500 companies failed to mention climate change in their annual SEC reports last year. These groups say the low rate of disclosure demonstrates a "fundamental failure" by the SEC.

In 2007 CERES submitted a 90-page petition to the SEC asking it to issue specific guidance on climate risk disclosure that would force companies to comply. That request collected dust while George W. Bush remained in office, but now appears to have found new life under the Obama Administration. A July 13, 2009 article appearing in the New York Times reported that "Federal regulators are preparing to launch 'a very serious look' at requiring corporations to assess and reveal the effects of climate change on their financial health, according to a commissioner on the Securities and Exchange Commission." It the SEC issues guidance on climate risk disclosure, temperatures soon will be rising in corporate boardrooms.

C. Gregory Rogers

C. Gregory Rogers, J.D., CPA, is Counsel with Guida, Slavich & Flores, P.C., a Dallas environmental law firm. His practice encompasses environmental aspects of corporate governance, financial reporting, and real estate and commercial transactions for clients in a broad range of industries, including real estate, manufacturing, oil and gas, chemicals, transportation, and forest products. He is recognized in Best Lawyers in America in the field of environmental law. He is also President and founder of Advanced Environmental Dimensions, LLC, a management consulting firm specializing in environmental accounting, disclosure, and tax.

Mr. Rogers is a non-practicing CPA and former financial auditor with Arthur Andersen & Co. He is Chairman of the American Bar Association's Environmental Disclosures Committee, one of 30 national experts contributing to the U.S. Government Accountability Office (GAO) investigation and report to Congress on Environmental Disclosures (July 2004), and author of "Financial Reporting of Environmental Liabilities and Risks after Sarbanes-Oxley," (Wiley, 2005).

Email: rogers@gsfpc.com Phone: 214.692.8385

Guest Lecturer

- University of Texas at Dallas School of Management
- Donald Bren School of Environmental Science & Management, University of California, Santa Barbara
- Stanford Graduate School of Business

Publications

- *Financial Reporting of Environmental Liabilities and Risks after Sarbanes-Oxley* (ISBN: 0-471-71743-6) (Wiley, 2005).
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Climate Change "Hot Issues"

Waste Management: One Company's Approach

Leslie Wong

8/6/2007

This paper describes the key Greenhouse Gas management issues of late 2009 and how one company, Waste Management, has chosen to assess and respond to them while looking to the future.

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Climate Change "Hot Issues": One Company's Approach – Waste Management

1) Introduction and Historical Background

As we approach the end of the twelve-year duration of the "Kyoto Protocol", it is only now that the enactment of federal regulations regarding greenhouse gas ("GHG") inventorying, reporting and reduction is being considered in earnest. As such, U.S. EPA is, perhaps for the first time, entering a realm of environmental regulation as an international follower rather than an international leader. The current scenario of "pre-regulation" presents unique challenges to potentially regulated industries as they must not only prepare for pending regulation in a new area but must also weigh the advantages and disadvantages of participating in voluntary GHG management programs prior to the implementation of mandatory regulatory requirements for GHG management. This paper discusses the approach of Waste Management ("WM"), a Fortune 200 waste industry company, to this scenario, as it outlines for others the challenges of regulating and managing compliance for GHG management requirements given current legislative and regulatory constructs.

The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is an international treaty established in 1997 with the goal of achieving "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system".1 The Kyoto Protocol establishes legally binding commitments for the reduction of six greenhouse gases (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons (as a group of compounds) and perfluorocarbons (also as a group of compounds) produced by "annex I" or "industrialized" nations, as well as general reduction commitments for all member countries. The United States is a signatory to the Kyoto Protocol2, but neither the Clinton Administration nor the Bush Administration ever submitted the protocol to the Senate for ratification. Now, in anticipation of developing what promises to be the replacement for the Kyoto Protocol in Copenhagen, Denmark, in December 2009, the Obama Administration has been openly supportive of both new legislation to regulate GHG's as air pollutants and the implementation of regulations under the existing Clean Air Act of 1990 ("CAA") to regulate GHG's as air pollutants.

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[1] "Article 2". *The United Nations Framework Convention on Climate Change*. http://unfccc.int/essential_background/convention/background/items/1353.php. Retrieved on 14 July 2009

[2] On 12 November 1998, then-Vice President Al Gore signed the Kyoto Protocol prior to congressional ratification.

While likely, near-term federal GHG regulation is not yet a foregone conclusion, whether in the form of new legislation or new regulations under the existing Clean Air Act. However, it is important to recognize that GHG's are already "regulated" in the U.S. to a not-insignificant degree thanks to the development of a robust voluntary and state-only regulatory structure from the grassroots during the nearly twelve-year federal regulatory vacuum following the symbolic U.S. signature of the Kyoto Protocol. It is also important to recognize the physical reality that there are profound differences in the sources and impacts of GHG "pollution" versus those from CAA criteria pollutants and hazardous air pollutants, as well as corresponding differences in technically appropriate measurement and management techniques.

2) An Unconventional Solution to "An Inconvenient Truth"

For the most part, environmental regulation in the U.S. has been a "top down" process: Congress passes legislation, such as the CAA; U.S. EPA implements regulations under the legislation to serve as the minimum environmental control standard; then state, as well as regional and local governmental entities, either adopt the federal standards or add to their terms and/or stringency. This gradual progression of regulation typically results in an equally gradual increase in the scope and severity of compliance requirements. While the call to legislate on a particular environmental issue may have come from the grassroots, the actual practice of establishing and enforcing environmental standards has been primarily in purview of the government. Until now.

a) The Concept of "Voluntary" Regulation

As carbon markets developed around the world to serve active participants in the Kyoto Protocol, environmental interests in the U.S. did not want to miss the opportunity to participate in GHG emissions reductions, and business interests in the U.S. did not want to miss the opportunity to participate in a new market. To facilitate this pent up demand, purely non-governmental organizations formed to develop purely voluntary GHG emissions inventory and reduction programs. The Chicago Climate Exchange ("CCX") developed and implemented an entire GHG management infrastructure in a microcosm consisting of its voluntary members only. The CCX program, of which WM is a founding member, includes a GHG inventory and reporting protocol, a series of carbon offset generation protocols, an offset verification program, an offset trading exchange and a GHG cap and trade program imposing emission reduction requirements on members. Other organizations have specialized in particular areas, such as The California Climate Action Registry ("CCAR"), of which WM is also a member, which formed as an inventory and reporting mechanism[3] exclusively serving

[3] Although now, the CCAR system is being supplanted by mandatory GHG reporting in the State of California, and CCAR has developed a nationwide, now expanding through North America,

the State of California. The Climate Registry ("TCR") formed as a nationwide inventory and reporting entity, and it has emerged as the most popular U.S. source of GHG emissions inventory protocols, calculation formulas and default values. Some states, Massachusetts most recently, has proposed to adopt TCR protocols by reference, which is unprecedented for a private, voluntary standard[4]. Other organizations serving the U.S., as well as the international carbon market in some cases, are the American Carbon Registry, which was the first registry in the U.S., the Voluntary Carbon Standard Association, and the Gold Standard Foundation.

These private organizations have, for the most part, employed good science in their GHG management protocols and programs. As such, their policies are frequently given equal authority to policies established under governmental authority. This has resulted in some unfortunate and costly assumptions being made in regard to the appropriateness of business scope of these private protocols and the appropriate management of data used for regulatory compliance. In regard to scope, private organizations are not obligated to taken into consideration the costs of implementing their programs, nor are they obligated to assess potential negative impacts on particularly vulnerable lines of business or small business. These organizations are free to propose very broad "no exception" inventory practices which can be very time consuming and costly to implement. Also, private organizations imposing GHG "compliance" requirements do not have the right of enforcement against their members that a regulatory agency has over its regulated body. By the same token, organizations developing GHG offset projects in undeveloped countries, primarily under the Clean Development Mechanism system established by the Kyoto Protocol, must work with governments that do not have their own environmental requirements to enforce. As such, these private organizations can ensure data accuracy only by requiring vigorous, time consuming and costly independent third party verification of all data submitted by participating parties by a third party certified by the private organization. As the GHG management protocols of these private organizations have become the "industry standard" in the absence of equivalent U.S. EPA protocols, the concept of necessary third party verification has followed. However, when these protocols are adopted by a U.S. governmental entity, the third party verification requirement becomes redundant to the authority of the governmental entity to demand submittal of complete and accurate data, absent risk of penalty and/or prosecution. There is no precedent in U.S. environmental law or regulation for requiring

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offset generation and verification protocols and its own offset trading exchange under the name "Climate Action Registry".

[4] See 310 CMR 7.71, June 2009 Final Amendments, http://www.mass.gov/dep/air/laws/regulati.htm#771.

independent third party verification of environmental data prior to its submittal to the government. To create that precedent with GHG management data would only exacerbate the cost burden of additional environmental regulation that is at the heart of opposition to mandatory GHG management at the federal level.

b) State and Regional Regulation

The voluntary, private GHG management programs are now giving rise to state and regional GHG inventory and control programs, some voluntary, some mandatory, but all developed in advance of a federal program and absent any federally supported basis for standards. As with the Massachusetts examples cited above, in the absence of federal guidance, the state and regional groups desiring to take early action in GHG inventories and controls were left to use only private organization and international standards, such as those cited prior as well as International Organization for Standardization 14064, as a bases for their programs. The result is a rapidly growing network of wildly divergent inventory, reporting and reduction requirements, some independent, some interconnected, and...as would be expected in a totally ad hoc approach, some conflicting. To add even more complexity to GHG management network in the U.S., some state agencies are requesting that sources of GHG emission report absent formal regulation or legislation, but pursuant to omnibus data acquisition authority vested in the agency.[5] Oddly enough, this practice follows the lead of the U.S. EPA, who invoked the broad rights of the U.S. EPA administrator to request reporting of data in the proposed Mandatory GHG Reporting Rule to allow for proposal of a GHG reporting rule in advance of a finding of endangerment in regards to GHG emissions[6].

As of the date of submittal of this paper, thirteen states have implemented mandatory GHG inventory and reporting requirements in some form, including California, Connecticut, Delaware, Iowa, Maine, Massachusetts, Nevada, New Jersey, New Mexico, North Carolina, Oregon, Wisconsin and Washington. Forms of reporting varies from additional slots on existing annual emissions inventory reports or Title V Air Permit Reports for GHG emissions to new, exclusive GHG Reports, some involving electronic submittal. Scope of reporting varies from carbon dioxide only to all six internationally recognized GHG's to conversions of individual GHG's to Carbon Dioxide Equivalents (CO2e's)[7] Reporting thresholds vary from no de minumus to minimum emissions in the

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[5] The State of Delaware requests such reporting pursuant to Delaware Title 7 Natural Resources and Environmental Control Regulation 1101 Section 2.0 Definitions, "Air contamin**ant**" and 1117 Source Monitoring, Record Keeping And Reporting, Section 2.1.

[6] See 74 Fed. Reg. 68, p. 16454, April 10, 2009.

[7] Reporting GHG emissions in CO2e's presents an additional challenge in that the Global Warming Factor for GHG's other than carbon dioxide must be used to calculate CO2e's. The

hundreds of thousands of tons of CO2e. Source coverage of reporting varies from utility plants only to all stationary sources to all sources, including mobile. To describe this network as simply inconsistent is clearly understating its status.

In addition to the development of a network of mandatory inventory and reporting requirements on a state level, a mandatory GHG cap and trade system has been established on a regional level absent a federal program. The Regional Greenhouse Gas Initiative (RGGI) is a consortium of ten Northeastern and Mid-Atlantic states that has established by agreement a mandatory GHG emissions inventory, offset and trading program in support of a mandatory GHG cap and trade system designed to reduce GHG emissions from the power generation sector by 10% by 2018. RGGI is administered by a non-profit, private corporation which maintains the registry, approves offsets[8], and holds an emission credit auction on a quarterly basis, beginning in September of 2008. Not surprisingly, due to its quasi-governmental status, the imposition of mandatory participation in RGGI has been challenged in the courts in litigation that continues today. The Western Climate Initiative, a similar group of Western states in the U.S. and Canada, as well as the State of California have also considered implementation of a cap and trade system, but neither has yet done so. It is expected that neither program will be proposed for some time in deference to the pending nature of a federal cap and trade program.

While the regulated community has never enthusiastically welcomed additional environmental regulatory burden, most would agree at this point that the unprecedented grassroots development of voluntary private and mandatory state and regional GHG inventory and control measures in recent years makes federal mandatory GHG management in some form and to some degree virtually inevitable. While some companies have come to participate in voluntary GHG management programs because GHG management is relevant to their core business, others...probably forming a majority...have elected to participate due to organizational and customer demand. Consumers are increasingly demanding to be informed of the GHG impact of the products they buy and the services they use. In addition, there is an increasing interest from consumers in seeing the companies they do business with participate in GHG management efforts. At a time when access to corporate and organizational data on the internet is almost universal, participation or lack thereof in GHG management

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Global Warming Factor for methane ranges from 21 to 25 in widely accepted reference documents and has been alleged to be as high as 100 in some publications.

[8] Although the RGGI cap and trade obligation pertains only to utility providers of electrical power, a wide variety of sources may generate offsets to offer for sale to these entities.

efforts is easily confirmable via reports such as the Carbon Disclosure Project and the Dow Jones Sustainability Index.

This business environment if not demands, certainly encourages, support for a consolidation of GHG management requirements. Any company required by its own commitments or by fate of its locations of doing business to comply with multiple, divergent GHG management requirements is already experiencing the burden of not only increased labor for data management, but also of increased risk of creating actual or perceived misrepresentations of their GHG impacts. Reporting of different impacts according to different standards, even if technically correct, can create the impression of, at best, inaccuracy in reporting and, at worst, "greenwashing", or representing oneself as more beneficial than is actually the case.

3) You Can't Regulate a New Pollutant by Old Methods

The proliferation of multiple standards for measuring GHG emissions and their impacts is not surprising given their profound differences from air pollutants that have been regulated before. During debates regarding the appropriate mechanism for regulating GHG emissions at the federal level, the most common argument against the use of the existing CAA of 1990 is that emissions of carbon dioxide from combustion are significantly greater in volume than those of the criteria pollutants, and the thresholds for regulatory program applicability would be exceeded even by small sources. While this is true, it is only one of many ways in which GHG's differ from criteria pollutants. GHG's impact the environment in a completely different way from criteria pollutants or hazardous air pollutants; their impacts are measured by different methods and they play a unique role in the life cycle of the planet that current CAA-regulated pollutants do not share.

a) Indirect versus Direct and Global versus Local Impacts

GHG's, at least the two most prevalent ones, carbon dioxide and methane, were not included in the criteria pollutants regulated under the CAA, nor have they been considered for the list of hazardous air pollutants regulated under the CAA. The reason for this is that they have yet to demonstrate direct negative effects on human health and/or the environment. They do not exhibit toxic effects nor do they trigger any disease in plants, animals or mankind. However, GHG's have been determined by the Supreme Court in Massachusetts v. EPA, 549 U.S. 497 (2007), to have a profound indirect negative impact on human health and the environment by amplifying the "greenhouse gas effect" of the earth's atmosphere. This phenomenon then leads to higher temperatures, which in turn leads to a host of negative environmental consequences, some of which directly or indirectly effect human health to degrees that are hotly debated in both political and scientific arenas and are beyond the scope of this paper.

Even if proven beyond a reasonable doubt, indirect impacts are a less stable basis for regulation and enforcement than direct impacts because of interference from other intervening forces, which may or may not have a hand in the nature or severity of the ultimate negative result. Not only is it difficult for the public and regulated community to grasp an indirect relationship between an air emission and a negative consequence, the fact that there are intervening elements involved prevent an "all or nothing" assessment of causation that is typically necessary to generate support for costly regulatory action.

However, the indirect nature of the environmental impacts of GHG's is not as great a challenge to traditional means of regulation than the fact that the impacts of GHG's are global rather than local. If emissions of GHG's in a discrete area have no impact on that area other than its share of impact from an increase in global temperatures, it follows that the reduction of those emissions will not have a local, discrete, observable positive impact either. All politics are local, and it is difficult to sell a local sacrifice to achieve a global goal unless that particular locality has suffered impacts. Moreover, the attainment/nonattainment structure for air emissions management under CAA New Source review is dependant upon local impact measurement to function. New Source Review air permits are issued pursuant to local air emissions impact modeling, but such modeling becomes irrelevant if the impacts of the pollutant in question are global rather than local. Also, the differentiation between attainment and nonattainment areas becomes irrelevant if the entire world, let alone the entire country, is a single nonattainment area. The New Source Review system of the CAA was designed to manage pollutants with direct measurable, or model-able, impacts on discrete localities, and it is very complex in its implementation. It is neither appropriate nor efficient to apply it to GHG management, which would be better served by a new, simpler structure that recognizes the indirect, global impacts of GHGs.

b) GHG Emissions, the Natural Carbon Cycle and Human Intervention

The global nature of GHG emissions does not stop with their impacts on human health and the environment. The label "global" can also be used to describe the range of GHG emission sources. While criteria and hazardous air pollutants are emitted from a wide range of human activities and from naturally occurring combustion, the range of GHG emission sources is even wider, as it includes not only a wide range of human activities, but also the entire organic life cycle. The most important distinction in GHG classification is that between biogenic, or naturally occurring, emissions and anthropogenic, or human triggered, emissions. Also, the most important difference between pollutants currently regulated under the CAA and GHGs is that traditional pollutants are managed in a linear fashion, their negative impacts are avoided by simply preventing of their release or by collecting and destroying them after release.

However, the carbon-based GHG's follow a cycle of release and sequestration with no net loss of carbon in the cycle, and the functioning of this cycle cannot be stopped absent the termination of life on earth.

In the natural cycle of organic, literally "carbon-based", compounds, also known as the "life cycle", plant life consumes carbon dioxide and emits oxygen, and animal life consumes oxygen and plant life (and other animal life) and emits carbon dioxide and methane (which oxidizes to carbon dioxide). Both plant and animal life store or "sequester" carbon in their bodies over the relatively short term of life, which then oxidize to carbon dioxide after death. On a broader scale, the earth's oceans absorb excess carbon dioxide from the atmosphere and anaerobic conditions deep in the earth allow for long-term sequestration of carbon compounds resident there, i.e. fossil fuels. As carbon moves through this cycle, it is alternatively emitted and sequestered. These emissions of carbon compounds are unavoidable, they would have occurred regardless of any human intervention that may have been involved, and they are "biogenic".

Although the balance of the carbon cycle between atmosphere and surface has changed dramatically over geologic time, it remains relatively stable over shorter time periods. However, it is vulnerable to human intervention. The greatest impact of human intervention on the balance of the carbon cycle has been the large scale removal of carbon from long-term subsurface sequestration in the form of fossil fuel and its release to the atmosphere via combustion for energy over the past 150 to 200 years. Of less severe impact, but still notable, are methane emissions from concentrated animal breeding, nitrous oxide emissions from use of crop fertilizers, and methane emissions from consolidated solid waste and waste water management. Emissions of carbon that would not have occurred in nature but for human intervention are "anthropogenic". When anthropogenic GHG emissions are generated, they enter the carbon cycle just as biogenic emissions do. The results are increased concentrations of carbon in the atmosphere that amplify the "greenhouse effect" and the acidification of the oceans as they attempt to absorb more carbon dioxide.

Clearly, biogenic emissions are part of the carbon life cycle and are unavoidable, regardless of human intervention. As such, it is essential that a GHG regulatory structure acknowledge these biogenic emissions as outside any cap and trade program and not subject to any other form of reduction. Only anthropogenic GHG emissions, which by definition are within the realm of human control, should be subject to capping or to other GHG emissions reduction programs. Nevertheless, some advocates have distorted the definition of "anthropogenic" to include any GHG emissions in which humans have participated, such as the burning of biogenic fuels for energy or the emissions of carbon dioxide from refuse management activities. However, rather than

encourage the reduction of GHG's, this advocacy, in addition to promoting inaccurate science, only discourages the use of renewable, carbon-neutral fuels and the responsible management of refuse and waste water.

4) The Evolution of the Emissions Inventory

In light of the dramatic differences between the behavior and the impacts of currently regulated CAA pollutants and GHG's it is not surprising that new methods have emerged to measure GHG emissions and their impacts, and that these new methods are more complex than traditional emission inventories. A traditional emissions inventory lists the measured or estimated (by a method approved by the respective environmental agency receiving the report) release of one or more air pollutants over a set period of time for an individual source of emissions or a grouping of related sources. This same approach is applied to GHG emissions, and it is referred to as an inventory of "direct" emissions. The only variable unique to a GHG inventory is that the emissions of each of the five internationally recognized GHG's other than carbon dioxide may be converted to CO2e by applying their Global Warming Potential. This allows the emission inventory to be expressed as a single number.

a) The Advent of Indirect and Life Cycle Emissions Issues

However, given the cyclical nature of GHG emissions and their association with a wide variety of human activity, two additional inventory methods have been developed exclusively for GHG emissions and impact measurement. These are the measurement of "indirect" emissions and the measurement of "life cycle" emissions.[9] "Indirect emissions" is a term used almost exclusively to describe the GHG impacts of demand for electrical power. The direct emissions associated with the generation of electrical power are attributable to the entity releasing emissions in the course of generating the electrical power for sale and distribution. It was acknowledged in the early days of GHG inventorying that applying this frequently very large GHG impact (particularly for coal-fired power generators) to a single facility or industry was misrepresentative, because that facility or industry would not exist but for the demand created by others for the product offered. The inventorying and reporting of indirect emissions by users of electrical power eliminates the risk of representing processes that use electricity exclusively as "zero GHG impact", when they are not, even though they may not directly emit GHGs themselves. As a matter of practicality, it is not possible to report exactly the GHG emissions from the electricity used by a process because, unless a user has its own power plant, it is impossible to determine what power producer on the

[9] The Climate Registry's General Reporting Protocol, Version 1.1, Chapter 5, May 2008, refers to direct GHG emissions as "Scope 1", indirect emissions as "Scope 2" and life cycle emissions as "Scope 3". This numerical nomenclature is as frequently used as the descriptive nomenclature.

electrical grid at the time of use supplied the power used by a particular source. Indirect emissions are estimated by applying the measured electrical use of a process in kilowatt hours by default emission rates per kilowatt hour known as "eGrid Factors". These factors are compiled and published by U.S. EPA for 25 different U.S. regions, most of them multi-state for carbon dioxide, methane and nitrous oxide. The compilation process takes into account the regional use of different fuels (including zero emission and renewable), efficiencies, line losses and generation technologies. When compiling a comprehensive GHG Inventory for a process that includes both direct and indirect emissions, it is important not to combine the two numbers into single figure because blending of direct and indirect emissions result in a double counting of emissions for electrical generation. By the same token, indirect emissions should not be taken into account when calculating a cap in a cap and trade program or reduction requirements in any other reduction program because they do not represent actual release of GHG's to the atmosphere.

The concept of inventorying indirect emissions, in turn, led to the development of the even more comprehensive life cycle method. A life cycle GHG emissions inventory explores all of the GHG emissions associated with the production, use and disposal associated with a particular process or product. It is usually not associated with an individual unit or facility, because its boundaries are so broad. The best known use of the life cycle inventory is in the current debate regarding the ultimate GHG impact of corn ethanol. Rather than limiting the GHG inventory of corn ethanol use to the direct emissions of its combustion as fuel, the life cycle inventory uses this as a starting point. From that starting point, the "life" of the corn ethanol is followed upstream to include the GHG impact of its transportation to the user, its production in an ethanol plant, the transportation of the corn feedstock to the ethanol plant, the use of heavy equipment to harvest the corn, the use of fertilizer and water to grow the corn, the manufacture of the fertilizer, the collection of the water, etc. This example highlights not only the nature, but also the risk of using a life cycle inventory: it can continue almost infinitely. TCR does not have a specific protocol for the development of a life cycle inventory, nor does any other recognized GHG registry. And, development of a comprehensive protocol that will fit a variety of applications will be a challenge due to the variability of issues to be covered.

Like the indirect emissions inventory, a life cycle inventory is not intended to be added to a direct GHG emissions inventory, and should not be a basis for setting emission caps or determining applicability of other GHG reduction efforts. While a life cycle inventory is very informative for internal use to assess the environmental sustainability of a product or process, the publication of a life cycle inventory carries significant risk. These inventories are frequently challenged by GHG advocates as "greenwashing" because, in the opinion of the advocates, the inventory did not include emissions from enough

elements of the life cycle of the product or process for which it was performed. However, in spite of this risk, these inventories becoming routine requests by customers of goods and services. In addition, organizations such as the Carbon Disclosure Project are adding more and more "supply chain" inquiries in their annual questionnaires. The benefits and risks of disclosing this information must be weighed by each individual GHG reporting company in light of the nature of its business and its customer demands.

5) Application of GHG Management Application to Waste Management

a) Introduction to WM and Status of the Waste Sector as a GHG Emitter

WM is the leading provider of comprehensive waste and environmental services in North America. Headquartered in Houston,Texas, WM operates in 48 states in the U.S. and most Canadian provinces. Our network of operations includes 354 materials collection operations, 341 waste transfer stations, 105 recycling plants, 277 active landfill disposal sites, 110 landfill gas-to-energy projects with more slated for construction, 16 waste-to-energy plants, and six independent power production plants.

WM is a leader in employing innovative technologies and services to reduce greenhouse gas emissions. They include the following:

a) Recovery and destruction of methane at our landfills. WM operates active landfill gas collection and control systems at over 200 of our landfills in North America.

b) Operation of landfill gas to energy, waste to energy and biomass plants that produce renewable energy. WM's landfills currently supply enough landfill gas to create more than 500 Megawatts of green energy that could power about 408,000 homes or replace nearly 2 million tons of coal per year.

We own/operate 16 Wheelabrator Waste to Energy plants that convert municipal solid waste to electricity resulting in an electric generating capacity of more than 650 megawatts of energy. This renewable energy source generates enough green energy to power about 600,000 homes each year.

c) Advancing technology for alternative transportation fuels (e.g., landfill gas to liquid natural gas) and engine design to lower the greenhouse gas emissions from our vehicles. WM fuels its diesel-powered collection vehicles with ultra-low sulfur diesel. We have also replaced over 500 diesel-fueled waste collection vehicles with natural gas-fueled trucks and retrofitted over 1100 vehicles with advanced pollution control devices.

In a joint venture with Linde North America, WM is building a landfill gas to liquefied natural gas (LNG) facility, located at our Altamount Landfill in Livermore, California.

When the facility begins operating at full capacity this year, it is expected to produce up to 13,000 gallons a day of LNG.

d) Increasing the recovery of valuable materials through the nation's largest recycling program for household-generated recyclables. In 2008 WM managed more than 7.6 million tons of recyclable material, including paper, cardboard, glass, plastics, metals and electronics. To encourage consumers to recycle and dispose of electronic devices in an environmentally responsible way, WM has built on its collaboration with Sony beginning in 2007 to establish a national recycling program for consumer electronics. In 2007, WM acquired LampTracker®, the nation's first provider of mail-back recycling for fluorescent lighting.

e) Developing bioreactor, or "next generation" landfill technology. Bioreactor landfill technology promotes the accelerated degradation of landfill waste, which allows for greater methane collection efficiency and earlier stabilization of landfills, and

f) In December 2007 we launched a two-year work plan to define our company carbon footprint using the most accurate and reliable means available to calculate our GHG emissions. We have developed the tools and software to collect our 2009 GHG emissions to be ready for voluntary or required reporting in 2010.

WM contributes significant effort to developing more sustainable practices, but that should not create a perception that the waste sector is a significant contributor to global or U.S. GHG emissions or that the waste sector has not already made significant reductions in its GHG emissions. The waste sector is a small contributor, accounting for less than five percent of GHG emissions globally (which includes emissions from countries that do not require the practice of modern landfill construction or management practices) and less than 3% of GHG emissions in the U.S. Nevertheless, the waste sector is frequently the target of advocates seeking GHG emissions reductions. This may be due in part to the high visibility of landfills as sources of methane emissions, and a general lack of public and political popularity on the part of landfills in spite of the essential service they provide. However, it may also be due in part to fact that landfills are classified as the second largest source of methane emissions in the 2009 U.S. Greenhouse Gas Inventory Report. What this description of "second highest emitter of methane" fails to illustrate is that all methane emissions are only 8.2% of total U.S. GHG emissions, and the methane emissions from "enteric fermentation" and "manure management" from the agricultural livestock sector, if counted together as one category (32% total) is significantly larger than landfills (23%) as a source of methane emissions.[10] In addition, technological advancements,

[10] See "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007, April 2009, Executive Summary, Agriculture and Waste sections.

environmental regulations, and emphasis on resource conservation and recovery have greatly reduced the environmental impacts of municipal solid waste management in landfills, including methane emissions.[11] Through improved practices, such as recycling and landfill gas collection and combustion, GHG emissions from municipal solid waste management in landfills have decreased by over 75 percent from the period between 1974 and 1997 despite an almost two-fold increase in waste generation over the same period.[12]

b) WM's Challenges in GHG Management and How They Were Met

As the first major waste sector company to develop and implement a comprehensive GHG inventory and reporting program, WM will have the opportunity to present its carbon footprint to the public for objective comparison with other GHG emission sources such as transportation, utility power generation and agriculture. With this opportunity, however, comes unique challenges associated with being "first". Following are some of the primary challenges faced by WM in developing its GHG inventory and reporting process, now known as "Climate Care", and a description of how WM responded to the challenges.

1) Lack of a template or examples set by others to follow.

In the absence of an example by another major waste sector company, WM drew upon its own experiences as a reporting member of CCX and CCAR, as well as the experiences of other companies participating in these GHG management programs contemporaneously. Although the GHG inventories prepared for these organizations were limited by types of activities covered or by geographical region covered, participation in them was invaluable "practice" for developing a broader inventory at a later date. The lesson learned by WM in meeting this challenge was that participation in voluntary GHG management programs reaped significant benefits that justified its expenses.

2) Absence of a reasonably accurate GHG emissions estimation protocol for landfills.

In the past, methane emissions from landfills have been estimated according to a very conservative modeling technique. This technique is acceptable for planning when

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[11] K. Weitz et al., The Impact of Municipal Solid Waste Management on Greenhouse Gas Emissions in the United States, 52 JOURNAL OF AIR & WASTE MANAGEMENT ASSOCIATION (Sept. 2002).

[12] *Id.*

landfill gas collection equipment is likely to be needed, but it is inappropriate for estimating and reporting GHG emissions to atmosphere. This situation was recognized by leading academics and by waste sector scientists almost as soon as voluntary GHG management programs emerged. In response, a group of industry scientists, including strong representation from WM, academic leaders and environmental consultants formed an organization known as the "Solid Waste Industry for Climate Solutions" or "SWICS". The purpose of SWICS was to combine the skill and research results from all reputable, available sources to develop a more accurate landfill GHG emissions model that would use readily available site specific data to predict GHG emissions rather than one-size-fits-all default values. After initial development, the "SWICS Protocol" was made the subject of a series of peer-reviewed publications, and it was further refined in response to comments received in response to these publications. Now, the SWICS protocol has been included in TCR's "local governments" protocol as an acceptable tool for use in calculating emissions from landfills owned or operated by local government entities. Its results have been accepted by several states, and its procedures and assumptions are compatible with the guidance for landfill emissions determination included in the recently proposed federal mandatory GHG reporting rule. While SWICS has not been officially endorsed by the U.S.EPA, WM is using SWICS to determine the GHG emissions of its landfills based on the acknowledgement it has received to date as a scientifically defensible GHG emissions estimation tool. The lesson WM learned in meeting this challenge is that overly conservative GHG emission estimation tools must be acknowledged and improved quickly, before they are established as regulatory standards for lack of a better tool.

3) **Need to accommodate the widely varying GHG inventory and reporting requirements that are emerging.**

Developing a GHG inventory for a coast-to-coast company involves addressing the widely varying GHG inventory and reporting requirements that have arisen coast to coast. As discussed herein, the absence of federal legislative and/or regulatory leadership on GHG management issues has resulted in the proliferation in the U.S. of many widely-varying voluntary and mandatory programs for inventorying and reporting GHG emissions. After review of the enormous number of data points to be managed in a company-wide system and the correspondingly large number of data combinations needed to calculate a company-wide GHG inventory in addition to other required voluntary and mandatory reports, it became evident to WM that the only viable solution for data management was a sophisticated database. WM sought out a database structure that would allow for custom programming of emission calculation protocols, custom development of report formats, the capacity to manage multiple options for default values such as global warming factors and emission rates and a high degree of data security. The database selected by WM was the ESP OpsEnvironmental

module for air, GHG management. Then, to ensure that the sophisticated database was properly developed to allow for utilization of all of its features, WM hired a consultant with equal skills in information technology implementation and air emissions management, ERM Information Solutions. The lesson WM learned in meeting this challenge is that pre-programmed GHG calculators offering "compliance in can" may be appropriate for small, straightforward GHG emission inventories, but not large, complex ones that are subject to change.

4) **Need to accommodate a large number of sites and a wide range of business activities.**

WM is a large, over 2,500 sites, diversified company including many different business activities, most of them highly regulated. Criteria and hazardous air pollutant emissions subject to regulation under the CAA are limited to direct emissions from stationary emission sources at industrial /commercial locations. GHG emissions subject to inventory and reporting, if one follows the guidance of TCR and most other voluntary GHG management programs, include direct and indirect emissions from all stationary and mobile sources at any location under the "operational control" of the reporting company. To properly account for and characterize the GHG emissions of over 2,500 sites, WM first enlisted the assistance of its finance and legal departments to identify all WM controlled entities exhibiting financial activity and featuring a physical location. Then, these entities were categorized by the main business activity in which they engaged from a list of six major business activities: materials collection services, heavy construction, landfills, recycling facilitation, power generation and office activities. Each line of business was reviewed to determine its potential sources of GHG emissions from indirect emissions from electrical use to direct emissions from fuel combustion to the mixed biogenic/anthropogenic emissions resulting from municipal solid landfill operation to releases of high global warming factor materials from use of air conditioning and refrigeration equipment. Finally, each source of emissions was reviewed to determine the types of GHG it could emit and the appropriate protocol to be applied to calculate these emissions. This hierarchy was used to populate the GHG management software, making it ready to receive data. The lesson WM learned from meeting this challenge was that one can leave no stone unturned when determining what facilities emit GHG's.

5) **Need for defensible results including verifiable data and widely accepted methods.**

Any GHG report generated by WM must be fully defensible with a base of industry or government-approved protocols and verifiable data. In light of the fact that a single, universally-defensible basis for nation-wide GHG inventory reporting does not exist, WM had to formulate its own using the most defensible protocols available. For purposes of

this project, "defensibility" was interpreted to be breadth of acceptance among international and voluntary GHG management system now in existence. Review of the major international and voluntary GHG management systems revealed that TCR was the most widely recognized and used in the U.S., and its protocols were, in turn, were based on well established international sources and peer reviewed publications. For needs not addressed by TCR protocols, we found that CCAR, which is closely associated with TCR, offered the remaining protocols we needed to full-fill our protocol needs. To provide consistency of defensibility, WM made every effort to provide a citation to an accepted TCR or CCAR protocol document for every protocol used. The lesson WM learned by meeting this challenge is that it is best to anticipate and avoid challenges to data validity by using only pre-approved protocols to calculate them.

The one area in which WM significantly diverted from TCR guidance was its requirement for third-party validation of GHG inventory data. While accuracy is of utmost importance to WM, we could not determine the value in expending large amounts of money, time and effort in third party validation of data, the disclosure of which is primarily voluntary, and for which third party validation has never been required historically on a government level. However, we did acknowledge the efforts of advocates to integrate third party reporting requirements in mandatory government reports, some of which were successful on a state level. We determined the corresponding risk that such validation practices could be required on a broad basis in the future merited integrating features into our program that would facilitate validation efforts. In response, we focused on locating forms of operational data to use in calculating GHG emissions that were already subject to regular audit, specifically invoices for purchase of materials that are subject to annual financial audit. In spite of the wide variety of emissions sources within the company, all GHG emissions resulted from the use of fuels (including renewable materials used as fuels), the use of electricity, the use of hydrofluorocarbons or perfluorocarbons or sulfur hexafluoride, and the operation of landfills. With the exception of landfill emissions, the remainder of the data used to calculate company GHG emissions can be validated by an audited invoice or other record of receipt. As an added bonus, basing emissions on the use of materials allows for collection of data upstream in the operations process, dealing with a limited number of materials suppliers (i.e. bulk fuel suppliers, power companies), rather than downstream in the operations process, dealing with a large number of materials users (i.e., individual vehicles, multiple electrical meters), which greatly simplifies the data collection process. This concept has been used by U.S. EPA in the mandatory GHG reporting rule in regard to the inventory of GHG emissions from mobile sources. Rather than requiring every downstream user of fuel in a vehicle, to report GHG emissions, upstream suppliers of fuel and engines for vehicles reports on the volume and carbon content of fuel supplied and the efficiency of the engines using the

fuel. The lesson WM learned in meeting this challenge is that that simplest data source can supply the best and most reliable data.

6) Where Do We Go From Here?

It is WM's intention that our development of the "Climate Care" program for comprehensive GHG inventory management, along with our other sustainability efforts, will further our goal of "Being GREEN Every Day": We aspire to accomplish **G**reat operations, maintain our **R**espected brand, **E**mpower our employees, **E**ngage our customers, and be good **N**eighbors to each other and the environment. The end project of "Climate Care" will be is a robust, comprehensive database of GHG emission information that will generate not only a report of our company-wide GHG emissions, but also virtually any scope of report required by a reporting entity or requested by an internal operations group to use to improve environmental and financial performance. It is our hope that this flexibility will allow us to use the same database for many years in the future, even though profound changes are expected in the way that GHG emissions are measured, reported and managed.

In addition to using "Climate Care" data to comply with GHG reporting demands, WM intends to use the data in support of advocacy efforts to influence the way in which GHG emissions inventories and reduction requirements are imposed on the U.S. regulated community. Our hope is that the presentation of defensible scientific data regarding the GHG impacts of various industrial activities will overcome past prejudices and presuppositions regarding the environmental impacts of materials management practices including landfilling, composting, recycling and waste to energy. The ultimate goal is a regulatory structure that is consistent, fair, clearly stated, based on demonstrated science and successful in achieving the maximum environmental benefit at the minimum cost.

Leslie Cook Wong,
Director of Greenhouse Gas Programs, Waste Management
Lwong@WM.com

Ms. Wong serves as Waste Management's Director of Greenhouse Gas Programs and, in that role, is overseeing the development of a company-wide greenhouse gas footprint and a corresponding greenhouse gas inventory and reporting program. Ms. Wong also assists Waste Management in the areas of air permitting, compliance, training and regulatory analysis. Prior to joining Waste Management in 2008, Ms. Wong was an environmental consultant and a landfill gas-to-energy project developer. Her professional experience includes greenhouse gas inventory development and review; renewable energy project development and environmental management; air permitting, compliance and offset management in ozone nonattainment areas, environmental regulatory analysis and interpretation and environmental agency negotiations support. She is a member of the State Bar of Texas, earned her Juris Doctor from the University of Arkansas at Little Rock School of Law, and earned her B.A. from Hendrix College in Conway, Arkansas.

Bryan Sinclair

Bryan Sinclair is Director of the TCEQ Enforcement Division. He has been with the TCEQ for 5 years, most of that as a manager in the Enforcement Division. Bryan is a graduate of Texas Tech University. Prior to joining the agency he worked for almost 20 years in the semiconductor and microelectronics manufacturing industry, primarily as a manager in semiconductor wafer fabrication facilities.

John Blevins

Director, Compliance Assurance and Enforcement Division

John Blevins joined Region 6 in January 2005 as Director of the Compliance Assurance and Enforcement Division with the U.S. Environmental Protection Agency (EPA) Region 6 in Dallas, Texas. He is responsible for the regulatory enforcement and compliance monitoring of the environmental statutes regulating air, water, toxic substances and land.

In addition to positions in EPA regional offices in Atlanta and San Francisco,
Mr. Blevins has worked for state environmental agencies in both Oregon and Delaware. His work in state agencies gave him a unique perspective of compliance issues. He appreciates the importance of working closely with our state partners to preserve our environment and protect public health. He is also committed to fair and consistent enforcement. Preventing the few bad players from gaining an unfair advantage strengthens our economy.

Mr. Blevins received a number of EPA awards in recognition of his leadership and managerial skills including the Special Achievement Award 1989-2000. He earned his bachelor's degree in environmental studies from Warren Wilson College in Ashville, North Carolina, and his master's in environmental engineering from the University of North Carolina at Charlotte.

Thomas A. Mariani, Jr.

Thomas A. Mariani, Jr. is an Assistant Chief in the U.S. Department of Justice's Environmental Enforcement Section (EES). During twenty-three years of service in the Department, he has helped enforce the environmental statutes administered by the U.S. Environmental Protection Agency and other federal agencies, including civil actions that seek injunctive relief and civil penalties under the Clean Air Act (CAA), Clean Water (CWA), and Resource Conservation & Recovery Act (RCRA). Superfund work and claims involving damage to natural resources also comprise a significant portion of his practice.

For the last eight years he has supervised the Department's civil, judicial enforcement work on behalf of U.S. EPA in its South Central Region (a/k/a EPA Region 6, covering the states of Arkansas, Louisiana, New Mexico, Oklahoma, &Texas). He also has worked extensively on several facets of EPA's coal-fired power plants initiative under the Clean Air Act, including settlement and remedy issues; he has successfully concluded settlement efforts on a number of those cases, resulting in annual pollution reductions of tens of thousands of tons, through installation hundreds of millions of dollars in pollution controls.

Before joining the Department, he clerked for the Honorable Alexander Harvey II, U.S. District Judge (District of Maryland). He is a graduate of the Columbia University School of Law (J.D.) and received his undergraduate degree (A.B.) from Hamilton College *(magna cum laude, Phi Beta Kappa)*.

He can be reached at tom.mariani@usdoj.gov or 202-514-4620.

Arnoldo Medina
Senior Counsel, Environmental Law & Compliance
Shell Oil Company, Legal Services US
One Shell Plaza, 48TH Floor, Suite 4860
910 Louisiana Street
Houston, TX 77002-4916
Phone: 713/241-5479
Fax: 713/241-4081
Arnoldo.Medina@shell.com

Arnoldo Medina is in-house environmental counsel with Shell Oil Company ("Shell"), Legal Services US. Mr. Medina advises refinery, chemical, R&D, distribution and retail clients for Shell, affiliates, and joint venture companies throughout the U.S. on environmental law and regulatory compliance, permitting, remediation and enforcement for air, water, and waste matters, and emergency response. Mr. Medina's focus areas include supporting the Shell Deer Park refinery and chemical plant, and Shell fuels/biofuels manufacturing and marketing compliance in the US. Previously, Mr. Medina was a senior associate with Campbell, George, & Strong, LLP in Houston, Texas, where he represented corporate clients in environmental permitting, compliance and enforcement matters before the U.S. Environmental Protection Agency and the Texas Commission on Environmental Quality ("TCEQ").

Mr. Medina began his career with the Texas Natural Resource Conservation Commission, predecessor to the TCEQ, as a staff attorney from 1997 to 2002. His practice areas included air quality, industrial and hazardous waste, and radioactive material regulation, permitting, and rulemaking. Mr. Medina represented the Executive Director in complex legal matters before the Commission and in evidentiary contested case hearings before the State Office of Administrative Hearings.

Mr. Medina earned his B.B.A. from Texas A&M University–Corpus Christi in 1992 and his J.D. from the University of Colorado School of Law in Boulder, Colorado in 1996. Mr. Medina graduated as the Colorado Hispanic Bar Association Outstanding Hispanic Law Graduate, the recipient of the Colorado Journal of International Environmental Law & Policy ("CJIELP") James Corbridge Leadership Award, and the CJIELP Research and Writing Award for his article on NAFTA, environmental law and emergency response aspects of petroleum development in the Gulf of Mexico.

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PHMSA Pipeline Safety Program

06/10/2009

U.S. Department
of Transportation

Pipeline and Hazardous Materials Safety Administration
1200 New Jersey Avenue SE
Washington, DC 20590

Pipeline Safety
Information Center
Main Number: 202-366-4595
Fax: 202-493-2311

LEGEND:
* – Inspector
I&E – Inspection and Enforcement
AI – Accident Investigator
PEG – Performance Evaluation Group

Website: http://phmsa.dot.gov

Pipeline Safety
Information Center
Main Number: 202-366-4595
Fax: 202-493-2311

For Immediate Notification of Pipeline Safety Incidents
National Response Center
(NRC)
1-800-424-8802

PHP-1
Sr. Technical Advisor
Mike Israni
202-366-4571

PHP-2
Mgmt. Analysis Officer/
PEG Director
Joy Kadnar
202-366-0568
Staff Positions in Regions

E22-321

ASSOCIATE ADMINISTRATOR
PHP-1
Jeffrey D. Wiese

DEPUTY ASSOCIATE ADMINISTRATORS
PHP-2
Vacant (v. Gute), Field Operations
Vacant (v. Brigham), Policy and Programs

EXECUTIVE DIRECTOR
Rita Freeman-Kelly

GENERAL ENGINEER
Elizabeth Komiskey

202-366-4595

PHP-2
National Field Coordinator
DIRECTOR
Blaine Keener
202-366-0970

Program Manager
Substance Abuse Prevention Program
Stan Kastanas (MA)
202-550-0629
*

INFORMATION & ANALYSIS
PHP-10, 202-366-4569

Roger Little, Director

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Dan Fisher (MA), *IT Spec.*
Jamerson Pender, *Prog. Analyst*
Skip Rush (PHA/PHP), *IT Spec.*
Pablo Vivas, *IT Spec.*

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David Spangler, *Nat'l. CATS*
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Dana Register, *Trans. Spec.*
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Glynn Blanton (TN), *Trans. Spec.*
Dale Bennett (LA), *Trans. Spec.*
Rex Evans (IL), *Trans. Spec.*

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Shauna Lange, *Trans. Spec.*
James Reynolds, *Gen. Eng.*
Cliff Zimmerman (08), *Gen. Eng.*

PHMSA Office of Chief Counsel

PHC-10, Charles Lohmeyer

PHC-20, E26-328, 202-366-4400
Jim Pates, *Asst Chief Counsel*

ENGINEERING & EMERGENCY SUPPORT
PHP-80, 202-366-5124

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Vincent Holohan, *Gen. Eng.*
Joshua Johnson (MO), *Mat'ls Eng.*
Frank Licari, *Cryogenic Eng.*
Max Kieba, *Gen. Eng.*
Steve Nanney (TX), *Gen. Eng.*

FINANCIAL ADMINISTRATION & RESOURCE MANAGEMENT
PHP-90, 202-366-4395

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Jean Milam, *Mgmt/Prog. Analyst*
Aurea Ortiz, *Mgmt/Prog. Analyst*
Angela Plato, *Mgmt./Prog. Analyst*

TRAINING AND QUALIFICATIONS
PHP-70 / Oklahoma City, OK
405-954-7219
Fax 405-954-0206

Richard Sanders, Director

DeWitt Burdeaux, *Pipeline Safety Spec.*
Keith Chandler, *Mgmt & Prog. Analyst*
Alyson Coyle, *Mgmt/Prog. Spec.*
Wallace McGaughey, *Pipeline Safety Spec.*
Lane Miller, *Pipeline Safety Spec.*
Wayne St. Germain, *Pipeline Safety Spec.*
Sharon Webb, Writer-Editor
John West (08), *Pipeline Safety Spec.*

EASTERN REGION OFFICE
PHP-100 / West Trenton, NJ
609-989-2171
Fax 609-989-2277

Byron Coy, Director

Anthony Breen (08), *PEG Analyst*
*Chris D'Souza, *Gen. Eng.*
*Karen Gentile, *CATS/Gen. Eng.*
*Stephen Gliebe, *Ops. Supv.*
*David McMillan, *Gen. Eng.*
*Alvin Schoen, *Gen. Eng.*
*Robert Smallcomb (MA), *Gen. Eng.*
*Michael Yazemboski (PA), *AI* (08)

Washington, DC
202-260-8500
Fax 202-260-8530

Brigette Burton, *Prog. Asst.*
*Alex Dankanich, *CATS/Gen. Eng.*
*Stephen Horvath, *Gen. Eng.*
Brianne Kurdock, *PHC-20 I&E Attorney*
*Clyde Myers, *Gen. Eng.*
*Dino Rathod, *Gen. Eng.*
*Mark Wendorff, *Gen. Eng.*

SOUTHERN REGION OFFICE
PHP-200 / Atlanta, GA
404-832-1147
Fax 404-832-1169

Linda Daugherty, Director

Renita Bivins (DC), *PHC-20 I&E Attorney*
Nancy Chai, *Prog. Asst.*
*Gregory Hindman, *Gen. Eng.*
Lori Hutwanger (08), *PEG Analyst*
*Gabriel Kotsis, *Gen. Eng.*
*Wayne Lemoi (GA), *CATS/Gen. Eng.*
*Don Martin (AR), *Gen. Eng.*
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*Donald Murphy, Gen. Eng.
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*Chris Taylor, *Gen. Eng.*
*Derrick Turner, *Gen. Eng.*
*Vasilios Tzamos, *Gen. Eng*

CENTRAL REGION OFFICE
PHP-300 / Kansas City, MO
816-329-3800
Fax 816-329-3831

Ivan Huntoon, Director

*Phillip Archuletta, *Gen. Eng.*
*David Barrett, *Ops. Supv.*
*Gerhardt Bauman (OH), *Gen. Eng.*
*Allan Beshore, *Gen. Eng.*
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Roger Sneegas, *Gen. Eng.*
*Leonard Steiner, *Gen. Eng.*
Lawrence White (DC), *PHC-20 I&E Attorney*
*Harold Winnie, *CATS/Gen. Eng.*

SOUTHWEST REGION OFFICE
PHP-400 / Houston, TX
713-272-2859
Fax 713-272-2831

Rod Seeley, Director

*James Arnold, *Trans. Spec.*
*Molly Atkins, *Gen. Eng.*
*Terri Binns, *Ops. Supv.*
*Frank Causey, *Gen. Eng.*
Benjamin Fred (DC), *PHC-20 I&E Attorney*
*Patrick Gaume, *Gen. Eng.*
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Robert E. Lee, *PEG Analyst*
Cynthia Lewis, *Prog. Asst.*
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*Richard Lopez, *AI (08)*
*Victor Lopez, *Gen. Eng.*
*William Lowry, *Gen. Eng.*
*Jon Manning, *Gen. Eng.*
*Theron McLaren, *Ops. Supv.*
*Juan Mendoza, *Gen. Eng.*
*Kim Nguyen, *Gen. Eng.*
*John Pepper, *Gen. Eng.*
*Aaron Sheets (LA), *Gen. Eng.*
*Jason Terry, *Gen. Eng.*

PHP-600
*Lewis Cresswell, *Gen. Eng.*
*David Eng, *Gen. Eng.*
*Charles Miller, *Ops. Supv.*
*Anthony Rallis, *Gen. Eng.*
*Gene Roberson, *Gen. Eng.*

WESTERN REGION OFFICE
PHP-500 / Lakewood, CO
720-963-3160
Fax 720-963-3161

Chris Hoidal, Director

*Claude Allen, *Gen. Eng.*
Kristi Bonnett, *Prog. Asst.*
*Brent Brown, *Gen. Eng.*
Keith Coyle (DC), *PHC-20 I&E Attorney*
Jim Curry (DC), *PHC-20 I&E Attorney*
*Gerald Davis (MT), *Gen. Eng.*
Sara DePaula (08), *PEG Analyst*
*Thomas Finch, *Gen. Eng.*
*Jeffery Gilliam, *Gen. Eng.*
*John Haddow, *Gen. Eng.*
*Bruce Hansen (OK), *Sr. Gen. Eng.*
*Peter Katchmar (WY), *AI* (08)
*Jerry Kenerson, *Gen. Eng.*
*Huy Nguyen, *Ops. Supv.*
*Michael Petronis, *Gen. Eng.*
*Ross Reineke, *CATS/Gen. Eng.*
*Jeffrey Stahoviak, *Gen Eng.*

Ontario, CA
*Hossein Monfared, *Gen. Eng.*
**Phillip Nguyen, *Gen. Eng.*

Anchorage, AK
Dennis Hinnah (08), *Dpty Director*
*William Flanders, *CATS/Gen. Eng.*
*Robert Guisinger (08), *Gen. Eng.*
*Donald Johnson (08), *Gen. Eng.*
*Jon Strawn, *Gen. Eng.*

Table 1: Regulatory Jurisdiction of Facilities Under the Pipeline Safety Act

(Federal and State Jurisdiction)

	Natural Gas	Hazardous Liquids	Crude Oil	Sour Gas
Interstate				
Transmission	DOT	DOT	DOT	Not Regulated
Urban Gathering	DOT	DOT	DOT	Not Regulated
Rural Gathering	Not Regulated	N/A	Not Regulated	Not Regulated
Offshore(OCS)	DOT/MMS	DOT/MMS	DOT/MMS	Not Regulated
Intrastate				
Transmission	RRC	RRC	RRC	RRC
State Offshore	RRC	RRC	RRC	RRC
Urban Gathering	RRC	RRC	RRC	RRC
Rural Gathering	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Lease/Flow Lines (bay & offshore)	RRC	RRC	RRC	RRC
Distribution	RRC	N/A	N/A	N/A
Master Meter	RRC	N/A	N/A	N/A

DOT – Department of Transportation

MMS – Minerals Management Service

RRC – Railroad Commission of Texas

N/A – No regulations applicable

http://www.rrc.state.tx.us/data/gasservices/vitalstats/regjur.php

Table 2: Texas Pipeline System Mileage

	Natural Gas	Hazardous Liquids	Crude Oil	Sour Gas
Interstate				
Transmission	80,000** This is an estimate of the total interstate jurisdictional miles			
Urban Gathering				
Rural Gathering				
Offshore(OCS)				
Intrastate				
Transmission	37,510	24,043	6,880	
State Offshore	1,170		288	
Urban Gathering	3,133		4,025	
Rural Gathering	43,573**This is an estimate of all of the "unregulated gathering lines in Texas, both liquid and gas			
Lease/Flow Lines(bay & offshore)	*included in offshore		*included in offshore	
Distribution	71,412			
Master Meter	4,659			
Distribution	Transmission	Liquids	Interstate	NJ Gathering

90,000	42,000	23,000	80,000	35,000

Total Pipeline Mileage in Texas is 270,000

http://www.rrc.state.tx.us/data/gasservices/vitalstats/mileage.php

Table 3: Texas Required Permits & Registrations

(No Federal Requirements)

	Natural Gas	Hazardous Liquids	Crude Oil	Sour Gas
Interstate				
Transmission	RRC Permit	RRC Permit	RRC Permit	RRC Registration
Urban Gathering	RRC Permit	N/A	RRC Permit	RRC Registration
Rural Gathering	RRC Permit	N/A	RRC Permit	RRC Registration
Offshore(OCS)	Not Regulated	N/A	Not Regulated	Not Regulated
Intrastate				
Transmission	RRC Permit & New Construction Report (>5 mi)	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
State Offshore	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
Urban Gathering	RRC Permit & New Construction Report (>5 mi)	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
Rural Gathering	RRC Permit	N/A	RRC Permit	RRC Permit & preconstruction (24-hour prior construction) notice
Lease/Flow Lines (bay & offshore)	RRC Permit & New Construction Reports (>5 mi)	N/A	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
Distribution	New Construction Reports (>5 mi)	N/A	N/A	N/A

Master Meter	Not Regulated	N/A	N/A	N/A

All operators are required to obtain a P-5 from the Commission's Oil & Gas Division.

http://www.rrc.state.tx.us/data/gasservices/vitalstats/permitsrequired.php

Pipeline Definitions

Under applicable rules, pipeline types are defined as follows:

Transmission Line – Pipeline transporting gas from a gathering line or storage facility to a distribution center. Transmission lines are typically operated at higher pressures and stress levels.

Non-Rural (Urban) Gathering Line – A gathering line that is located within city limits of a designated residential of commercial area such as a subdivision, business, shopping center, or community development.

Rural Gathering Line – A gathering line located outside any incorporated municipality, commercial, or business area.

Federal Offshore Line – A pipeline located on outer continental shelf lands. Federal waters offshore from Texas begin at 3 marine leagues, or 10.3 miles.

State Offshore Line – A pipeline originating in a bay extending within 3 marine leagues, or 10.3 miles offshore.

Lease/Flow Line – A pipeline located within the lease of production, carrying full well stream production to a tank battery, separator, or other production treatment equipment located on the lease.

Distribution Line – A pipeline serving both as a common source of supply and associated branch lines serving consumers. Distribution lines are the source of supply for residential and small commercial users.

Master Meter System – A natural gas pipeline system for distributing natural gas for within, but not limited to, a distinct area, such as a mobile home park, housing project, or apartment complex, where the operator purchases metered gas from an outside source. The natural gas distribution pipeline system supplies the end-consumer who either purchases gas directly through a meter or by other means such as rent.

Interstate System – Typically, a natural gas pipeline transportation system extending beyond state boundaries. However for hazardous liquids systems, pipelines may be designated as interstate if they are connected to a pipeline that carries product out of state boundaries and affects foreign commerce subject to FERC tariffs.

Intrastate System – A pipeline system for transporting natural gas or hazardous liquids within a state and not subject to the jurisdiction of FERC.

Hazardous Liquids Line – A pipeline for transportation of petroleum or petroleum products such as gasoline, diesel fuels, or liquefied petroleum gas (LPG).

Sour Gas Line – A pipeline system containing greater than 100 parts per million (ppm) hydrogen sulfide.

http://www.rrc.state.tx.us/data/gasservices/vitalstats/definitions.php

Table 3: Texas Required Permits & Registrations

(No Federal Pipeline Safety Requirements)

	Natural Gas	Hazardous Liquids	Crude Oil	Sour Gas
Interstate				
Transmission	RRC Permit	RRC Permit	RRC Permit	RRC Registration
Urban Gathering	RRC Permit	N/A	RRC Permit	RRC Registration
Rural Gathering	RRC Permit	N/A	RRC Permit	RRC Registration
Offshore(OCS)	Not Regulated	N/A	Not Regulated	Not Regulated
Intrastate				
Transmission	RRC Permit & New Construction Report (>5 mi)	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
State Offshore	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
Urban Gathering	RRC Permit & New Construction Report (>5 mi)	RRC Permit & New Construction Report	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
Rural Gathering	RRC Permit	N/A	RRC Permit	RRC Permit & preconstruction (24-hour prior construction) notice
Lease/Flow Lines (bay & offshore)	RRC Permit & New Construction Reports (>5 mi)	N/A	RRC Permit & New Construction Report	RRC Permit, Preconstruction and New Construction Reports
Distribution	New Construction Reports (>5 mi)	N/A	N/A	N/A
Master Meter	Not Regulated	N/A	N/A	N/A

All operators are required to obtain a P-5 from the Commission's Oil & Gas Division.

http://www.rrc.state.tx.us/data/gasservices/vitalstats/permitsrequired.php

Pipeline Definitions

Note: Many other definitions are interspersed among the other relevant regulations. Care should be taken to make sure all the relevant definitions and authorities are considered.

Texas RRC Pipeline Definitions

Under applicable rules, pipeline types are defined as follows:

Transmission Line – Pipeline transporting gas from a gathering line or storage facility to a distribution center. Transmission lines are typically operated at higher pressures and stress levels.

Non-Rural (Urban) Gathering Line – A gathering line that is located within city limits of a designated residential of commercial area such as a subdivision, business, shopping center, or community development.

Rural Gathering Line – A gathering line located outside any incorporated municipality, commercial, or business area.

Federal Offshore Line – A pipeline located on outer continental shelf lands. Federal waters offshore from Texas begin at 3 marine leagues, or 10.3 miles.

State Offshore Line – A pipeline originating in a bay extending within 3 marine leagues, or 10.3 miles offshore.

Lease/Flow Line – A pipeline located within the lease of production, carrying full well stream production to a tank battery, separator, or other production treatment equipment located on the lease.

Distribution Line – A pipeline serving both as a common source of supply and associated branch lines serving consumers. Distribution lines are the source of supply for residential and small commercial users.

Master Meter System – A natural gas pipeline system for distributing natural gas for within, but not limited to, a distinct area, such as a mobile home park, housing project, or apartment complex, where the operator purchases metered gas from an outside source. The natural gas distribution pipeline system supplies the end-consumer who either purchases gas directly through a meter or by other means such as rent.

Interstate System – Typically, a natural gas pipeline transportation system extending beyond state boundaries. However for hazardous liquids systems, pipelines may be designated as interstate if they are connected to a pipeline that carries product out of state boundaries and affects foreign commerce subject to FERC tariffs.

Intrastate System – A pipeline system for transporting natural gas or hazardous liquids within a state and not subject to the jurisdiction of FERC.

Hazardous Liquids Line – A pipeline for transportation of petroleum or petroleum products such as gasoline, diesel fuels, or liquefied petroleum gas (LPG).

Sour Gas Line – A pipeline system containing greater than 100 parts per million (ppm) hydrogen sulfide.

http://www.rrc.state.tx.us/data/gasservices/vitalstats/definitions.php

PHMSA Gas Pipeline Definitions (49 CFR 192.3)

"Distribution Line" means a pipeline other than a gathering or transmission line.

"Exposed underwater pipeline" means an underwater pipeline where the top of the pipe protrudes above the underwater natural bottom (as determined by recognized and generally accepted practices) in waters less than 15 feet (4.6 meters) deep, as measured from mean low water.

"Gathering Line" means a pipeline that transports gas from a current production facility to a transmission line or main.

"High pressure distribution system" means a distribution system in which the gas pressure in the main is higher than the pressure provided to the customer.

"Line section" means a continuous run of transmission line between adjacent compressor stations, between a compressor station and storage facilities, between a compressor station and a block valve, or between adjacent block valves.

"Low-pressure distribution system" means a distribution system in which the gas pressure in the main is substantially the same as the pressure provided to the customer.

"Main" means a distribution line that serves as a common source of supply for more than one service line.

"Offshore" means beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

"Outer Continental Shelf" means all submerged lands lying seaward and outside the area of lands beneath navigable waters as defined in Section 2 of the Submerged Lands Act (43 U.S.C. 1301) and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control .

"Pipe" means any pipe or tubing used in the transportation of gas, including pipe-type holders.

"Pipeline" means all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.

"Pipeline facility" means new and existing pipeline, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation.

"Service line" means a distribution line that transports gas from a common source of supply to an individual customer, to two adjacent or adjoining residential or small commercial customers, or to multiple residential or small commercial customers served through a meter header or manifold. A service line ends at the outlet of the customer meter or at the connection to a customer's piping, whichever is further downstream, or at the connection to customer piping if there is no meter.

"Transmission line" means a pipeline, other than a gathering line, that: (1) Transports gas from a gathering line or storage facility to a gas distribution center, storage facility, or large volume customer that is not down-stream from a gas distribution center; (2) operates at a hoop stress of 20 percent or more of SMYS; or (3) transports gas within a storage field. (Note: A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.)

"Transportation of gas" means the gathering, transmission, or distribution of gas by pipeline or the storage of gas, in or affecting interstate or foreign commerce.

PHMSA Hazardous Liquid Pipeline Definitions (49 CFR 195.2)

Exposed pipeline means an underwater pipeline where the top of the pipe protrudes above the underwater natural bottom (as determined by recognized and generally accepted practices) in waters less than 15 feet (4.6 meters) deep, as measured from mean low water.

Gathering line means a pipeline 219.1 mm (8 5/8 in) or less nominal outside diameter that transports petroleum from a production facility.

Hazardous liquid means petroleum, petroleum products, or anhydrous ammonia.

Highly volatile liquid or HVL means a hazardous liquid which will form a vapor cloud when released to the atmosphere and which has a vapor pressure exceeding 276 kPa (40 psia) at 37.8 deg C (100 deg F).

In-plant piping systems means piping that is located on the grounds of a plant and used to transfer hazardous liquid or carbon dioxide between plant facilities or between plant facilities and a pipeline or other mode of transportation, not including any device and associated piping that are necessary to control pressure in the pipeline under §195.406(b).

Interstate pipeline means a pipeline or that part of a pipeline that is used in the transportation of hazardous liquid or carbon dioxide in interstate or foreign commerce.

Intrastate pipeline means a pipeline or that part of a pipeline to which this part applies that is not an interstate pipeline.

Line section means a continuous run of pipe between adjacent pressure pump stations, between a pressure pump station and terminal or breakout tanks, between a pressure pump station and a block valve, or between adjacent block valves.

Low stress pipeline means a hazardous liquid pipeline that is operated in its entirety at a stress level of 20 percent or less of the specified minimum yield strength of the line pipe.

Offshore means beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

Outer Continental Shelf means all submerged lands lying seaward and outside the area of lands beneath navigable waters as defined in Section 2 of the Submerged Lands Act (43 U.S.C. 1301) and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control.

Petroleum means crude oil, condensate, natural gasoline, natural gas liquids, and liquefied petroleum gas.

Petroleum product means flammable, toxic, or corrosive products obtained from distilling and processing of crude oil, unfinished oils, natural gas liquids, blend stocks and other miscellaneous hydrocarbon compounds.

Pipe or line pipe means a tube, usually cylindrical, through which a hazardous liquid or carbon dioxide flows from one point to another.

Pipeline or pipeline system means all parts of a pipeline facility through which a hazardous liquid or carbon dioxide moves in transportation, including, but not limited to, line pipe, valves and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

Pipeline facility means new and existing pipe, rights-of-way, and any equipment, facility, or building used in the transportation of hazardous liquids or carbon dioxide.

Production facility means piping or equipment used in the production, extraction, recovery, lifting, stabilization, separation or treating of petroleum or carbon dioxide, or associated storage or measurement. (To be a production facility under this definition, piping or equipment must be used in the process of extracting petroleum or carbon dioxide from the ground or from facilities where carbon dioxide is produced, and preparing it for transportation by pipeline. This includes piping between treatment plants which extract carbon dioxide, and facilities utilized for the injection of carbon dioxide for recovery operations.)

Rural area means outside the limits of any incorporated or unincorporated city, town, village, or any other designated residential or commercial area such as a subdivision, a business or shopping center, or community development.

Toxic product means "poisonous material" as defined by 173.132 Class 6, Division 6.1-Definitions of this chapter.

Unusually sensitive area (USA) means a drinking water or ecological resource area that is unusually sensitive to environmental damage from a hazardous liquid pipeline release, as identified under §195.6.

Recommended Guideline for Enhancement of Penalties in Enforcement Cases for Pollution, Safety Hazards, and Severity of Violations

This schedule is provided solely as a guideline for enhancements in recommended administrative penalties where there is threatened or actual pollution, threatened of actual safety hazards to persons of property, and the severity of the violation. The actual amount of any proposed penalty and enhancement will be determined on an individual case-by-case basis for each violation by the assigned hearings examiner after consideration of all evidence submitted at the hearing. The final amount of any actual administrative penalty imposed and enhancement for prior violations will be determined by the action of a majority of the Commissioners at Conference.

Evidentiary Factors	Pollution Threatened or Actual	Safety Hazard	Severity of Violation
Agricultural Land of Sensitive Wildlife Habitat	$1,000.00 to $5,000.00		
Endangered or Threatened Species Habitat	$2,000.00 to $10,000.00		
Bay, Estuary of Marine Habitat	$5,000.00 to $25,000.00		
Minor Freshwater Source (Minor Aquifer, Seasonal Watercourse)	$2,500.00 to $7,500.00		
Major Freshwater Source (Major Aquifer, Creeks, Rivers, Lakes and Reservoirs)	$5,000.00 to $25,000.00		
Impacted Residential/Public Area		$1,000.00 to $15,000.00	
Hazardous Materials Release		$2,000.00 to $25,000.00	
Reportable Incident/Accident (Applicable to LP-Gas and Pipeline Safety Violations)		$5,000.00 to $25,000.00	
Exceeding Pressure Control Limits (Applicable to LP-Gas and Pipeline Safety Violations)		$5,000.00 to $20,000.00	
Well in H2S Field		Up to $10,000.00	
Time out of Compliance			$100.00 to $2,000.00 each month
Reckless Conduct of Operator			Double Total Penalty
Intentional Conduct of Operator			Triple Total Penalty

Recommended Guideline for Enhancement of Penalties in Enforcement Cases for Prior Violations

This schedule is provided solely as a guideline for enhancements in recommended administrative penalties where an operator has a history of prior violations. The actual amount of any proposed penalty and enhancement will be determined on an individual case-by-case basis for each

violation by the assigned hearings examiner after consideration of all evidence submitted at the hearing. The final amount of any actual administrative penalty imposed and enhancement for prior violations will be determined by the action of a majority of the Commissioners at Conference.

The two guidelines set forth are intended to be used separately. Either guideline may be used where applicable, but not both.

Violations in 5 Years Prior to Action

Violations in 5 Years Prior to Action	Enhancement Amount
One	$1,000.00
Two	$2,000.00
Three	$3,000.00
Four	$4,000.00
Five	$5,000.00

Total Administrative Penalties Assessed in 5 Years Prior to Action	
Less than $10,000.00	$1,000.00
Between $10,000.00 and $25,000.00	$2,500.00
Between $25,000.00 and $50,000.00	$5,000.00
Between $50,000.00 and $100,000.00	$10,000.00
Over $100,000.00	10% of total amount

Recommended Guideline for Reduction of Penalties

Operator Brings Violation into Compliance	Percentage Reduction*
Before Complaint is Filed	50%
Before Hearing on Complaint	25%

- Reduction percentages apply only to standard penalties and do not apply to enhancement penalties.

Pipeline Safety Rules (Federal and State Jurisdiction)

Gas Services – Pipeline Safety Rules	Standard Penalty Amount
§ 3.65 – Permit to operate a pipeline	$1,000.00
§ 7.70 – Natural gas reporting, records and procedures	$5,000.00
§ 7.71 – Odorization of natural gas	$5,000.00
§ 7.72 – Handling leak complaints for natural gas	$1,000.00
§ 7.73 – Overpressure protection and leak surveys for master meters	$5,000.00
§ 7.80 – Compliance with hazardous liquid rules	$5,000.00
§ 7.84 – Hazardous liquid reporting, records and procedures	$5,000.00
§ 7.85 – Construction of hazardous pipelines and compliance with rules	$1,000.00
§ 7.86 – Corrosion control of hazardous liquid pipelines	$1,000.00

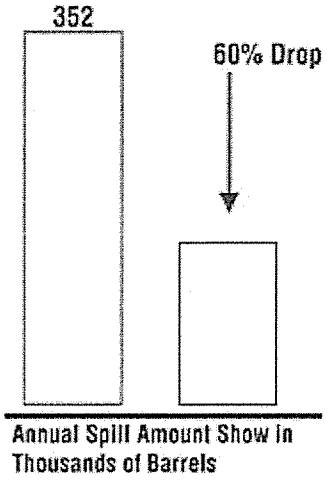
192.613 – Continual surveillance of pipelines for hazards	$5,000.00
192.619 – Maximum operating pressure with protection for natural gas	$5,000.00
192.625 – Odorization of natural gas	$5,000.00
192.403 – Training for operations of hazardous liquids pipelines	$5,000.00
192.406 – Maximum operating pressure with protection for hazardous liquids	$5,000.00
49 CFR Part 192 – Rules for natural gas pipelines	$1,000.00
49 CFR Part 193 – Rules for liquefied natural gas storage and transportation	$1,000.00
49 CFR Part 195 – Rules for hazardous liquid pipelines	$1,000.00
49 CFR Part 199 – Rules for drug and alcohol programs	$500.00

Safety Record

30 Years of Improvement
An analysis of the historical record shows that the oil pipeline industry's safety performance has improved significantly over the last 30 years. These improvements correlate with advancements in technology as well as increased environmental awareness.

The annual number of spills has decreased by nearly 40%. Over the last 30 years the number of spills has also dropped from an average of 318 in the first six years (1969 - 74) to the most recent six year running average of 197 spills nationwide.

Today's median spill is one-third the size of thirty years ago. From 1969-74, the median spill volume (half the spills are smaller, half larger) for incidents in the Office of Pipeline Safety database was 290 barrels. In the latest six year period, it had dropped to 100 barrels - one-third the size of 30 years ago. The annual volume of oil spilled from pipeline systems has fallen by about 60%, based on six year running averages.



Safest Oil Transportation Mode
Pipelines operate more safely than any other mode of oil transportation. In the following table, the numbers show how much more likely a transportation mode is to have an accident of a particular type compared to an oil pipeline. For example, truck accidents result in deaths at least 87 times more often than pipeline accidents. Likewise, truck accidents result in fires and/or explosions about 35 times more frequently per barrel of oil transported per mile. (These figures include only accidents involving petroleum shipments, not all accidents for a given transportation mode.)

Accident Rates of Petroleum Transportation Methods
Values less/more than 1.0 indicate risk of accident is lower/greater than pipeline transportation.

	Death	Fire/Explosion	Injury
Truck	87.3	34.7	2.3
Rail	2.7	8.6	0.1
Barge	0.2	4.0	3.6
Tank Ship	4.0	1.2	3.1

Comparisons based on calculated rates per ton-mile. (Source: Allegro Energy Group)

http://www.aopl.org (click on "Safety")

Document Title	Date	Abstract	Website
Federal Initiatives Land Use Planning next to Pipelines			
TRB Special Report 219- Pipelines and Public Safety, Damage Prevention, Land Use, and Emergency Preparedness	1988	The committee that developed this report recommended collaboration on damage prevention and public preparedness programs, land use measures, and emergency preparedness programs. The committee stopped short of recommending specific development setbacks that would provide more uniform land use control across the nation. Instead, it pointed out a number of procedural changes in land development review and regulation that would educe the risk of inadvertent damage. Although more uniform public policies on land use near pipelines might be desirable, differences in local conditions argue against establishing definitive standards or limits on specific land uses near pipeline rights-of-way.	http://onlinepubs.trb.org/onlinepubs/sr/sr219/SR219_00.pdf
Pipeline Safety Improvement Act of 2002	2002	The Pipeline Safety Improvement Act of 2002, which was signed into law on December 17, 2002, mandates significant changes and new requirements in the way that the natural gas industry ensures the safety and integrity of its pipelines. The law applies to natural gas transmission pipeline companies. Central to the law are the requirements it places on each pipeline operator to prepare and implement an "integrity management program,	http://ops.dot.gov/library/docs/107_cong_public_laws.pdf
TRB Special Report 281 - Transmission Pipelines and Land Use: A Risk-Informed Approach - Committee for Pipelines and Public Safety: Scoping Study on the Feasibility of Developing Risk-Informed Land Use Guidance near Existing and Future Transmission Pipelines	September, 2004	The Pipeline Safety Improvement Act (PSIA) of 2002 required the Secretary of Transportation, in conjunction with the Federal Energy Regulatory Commission (FERC) and other appropriate federal and state agencies and local governments, to undertake a study of land use practices, zoning ordinances, and preservation of environmental resources with regard to pipeline rights-of-way and their maintenance. The Act also required the Secretary to promote the adoption of practices, laws, and ordinances by federal agencies and state and local governments in reducing the risks and hazards associated with encroachment on pipeline rights-of-way. In light of the PSIA requirements, PHMSA contracted with the TRB to study the feasibility of developing risk-informed land use guidance for application adjacent to transmission pipelines. The TRB convened an expert committee of 12 members from academia, pipeline industry, local governments, and consultants to conduct the study and provide recommendations to OPS.	http://onlinepubs.trb.org/onlinepubs/sr/sr281.pdf
Land Rights US			
THE NECESSITY OF ADEQUATE FINDINGS/REASONS TO SUPPORT MUNICIPAL LAND USE DECISIONS	April, 2004	In land use cases, Minnesota courts are looking for a sufficient statement of the reasons given by the city to grant or deny an application request. The role of the court is to examine the city's reasons and ascertain whether the record before the city council supports	www.lmnc.org/pdfs/LCWorkshop04/NecessityAdequateFindings.pdf
An Interstate Natural Gas Facility on My Land? What Do I need to Know?	Unknown	The Federal Energy Regulatory Commission is charged by Congress with evaluating whether interstate natural gas pipeline projects proposed by private companies should be approved. The Federal government does not propose, construct, operate, or own such projects. The Commission's determination whether to approve such a project may affect you if your land is where a natural gas pipeline, other facilities, or underground storage fields might be located. We want you to know: ß How the Commission's procedures work; ß What rights you have; ß How the location of a pipeline or other facilities is decided; and ß What safety and environmental issues might be involved.	http://www.ferc.gov/for-citizens/citizen-guides/citz-guide-gas.pdf
Dealing with Public Risks Involved in Land Use Planning	Jun-01	The paper focuses on land use planning issues that raise fiscal, safety, and legal risks to local communities in a variety of critical areas. It is a collection of papers from a symposium by PERI to stimulate dialogue about ways cities and counties can minimize these risks in developing long-range land use policy strategies, and in carrying out day-to-day development review responsibilities.	www.riskinstitute.org/PERI/PTR/Risk+Management_PTR_1004.htm
The Liquid Pipeline Industry in the United States: Where It's Been, Where It's Going	April, 2004	The outlook for the liquid pipeline industry in the US is for improving environmental and safety performance, albeit at the same time that the public's expectations continue to rise rapidly, with little tolerance for operational incidents. Issues relating to rights of way will become even more contentious and expensive.	www.aopl.org/posted/888/Final_Rabinow_print_40804.57626.pdf
Takings Law in Plain English	May-06	Explanation of terms related to regulatory takings.	www.cacities.org/index.jsp?zone=ilsq&previewStory=20212
Regulatory Takings after Lucas Henry N. Butler	1993	Regulatory-induced reductions in property value are potentially characterized as takings subject to the just compensation provisions of the Takings Clause.	www.cato.org/pubs/regulation/reg16n3g.html
REGULATORY TAKINGS DEVELOPMENTS SINCE LUCAS	August, 2006	The Supreme Court's recent interpretation of this Amendment has provided important clarification on the limits imposed upon government entities when restricting landowner's use and enjoyment of their property. These limitations on government powers are becoming more important as states and municipalities seek to more comprehensively regulate land use through new strategies such as "Smart Growth" and will have particular application as landowners and state and local governments attempt "Smart Rebuilding" in the wake of the 2005 Hurricane season.	http://www.finkellaw.com/CM/PublishedWorks/Regulatory%20Takings%20Since%20Lucas%20Paper.pdf
Second Anniversary of Kelo and the State of Property Rights in America	Jun-07	On the second anniversary of the U.S. Supreme Court's *Kelo vs. New London* decision a look at property rights.	http://communities.justicetalking.org/blogs/day26/archive/2007/06/26/2nd-Anniversary-of-Kelo.aspx
Risk-Informed Decision Making			
Planning for the Unexpected: Land Use Development and Risk	February-05	This book is available to purchase. Planning for the Unexpected: Land-Use Development and Risk is a concise review of risk management fundamentals. The authors present the strategic principles of risk management and provide examples of how it can be better incorporated by local city planners.	www.planning.org/APAStore/Search/Default.aspx?p=2438
Risk Management Standards	2003	History and synopsis of risk management standards around the world. National "standards" on risk management first appeared in Australia and New Zealand in 1995, then in Canada in 1997 and in the United Kingdom in 2000. Other countries and regions (Europe) are currently studying similar standards, and the International Standards Organization is preparing a list of common global definitions for risk management terms.	www.riskreports.com/standards.html
Website with links to all major risk management groups.	Current	Website with links to all major risk management groups. The website also contains concise information (Riskipedia) about risk management. (http://riskipedia.riskreports.com/display/RPA/The+RISKIPEDIA--+free+risk+information+available+to+everyone%2C+everywhere)	www.riskreports.com/links.html
Elements in risk management	2000	Website by Chemical Industries Association - Periodic problems with this website.	http://www.cia.org.uk/ps%20GO%20demo/riskelements.htm
A PRIMER ON RISK MANAGEMENT IN THE PUBLIC SERVICE A Background Document for CCMD's Action-Research Roundtable on Risk Management	Unknown	This primer is not meant to be an exhaustive review or treatment of risk management. Rather, the intent is to create a common point of departure for learning and work on what constitutes good risk management and what obstacles might be encountered in incorporating risk management into government decision making. To encourage a broad readership, an effort has been made to avoid technical jargon and to keep the primer succinct.	http://www.csps-efpc.gc.ca/Research/publications/pdfs/Risk-Primer-REV.pdf
Other Land Use Near Transmission Lines Documents			

Document Title	Date	Abstract	Website
API GUIDELINES FOR PROPERTY DEVELOPMENT	2004	Guidelines for Property Development, which helps increase awareness about how to conduct land development and use activity along pipeline rights-of-way.	http://global.ihs.com/doc_detail.cfm?currency_code=USD&customer_id=21254C2C3C0A&shopping_cart_id=282448332F4A50384A5B3D38220A&rid=API&country_code=US&lang_code=ENGL&item_s_key=00442197&item_key_date=951231&input_doc_number=&input_doc_title=guidelines%20for%20property%20development
BUILDING SAFE SCHOOLS: Invisible Threats, Visible Actions (50 State Survey: Existing School Siting Laws, Policies and Regulations)	Dec. 2005	To better inform policy discussions surrounding the siting of schools, a survey of the laws, regulations and policies (referred to hereafter as "policies") related to the siting of schools on or near sources of environmental pollution in all fifty states was conducted.	www.childproofing.org/documents/building_safe_schools.pdf
Expanding Natural Gas Pipeline Infrastructure To Meet The Growing Demand For Cleaner Power - Final Report Of The Keystone Dialogue On Natural Gas Infrastructure	March-02	The Dialogue focused on three broad topics relating to natural gas pipeline infrastructure: (1) natural gas pipeline infrastructure needs, (2) the challenges of siting new or expanded pipeline infrastructure, and (3) the safety, integrity, and reliability of natural gas pipeline infrastructure. Appendix A - A recent report prepared by the IOGCC/NARUC Pipeline Siting Work Group contained the following recommendations aimed at helping state and local bodies move through the permitting process.	www.keystone.org/spp/documents/GasPipelineReport-FINAL%20VERSION-JTL.PDF
Risk-Informed Land Use Planning Near Pipelines in the US			
California Department of Education Proposed Standard Protocol for Pipeline Risk Analysis	2007	Review and preparation of pipeline risk analyses CA school districts must submit to CDE. Intended to provide a consistent basis for risk analysis of basis for the risk analysis of pipelines near schools.	www.cde.ca.gov/ls/fa/sf/protocol07.asp
CDE's Pipeline Risk Analysis Protocol Total Individual Risk (TIR) Estimating Aid	2007	California Department of Education PIPELINE RISK ANALYSIS PROTOCOL TOTAL INDIVIDUAL RISK (TIR) ESTIMATING AID To be used in conjunction with the CDE Guidance Protocol for School Site Pipeline Risk Analysis	www.cde.ca.gov/ls/fa/sf/protocol07.asp
Washington Model Pipeline Ordinances - Website	Current	Municipal Research and Services Center of Washington's website	www.mrsc.org/subjects/PubSafe/PipeSafetyModel.aspx#Model
SETBACKS AND ZONING FOR NATURAL GAS AND HAZARDOUS LIQUID TRANSMISSION PIPELINES	August, 2004	This paper contains: a brief introduction, excerpts from a prepublication copy of the TRB report and a concluding section containing the author's recommendations. Attached are copies of the recently amended MRSC model setback ordinance, and code provisions enacted by Austin, Texas.	www.mrsc.org/subjects/pubsafe/setbacks.pdf
Gas Regulation	2007 Draft	Regulation for Gas Pipelines which includes proximity of pipelines to buildings in section 480-93-020 .	http://www.wutc.wa.gov/rms2.nsf/177d98baa5918c7388256a550064a61e/838687206275d9018825738300581186!OpenDocument
WUTC Website	Current	Land Use Planning for Pipelines The presence of a pipeline forms a relationship between pipeline operator, local government and property owner. How this relationship is managed can affect directly the safe operation of the pipeline and consequently the public health and safety of the surrounding community. In 2004 and 2005, a group of city, county, state and industry representatives conducted a series of workshops throughout the state for local government officials, talking in particular with planning, permitting and public works sections. The purpose of these workshops was to exchange ideas and explore the range of tools available to manage and make effective decisions concerning land use in proximity to transmission pipelines.	www.wutc.wa.gov/webimage.nsf/1fd8daa538d4adba8825704d00643802/9fe01a11e8383ff888257097005d6218!OpenDocument
Edison Township Municipal	June-05	Section 17.08.210 Interference with pipelines	http://primis.phmsa.dot.gov/comm/publications/MunicipalCodeofEdisonTownship.pdf
EFFECTIVENESS OF U.S. AND INTERNATIONAL PIPELINE REGULATIONS WITH REGARD TO LAND USE PLANNING		The transmission pipeline incident in Edison, New Jersey in March, 1994 raised public concerns about the safety of siting of transmission pipelines in proximity to populated areas. One of the responses to this incident was the issuance of a contract by the United States Department of Transportation (USDOT) to the New Jersey Institute of Technology (NJIT) to study this and other issues with regard to pipeline safety.	http://transportation.njit.edu/nctip/publications/intregulations.html
City of Austin HL Ordinance	April, 2003	The City of Austin has enacted an ordinance that regulates structures built near a pipeline transporting hazardous materials. The ordinance -- approved by the Austin City Council on April 10, 2003 -- is designed to ensure greater public safety. The ordinance requires special construction standards, determined by the Fire Department, for new structures within 200 feet of a pipeline. In addition, uses requiring special evacuation assistance are prohibited within 500 of such a pipeline unless it is a structure within 200-500 feet of the pipeline and the Fire Chief makes a safety recommendation to City Council. In those cases, the City Council makes the final determination.	http://www.ci.austin.tx.us/news/02/pipeline_ord.htm
Examples of Safety Reviews with QRA's of Transmission Pipelines			
PIPELINE SAFETY ASSESSMENT SCHULTE ROAD SPORTS COMPLEX	March, 1998	This report provides an analysis of the pipelines' safety, considering the potential future use of the surrounding land. Tetra Tech collected and reviewed documents related to the two PG&E pipelines to evaluate pipeline failure rates, risks associated with natural gas pipeline failures, and risks commonly experienced by members of the public. Tetra Tech also reviewed various other documents provided by PG&E and the City of Tracy, including but not limited to pipeline safety records, pipeline and facility plans, pipeline and facility specifications, waiver applications, waiver agreements, settlement agreements, and other reports and associated documents.	http://www.ci.tracy.ca.us/city_council/meetings/agendas/2007/12/18/04.pdf
INDEPENDENT SAFETY REVIEW OF THE ONSHORE SECTION OF THE PROPOSED CORRIB GAS PIPELINE	January-06	The report presents the detailed findings of the review of the onshore section of the proposed Corrib gas pipeline, which ranges from a general consideration of the process followed in selecting the preferred design option, to detailed analysis of highly technical aspects of the engineering design and risk assessment.	http://www.mayogasinfo.com/download/Advantica_Report.pdf
Cross-country Pipeline Safety Assessment - India	2003	Pipeline safety assessment studies were carried out at the design stage of cross-country Natural gas pipeline for implementation of various safety measures. The risk level based decisions for the pipeline are easy for implementation at this stage, since the pipeline is proposed and various modifications can be easily carried out. The costs incurred on such modifications are also minimal. Risk level for the pipeline is computed through the use of Event tree analysis, Consequence analysis, Vulnerability analysis and Individual risk computation. Pipeline design parameters like pipeline thickness, its depth cover, routing, locations of sectionalizing valve and site specific surrounding population density, terrain etc. was considered for arriving at the risk level for the pipeline. Mitigation measures and design modifications were implemented to bring the undesired risk to acceptable level.	www.iitk.ac.in/che/jpg/papersb/full%20papers/M%20-%2055.doc
Commentary on the Risk Analysis for the Proposed Emera Brunswick Pipeline Through Saint John, NB	October, 2006	Accufacts Inc. has been asked to comment on the recent Risk Analysis ("RA") performed on the proposed Emera Brunswick Pipeline route through Saint John, New Brunswick by the Saint John Fire Department.1 In a previous independent report concerning this proposed high pressure gas transmission pipeline through the city of Saint John, Accufacts concluded: "For most gas transmission pipelines, the large thermal impact zones generated from early (within minutes) ignition sets the "controlling case" defining the potential impact zone.	http://pstrust.org/library/docs/accufacts_report_fd_ra.pdf#search="accufacts"

Document Title	Date	Abstract	Website
Safety Review of the Proposed Onshore Section of the CorribGas Pipeline	2005	Powerpoint presentation by Advantica of the safety review. Includes useful flowchart of a QRA process.	http://www.dcmnr.gov.ie/NR/rdonlyres/4CA02A2D-8FA0-4F76-8372-1839D95FA773/0/AdvanticaPresentationonDraftReport.pdf
Risk-Informed Land Use Planning Outside of US			
GUIDANCE ON LAND USE PLANNING AS REQUIRED BY COUNCIL DIRECTIVE 96/82/EC (SEVESO II) M.D. CHRISTOU & S. PORTER (Editors) 1999	1999	This guidance document is intended to assist with the interpretation of the requirements on land-use planning contained within the Seveso II Directive and, where relevant, on the provisions on land-use planning laid down within the UN/ECE Convention on the Transboundary Effects of Industrial Accidents. It has been assumed that the relevant requirements within the UN/ECE Convention will be implemented through the same laws, regulations and administrative provisions which are intended to bring the Seveso II Directive into force. However it may be noted that the land-use planning provisions within Seveso II apply to all establishments covered by the Directive whilst the Convention has a more restricted scope corresponding to only those establishments covered by Article 9 of the Directive, i.e. so called 'upper tier' establishments.	http://mahbsrv.jrc.it/downloads-pdf/Landuse2.pdf
LAND USE PLANNING GUIDELINES IN THE CONTEXT OF ARTICLE 12 OF THE SEVESO II DIRECTIVE 96/82/EC AS AMENDED BY DIRECTIVE 105/2003/EC, ALSO DEFINING A TECHNICAL DATABASE WITH RISK DATA AND RISK SCENARIOS, TO BE USED FOR ASSESSING THE COMPATIBILITY BETWEEN SEVESO ESTABLISHMENTS AND RESIDENTIAL AND OTHER SENSITIVE AREAS LISTED IN ARTICLE 12.	2006	The document is intended to give guidance for risk assessment in Land Use Planning (LUP) in general as far as the major accident potential of industrial establishments is concerned. The main aim in this respect was to combine the understanding of the land use planners and the risk assessment experts in a coherent view. In this respect it may offer especially land use planners not familiar with industrial risk assessment considerations a quick and comprehensive information resource. It will also assist with the use of the risk/hazard assessment database which the Major Accident Hazards Bureau (MAHB) was assigned to develop and which shall provide proposals for key factors in this respect. By defining best practice of risk assessment in Land Use Planning the underlying principles of the risk/hazard assessment database are described.	http://mahbsrv.jrc.it/downloads-pdf/LUP%20Guidance-2006.pdf
Land Use Planning Policies & Good Practices European Commission, Joint Research Centre	2006	Powerpoint presentation on a "Workshop for Pipeline Safety". Seveso II directive Article 4: Exclusions This Directive shall not apply to the following: .....d) the transport of dangerous substances in pipelines, including pumping stations, outside establishments covered by this Directive. The presentation discusses the different approaches European countries are taking to meet the Seveso II directive and the challenges they face such as reliable failure rates. Implies that pipelines may be a high tier facility.	www.unece.org/env/teia/water/pipeline/haguepresentations/SessionIII-1MichaelStruckl.pps
Website of European Working Group on Land Use Planning (EWGLUP)	Current	The website has links to land use planning documents of all EU member countries LUP and other documents that were developed from the Seveso directive. Terms of Reference for the work of a European Working Group on Land-use Planning in the Context of Article 12 of Directive 96/82/EC (Seveso II Directive).	http://landuseplanning.jrc.it/index.html
Health and Safety Executive's (HSE) IMPLEMENTATION OF THE FUNDAMENTAL REVIEW OF LAND USE PLANNING - Great Britian	1999	The Health and Safety Commission in agreement with the Office of the Deputy Prime Minister, Scottish Executive and Welsh Assembly, all support the principle of providing 'standing advice' via the devolution of HSE's land use planning decision tool (PADHI+) to planning authorities.	www.hse.gov.uk/landuseplanning/ifrlup/images/news4.pdf
IGE/TD/1 Edition 4	2001	Recommendations apply to design, construction, inspection, testing, operation, and maintenance, of pipelines designed, after the date of publication for dry natural gas for Maximum Operating Pressure 16 to 100 bar. Provides graphs of setbacks.	http://lorien.ncl.ac.uk/ming/safety/pipeline/pipeline-codes.pdf
PD 8010 - 1- 2004	2004	The published document takes into account issues that are outside of the scope of BS EN 14161:2003 and updates the content of BS 8010-1, BS 8010-2.8 and BS 8010-3.	www.bsi-global.com/en/Standards-and-Publications/Industry-Sectors/Manufacturing/Manufacturing-Standards/PD-80102004/
PD 8010-3 DPC Code of practice for pipelines. Guide to the application of pipeline risk assessment to proposed developments in the vicinity of major hazard pipelines – Supplement to PD 8010-1:2004	2005	PD 8010-3 DPC will give recommendations for the risk assessment of major accident hazard pipelines (MAHPs), guidance on the modeling of failure consequences and determination of failure frequencies for the prediction of individual and societal risks. The principles of PD 8010-3 are based on best practice for the quantified risk analysis of new pipelines and existing pipelines. It is not intended to replace or duplicate existing risk analysis methodology, but is intended to support the application of the methodology and provide recommendations for its use. PD 8010-3 is applicable to buried pipelines on land that can be used to carry category D and category E substances that are hazardous by nature of being flammable or liable to cause harm to persons.	www.bsigroup.com/en/Standards-and-Publications/Industry-Sectors/Risk/Risk-Publications/PD-8010-3-DPC/
Health and Safety Executive's (HSE) Website	Current	Health & Safety Executive regulates health, safety and integrity issues for all natural gas and other applicable pipelines in Great Britain, in territorial waters and the UK continental shelf. This site concentrates on Major Accident Hazard (MAH) pipelines. There is a link to "Procedure for setting land use planning zones for MAH pipelines ."	http://www.hse.gov.uk/pipelines/hseandpipelines.htm
Risk-based Land Use Planning Guidelines Major Industrial Accidents Council of Canada	June-95	This MIACC risk assessment product is one of six publications dealing with hazardous substances and urban areas. It provides the reader with background material and advice on the use of risk assessment in respect to the development of land use plans for situations where more comprehensive methods are not justified.	
Land use planning for pipelines: A guideline for local authorities, developers, and pipeline operators	August-04	governments, industry, labor, emergency response groups, public interest groups, and academics. As part of its dissolution in 1999, MIACC transferred the ownership of this Guideline to the Pipeline Risk Assessment Steering Committee (PRASC), whose membership included the National Energy Board (NEB), the Alberta Energy and Utilities Board (EUB), the Transportation Safety Board of Canada (TSB), Canadian Standards Association (CSA) committee members, the Canadian Gas Association (CGA), the Canadian Association of Petroleum Producers (CAPP), and the Canadian Energy Pipeline Association (CEPA). Under the auspices of PRASC, a multi-stakeholder task force was formed to continue the development of this Guideline. PRASC transferred the ownership of this Guideline to CEPA, and CEPA subsequently transferred it to CSA. Throughout the development of this Guideline, input has been provided by representatives of the pipeline industry, government and regulatory agencies, municipalities, planners, developers, and	http://www.cepa.com/index.aspx?site_guid=20B417BE-EDD6-497C-AFCA-B0D26BFF93FE&page_guid=4E05CD71-929E-40D1-94E7-DB904C3942A1
Choosing a Standard for Natural Gas Pipelines Design and Construction	January, 2004	The Israeli government's, Ministry of National Infrastructures, had to create an agreed safety practice for the natural gas systems pipelines. A new Code had to be developed or adapted. The report compares land use regulations of different countries. The report includes tables for acceptable separation of buildings to transmission pipelines. Chain of possible events following a gas leak were defined. The hazard level as determined for one person was chosen. They decided to adopt the Dutch standard NEN 3650.	http://ictaf.tau.ac.il/cff4.pdf

Document Title	Date	Abstract	Website
Communications Process			
Planning Public Forums: Questions to Guide Local Officials	2007	Increasingly, local officials are organizing and supporting public forums to help inform their decision-making. Their interest is to: • Achieve the best policy result by promoting the overall public interest; • Maximize the public's satisfaction with the ultimate decision; and • Foster the public's support for the agency. The emphasis here is on designing appropriate forums for public deliberation. Typically in such forums, members of the public participate in reasoned discussions that result in new ideas, visions, general preferences, or detailed recommendations. In turn, these results are considered by policymakers and help shape public decisions and actions.	http://www.cacities.org/resource_files/25304.ILG_PlanPubForums.pdf
An Ounce of Prevention: Best Practices for Making Informed Land Use Decisions	Unknown	An Ounce of Prevention focuses on the underlying procedures that are common to all land use decisions. It walks through the typical decision-making process - from design and drafting ordinances to issuing a final decision and hearing appeals - and identifies practical strategies to reduce the risk of litigation.	http://www.riskinstitute.org/PERI/PTR/Risk+Management_PTR_1144.htm
NPMS Website	Current	The National Pipeline Mapping System (NPMS) is a geographic information system (GIS) created by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS) in cooperation with other federal and state governmental agencies and the pipeline industry. The NPMS consists of geospatial data, attribute data, public contact information, and metadata pertaining to the interstate and intrastate gas and hazardous liquid transmission pipelines, liquefied natural gas (LNG) plants, and hazardous liquid breakout tanks jurisdictional to PHMSA.	http://www.npms.phmsa.dot.gov/
Land Use Planning In Proximity to Natural Gas and Hazardous Liquid Transmission Pipelines in Washington State	June-06	This report is focused on land use in proximity to existing pipelines. The appendices and reference documents associated with this report deal with the details of many of the issues and provide some thoughts on options that can be used in managing the relationships among stakeholders.	http://www.mrsc.org/artdocmisc/landusegas.pdf
Pipeline Operator Awareness Programs	Current	Improvement Act (PSIA) of 2002 and the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162, "Public Awareness Programs for Pipeline Operators". Under the regulations, pipeline operators provide the Affected Public with information about how to Recognize, Respond To, and Report pipeline emergencies. The importance of using One-Call notification systems prior to excavation is emphasized for all stakeholders. Emergency Officials and Local Public Officials are provided information about the location of transmission pipelines to enhance emergency response and community growth planning. Operators must review their programs for effectiveness and enhance the programs as necessary. Operators must include in their programs activities to advise affected municipalities, school districts, businesses, and residents of pipeline locations. Of significance is the requirement that operators must review their programs for effectiveness and enhance the programs as necessary.	http://primis.phmsa.dot.gov/comm/PublicEducation.htm
Operations/Maintenance of the ROW			
Black Out 2003 - BASF Professional Vegetation Management Magazine Article	August-03	Report summarizing FERC Report recommending electric utilities to take more aggressive steps to trim and clear cut trees near transmission lines.	http://www.vmanswers.com/magazines.aspx?pid=688
Utility Vegetation Management and Bulk Electric Reliability Report from FERC	September, 2004	Electric transmission owners and operators conduct vegetation management to prevent physical contact between transmission lines and nearby vegetation that could cause a transmission line to fail. On August 14, 2003, an electric power blackout affected large portions of the Northeast and Midwest United States and Ontario, Canada. President George W. Bush and Prime Minister Jean Chrétien established a joint U.S.- Canada Power System Outage Task Force (Task Force) to investigate the causes of the blackout and how to reduce the possibility of future outages. One of the four primary causes of the blackout was inadequate vegetation management (tree pruning and removal).	http://ferc.gov/industries/electric/indus-act/reliability/veg_mgmt-rpt-final.pdf
Research and Development in Natural Gas Transmission and Distribution	March-07	The purpose of the study is to determine the current and projected R&D budgets of government agencies, the pipeline industry, manufacturers, and research consortiums; the focus of their funded research, and the prudent and correct levels of investment and research for the future for the natural gas transmission and distribution pipeline sectors. The study will attempt to gauge the natural gas industry's investment in R&D in comparison with similar type of industries and determine if the level of investment is sufficient to address the industry needs. Due to uncertainties of disjointed approaches that currently exist, the industry is at possible risk of underinvestment in R&D that could negatively impact customers and the safe, reliable, and cost effective delivery of natural gas to residential and business consumers.	http://www.gasfoundation.org/ResearchStudies/researchgas.htm
Example Easement Language	Unknown	The two examples in this appendix are taken from documentation used by the Gallatin Valley Land Trust (easement agreement), and the City of Billings and Yellowstone County (encroachment permit) to acquire trail rights-of-way. Each easement is tailored to meet the needs of the Grantor and the Grantee.	http://www.gallatin.mt.gov/public_documents/gallatincomt_plandept/uploadedpdfs/appendix%20n.pdf
Example easement language - City of Salem, Oregon	June-05	The documents listed are the City's current (January 5, 2004) standard deed and easement merge forms for use on public improvements in the City of Salem. If you believe alternative language is absolutely necessary, the language must have prior approval of the City Attorney's Office before document is signed by Grantor and submitted to the City.	http://www.cityofsalem.net/departments/spubwork/pwengin/publications/deedease/index.htm
Court Case about Pipeline Easement - Right to replace pipe - Norbert Scherger, et al., Respondents, vs. Northern Natural Gas Company, petitioner	June-05	An easement is an interest in land possessed by another which entitles the grantee of the interest to a limited use or enjoyment of that land. *Minneapolis Athletic Club v. Cohler* , 287 Minn. 254, 258, 177 N.W.2d 786, 789 (1970). The extent of an easement depends entirely upon the construction of the terms of the agreement granting the easement. *Hwy. 7 Embers, Inc. v. Northwestern Nat'l Bank* , 256 N.W.2d 271, 275 (Minn. 1977). "When the terms of an easement grant are unclear, extrinsic evidence may be used to aid in the interpretation of the easement grant; however, when the language granting the easement is clear and unambiguous, the court's power to determine the extent of the easement granted is limited." *Bergh and Misson Farms, Inc. v. Great Lakes Transmission Co.* , 565 N.W.2d 23, 26 (Minn. 1997). While ambiguities in contract agreements are resolved against the drafter, *see, e.g., Cherne Indus., Inc. v. Grounds & Assoc., Inc.* , 278 N.W.2d 81, 89 (Minn. 1979), "[g]enerally, an easement grant is to be strictly construed against the grantor." *Bergh* , 565 N.W.2d at 26 (citing *Romanch*	http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=mn&vol=sc%5C9803%5Ccx962319&invol=1
No. 96,103 IN THE COURT OF APPEALS OF THE STATE OF KANSAS SOUTHERN STAR CENTRAL GAS PIPELINE, INC., Appellant, v. GORDON and JENNIFER CUNNING, Appellees, v.MICHAEL RONNEBAUM, Appellee. SYLLABUS BY THE COURT	May 18, 2007.	Southern Star Central Gas Pipeline, Inc. (Southern Star), appeals the district court's decision denying its petition for possession, ejectment, and trespass based upon an alleged encroachment on Southern Star's pipeline easement across land owned by Gordon and Jennifer Cunning. Southern Star claims the district court erred by not enforcing Southern Star's easement rights and by not requiring the Cunnings to remove a garage which had been built near the pipeline. We disagree and affirm.	http://www.kscourts.org/Cases-and-Opinions/opinions/ctapp/2007/20070518/96103.htm
Technical Risk Documents			

Document Title	Date	Abstract	Website
DEVELOPMENT AND IMPLEMENTATION OF RISK ASSESSMENT METHODS	2001	consequences of such releases in order to help manage the risks involved. The development of techniques to allow quantified risk assessments of natural gas pipelines and associated facilities to be undertaken has accelerated in recent years, supported by mathematical modeling and experimental validation. These techniques offer operators the opportunity to optimize safety by targeting areas where risk can be reduced most cost-effectively, and to optimize the use of assets by avoiding inappropriate restrictions on operations. Risk assessment techniques have been developed by Advantica for a broad range of gas industry applications, including offshore platforms, reception terminals, high and low pressure pipelines, compressors, gas storage and LNG sites. This paper describes the background to the development of these techniques, the framework that has been established in the UK for decision-making based partly on results of quantified risk analysis (QRA) and techniques developed and applied by Advantica for both transmission and distribution pipelines.	http://66.102.1.104/scholar?hl=en&lr=&q=cache:NqojiUQhnaQJ:www.advanticatechinc.com/Library_Items/Technical_Papers/Papers/papers/ready%2520for%2520site/Development%2520and%2520Implementation%2520of%2520Risk%2520Assessment%2520Methods%2520for%2520Natural%2
ESTIMATING THE INFLUENCE OF NATURAL HAZARDS ON PIPELINE RISK AND SYSTEM RELIABILITY IPC04-0238	2004	Natural hazards (also known as ground movement or geohazards) can cause pipeline failures, with consequences ranging from injury/death, environmental impact, and property damage, to lengthy service disruption and a failure to achieve delivery targets. In North America and western Europe, pipeline failures resulting from natural hazards are typically rare (but costly) events. However, where difficult ground conditions have not been properly accounted for in pipeline design, construction, and operation, natural hazards may have an overriding influence on pipeline risk and reliability. These issues are discussed, and a framework for estimating the influence of natural hazards on pipeline risk and system reliability is introduced.	http://64.233.169.104/search?q=cache:eCg2XTe91aMJ:www.bgcengineering.info/Publications/MJP%2520IPC04-0238%2520Reliability.pdf+ESTIMATING+THE+INFLUENCE+OF+NATURAL+HAZARDS+ON+PIPELINE+RISK+AND+SYSTEM+RELIABILITY&hl=en&ct=clnk&cd=1&gl=us
California Guidance Protocol for School Site Pipeline Risk Analysis - 3.0 Consequences and Likelihood of Pipeline Failures	Unknown	Description of liquid pipeline failure.	www.cde.ca.gov/ls/fa/sf/documents/v1protocolsec3.pdf
Model simulates pipeline, tank-storage failu	1983	gas or liquid pipelines and from cryogenic storage tanks. Two major types of hazards can develop after a structural failure of a pipeline or hydrocarbon storage tank: a combustion hazard or a toxic chemical hazard. Both of these types of hazards can affect the safety of personnel in the vicinity of the structural failure. A flammable vapor cloud can form after a pipeline or tank fracture and, if an ignition source is present, the cloud can detonate, or explode. In the case of a crude oil or gas-pipeline failure, a toxic cloud may also develop due to the presence of hydrogen sulfide (H/sub 2/S).^Even in low concentrations, inhalation of H/sub 2/S may cause physical impairment or death. The existence of these two potential hazards--a flammability hazard or a toxic chemical hazard--prompts the need to conduct safety analysis studies of facilities and transport systems that carry pressurized fluids and gases. However, the simulation modeling of the flammability or toxicity concentration limits due to the structural failure of a pipeline or storage tank is quite difficult. Complicating factors include the two-phase (gas and liquid) flo	http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=6819773
Pipelines Safety - Risk Quantification	2000	This lecture will cover the following aspects:- • How are pipeline failure risks quantified? • What pipeline databases exist for failure rates? • What are typical failure rates for pipelines • How is Consequence Analysis carried out? • Which Risk Criteria are applied for pipelines? Presentation includes useful graphs of likelihood of risk based on distance from pipeline.	http://lorien.ncl.ac.uk/ming/safety/pipeline/pipeline-risk.pdf
Criticality of Pipelines			
The Role of Energy Pipelines and Research in the United States: Sustaining the Viability and Productivity of a National Asset	May-06	This report surveys the contributions of oil and gas pipelines in meeting the Nation's energy needs, the critical role that research played in making those contributions possible up until now, and how research will be necessary in the future to meet the challenges facing pipelines. Continued, even increased, dependence on pipelines is clear. Future demand for oil and natural gas will grow, requiring greater capacity for distribution across the nation and into communities, but regional patterns of supply and demand will shift, requiring reconfigured pipeline movements. Research is essential to improve pipeline safety, supply reliability, environmental performance, security and efficiency as the system encounters higher capacity utilization and higher bars for performance.	http://www.ingaa.org/cms/28/4854.aspx

Transportation Security Administration

Corporate Security Reviews (CSRs)
Observations, Recommendations, and What's Next?

International Pipeline Security Forum

Salt Lake City, Utah

October 29, 2008

Buddy Secor

Branch Chief – Pipeline Programs

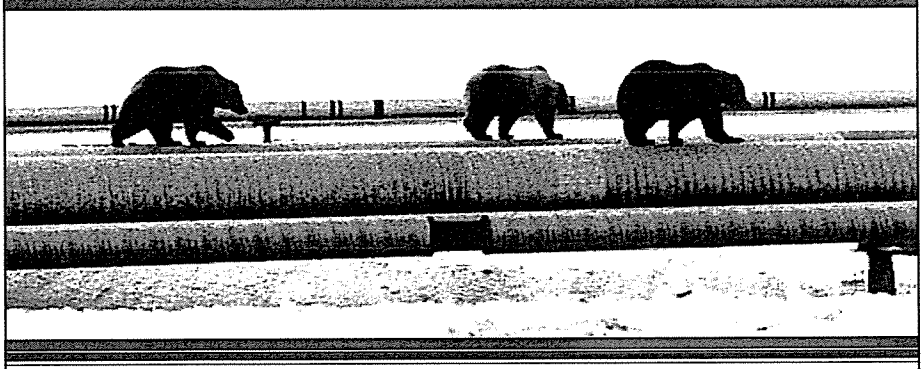
TSNM Pipeline Security

Transportation Security Administration

Department of Homeland Security

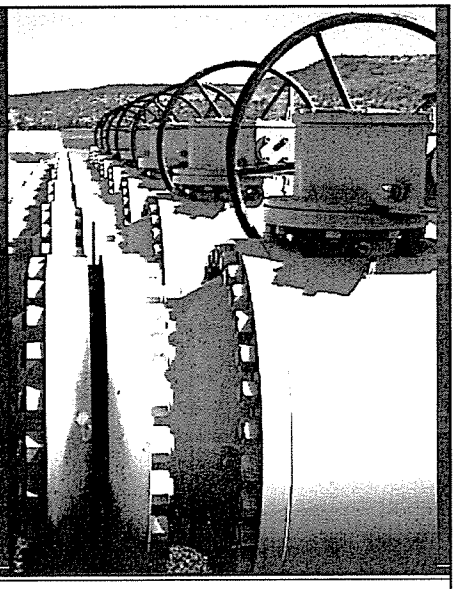
Washington, D.C.

Pipeline Security?



Agenda

- Introduction
  - Description/Background
  - Focus
  - Status / What's Next
  - 9/11 Act Inspections
- CSR Observations
  - 11 Categories
- Concluding Remarks



Corporate Security Review Program

Onsite Security Review

Goals include:

- Developing knowledge of **security planning** and **execution** at critical pipeline sites
- Establishing and maintaining **working relationships** with key pipeline security personnel
- Identifying and sharing **smart practices** observed throughout the industry

History

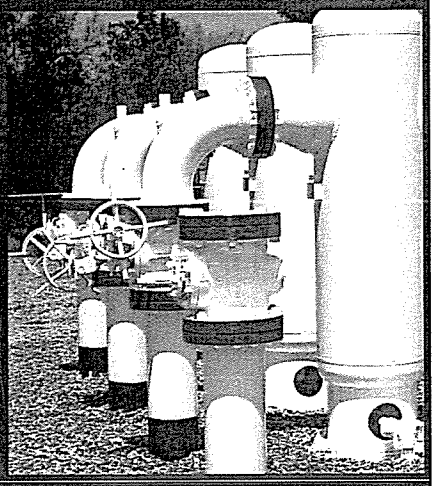
- 2002 Pipeline Security Circular
  - Corporate Security Planning
  - Identify Critical Facilities
  - Recommended Security Practices
- CSRs Started in early 2003

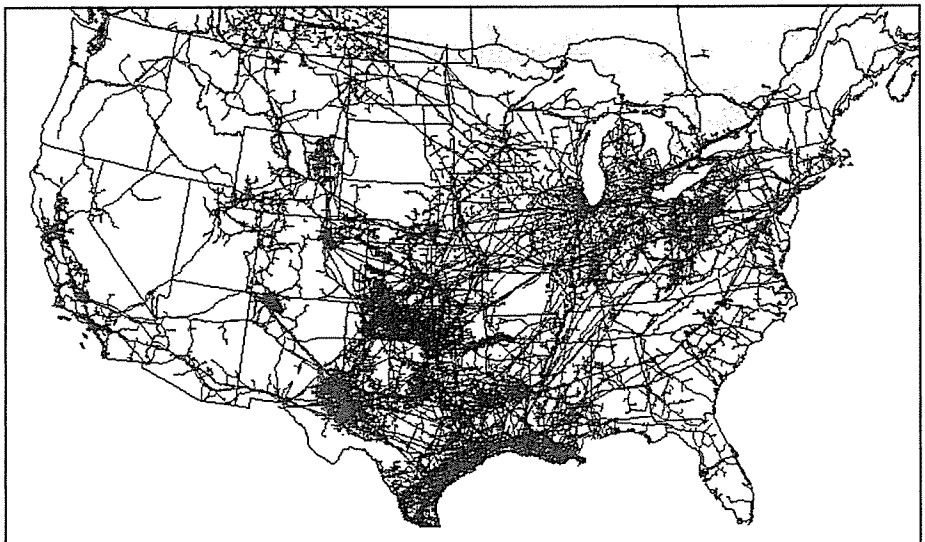


Corporate Security Review Program

Pipelines Reviewed

- Natural Gas Transmission
- Oil and Liquids Lines
- Privately Held LDCs
- Municipal LDCs
- TIH Chemical Pipelines





CSR Selection Based on Highest Risk

PROTECTION

MANAGE RISKS

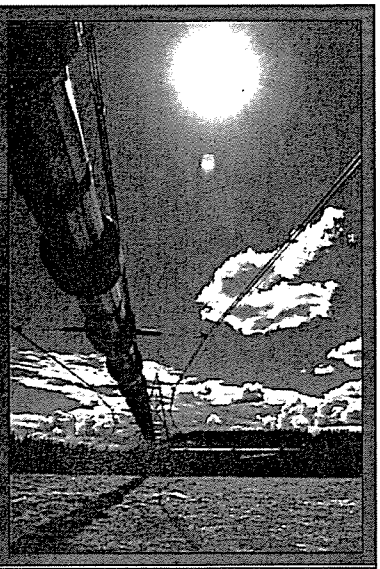
Deter Threats | Mitigate Vulnerabilities | Minimize Consequences

Relative Risk = f (Threat, Vulnerability, Consequence)

Likelihood of a Successful Attack | *Cost/Impact of a Successful Attack*

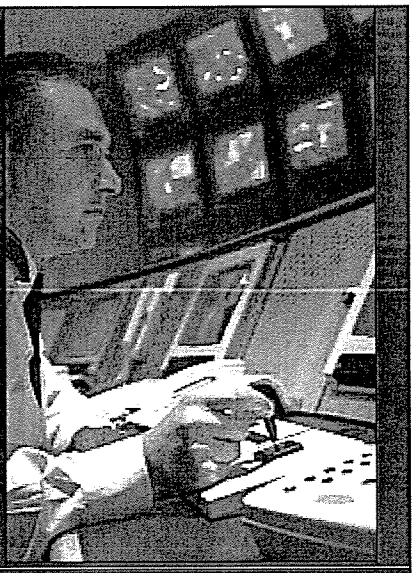
CSR Focus

1. Risk / Consequence Driven
2. Top 100 Sorted by Thru-put
3. DHS Tier 1&2
   - 300 MMCF/d Natural Gas
   - 200 MBBL/d Liquids
4. TIH Chemical Pipelines

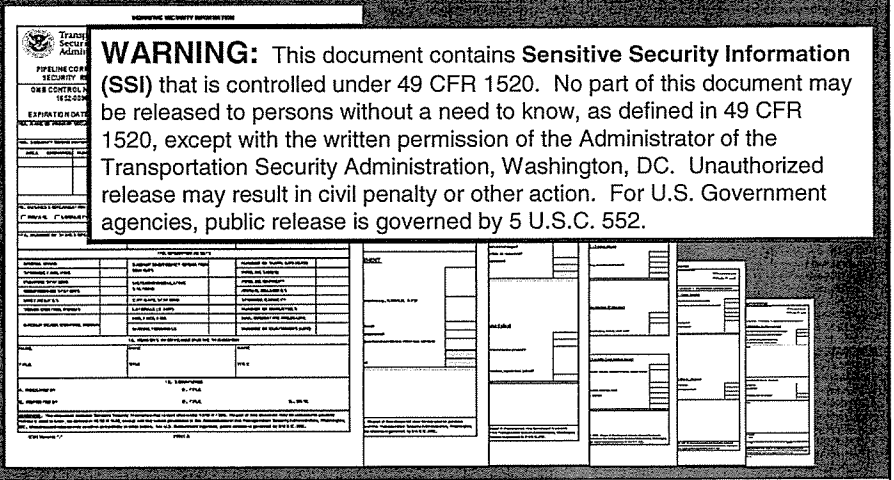


CSR Process

1. Setup and Logistics
2. TSA Advance Research
3. Corporate Office Interview
4. Field Facility Visit
5. Paperwork / Report
6. Provide Feedback



CSR Protocols



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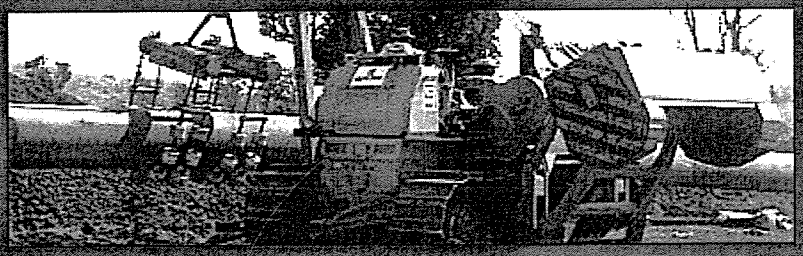
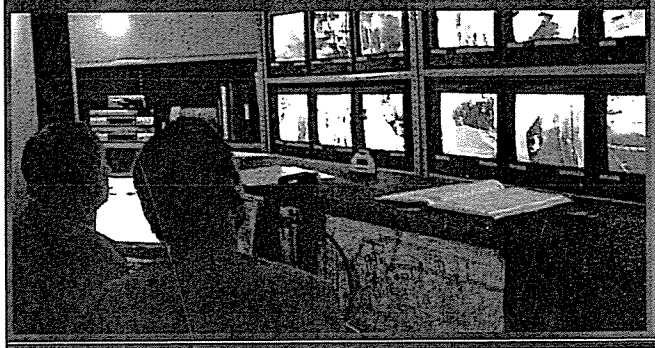
Progress

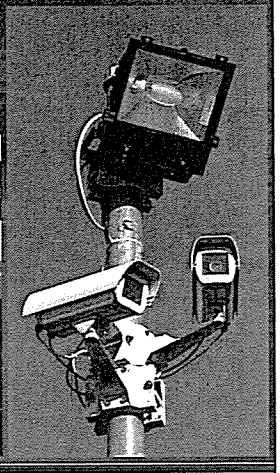
- 82 CSRs To Date
- 100% of Top 100 (Energy)
- Typically 1 per Month



Pipeline Security Smart Practices

- Data from 2003 – 2006





9/11 Commission Act of 2007 (HR 1)

Improving America's Security Act of 2007 was signed into law by President George Bush on August 3RD, 2007



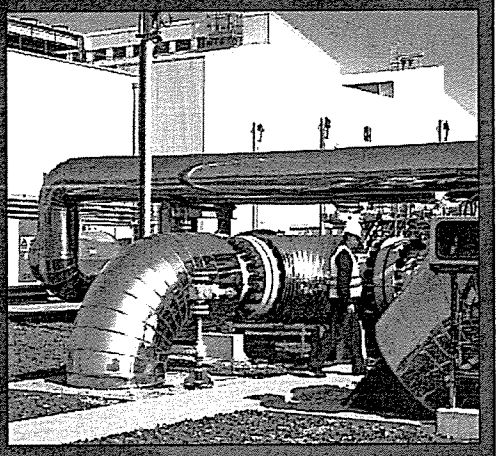
Implementing Recommendations of the 9/11 Commission Act of 2007

Sections 1557 & 1558 relate to pipeline security:

- Establish a **Program for Reviewing** pipeline operator adoption of **2002 Pipeline Security Information Circular** recommendations
- Develop and implement a plan for reviewing the **Pipeline Security Plans** and an inspection of the **Critical Facilities** of the 100 most critical pipeline operators
- Develop and transmit pipeline **Security Recommendations** for natural gas and hazardous liquid pipelines and facilities
- If appropriate, promulgate **Regulations** and carry out necessary inspection and enforcement actions
- Develop a **Pipeline Security and Incident Recovery Plan**

What's Next?

1. Return CSRs
   - 9/11 Act
   - ~5 Years
   - Metrics
2. Chemical Lines (TIH)



CSR Observations

CSR Categories

1. Threat Assessment
2. Vulnerability Assessment
3. Planning, Management and Oversight
4. Employment Screening, Badge & Access Controls
5. Secure Areas
6. Infrastructure Protection
7. Physical Security
8. Cyber Security
9. Training
10. Communication
11. Drills / Exercise

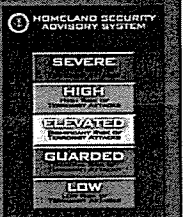
1. Threat Assessment







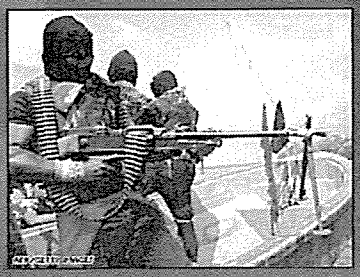




Threat Assessment

Question:

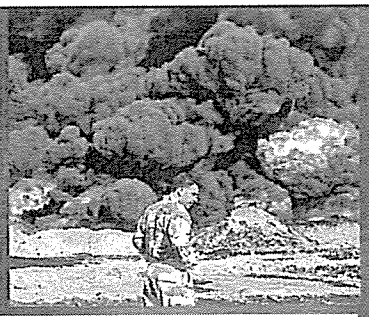
- Do you feel there is a viable threat to the pipeline industry?





Terrorist Focus on Energy

600+ Pipeline Attacks Worldwide since 2001



Osama bin Laden in December 2004, declared that *"oil prices should be at least $100 a barrel,"* and called upon Jihadist militants to attack oil facilities and pipelines throughout the Gulf region to prevent the West from getting "cheap" Arab oil. Oil is deemed by militant Jihadists to be the *"artery of life to the crusader's nation."* According to bin Laden, the strategy being pursued by al-Qaeda aims expressly at *"bleeding America to the point of bankruptcy."*

Events in the News

"JFK arrests raise issue of pipeline vulnerability"

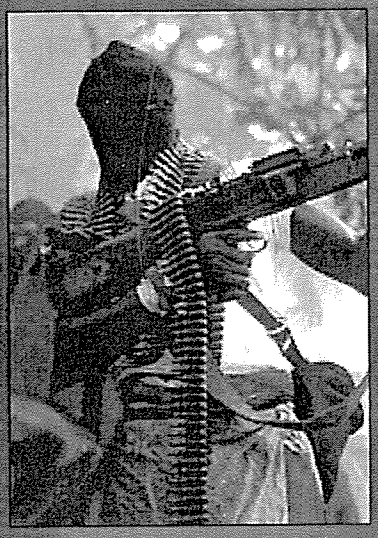
June 2, 2007 – NYC, USA

- 4 Men, one was former member of Guyana's parliament
- Buckeye Pipe Line Company
- "Unthinkable' terror devastation prevented"
- Expert says 'wackos' might do limited damage, but large blast unlikely



Threat Assessment

- Evaluated Threat Vectors?
  - Terrorist
  - Militant
  - Insider Threat
  - Employee Issues
  - Lone Wolf
  - Eco – Terrorist
  - Theft / Vandalism
  - Other / Unknown





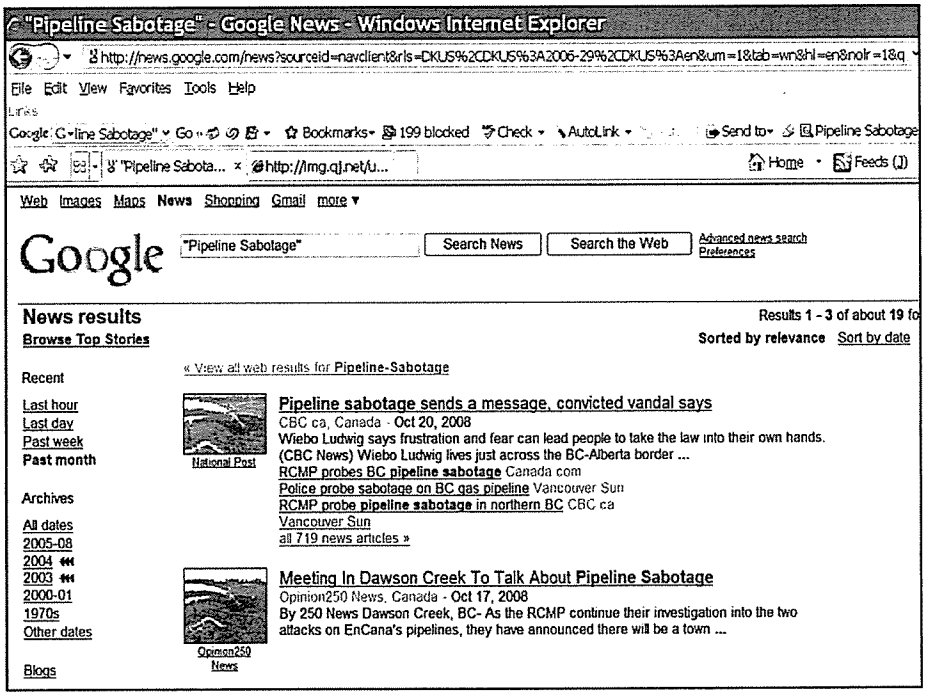
Threat Assessment

Other Areas Needing Improvement

- Security Clearance?
- Threat monitoring and information streams?
- What is your situational awareness (in your company, region, state, country, or world)?

Threat Assessment

- Homework assignment…
- Program Google News for "Pipeline terror, sabotage, attack, etc.



2. Vulnerability Assessments

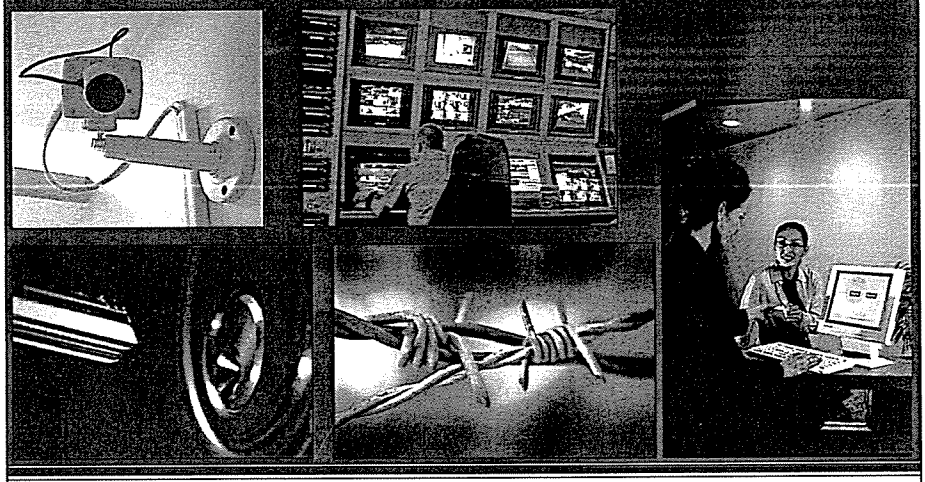




Vulnerability Assessment

- Conduct Assessments on Critical Facilities
- Conduct Assessments Periodically (<36 Months)
- Use Other Resources (another set of eyes)

3. Planning, Management & Oversight



Planning, Management & Oversight

- Corporate Security Program / Plan
- Program / Plan Elements
- Review and Update Plan (Annually)

Planning, Management & Oversight

Program / Plan Elements Should Include:

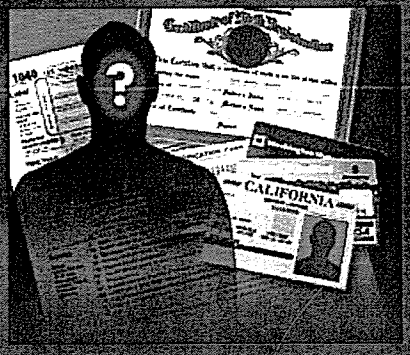
1. Security Administration and Responsibilities
2. Risk Analysis and Assessment
3. Physical Security and Access Control
4. Personnel Security
5. Intrusion Detection
6. Equipment O&M and Testing
7. Design / Construction Security Measures
8. Communications

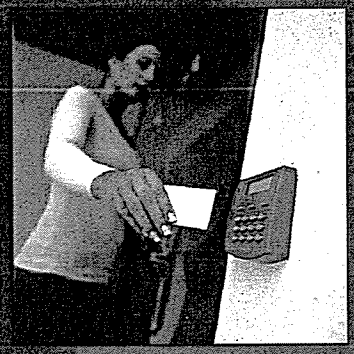
Planning, Management & Oversight

Program / Plan Elements Should Include:

9. Personnel Training
10. Drills and Exercises
11. Security Incident Procedures
12. HSAS Response Procedures
13. Compliance Reviews
14. Record Keeping
15. Cyber / SCADA System Security Measures
16. Critical Contact Listings

4. Employment Screening, Badge & Access Controls

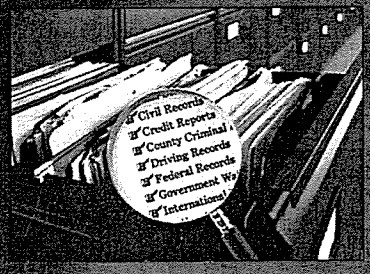




Employment Screening

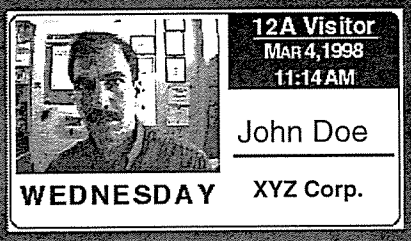
- Most Companies do Background Checks
- However, many do not on Contractors
- Few Companies scrutinize Sensitive Positions





Badge and Access Control

- Photo IDs
- Key Cards
- Secure Area Access Rights





Events in the News

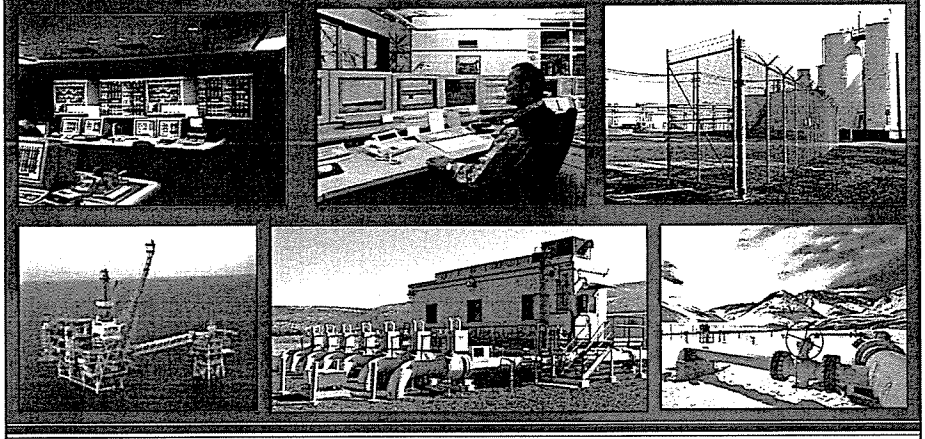
April 23, 2007 - USA

"Disgruntled data center employee looks to take out state power grid"

- Lonnie Denison, 32
- Contract employee for Cal -ISO
- Card readers / handprint scanner
- Crashed computers / power market
- Could have taken down the grid



5. Secure Areas



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M. "Buddy" Secor, Jr. PE
International Pipeline Security Forum

10/29/2008
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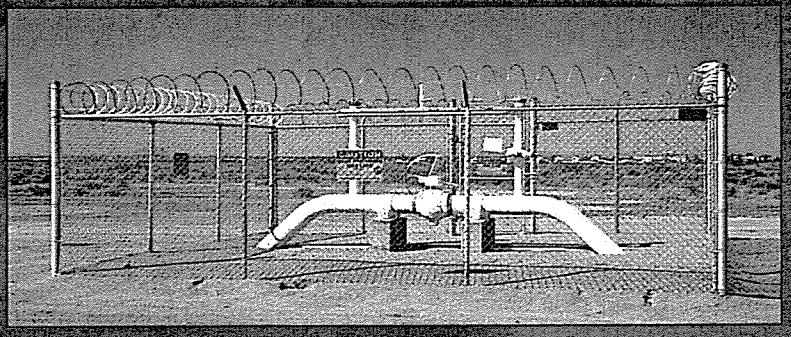
Secure Areas

- Defined Secure Areas?
- Restricted Access to Secure Areas?



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International Pipeline Security Forum

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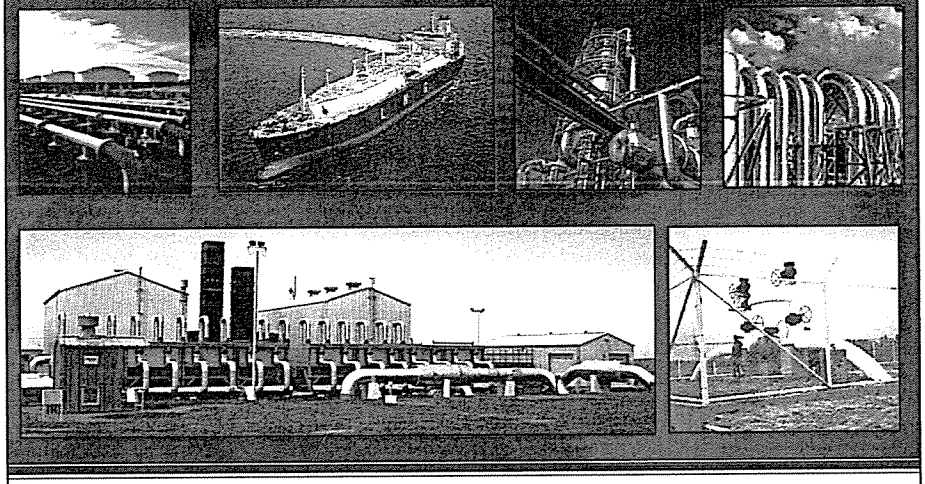
6. Infrastructure Protection

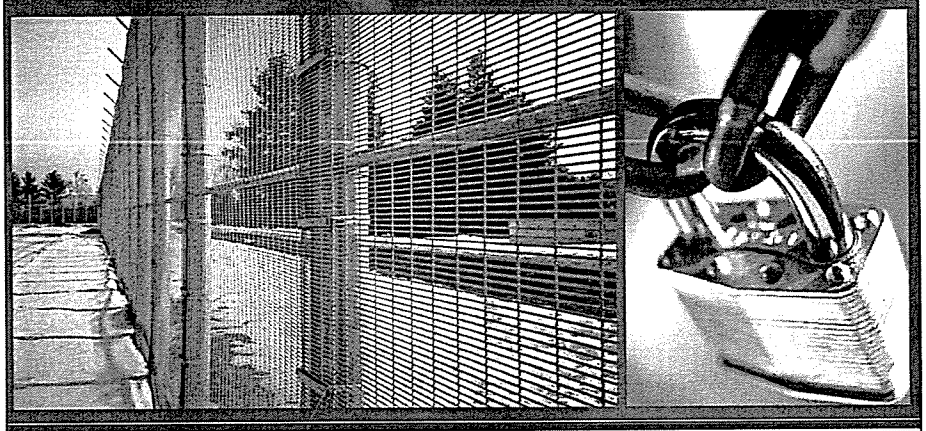


Infrastructure Protection

- Critical Facility Determination
- Company Engineering / Operations Experts
- Review Periodically

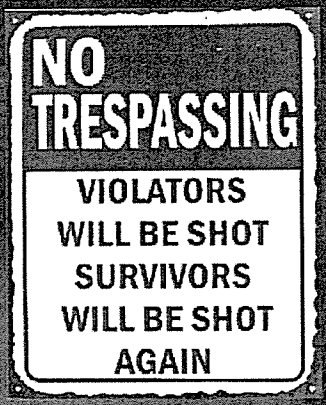


7. Physical Security

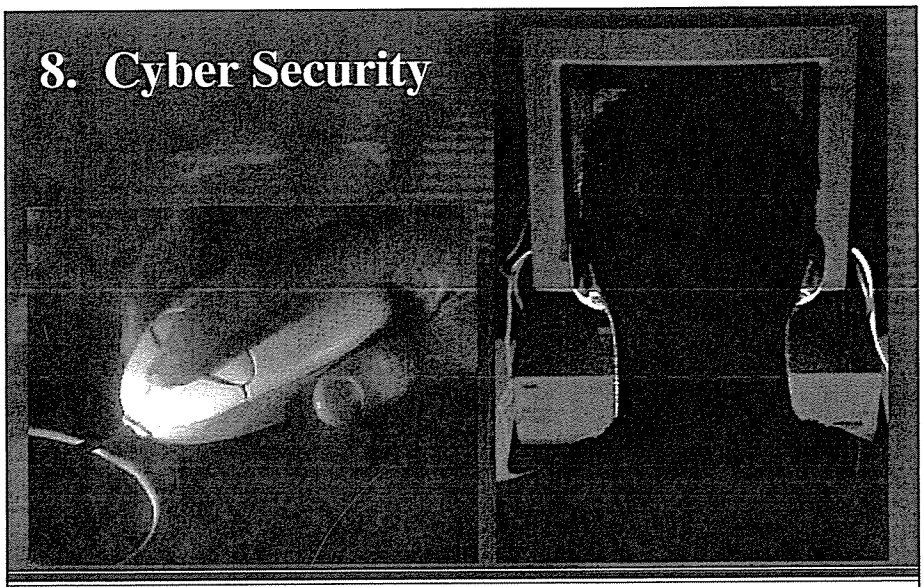


Physical Security

- Layered Approach / Depth
- Physical Barriers
  - Fences, Walls, Bollards, Jersey Barriers, ...
- Utilize Intrusion Detection
  - CCTV, Motion Detection, Door Alarms, ...

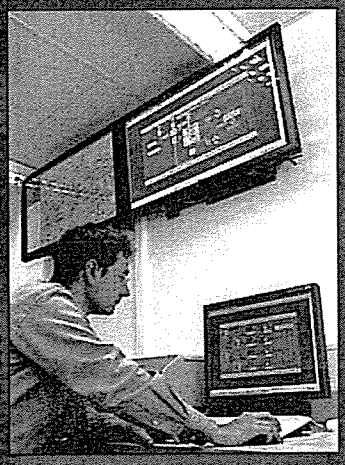


8. Cyber Security

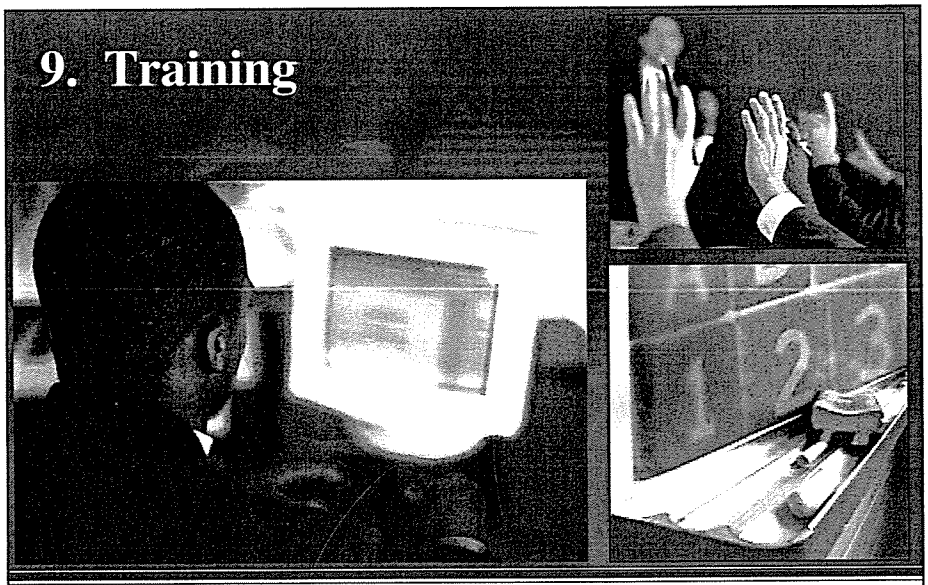


Cyber Security

- Criticality?
- Isolated SCADA Networks
  - Air Gapped
  - DMZ / Firewall Isolated
- Assessments
- Penetration Testing
- Offsite Backup Control

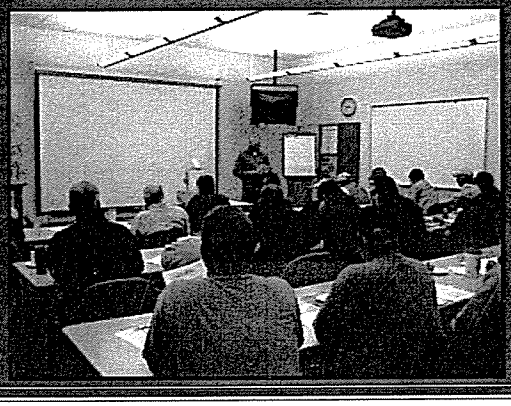


9. Training



Training

- Security Awareness Training
- Documented
- Re-occurring

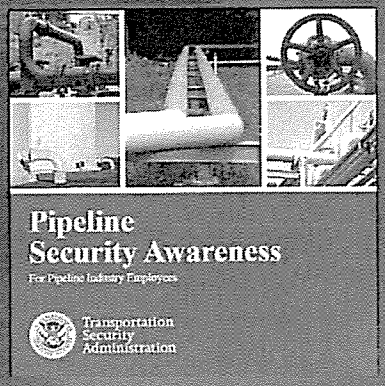


Training

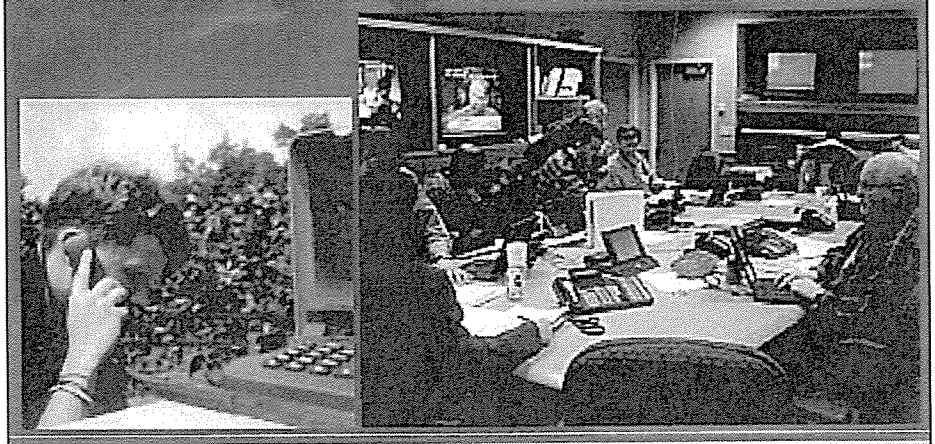
Pipeline Security Awareness

www.tsa.gov

(search: Pipeline Security Awareness)

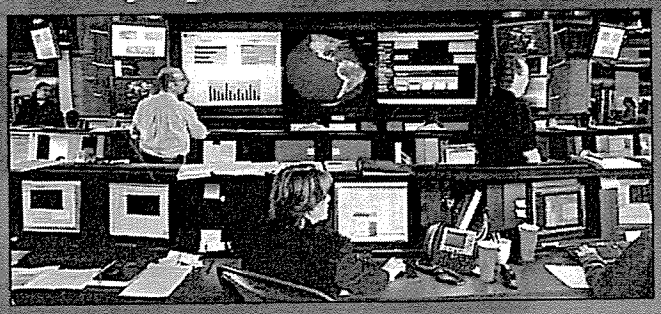


10.Communication / Incident Mgmt



Communication / Incident Mgmt

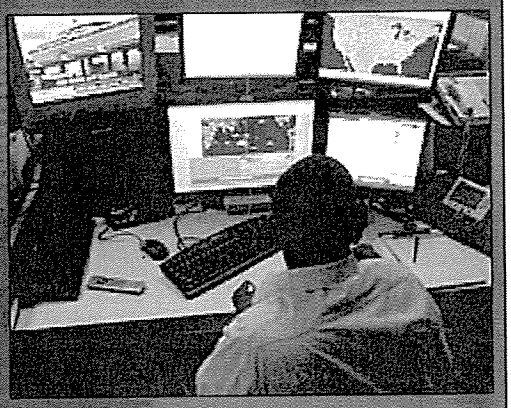
- Communication Plan / Notification Procedures
- Backup Equipment / Method
- Security Operations Command Center



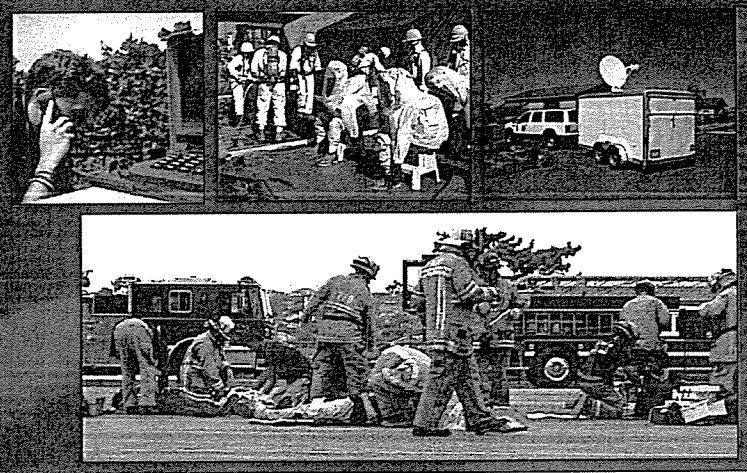
Reporting Transportation Security Incidents

- Transportation Security Operations Center (TSOC)

(866) 615-5150



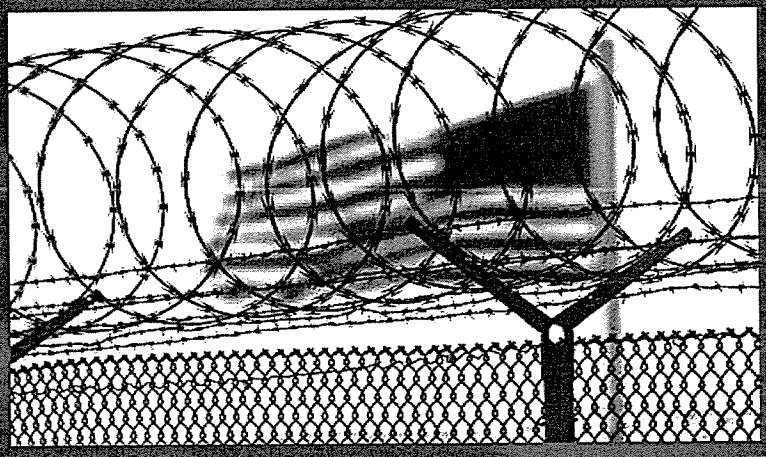
11. Drills / Exercises



Drills / Exercises

- Perform Planned Drills and Exercises
- Involve External Resources (LEO, FBI, TSA, DHS, Etc.)
- Perform Un-announced / Covert Testing
- Verify the Solidity of your:
  - Emergency Operations Procedures,
  - Continuity of Operations Plans
  - Business Continuity Plans
  - Restoration Procedures

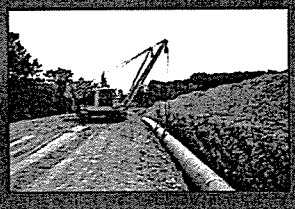
Summary / Anecdotal / Conclusions



Concluding Thoughts

- How well is industry doing?
- Your Responsibilities







Contact Information

Buddy Secor
Branch Chief - Pipelines
TSNM Pipeline Security
Transportation Security Administration
Email: buddy.secor@dhs.gov
Phone: (571) 227-1306
(202) 494-1598 Cell

List of Useful Web Sites

1. PIPES Act 2006: www.phmsa.dot.gov/pipeline/library (Click on "Pipes Act (PDF)" at bottom of page)

2. Pipeline Safety Statutes - http://www.gpoaccess.gov/uscode/browse.html (Click on "Title 49, Transportation", then on "SUBTITLE VIII--PIPELINES "

3. PHMSA Home Page –excellent source of pipeline safety information: www.phmas.dot.gov/pipelines

4. Common Ground Alliance – prevention of damage to underground utilities: www.commongroundalliance.com

5. Regulations.gov, a one-stop site to find, view, and comment on Federal regulations and other Federal actions. www.regulations.gov

6. National Pipeline Mapping System - The NPMS consists of geospatial data, attribute data, public contact information, and metadata pertaining to the interstate and intrastate gas and hazardous liquid transmission pipelines, liquefied natural gas (LNG) plants, and hazardous liquid breakout tanks jurisdictional to PHMSA. www.npms.phmsa.dot.gov

7. The Pipeline Safety Trust promotes fuel transportation safety through education and advocacy, by increasing access to information, and by building partnerships with residents, safety advocates, government, and industry, that result in safer communities and a healthier environment. www.pstrust.org

8. Pipeline Emergencies - training for emergency responders: www.pipelineemergencies.org

9. Transmission Pipelines and Land Use: A Risk-Informed Approach (TRB 281 Report) – http://onlinepubs.trb.org/Onlinepubs/sr/sr281.pdf

10. Transportation Security Administration Pipeline Security Best Practices – www.tsa.gov (Upper right corner, search for "Pipeline Security", click on "TSA: Pipeline Security", click on "Order Now!" under "Pipeline Security Awareness CD & Brochures")

11. International Pipeline Security Forum - Ottawa, Ontario, Canada, October 28 & 29, 2009: http://udev.nrcan.gc.ca/eneene/sources/infinf/forum/index-eng.php

Pipeline and Hazardous
Materials Safety Administration

Pipelines Update

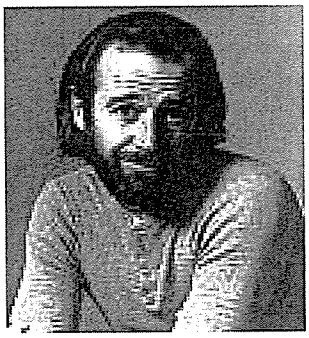
Texas Environmental Superconference
Austin, Texas
August 7, 2009

John A. Jacobi, P.E.

CATS Manager, SW Region

Pipeline and Hazardous
Materials Safety Administration

"If a man speaks in the forest and there isn't a woman around to hear him, is he still wrong?"



Pipeline and Hazardous
Materials Safety Administration

Down the tubes -- hear that one a lot. People say, "Ah, the country is going down the tubes."

What tubes? Have you seen any tubes? Where are these tubes? And where do they go? And how come there's more than one tube?

Pipeline and Hazardous
Materials Safety Administration

It would seem to me, one country, one tube. But is every state all of a sudden have to have its own tube now? One tube is all you need. But a tube that big? Somebody would have seen it by now. "Hey Joey! Get a load of these *****' tubes!"

Have you seen any tubes? Where are they? What do people mean by saying America is going down the tubes? Do you agree? Disagree? Why?

Pipeline and Hazardous
Materials Safety Administration

TUBES

- PHMSA Mission Statement
- Types of pipelines
- PIPA (Pipelines Informed Planning Alliance)
- Texas Enforcement Program
- Federal Enforcement
- Easements
- Pipeline Security
- Access to PHMSA Regulations
- Additional Resources
- Questions

Pipeline and Hazardous
Materials Safety Administration

Pipeline Safety Program Mission Statement

"To ensure the safe, reliable, and environmentally sound operation of the Nation's pipeline transportation system."

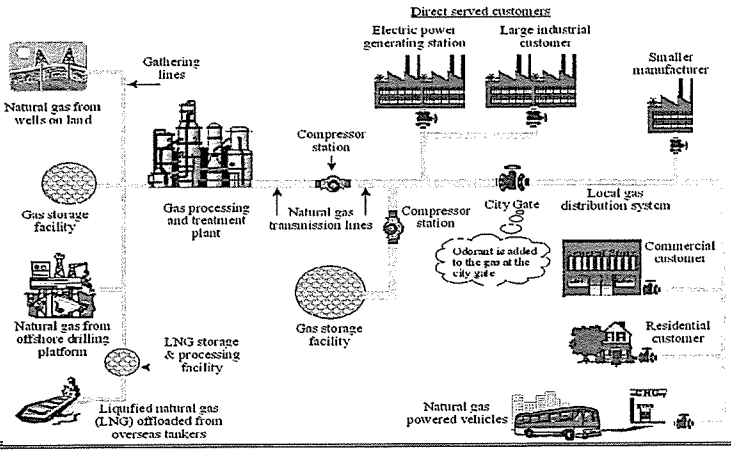
Pipeline and Hazardous
Materials Safety Administration

Types of Pipelines

- Liquid vs. Gas
- Interstate vs. Intrastate
- Transmission
- Gathering
- Local Distribution
- Service Lines
- Flow Lines

Pipeline and Hazardous
Materials Safety Administration

Types of Natural Gas Pipelines



Pipeline and Hazardous
Materials Safety Administration

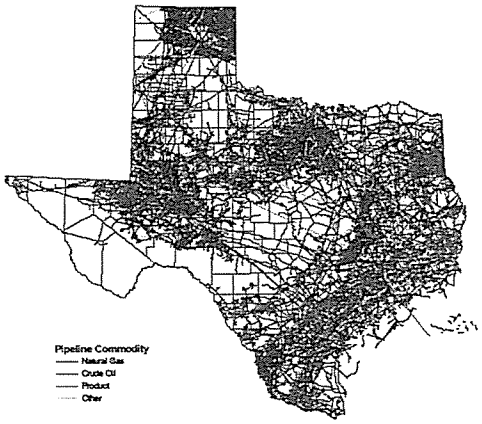
Scope of PHMSA Jurisdiction

- Over two million miles of pipelines in the U.S. (enough to circle the earth 83 times)
  - 170,000 miles of hazardous liquid pipelines
  - 295,220 miles of gas transmission pipelines
  - 1,900,000 miles of natural gas distribution pipelines
  - 109 LNG plants connected to our natural gas transmission and distribution systems
  - Propane distribution pipelines
- These pipelines are operated by more than 3,000 companies, large and small
- Natural gas provides for 24% of U.S. *total energy consumption;* petroleum provides for another 39%

Texas Pipelines

Pipeline Operators: **1238**

Miles of Pipeline: **282,000**



Does not include distribution systems

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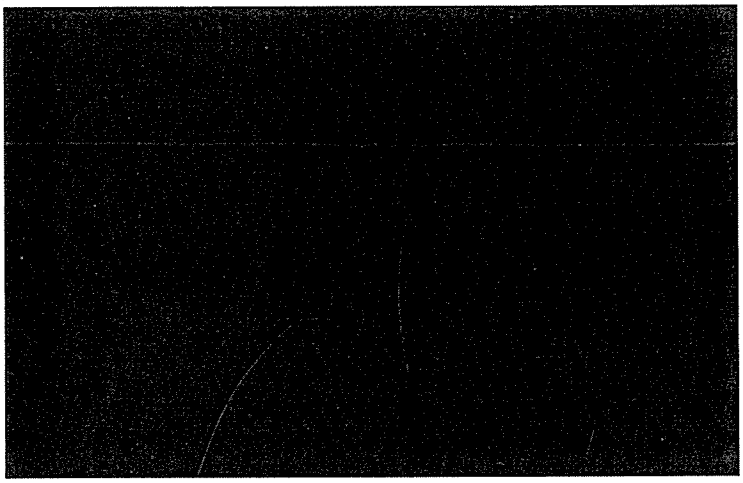
PIPELINE EMERGENCIES



Pipeline and Hazardous Materials Safety Administration

Petroleum Pipeline Safety

- Values less/more than 1.0 indicate risk is lower/greater than pipeline transportation
- Comparisons based on calculated rates per ton-mile
- Only apply to petroleum transportation
- As provided by the Allegro Group to the Association of Oil Pipelines (www.aopl.org)

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Petroleum Pipeline Safety

	Death	Fire/Explosion	Injury
Truck	87.3	34.7	2.3
Rail	2.7	8.6	0.1
Barge	0.2	4.0	3.6
Tanker/Ship	4.0	1.2	3.1

Pipeline and Hazardous
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Pipeline Informed Planning Alliance (PIPA)

The Pipeline Safety Improvement Act of 2002 (PSIA) required DOT and FERC to study land use practices, zoning ordinances, and preservation of environmental resources relative to transmission pipeline ROW and maintenance

Pipeline and Hazardous
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PHMSA's Response to PSIA:

- PHMSA commissioned a study: TRB Special Report 281, September 2004 – Transmission Pipelines and Land Use, A Risk-Informed Approach
- PHMSA continued to support the Common Ground Alliance
- PHMSA Facilitated the Pipelines Informed Planning Alliance (PIPA)

Pipeline and Hazardous
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PIPA

- Was conceived to become a resource for local governmental bodies in dealing with new development near pipelines
- Consists of a "Blue Ribbon" panel of over 130 stakeholders representing all facets of development near pipelines
- Has been investing thousands of hours since January, 2008

Pipeline and Hazardous Materials Safety Administration

PIPA has:

- Investigated existing best practices and different stakeholder needs and challenges
- Sought consensus to develop practical guidance on:
  - Land use policies
  - Range of appropriate land uses
  - Setbacks and other measures
- Discussed topics and approaches including:
  - Model local zoning ordinances and subdivision regulations
  - Model planning policies
  - Model state legislation

Pipeline and Hazardous Materials Safety Administration

PIPA will produce:

- High-quality, national level risk assessment
  - Include classes of pipelines, risk profiles and field conditions
- Simple and easy-to-use decision-guiding tools
  - Relative to risk levels associated with various aspects of land use planning near pipeline ROW
- Plans for implementation
  - Providing help to local communities
- Plans for long-term communication
  - Of risk with input from all stakeholders
- Plans for integrating and refining
  - Preceding components, on a continuing basis, using actual experience.

Pipeline and Hazardous
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PIPA Final Report

- Final PIPA Report will be integrated into an interactive application on PHMSA's Stakeholder Communications website.
- Stakeholder's will be encouraged to refer to website for land use planning guidance and to link to it from their own websites.
- Use of website will enhance ability to accommodate and make available future revisions.

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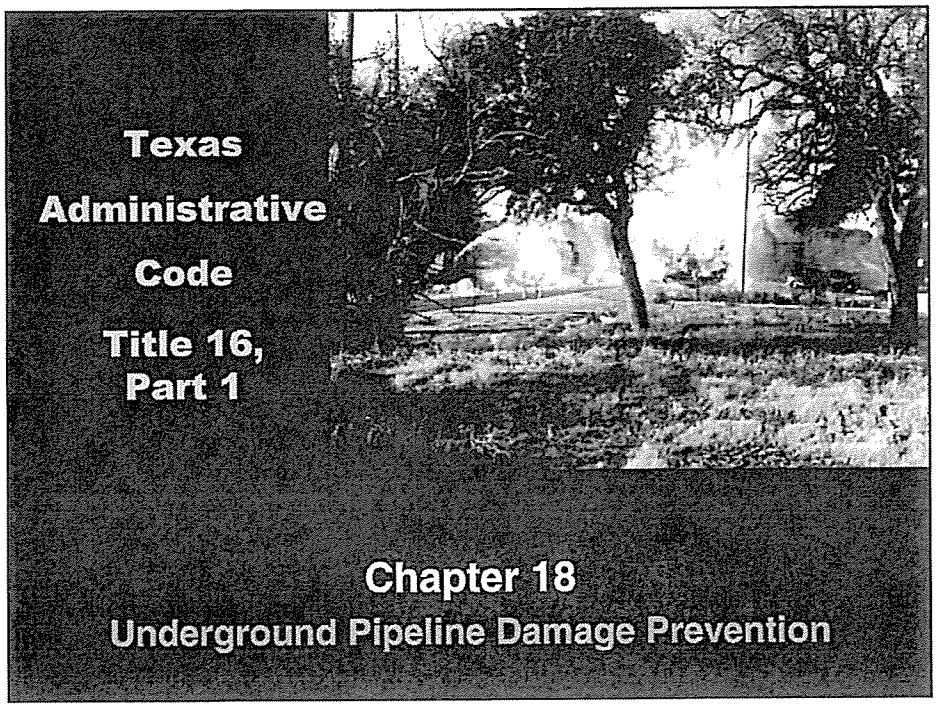
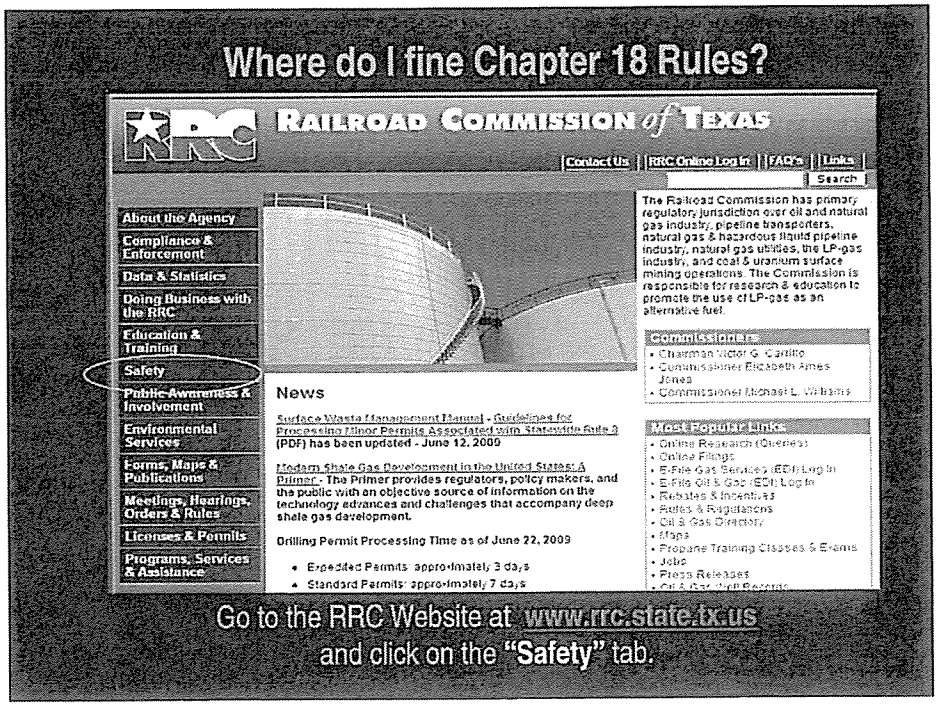
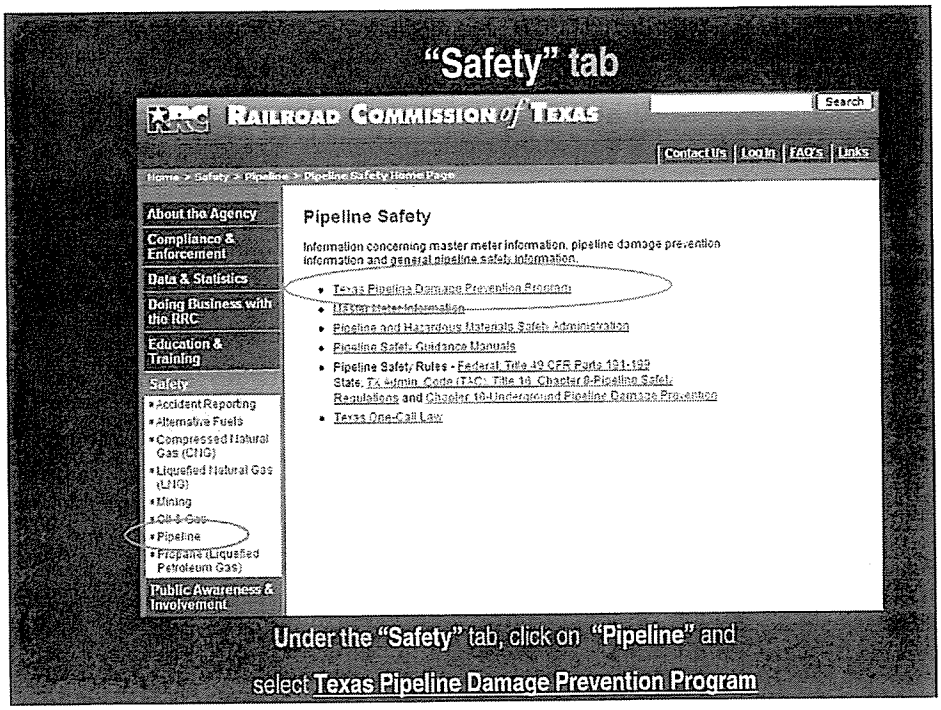
PIPA Status

- Lack of Consensus with respect to Consultation Zone
- Meeting of Stakeholders with opposing views in DC in late July
- If consensus is reached, report will be published this year
- If no consensus there may be no final report. Alternative: remove minority stakeholders and publish with Consultation Zone


Texas
Administrative
Code
Title 16,
Part 1
Chapter 18
Underground Pipeline Damage Prevention


Where do I fine Chapter 18 Rules?
RAILROAD COMMISSION of TEXAS
Contact Us
RRC Online Log In
FAQs
Links
Search
About the Agency
Compliance & Enforcement
Data & Statistics
Doing Business with the RRC
Education & Training
Safety
Public Awareness & Involvement
Environmental Services
Forms, Maps & Publications
Meetings, Hearings, Orders & Rules
Licenses & Permits
Programs, Services & Assistance
The Railroad Commission has primary regulatory jurisdiction over oil and natural gas industry, pipeline transporters, natural gas & hazardous liquid pipeline industry, natural gas utilities, the LP-gas industry, and coal & uranium surface mining operations. The Commission is responsible for research & education to promote the use of LP-gas as an alternative fuel.
Commissioners
Chairman Victor G. Carrillo
Commissioner Elizabeth Ames Jones
Commissioner Michael L. Williams
News
Surface Waste Management Manual - Guidelines for Processing Minor Permits Associated with Statewide Rule 8 (PDF) has been updated - June 12, 2009
Modern Shale Gas Development in the United States: A Primer - The Primer provides regulators, policy makers, and the public with an objective source of information on the technology advances and challenges that accompany deep shale gas development.
Drilling Permit Processing Time as of June 22, 2009
Expedited Permits: approximately 3 days
Standard Permits: approximately 7 days
Most Popular Links
Online Research Queries
Online Filings
E-File Gas Services (EDI) Log In
E-File Oil & Gas (EDI) Log In
Rebates & Incentives
Rules & Regulations
Oil & Gas Directory
Maps
Propane Training Classes & Exams
Jobs
Press Releases
Oil & Gas Well Records
Go to the RRC Website at www.rrc.state.tx.us
and click on the "Safety" tab.


"Safety" tab
RAILROAD COMMISSION of TEXAS
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Home > Safety > Pipeline > Pipeline Safety Home Page
About the Agency
Compliance & Enforcement
Data & Statistics
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• Alternative Fuels
• Compressed Natural Gas (CNG)
• Liquefied Natural Gas (LNG)
• Mining
• Oil & Gas
• Pipeline
• Propane (Liquefied Petroleum Gas)
Public Awareness & Involvement
Pipeline Safety
Information concerning master meter information, pipeline damage prevention information and general pipeline safety information.
• Texas Pipeline Damage Prevention Program
• Master Meter Information
• Pipeline and Hazardous Materials Safety Administration
• Pipeline Safety Guidance Manuals
• Pipeline Safety Rules - Federal, Title 49 CFR Parts 191-199
State, TX Admin. Code (TAC), Title 16, Chapter 8-Pipeline Safety Regulations and Chapter 18-Underground Pipeline Damage Prevention
• Texas One-Call Law
Under the "Safety" tab, click on "Pipeline" and
select Texas Pipeline Damage Prevention Program


Damage Prevention Contact Information
Kendall Smith: Damage Prevention Deputy Director
RRC Website: www.rrc.state.tx.us
Call: 512-475-0512
Email at: TDRFInfo@rrc.state.tx.us

Pipeline and Hazardous Materials Safety Administration

Federal Enforcement

- The Federal Pipeline Safety Statutes (49 U.S.C. § 60101 *et seq.)* are the basic authority for Federal Regulation of Pipeline Safety
- PHMSA is reauthorized every 4 years
- Pipeline Safety Improvement Act of 2002 (PSIA)
- Pipeline Inspection, Protection, Enforcement and Safety Act of 2006 (PIPES)
- PHMSA WILL be reauthorized in late 2010

Pipeline and Hazardous Materials Safety Administration

Federal Enforcement

- The PIPES Act maintained the existing role of the States as having primary responsibility for one call enforcement against excavators, and supports the States by providing additional grant funds
- The PIPES Act gave PHMSA limited Federal enforcement authority over excavators in States that do not have or are not exercising enforcement authority, but required a rulemaking before direct Federal authority can be used
- PHMSA will issue an Advance Notice of Proposed Rulemaking (ANPRM) on the enforcement issue, target date is early Fall 2009

Pipeline and Hazardous
Materials Safety Administration

Through rulemaking, PHMSA must:

- Establish procedures for determining whether a State's enforcement program is inadequate
- Establish administrative procedures for the State to contest a notice of inadequacy
- Establish minimum Federal standards for excavators that PHMSA would enforce in a State found to be inadequate
- Establish an adjudication process in the event an excavator is cited by PHMSA

Pipeline and Hazardous
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Easements

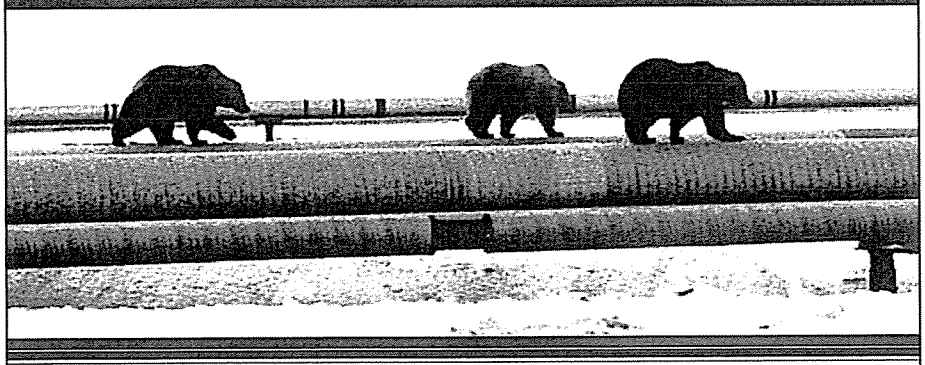
- Private contract between landowner & pipeline operator
- Interest in land – must be recorded
- Runs with the land & with the current operator of the pipeline
- PHMSA will not enforce easements but will enforce pipeline safety regulations

Pipeline and Hazardous Materials Safety Administration

FYI, PIPES also states:

- One call use is mandatory for excavators in states with one call centers
- An excavator who causes damage to a pipeline facility that may endanger life or cause serious bodily harm or damage to property:
  - Must promptly report the damage to the owner or operator of the facility; and
- If the damage results in the escape of any flammable, toxic, or corrosive gas or liquid, the excavator:
  - Must promptly report to other appropriate authorities by calling 911

Pipeline Security?



History

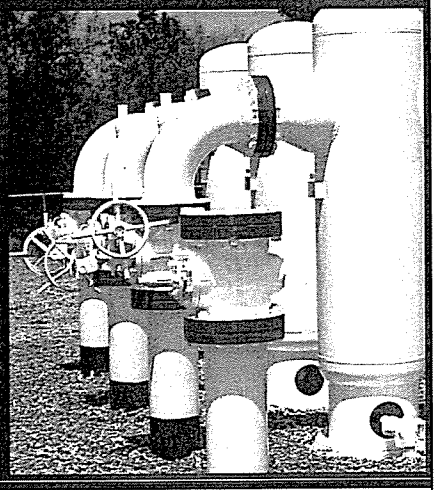
- 2002 Pipeline Security Circular
  - Corporate Security Planning
  - Identify Critical Facilities
  - Recommended Security Practices
- CSRs Started in early 2003



Corporate Security Review Program

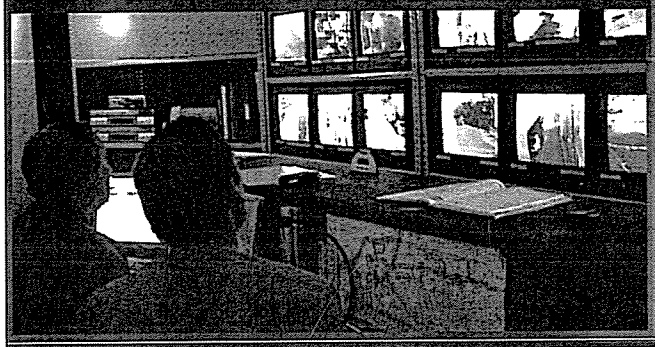
Pipelines Reviewed

- Natural Gas Transmission
- Oil and Liquids Lines
- Privately Held LDCs
- Municipal LDCs
- TIH Chemical Pipelines



Pipeline Security Smart Practices

- Data from 2003 – 2006





CSR Categories

1. Threat Assessment
2. Vulnerability Assessment
3. Planning, Management and Oversight
4. Employment Screening, Badge & Access Controls
5. Secure Areas
6. Infrastructure Protection
7. Physical Security
8. Cyber Security
9. Training
10. Communication
11. Drills / Exercise



Contact Information

Buddy Secor
Branch Chief - Pipelines
TSNM Pipeline Security
Transportation Security Administration
Email: buddy.secor@dhs.gov
Phone: (571) 227-1306
(202) 494-1598 Cell

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Access to PHMSA Regulations

The best place to get the most recent 49 CFR Parts 190–199 and 49 CFR Part 40 (Alcohol and Drug Abuse Regs) is:

www.phmsa.dot.gov/pipeline

- Click on "Training & Qualifications"
- Click on "Regulatory Information"
- Click on the part you want

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Additional Resources

- For Federal Regulations

  www.regulations.gov
- If you have the Docket Number, enter it and you will get all of the background and actions that led to the rule
- If you don't have the docket number, use the key word search to find the docket number
- All of the Federal Register notices will be in the docket along with lots of other information



Pipeline and Hazardous
Materials Safety Administration

QUESTIONS??

THANK YOU!!

John A. Jacobi, P.E.
713-272-2839 (O)
281-685-7128 (C)
john.jacobi@dot.gov

John A. Jacobi, P.E.
Community Assistance/Technical Services (CATS) Manager
U.S. Department of Transportation
Pipeline and Hazardous Materials Administration
Office of Pipeline Safety – Southwest Region
8701 South Gessner, Suite 1110
Houston, Texas 77074
(713) 272-2839 (O)
(281) 685-7128 (C)
john.jacobi@.dot.gov

John Jacobi joined the Office of Pipeline Safety, Southwest Region in 2003 with over 20 years of natural gas and liquids pipeline experience. A professional engineer (TX) and licensed attorney (TX & FL), he began his career with the U.S. Army Materiel Command with assignments at Red River Army Depot and the Aviation Systems Command before becoming Chief Engineer, Lake City Army Ammunition Plant. His private sector experience includes 13 years with Tenneco Inc. and Tennessee Gas Pipeline (TGP) including stints as a Planning Manager, Manager of Technical Services, and as an attorney dealing with health, safety and environmental compliance issues for both Tenneco Inc. and TGP. He left Tenneco for a career as an environmental consultant focusing on regulatory compliance, pipelines and energy issues. At the state level, he served as Chief, Bureau of Environmental Health for the Texas Department of Health where he managed regulatory programs such as asbestos, lead in paint, hazardous communications, industrial hygiene, indoor air quality, general sanitation and product safety. He has also served as in-house counsel for a public bulk liquids storage facility on the Texas Gulf coast.

A former Presidential Exchange Executive, Mr. Jacobi received his Bachelor of Science in Mechanical Engineering (with Honors) from Rose-Hulman Institute of Technology, his Master of Science in Industrial Engineering from Texas A & M University, and his Juris Doctorate from the University of Missouri - Kansas City.

Mr. Jacobi resides in Houston with his wife of 42 years, Jane. In his spare time, he enjoys flying, golf and bridge.

MONTE CARLO:

U.S. COMPANIES GAMBLING WITH EU CHEMICAL REGULATIONS



PINAR DOGRU
AND
SUE SNYDER

MONTE CARLO:

U.S. COMPANIES GAMBLING WITH EU CHEMICAL REGULATIONS

The new European Regulation on Registration, Evaluation, Authorization, and Restriction of Chemicals No. 1907/2006 (REACH) entered into force on June 1, 2007 and immediately and directly impacted any producer, manufacturer, or downstream user in the European Union (EU).[1] REACH regulates the import and distribution of a chemical (substance), mixture of chemicals (preparation), or object such as clothing, toys, or computers (article) in quantities equal to or over 1 ton per year. Beyond the EU, REACH also immediately impacted any business outside of the EU who markets and exports their product to the EU member states. What has not been readily apparent, however, is that companies that decide not to market to EU states may still not avoid REACH; non-EU countries have begun promulgating "me too" regulations that mirror REACH in efforts of maintaining a united front, or in some cases, for political reasons to gain acceptance into the EU. U.S. companies must individually evaluate whether registration under REACH will have a greater net benefit for their operations or whether the costs will outweigh the benefits. This decision becomes exceedingly more difficult for the smaller companies where cost has a greater impact on operations.

In essence, companies, particularly smaller companies, gamble with the international marketing of their product, deciding whether the added regulations and associated costs are outweighed by the potential for profit from exporting to the EU. Given the current downturn in the economy, it is possible that several companies may decide not to pursue registration under REACH and avoid exporting, or they may decide to only export their products into countries outside of the EU. What follows is an analysis of the REACH regulation, obligations for companies that intend on exporting their product to EU states, and implications for failing to register.

I. RED OR BLACK: REGISTER UNDER REACH OR NOT?

HISTORY

When examining the REACH registration, it appears that several companies overseas and in the U.S. had not yet become aware of the regulation as there was no immediate realization of application to their operations. However, REACH has been under consideration for quite some time. Prior to REACH, European regulations on the registration of chemicals were not nearly as

[1] *New European Chemicals Agency starts operations as REACH enters into force,* Europa, June 1st, 2007, http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/745&format=HTML&aged=0&language=EN&guiLanguage=fr.

expansive or consolidated in their approach.[2] The EU treated existing chemicals, prior to 1981, differently than new substances in amounts greater than 10 kg/year.

Beginning in 2001, the European Commission began examining new methods of regulating chemicals and drafted a white paper, "Strategy for a future Chemicals Policy."[3] Eight years later, REACH was promulgated on June 1, 2007 and became effective on the same day to all EU member states and those companies marketing their products in EU member states.

OBJECTIVES OF REACH

REACH removes the divisive treatment between new and existing chemicals and requires *all* chemicals or substances distributed or imported in amounts greater than 1 ton[4] per year to be registered so that the substance can be evaluated prior to continued import, production, marketing, and use in the EU. The intended goal is that EU states will be fully aware of the nature of the substances being manufactured, used, produced, imported and marketed within their territory. Any company with exports to EU member states will face REACH regulation.

Not only substances in their pure chemical form must be registered, but substances in articles also must be registered.[5] Articles are products, such as a toy. If a substance in a toy is present in quantities of greater than 1 ton/year/manufacturer or importer, and may foreseeably be released (or the European Chemical Agency (ECHA) assesses a risk for it), or if the concentration of a substance of very high concern is greater than 0.1 m/m%, the substance in the child's toy must also be registered.[6]

REACH, in keeping with its goal of environmental and human health and safety, places restrictions on larger amounts of substances as well as "substances of very high concern."[7] REACH also reduces the reliance on animal testing, and promotes alternative test methods, such as *in silico, in vitro* and other methodologies.

Beyond registration requirements, REACH assists in data dissemination in the supply chain. Manufacturers, importers, downstream users, distributors, and consumers are all part of the supply chain and data dissemination. For example, if a downstream user discovers a use or a new risk, the downstream user may add the information to the registration dossier and inform the

---

[2] Prior to REACH, Council Directive 67/548/EEC covered classification, packaging, and labeling of dangerous substances; European Parliament and Council Directive 1999/45/EC covered EU states' promulgation of laws on the classification, packaging, and labeling of dangerous preparations; Commission Directive 76/769/EEC covered restriction on the Member States on marketing and use of certain dangerous substances and preparations; and Council Regulation 793/93 covered the evaluation and risk associated with existing substances.

[3] Commission of the European Communities, *White Paper: Strategy for a future Chemicals Policy*, 2001, < http://docs.google.com/gview?a=v&q=cache:GRzgB0nWG9YJ:www.sfc.fr/LivreBlancEU-REACH-01-2.pdf+Strategy+for+a+future+Chemicals+Policy&hl=en&gl=us>.

[4] 1 ton is approximately (or 2240 pounds, or approximately 1016 kilograms).

[5] REACH, art. 6, art. 7 (EC). REACH regulation available at < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:136:0003:0280:EN:PDF>.

[6] Id.

[7] REACH, sec. 72 (EC).

supplier.[8] REACH requires and facilitates intensive communication between manufacturers, importers, users and distributors of the registered products. This way, if there is a new use or risk that has not already been accounted for, every current and future party is involved in the data dissemination.

REGISTRATION DOCUMENTS

Substances undergoing registration are submitted as a registration dossier, which is considered by the REACH agency tasked with implementing REACH, ECHA and the individual Member States. The dossier is a comprehensive file created by the registrant and includes all relevant information as well as prior assessments of the substance.[9] The registration dossier is submitted to ECHA for substances > 1 ton/year. The importer or "only representative"[10] must submit a Technical Dossier, which includes identification of the importer, substance, use, classification and labeling, toxicological studies, testing proposals, exposure information, guidance instructions for safe use of the substance, and any confidentiality requests.[11] In addition to a Technical Dossier, substances in quantities > 10 tons/year require submittal of a Chemical Safety Report.[12] The Chemical Safety Report contains a hazard assessment, PBT/ vPvB properties assessment, and Safety Data Sheet.[13] If the company is exporting a hazardous substance or PBT/ vPvB then they will be required to submit a Chemical Safety Report with three additional assessments (Exposure Assessment, Risk Characterization, and Exposure Scenario).

AUTHORIZATIONS

Substances of Very High Concern (SVHC) are subject to authorization requirements, meaning that even if all of the information is submitted in a registration dossier, the registrant will have to receive ECHA authorization to place the substance in the EU market.[14]

SVHC include:[15]

- Substances classified as Category 1 or 2 Carcinogens, Mutagens, or toxic to Reproduction (CMR substances)
- Substances identified as Persistent, Bioaccumulative, and Toxic to the environment (PBT substances)
- Substances identified as very Persistent and very Bioaccumulative in the environment (vPvB substances)

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[8] REACH, sec. 58.

[9] REACH, art. 12.

[10] An Only Representative is defined in Section II of this paper.

[11] Id.

[12] REACH, art.14.

[13] PBT/vPvB means Persistent, Bioaccumulative, and Toxic / very Persistent, very Bioaccumulative.

[14] REACH, Title VII, art. 56.

[15] REACH, sec. 115.

- Substances of equivalent concern (i.e., endocrine disrupter, respiratory sensitizer, etc.)

If the registrant can prove that the risk with the SVHC can be adequately controlled, the ECHA may approve use, distribution, and manufacture of the substance.[16]

RESTRICTIONS

Some SVHC substances that pose an unreasonable risk to human health or the environment will be subject to Restrictions after a comment period to consider opinions on the restriction.[17] The European Commission will make a decision based on the ECHA's dossier analyzing the risks and socioeconomic aspects of restriction and whether to impose a total or partial ban.

As of June 1, 2009, ECHA has proposed seven chemicals for Restriction[18]:

- Musk Xylene 5-tert-butyl-2,4, 6-trintro-m-xylene
- Solvent Hardener 4,4'-diaminodiphenylmethane (MDA)
- Flame Retardant Short Chained Chlorinated Paraffins (SCCPs);
- Flame Retardant Hexabromocyclododecane (HBCDD)
- Plasticizers Bis(2-ethylhexyl) Phthalate (DEHP)
- Benzyl Butyl Phthalate (BBP)
- Dibutyl Phthalate (DBP)

If adopted, the seven chemicals will be amended into Annex XIV of the REACH regulation and would not be allowed to be distributed without ECHA-authorization.

EXCLUSIONS FROM REACH

With the vast amount of chemicals or substances in pure form and in articles that are regulated by REACH, it seems almost incomprehensible that any substances would be excluded. However, REACH recognizes that the following would not be regulated under REACH:[19]

- Substances less than 1 ton/year/manufacturer/importer.
- Radioactive substances and substances under customs supervision.
- Non-isolated intermediates.
- Waste.[20]

Understanding the expanse of substances covered by REACH, it is likely that several substances exported from the U.S. to the EU will be impacted by REACH. Even so, a company may choose

---

[16] REACH, art. 55.

[17] REACH, Title VIII.

[18] European Chemical Agency, *Recommendation of the ECHA of June 1, 2009 for the inclusion of substances in Annex XIV of Regulation (EC) No. 1907/2006* (2009). Decision available at http://echa.europa.eu/doc/authorisation/annex_xiv_rec/annex_xiv_subst_inclusion.pdf.

[19] REACH, art. 2.

[20] Waste is not a substance, preparation, or article according to EU Directive 2006/12/EZ.

not to register the substance due to additional concerns and costs associated with REACH compliance.

II. Picking a Number: Additional Considerations Beyond Registration.

REPRESENTATION IN THE EU

Since REACH does not allow non-EU companies to register, U.S. companies will have to either (1) set up a European-based company in the EU; (2) register through an EU importer; or (3) appoint an "only representative" who is an established EU citizen.

Hiring an "only representative" seems to be the safest, most reliable, and cost-effective approach to registration under REACH. "Only representatives" are hired by the company to represent the company's interests, assume all legal responsibility associated with the registration, and have set fees associated with the cost of their services.

An existing importer of the U.S. Company may be hesitant or reluctant to take on the additional role of an "only representative," such as the legal responsibility, added time, and effort involved in the pre-registration and compilation of the registration dossier. Whereas "only representatives" exist and have established fees associated with their consulting services, an importer may not have an established fee structure associated with their services. Also, the creation of an EU-based company simply for REACH registration involves more administrative hurdles and cost to gain EU citizenship than to hire an EU-based consultant already familiar with the complexities of the registration process.

"ONLY REPRESENTATIVE"

If a U.S. company is exporting to the EU a substance over 1 ton, the company may hire an "only representative" to register the substances on their behalf. Article 8 of REACH defines an "only representative" as:

1. A natural or legal person established outside the Community who manufactures a substance on its own, in preparations or in articles, formulates a preparation or produces an article that is imported into the Community may by mutual agreement appoint a natural or legal person established in the Community to fulfill, as his only representative, the obligations on importers under this Title.
2. The representative shall also comply with all other obligations of importers under this Regulation. To this end, he shall have a sufficient background in the practical handling of substances and the information related to them and, without prejudice to Article 36, shall keep available and up-to-date information on quantities imported and customers sold to, as well as information on the supply of the latest update of the safety data sheet referred to in Article 31.
3. If a representative is appointed in accordance with paragraphs 1 and 2, the non-Community manufacturer shall inform the importer(s) within the same supply chain of the appointment. These importers shall be regarded as downstream users for the purposes of this Regulation.

Since the implementation of REACH, several consulting companies have begun to offer services as "only representatives," such as Welkang Tech Consulting or B Lands Consulting.[21] Welkang is advertising their services as beginning at costs from 99 Euros on an annual basis (this currently equates to $140/year); however this cost is most likely the minimum and may only consider a simple registration for a non-hazardous substance, for a relatively small volume of export. Cost estimates for more extensive chemicals have been six digits for registration services.

It is advisable that the U.S. Company hire counsel to draft confidentiality agreements and engagement letters with the "only representative" so that communications are protected and the "only representative" has legal documentation stating that they are appearing on behalf of the U.S. Company's interests. In preparation of hiring an "only representative," the companies will also need to proactively review records and communications and to identify any trade secrets, confidential communications or documents.

Other than the cost of hiring an "only representative," and the precautions needed to maintain privileged information, a company must also account for registration fees.

REGISTRATION FEES[22]

Substances in tons/year	**Substances in pounds/year**	**Registration Fee (Euros)**	**Registration Fee (Dollars)**[23]
1-10	2,204 – 22,046	1600	2,254.23
10-100	22,046 - 220, 462	4300	6,058.26
100-1000	220, 462 – 2,204,622	11,500	16,202.30
>1000	> 2,204,622	31,000	43,675.80

If a small or medium-sized U.S. company is facing REACH registrations, all of the added costs may seem overwhelming and act as a deterrent for exports to the EU. However, REACH contemplates such a concern and allows for reduction in registration fees for small and medium-sized businesses.

Fees for Small / Medium Businesses (% Reduction)	
Medium	30%
Small	60%
Micro	90%

[21] Inclusion of these two companies by name in this article does not constitute a recommendation of either company.

[22] REACH, Title IX. For specific fees and reductions for smaller businesses, see http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/582&format=HTML&aged=0&language=EN&guiLanguage=en>.

[23] Conversions to the U.S. Dollar are from the online Conversion Calculator based on the Euro rate as of July 16, 2009, available at http://www.x-rates.com/calculator.html.

Even with the discounted registration fee for smaller companies, all companies have additional considerations beyond the cost of registration and hiring an "only representative," such as the protection of confidential information and trade secrets.

COST ASSOCIATED WITH NEW STUDIES

In the event the substance registered for the U.S. Company requires a new study, there will be an added cost for conducting the study. A new study would be required if registrants within a Substance Information Exchange Forum (SIEF) are not able to produce a relevant study required for the substance registration under REACH.[24] Either the type of study needed does not exist or a member of the SIEF refuses to produce the test and test results. The cost of a new study will be shared by the SIEF, but it still becomes an additional cost consideration when registering under REACH.

PROTECTION OF CONFIDENTIAL DATA

REACH is a regulation aimed at making chemical-specific information available to the entire supply chain as well as to the public. Once an entity registers the substance, ECHA will publish the information on its website and will include such information as the identity, classification and labeling, physical and chemical properties, transport and fate in the environment, toxicological and ecotoxicological study results, Safety Data Sheet information (e.g., Derived No Effects Level and Predicted No Effects Concentration), guidance on safe usage, analytical methods for identification of hazardous substances released in the environment, and human exposure assessment.[25]

This becomes more complex when ECHA forms SIEF groups upon closure of the pre-registration deadline. SIEFs are created so that those registrants who submitted pre-registrations on similar chemicals may be grouped together and prepare a joint submission for the registration dossier. The SIEFs cooperation on the registration dossier would undoubtedly require dissemination of confidential information and trade secrets.

Registrants within a SIEF will be required to:

- Share existing studies and proposed studies. This is necessary so that the SIEF members may determine whether further studies are needed and how to allocate the cost of new studies among SIEF members.
- Cooperate on joint data submission for the Technical Dossier.
- Agree on classification and labeling of substances.
- Determine allocation of costs associated with new studies, if needed.

There are, however, opportunities to opt out of a SIEF if conditions in Article 11(3) are met. However, if a registrant exercises the opt-out provision, and the registrant has conducted animal studies with the substance, this information will become publicly available. The registrant would

[24] REACH, art. 30.

[25] REACH, art. 119.

not only have to submit the animal data irrespective of inclusion in a SIEF, but the registrant would bear all associated costs alone, unlike as a member of a SIEF where costs are shared.

Beyond data exchange within the SIEF, data will be made publicly available on ECHA's submission website, REACH-IT.[26] Even though ECHA intends to keep private confidential information and to only publish non-confidential information, if a company is not diligent in marking confidential data and documents, then it is possible that it will be published on REACH-IT.

III. "RIEN NE VA PLUS," NO MORE BETS: DEADLINES.

REACH offers staggered deadlines by which the registrant may submit pre-registration and registration documents to ECHA. Depending on whether the substance qualifies as "phase-in" or not, deadlines for pre-registration and registration will differ. Phase-in substances refer to substances that were in existence before REACH was implemented, whereas those substances that are not phase-in would include any new substances that had not previously been introduced into the EU market. REACH rewards those registrants that have already pre-registered the substance, as the entities will enjoy a delayed registration deadline, as opposed to those entities that forego pre-registration.

If a company is successful in pre-registering the substance, they may enjoy continued export into the EU without interruption. Otherwise, failure to pre-register means an immediate prohibition on any marketing of your substance to the EU member states. Note that even after one is successful in pre-registering the substance under REACH, through the free on-line program REACH-IT, a company must still submit a complete registration dossier by the registration deadline. Simply pre-registering a substance does not mean that the company no longer has to submit any further documentation to the EU through REACH.

Deadline	Registrations
June 1, 2008[27]	*Phase-in substances:* Pre-registration begins *Non-Phase in substances*: Registration begins
December 1, 2008[28]	*Phase-in substances*: Registration begins, if a company has not already pre-registered.
January 1, 2009[29]	ECHA publishes the list of pre-registered substances.[30]
June 1, 2009[31]	ECHA recommends priority substances that will require authorization.[32]
December 1,	*Phase-in Pre-registered substances*: Registration begins for those

[26] REACH-IT website, available at <https://reach-it.echa.europa.eu/reach/public/welcome.faces>. See also ECHA decisions, July 13, 2009, < http://echa.europa.eu/chem_data_en.asp>.

[27] REACH, art. 28.

[28] Id.

[29] Id.

30 ECHA, *List of pre-registered substances*, May 27, 2009, http://apps.echa.europa.eu/preregistered/pre-registered-sub.aspx.

[31] REACH, art. 58.

[32] Priority substances include substances with PBT/vPvB properties, wide dispersive use, and those substances used in large quantities.

2010[33]	substances in quantities greater than 1,000 tons/year; CMR substances greater than 1 ton/year; substances very toxic to aquatic organisms in quantities of greater than 100 tons per year.
December 1, 2012[34]	*Phase-in substances:* ECHA will publish draft decisions on whether further testing should be required for Category 1 or CMR substances greater than one, 100, and 1,000 tons per year.
June 1, 2013[35]	*Phase-in Pre-registered substances*: Registration begins for substances greater than 100 tons per year.
June 1, 2016[36]	*Phase-in substances*: ECHA will publish draft decisions on whether further testing should be required for substances greater than 100 tons per year.
June 1, 2018[37]	*Phase in Pre-registered substances*: Registration begins for substances greater than 1 ton per year.

IV. LOSING BETS: FAILURE TO REGISTER AND ENFORCEMENT

"No data no market."[38] Article 5 of REACH states that "...substances on their own, in preparations, and articles can not be manufactured in the [EU] or placed on the market if they are not registered according to the Regulation..."

At the point that a company decides not to pre-register or register the product, the company is then banned from marketing and exporting their substance into any of the EU member states. While some companies may then opt to avoid export into any EU state, the avoidance strategy does not necessarily mean that the company will avoid REACH-like regulations elsewhere.

REACH BEYOND THE EU

Countries outside of the EU are seeking to adopt either REACH implementation rules or regulations mirroring REACH so that exports to the EU will not be hindered. A prime example of such a development can be found in Croatia.

Croatia has been seeking to join the EU since 2003 and as part of the accession into the EU, the Croatian Parliament passed a "Law on the Implementation of the REACH Regulation" on May 9, 2008. The enactment of the law is intended to prepare Croatia for assimilation into the EU.[39]

The Croatian Parliament passed a "Law on the Implementation of the REACH Regulation" on May 9, 2008 where Croatia would be required to fully comply with REACH regulations upon entrance into the EU.

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[33] REACH, art. 23.

[34] REACH, art. 42.

[35] REACH, art. 23.

[36] REACH, art. 43.

[37] REACH, art. 23.

[38] REACH, art. 5.

[39] Z. Pavlinic, D. Likco, J. Grubic-Dodo, *REACH Regulation and its Influence on Business Activities*, 2009, http://hrcak.srce.hr/file/57109.

Other countries that rely on continued exports to the EU are considering revising their existing regulations to mirror REACH, realizing that some sort of harmonization may be necessary. Russia has a keen interest on revising its regulations to mirror REACH, particularly since they engage in a great amount of trade with the EU. In fact, Russia is the EU's third largest trading partner. In anticipation of REACH, Russia began examining its existing chemical regulations. The Russian Chemists Union joined the Responsible Care Program in October 2007, which is a program that creates the groundwork from which a country can begin reformulating its chemical regulations. [40]

Such harmonizations of chemical regulations are even occurring at home. Under the Obama administration and the direction of EPA Administrator Lisa Jackson, the EPA has begun the task of re-examining existing risk assessment decisions of chemicals. Currently suspended, the EPA is reviewing the Chemical Assessment and Management Program (ChAMP) to examine how to prioritize and act on chemicals of concern.[41] The EPA will announce how it intends to proceed with ChAMP in Summer of 2009 and will receive public comment on the decision then. The Toxic Substances Control Act (TSCA) is another chemical regulation in the U.S. that has recently been under scrutiny as well and may undergo reform.[42]

ENFORCEMENT WITHIN THE EU

Failure to pre-register existing substances will result in a mandatory cessation of all manufacture, import, and distribution of the substance until a full registration dossier has been submitted and approved by ECHA. Any entity that continues to import, manufacture, or distribute an un-registered substance could be subject to administrative fines, criminal charges, as well as a ban from the EU market. Member countries are in the process of enacting similar enforcement regulations under REACH that may include additional penalties.

Given the already massive amount of work ECHA has before it in the evaluation of the registered substances, enforcement of REACH will be handled on an individual basis, by Member States. Member States will be responsible for enforcing REACH through inspections as well as penalties should a registrant be found to be non-compliant.[43]

IV. DEALER PAYS: SUCCESSFUL REACH REGISTRATION

One obvious benefit of pre-registration and registration is that any U.S. company that is currently exporting and marketing their product to the EU, can enjoy uninterrupted business with the EU. Given that the Austin area, alone, is the 25th largest exporter in the U.S., with more than $8 billion of goods exported in 2006, it seems inevitable that local businesses, particularly small to mid-sized companies, will feel the brunt of REACH in some fashion. International trade is a

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[40] L. Kinnunen, *Russia Harmonizes its Chemical Legislation with REACH*, Kemia-Kemi, 2008, http://www.kemia-lehti.fi/pdf/kem308_kinnunen.pdf.

[41] S. Goodman, *EPA suspends assessment program*, June 19, 2009, Greenwire.

[42] Opponents of TSCA regulation argue that the regulation does not generate or require enough test data submissions and that too often the burden is on the EPA to prove why additional tests may be necessary or regulation may be warranted.

[43] REACH, Title XIV. See also, REACH, art. 216.

vital part of the economy, and it will be crucial to keep apprised of the REACH pre-registrations, registrations, authorizations, restrictions, and SIEF formations.

ECHA estimates that the required registration of new and existing substances under REACH will lead to a decreased reliance on animal testing, persistent bio-accumulative and toxic substances and endocrine-disrupting chemicals. ECHA also believes that the REACH regulations will increase awareness of chemicals, promote innovation and support for safer alternatives, as well as to reduce environmental and health impacts by decreasing the presence of the dangerous substances.[44]

In addition, a successful REACH registration could provide a U.S. Company with a market advantage over some of its competitors. Considering that several competitors may be deterred by the daunting registration requirements of REACH, there could be a decrease in the substance availability in the EU market.

[44] European Commission Environment Directorate General, *REACH in Brief*, October 2007.

SUE SNYDER



- *Partner*
- **International, Corporate & Securities, Technology, Environmental, Energy, Legislative**
- B.S., Cornell University
- J.D., University of Texas
- ssnyder@jw.com

Sue Snyder represents companies with regard to transactions in the domestic and international arena. She specializes in companies involved in technology and energy with general corporate matters and also provides advice for companies sending people, products and monies in the international arena. Ms. Snyder's experience spans regulatory and permitting issues; international legislation; drafting multilateral country agreements; tariff and trade matters; establishing international public/private partnerships; and handling policy issues regarding business and environmental matters in various countries.

Ms. Snyder has extensive experience in negotiating with governments around the world regarding incentives, legislation, joint endeavors, standards and trade matters. Her international work includes engaging in matters with the World Trade Organization (WTO), World Customs Organization (WCO), World Intellectual Property Office (WIPO), United Nations, World Economic Forum (WEF), and others. Ms. Snyder's work has encompassed the following countries and regions: Europe, China, Japan, Korea, Taiwan, Singapore, India, Russia, Brazil, Africa, Mexico and many others.

Ms. Snyder also has worked extensively in international trade matters including expansion and construction of the Information Technology Agreement. She frequently assists on advisory committees regarding trade matters and guidance.

Before joining the firm, Ms. Snyder served as Vice President of International Policy and Relations and Executive Legal Counsel for Advanced Micro Devices, Inc. While at Advanced Micro Devices, Ms. Snyder worked to create a new department for international policy and relations. The department conducted numerous engagements with governments and entities in over twenty countries. She also worked extensively on a wide variety of corporate matters including international transactions, environmental, legislative, policy and trade matters while there.

Prior to Advanced Micro Devices, Ms. Snyder worked as a private practice attorney in Austin practicing environmental, health, and safety law, which included complex administrative, enforcement, and permitting actions. Ms. Snyder also was involved in toxic tort litigation involving environmental matters.

REPRESENTATIVE MATTERS

- Successfully assisted companies in selling and emerging in the Chinese Market.

SUE SNYDER

- Guided companies in India contractor matters.
- Created international licensing agreements for technology company in the European Union.
- Successfully concluded energy agreements for expansion and entry in the United States.
- Assisted in Foreign Direct Investments and federal filings in the United States.
- Assisted in the first WTO case the United States brought against China regarding semiconductor products, which concluded successfully.
- Successfully negotiation multilateral trade and environmental agreements with the United States, Japan, European Union, Korea and Taiwan.
- Successfully worked with others in concluding China's entry into the World Semiconductor Council.
- Successfully modified regulations in European Union and legislation in China.
- Assisted in engaging technology in undeveloped countries.
- Assisted in government investment in a public/private endeavor worth over 4 billion dollars.

MEMBERSHIPS

Ms. Snyder is a Texas Bar Foundation Fellows Member and a member of the American Bar Association, State Bar Association, Austin Bar Association and certain International sections within these memberships. She is a founder of the International Business and Law Council of Texas and the High Tech for Solar group. Ms. Snyder previously was the chair of the Semiconductor Industry Association's international policy steering committee and law committee. She also previously served as a Board Member of the Information Technology Business Council and the Austin Chamber of Commerce. Ms. Snyder was one of the founders of the High Tech Committee of the Travis County Bar Association and coordinated the Austin In-House Counsel group for over five years. Ms. Snyder also has served as a Board Member of the Texas Business Education Coalition, on the Texas Higher Education TETC Committee, and as a member of the Industry Executive Subcommittee of the National Security Telecommunications Advisory Committee for the President of United States.

COMMUNITY INVOLVEMENT

Ms. Snyder is currently serving on the Board of Directors of the Capital Area Food Bank and on the Board of Governors of Lifeworks. She also is on the Leadership Council of Communities in Schools, a member of the Children's Medical Center Foundation, a member of Westlake Circle of Friends, and a member of the National Charities League Capital of Texas Chapter. Ms Snyder is a founder of Girl Scout

SUE SNYDER

Troop 1600 and a past Board Member of the Lone Star Council Girl Scouts. She also is active in pro bono matters.

EDUCATION

Ms. Snyder earned her B.S. degree in Civil and Environmental Engineering, *with distinction*, from Cornell University, where she was a Cornell Ambassador and a member of Chi Epsilon, Tau Beta Pi, and Alpha Lambda Delta Honor Society. She received her J.D. degree, *with honors*, from the University of Texas School of Law, where she was Order of the Coif, Phi Delta Phi Honor Society, Teaching Quizmaster, and Associate Editor of the *Texas Law Review*.

PUBLICATIONS & SPEAKING ENGAGEMENTS

Ms. Snyder has been a speaker at numerous events regarding international matters. She currently is a lecturer at the University of Texas McCombs School of Business. Ms. Snyder has been a speaker at the Governor's Texas Conference for Women, an adjunct professor at the University of Texas School of Law and a host of the Austin show "Ask an Attorney." Recent publications/speaking engagements include:

- "Free Trade is Crucial to Austin"
- "Austin's International Law Practice on the Rise"
- "Coming and Going . . . Why Free Trade is Becoming Crucial to Austin Business"

PINAR DOGRU



- *Associate*
- **Legislative, Environmental, Energy, Agriculture**
- B.S., University of Texas at Austin
- M.S., Texas Tech's Institute of Environmental and Human Health
- J.D., Texas Tech University School of Law
- pdogru@jw.com

Prior to joining Jackson Walker L.L.P., Pinar Dogru worked as an environmental attorney with the Texas Commission on Environmental Quality (TCEQ) in the air quality, water quality, utilities and water rights sections. Ms. Dogru gained expertise in environmental matters spanning air quality permitting water quality permitting, water pollution abatement plans over the Edwards Aquifer, water and sewer utility matters, district matters, as well as water rights permitting. Ms. Dogru regularly presented matters before the TCEQ Commissioners and served as counsel for the TCEQ Executive Director in contested case hearings before the State Office of Administrative Hearings. She also served as lead counsel for several rulemaking matters concerning air quality, environmental management systems, and groundwater availability. Prior to the TCEQ, Ms. Dogru worked on patent litigation matters for a firm in Washington, D.C.

Ms. Dogru is licensed to practice in Texas.

MEMBERSHIPS

Ms. Dogru is a member of the State Bar of Texas (Environmental and Natural Resources Section) as well as the Austin Bar Association (Environmental, Natural Resources, and Water Section), where she serves as the Chair of the Publications Committee. She is also a member of the Texas Ag Industries Association.

COMMUNITY INVOLVEMENT

Ms. Dogru regularly assists the Austin and Round Rock chapters of Habitat for Humanity, the Green Corn Project, and works on fundraising efforts for the American Cancer Association, Lance Armstrong Foundation, and Imerman Angels organization.

PATRICK B. TOBIN

EDUCATION

Ms. Dogru received her B.S. degree in Environmental Biology from the University of Texas at Austin. She received her M.S. in Environmental Toxicology from Texas Tech's Institute of Environmental and Human Health. She received her J.D. degree from Texas Tech University School of Law.

During the course of her academic career, Ms. Dogru worked with the Middle East Technical University and National Security Council in Turkey.

LANGUAGES

Ms. Dogru is proficient in German and fluent in Turkish.

PUBLICATIONS & SPEAKING ENGAGEMENTS

Ms. Dogru has presented papers on Environmental Law and Toxicology issues at the following:

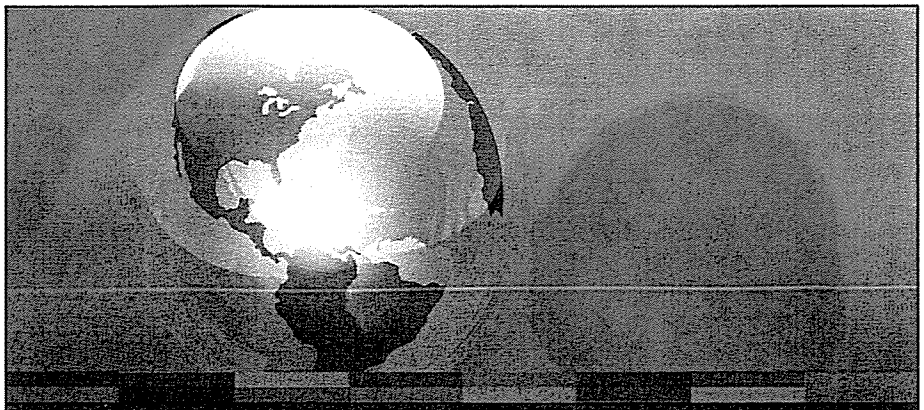
- "CleanTX Analysis on Environmental Regulations," *CleanTX Forum* (February 2009)
- Society for Risk Analysis: Perchlorate Contamination of Federal Facilities, Palm Springs, California (2004)
- Society of Environmental Toxicology and Chemistry: Perchlorate Leakage in Bosque Watershed, Austin, Texas (2003)
- Environmental Certification meeting, Texas Tech Law School: Environmental Modeling and Legal Issues on Perchlorate-Contaminated Federal Facilities, Lubbock, Texas (2004)

Robert D. Lawrence

Since May of 2003, Rob has served as the Senior Policy Advisor to the EPA Regional Administrator and Senior Staff on all aspects of energy issues as they relate to the environment. In that position, he is responsible for the overall coordination of energy initiatives within the EPA Region 6 area of jurisdiction (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas) with a focus on working with members of the regulated community as well as federal, state and tribal regulatory agencies. Priorities of the position include: development of alternative and/or renewable energy sources, advocacy of energy efficiency and energy conservation, and process streamlining of permit decisions for energy infrastructure projects such as liquefied natural gas terminals under the Deepwater Port Act and transmission lines and pipelines. Rob serves as the Region 6 representative on the Federal Leadership Forum (energy issues in New Mexico, Colorado, Montana, Wyoming and Utah) and the EPA key staff member for the Task Force between EPA and the Interstate Oil & Gas Compact Commission.

He has worked for EPA in the Dallas regional office since July of 1990 in a number of management and staff positions. Previously, he worked for the Louisiana Department of Environmental Quality between September 1980 and July 1990.

Rob received his Bachelors and Masters degrees from Louisiana State University in Baton Rouge.



Clean Technology

Paul Dickerson

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Setting precedent.

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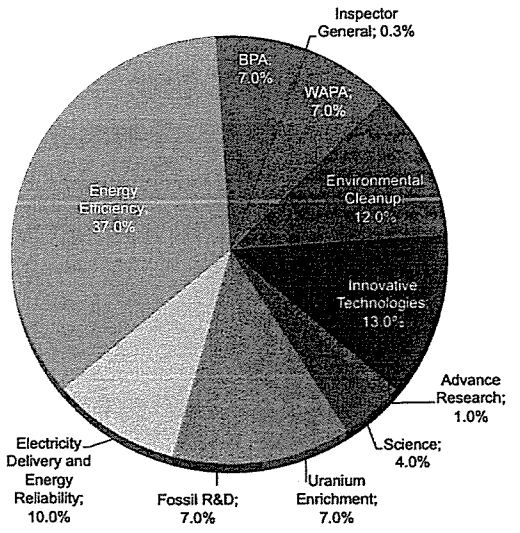
CLEANTECH'S STATE OF PLAY

VC Cleantech Funding

- 2008 totaled $8.4 billion globally
  - Up 38% from $6.1 billion in 2007
- Q1 2009 – plunged 63% to $277 million nationally (vs Q1 2008)
- Q2 showed signs of recovery, with VC investments up 12% from Q1
- The cost of capital is just as important to the cost of oil for Cleantech's success
- Access to capital is a major challenge for Cleantech companies at all stages of development

THE AMERICAN RECOVERY AND REINVESTMENT ACT (2009)

Funding is primarily for alternative energy and electric power industries, but possibilities are raised for traditional energy development



THE AMERICAN RECOVERY AND REINVESTMENT ACT (2009)

Major Provisions Include:

- Extension of Renewable Electricity Production Tax Credit
  - Provides a 3-year extension of the in-service deadline
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  - Allows businesses eligible for the federal PTC to take the federal business energy investment tax credit or to receive a grant
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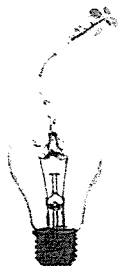

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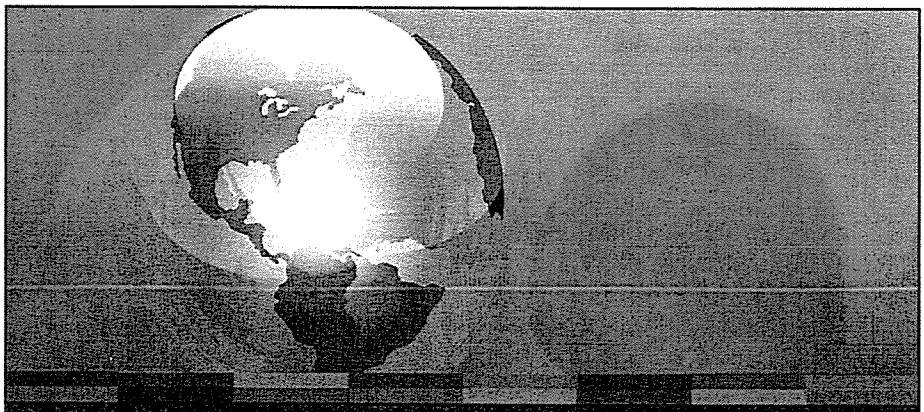
- Expansion of Energy Tax Credit
  - A taxpayer may now claim a credit of up to 30% of qualified expenditures
- Clean Renewable Energy Bonds
  - Provides an additional $1.6 billion
- Department of Energy Loan Guarantees
  - Authorized an additional $6 billion in loan guarantees for renewable projects

DOE LOAN GUARANTEES

- Authorized by EPACT (2005) to guarantee loans for qualifying projects that both "avoid, reduce or sequester air pollutants or anthropogenic emissions of greenhouse gases" and "employ new or significantly improved technologies as compared to commercial technologies in service" in the US.
- Prior to the stimulus, the DOE had been authorized by Congress to issue an aggregate of $42.5 billion in loan guarantees
- March: DOE makes its first loan guarantee offer to Solyndra Inc. for $535 million to expand its solar panel manufacturing capacity
- July: DOE issued loan guarantees to Beacon Power and Nordic Windpower
- Funds are contingent on companies providing further financing
- DOE's Chu has vowed to speed up approvals



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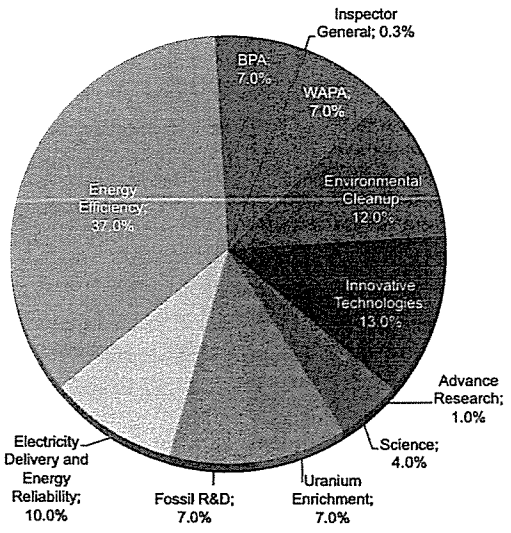

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PENDING LEGISLATION – Waxman-Markey Bill

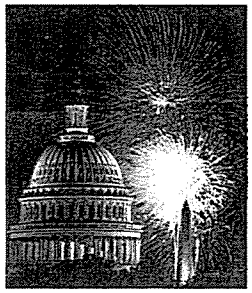
Clean Energy Deployment Administration

- CEDA established through an amendment to the Waxman-Markey energy and climate bill
  - Bill narrowly passed in House on June 26
- CEDA would be housed within DOE
- Help bridge the "commercialization valley of death" preventing technologies from moving from the lab into the market
- Designed to finance breakthrough technologies through:
  - Direct loans
  - Letters of Credit
  - Loan Guarantees
  - Insurance Products
- Portfolio investment approach – each technology eligible for up to only 30% of total funding available

PENDING LEGISLATION – Waxman-Markey Bill

Cap-and-Trade

- Current bill sets caps on emissions and lets government issue permits allowing companies to pollute within those limits
  - Seeks to reduce U.S. carbon emissions 17% below 2005 levels by 2020 and 83% below by 2050
- Key concession awarded to win passage:
  - Government would issue 85% of permits for prolonged transition period
  - President Obama originally envisioned auctioning off 100% of permits
- Now moves to Senate – let the fireworks begin!
  - 15 additional votes needed for passage



DOE FUNDING OPPORTUNITIES

- Open DOE funding solicitations:
  - Combined Heat and Power System – up to $40 million in awards (7/21/09)
  - Solar energy adoption in local governments – $10.5 million (10/15/09)
  - Modernize existing hydropower infrastructure - $32 million (Letter of intent due 7/22/09, application due 8/20/09)
- ARRA appropriated $3.1 billion to the DOE's State Energy Program to help promote energy efficiency and clean energy deployment at the state and local level

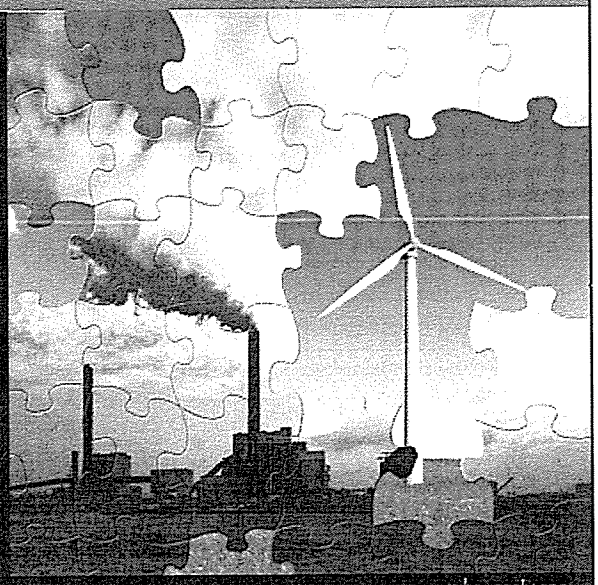
CORPORATE CLEANTECH INVESTMENTS

- Climate change is climbing up the corporate agenda
  - 90% of the 150 multinational corporations have launched climate change initiatives (Source: Ernst & Young)
- Corporations are setting operational standards and acting as change agents in mature and developing economies
  - GE's Ecomagination
  - Wal-Mart and energy efficiency
- Next wave: Partnerships with energy incumbents
  - Benefits:
    - Deep pockets
    - Energy infrastructure expertise
  - Collaborative areas: Biofuels, off-shore wind power, geothermal

STRATEGIC ALTERNATIVES

Early-Stage/R&D
- Technology Licenses
- Joint Ventures

Late-Stage/Commercialization
- Government as Consumer
- International
- Joint Ventures
- Strategic Mergers/Acquisitions



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CLEAN TECH AND HAYNES AND BOONE

- More than 25 attorneys comprise the Haynes and Boone Clean Tech practice group to assist clients with everything from emerging Clean Tech products to raising capital to fund production
- Attorneys are located in the country's centers for finance, regulation, and energy
- The firm has a total of 550 attorneys in 12 offices worldwide
- Ranked among the largest law firms in the nation by *The National Law Journal*
- Haynes and Boone attorneys and practices were recognized in 29 areas as being leaders in the legal industry – at both the state and national levels

www.haynesboone.com/CleanTech

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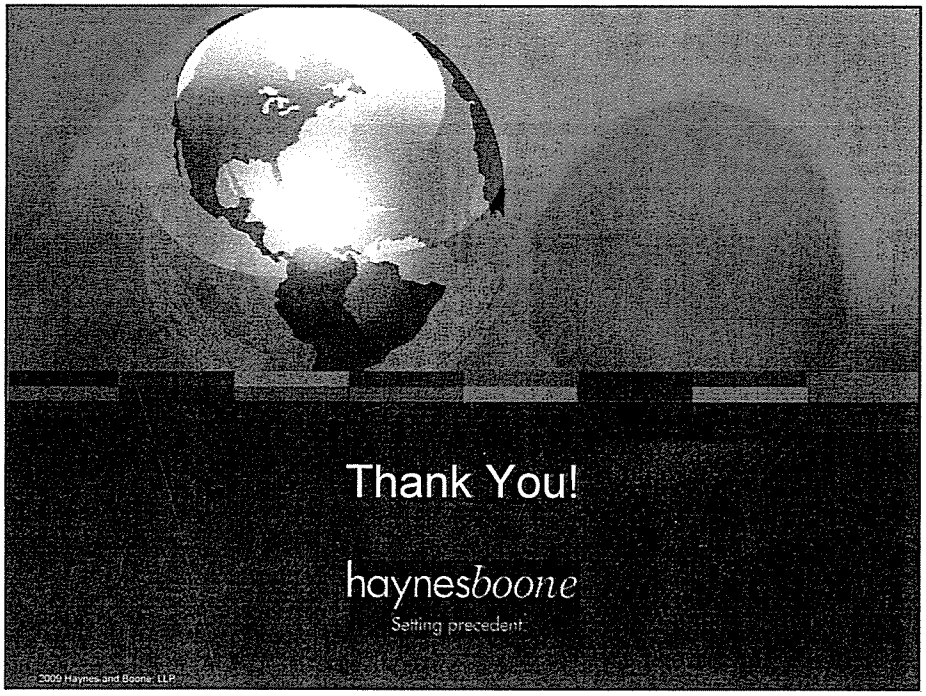
PAUL DICKERSON



- Served as Chief Operating Officer of the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) from 2006 – 2008
- At EERE, Dickerson helped move alternative and renewable energy technologies from the "vision" stage to real-world development
- Dickerson launched Haynes and Boone's Clean Tech practice group in 2009, and focuses on helping clients develop products and businesses in the Clean Tech arena in the U.S. and abroad

Paul.Dickerson@haynesboone.com

haynesboone



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Setting precedent.



Paul Dickerson

paul.dickerson@haynesboone.com

Partner

- Clean Tech
- Projects
- Tax
- Energy Tax

Houston
1 Houston Center
1221 McKinney, Suite 2100
Houston, Texas 77010
T +1 713.547.2506
F +1 713.236.5683

Washington, D.C.
1615 L Street, NW
Suite 800
Washington, District of Columbia 20036-5610
T +1 202.654.4520

Education

- J.D., South Texas College of Law, 1998, *magna cum laude*
- B.B.A., Accounting, University of Texas at Austin, 1992

Bar Admissions

- Texas

Paul Dickerson, a recognized leader and sought-after speaker on issues of clean tech and energy efficiency, launched Haynes and Boone's Clean Tech practice group in 2008. Paul, a partner who offices in the firm's Houston and D.C. offices, returned to the firm to launch the group, a new concentration for the firm that builds upon the firm's broad experience in intellectual property, litigation, technology, financing and many other legal issues that companies in the nascent industry must face.

Paul served as Chief Operating Officer of the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) from 2006 until his return to Haynes and Boone (where he worked as an associate from 2000 to 2005). He oversaw the EERE's $1.8 billion budget and helped move alternative and renewable energy technologies from the "vision" stage to real-world development.

Paul is knowledgeable on the pressing needs of the global energy market and regularly speaks about the tangible, real-world solutions that can be implemented now, from increasing efficiency, bio-fuels, solar and wind investments, to connecting venture capitalists with the cutting-edge scientific researchers in the field of sustainable energy.

He also served as Chief of Staff for the United States and Foreign Commercial Service at the U.S. Department of Commerce. While at the Commerce Department, Paul was responsible for day-to-day management of the Commercial Service's worldwide network of 1,700 employees in 260 offices and for directing the implementation of the Commercial Service's worldwide priorities and policies.

Paul has extensive experience with corporate turn-arounds and holds great knowledge about the new wave of renewable energy and energy efficiency technologies that will power America and the world in the 21st century. Under his leadership, the Department of Energy changed its direction toward commercialization of technology and quickened the pace of moving these groundbreaking energy solutions from the laboratory to the international marketplace.

He now helps Haynes and Boone clients as they continue to develop products and businesses in the Clean Tech arena, in the U.S. and abroad.

Paul, who is also a certified public accountant, has published numerous articles and frequently appears on the media circuit discussing politics, business, taxation, financing and other issues relevant to international trade and business. Through articles, interviews and speeches, he has appeared regularly in the local, statewide, nationwide and international press, including frequent citations in the *New York Times* and the *Houston Chronicle.*

Selected Publications, Speeches and Interviews

- "Cleantech Upstarts Team With Big Oil," *San Jose Business Journal*, June 8, 2009
- "Cleantech and Green Jobs Policy update," SJF Summit on the New Green Economy, Durham, NC, June 2, 2009
- "Obama's Push Toward Green has Some Texans Seeing Red," *Dallas Morning News*, May 24, 2009
- "A New Go-To Agency For 'Clean Cash'?" *National Law Journal*, May 11, 2009
- "Fuelling the Energy Future: Convergent Technologies in Oil and Gas," Synergies Between Oil & Gas and Renewable Energy, May 7, 2009
- "The Clear Alternative," *The Deal Magazine*, May 6, 2009
- "Can Uncle Sam Cure What Ails Clean Tech?" Nanotech Conference & Expo, Houston, TX, May 3-7, 2009
- "The Impact of Government Policy on Cleantech Entrepreneurship," panel discussion hosted by Battery Ventures, *Business Wire,* April 21, 2009
- "CoRERE to Help Develop Fuel Cell Technology," *Arab News*, April 12, 2009
- "Renewable Energy 'Green Bank' Idea Takes Root," *Houston Chronicle*, April 11, 2009
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- "Advances in fuel Cell research and Technology," 3rd Workshop on Renewable Energy, King Fahd University, Saudi Arabia, April 5, 2009
- "US DOE Guarantees First Loan to Solar Energy Firm," Environmental Finance Online News, March 26, 2009
- "Clean Tech's State of Play," Energy Daily, Webinar, March 24, 2009
- "San Diego's Clean-Energy Entrepreneurs," SignOnSanDiego.com by Union-Tribune, March 22, 2009.
- "Former Bush Aide will Lead Law Firm's Clean Tech Group," *Houston Business Journal*, March 6, 2009
- "Going Green with Yolanda Green," Houston Channel 39 News, Feb. 22, 2009
- "Clean Energy Veteran Paul Dickerson on the Clean Energy Outlook for the US," *New Energy World Network*, Jan. 27, 2009
- "DOE Vet Rejoins Haynes and Boone," *Law360*, Jan. 8, 2009

Al Schuele, General Partner

Al, a high-tech industry veteran of over 30 years, joined Sevin Rosen Funds in 2000 and now heads up the firm's ventures in Austin's dynamic entrepreneurial community. He has held executive and sales positions in several semiconductor companies including Benchmarq, Crystal, Cypress, and Mostek. Al has played key roles in major mergers and acquisitions and has worked extensively in Asian markets. Before joining SRF, Al was CEO of Benchmarq Microelectronics, managing the company through the turbulent Asian financial crisis before negotiating a merger with Unitrode Corporation, where he then served as president and COO.

At SRF, he focuses on opportunities in the semiconductor, telecommunications, energy related technologies, and nanotechnology arenas, working with companies such as InnovaLight, Nanomix, Javelin, InfoNow, and Slacker.

Despite an impressive track record in high-tech sales and management, Al says the experience most valuable to his role as venture capitalist came while he was a U.S. Marine Corps attack pilot. "Being shot at and missed is one of the most character-building experiences you can imagine," he says. "Combat taught me a lot about how to succeed in tough environments. These military experiences, coupled with 36 years of corporate experiences, have served as an excellent foundation for advising entrepreneurs on how to turn their emerging technologies into winning companies."

CONNELLY · BAKER · WOTRING LLP

DEBRA TSUCHIYAMA BAKER
PARTNER

DIRECT DIAL: (713) 980-1717
dbaker@connellybaker.com



DEBRA TSUCHIYAMA BAKER

CURRICULUM VITAE

Ms. Baker is a founding partner of the Houston litigation and environmental regulatory law firm of Connelly · Baker · Wotring LLP, where she serves on the Firm's Management Committee. Ms. Baker has practiced environmental law for more than 24 years and obtained her law degree from the Georgetown University Law Center where she received the Magoichi Kato Scholarship Award for Academic Excellence for Japanese American students. She obtained a Bachelor of Science degree, Summa Cum Laude, from the University of Maryland.

Ms. Baker's practice encompasses the full spectrum of environmental issues, with an emphasis on the handling of difficult and complex multi-party environmental cases, Superfund, environmental regulatory counseling and representation in enforcement, permitting, catastrophic release response, compliance and environmental support in corporate/real estate due diligence and transactional matters. She is an author and editor of the First and Second Editions of the *Texas Environmental Law Handbook*, published in January 1989 and October 1990 and is a co-author of two other books on environmental law. Ms. Baker has also authored and published more than 50 articles on environmental law, has lectured extensively on environmental legal issues, and has testified in a variety of cases as an expert witness on environmental law in the United States and Canada.

She is active in bar, law school and community activities promoting issues concerning the environment, minority advancement and gender equality issues, among others. Ms. Baker was recently featured on the cover of *Diversity & The Bar* magazine, a publication of the Minority Corporate Counsel Association, in connection with her work in the area of diversity. She is the 2008 recipient of the Ma'at Justice Award, awarded annually by the State Bar of Texas Women and the Law Section to an individual who has actively addressed the needs and issues of women in the legal profession and the community. Ms. Baker was also the 2006 award winner of the Texas Bar Foundation's Dan Rugeley Price Award presented to an outstanding practitioner dedicated to the bar and public. She has served as an Adjunct Professor of Environmental Law at both the University of Houston Law Center and the South Texas College of Law, and was co-founder and past Chair of the Houston Bar Association's Environmental Law Section. She was also a founder and Chair of the American Bar Association's national Environmental Law Group, supervising 10 environmental committees integrating issues of environmental law with real estate, landlord and tenant issues, due diligence, and merger and acquisition transactions. Ms. Baker was the 2008 Chair of the Houston Bar Foundation, the HBA's 501(c)(3) charitable foundation, and other bar appointments have included serving on the Board of Directors of the Asian American Bar Association, as Vice Chair of the State Bar of Texas Standing Committee on Women in the Profession, and Co-Chair of the Houston Bar Association's Gender Fairness Committee, among others. Prior to forming the Connelly · Baker Firm, Ms. Baker headed the Environmental Law Practice group for the 120-lawyer firm of Mayor, Day, Caldwell & Keeton, L.L.P. for over a decade and also practiced environmental law in the D.C. and Houston offices of Fulbright & Jaworski, L.L.P. She is admitted to practice in both the District of Columbia and Texas.

Solid Waste Update – *"What's the deal?"*

21st Annual Texas Environmental Superconference

August 6-7, 2009

Prepared by:

Paul G. Gosselink
Lloyd Gosselink Rochelle & Townsend, P.C.
816 Congress Avenue, Suite 1900
Austin, Texas 78701
(512) 322-5806
pgosselink@lglawfirm.com
www.lglawfirm.com

Lloyd Gosselink
ATTORNEYS AT LAW

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Texas Environmental Superconference
"Viva Las Vegas" ~ August 7, 2009

Solid Waste Update – *"What's the deal?"*

By Paul G. Gosselink*
Lloyd Gosselink Rochelle & Townsend, P.C.

Introduction

There have been a variety of new cases and rules in the hazardous and municipal solid waste arena since the last Superconference. This paper will focus on three "game-changers" – two Supreme Court cases and one EPA rule which can change the way we practice and the way our clients do business. These three game changers are (1) the case of *Burlington Northern and Santa Fe Railway Company v. United States ("BNSF")*, which arguably redefined "arranger liability" and "apportionment" in federal Superfund cases; (2) the case of *United Haulers Ass'n v. Oneida-Herkimer Solid Waste Authority ("Oneida")* which held that the dormant commerce clause was not violated by a flow control ordinance which mandated that all the municipal waste collected within the jurisdictional boundaries of the Authority be taken to a specific facility because it was a public, as opposed to private, facility and (3) the latest version of the EPA's Definition of Solid Waste ("DSW") Rule and the legal challenges that have been brought against that rule. As you will see, each of these represents a change from the existing law. Each will likely result in a change in the way you evaluate business opportunities and/or risks and in a change in the advice you give to your clients.

Summary

The potential implications of each of the two game changing cases and of the DSW new rule are offered at the end of each section. It is likely that different facts can lead to nuanced distinctions in future cases. For example, not all the cases involving apportionment and/or arranger liability are likely to have as clean a set of facts as the facts of the BNSF case. A revived Superfund tax is also a possibility as a result of the *BNSF* case. As a result of the Oneida case, how government entities and private haulers make future business decisions will likely be different; I predict more upfront negotiations and long term agreements. Finally, with respect to the DSW Rule, we will have to wait and learn how the EPA responds to the Motion for Reconsideration, whether the EPA's response spawns additional litigation and whether Texas chooses to adopt the new rule. Perhaps it will still be a topic that needs to be discussed again next year.

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* I received extraordinary research and editing assistance from Jeffrey Reed, Lauren Damen, Katie Dubois and Ashley Dalton. All the erudite analysis is theirs. Any misstatements are mine.

I. *BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY V. UNITED STATES*

A. Introduction:

On May 4, 2009, the U.S. Supreme Court issued a game changing decision in the Superfund arena in the *Burlington Northern and Santa Fe Railway Company v. United States*[1] case ("BNSF"). In this one case, the U.S. Supreme Court reversed the Ninth Circuit on two separate counts, both affecting how CERCLA will be litigated in the future. First, the Supreme Court narrowed who can be held liable for the clean up of a site as an "arranger" by holding that "arrangers" must have intended to dispose of the material where the waste was a new and useful product at the time. Second, the Supreme Court expanded the ability of PRPs to avoid "joint and several" liability if the PRP can show a "reasonable basis" for apportionment. The full implications of these changes are yet to be seen but will likely include:

- An increase in litigation over "intent" to dispose of hazardous waste.
- A decrease in the number of PRPs to share the cost of remediating contaminated sites.
- A decrease in the number of voluntary clean ups undertaken, because it may be more difficult to recover any orphan share they might have paid.
- An increase in litigation regarding what is considered a "reasonable basis" for apportionment.
- A potential rethinking by the EPA regarding how to prioritize sites to elect to remediate.
- An increase in support for reinstating the Superfund tax.

B. Facts and Procedural History: [2]

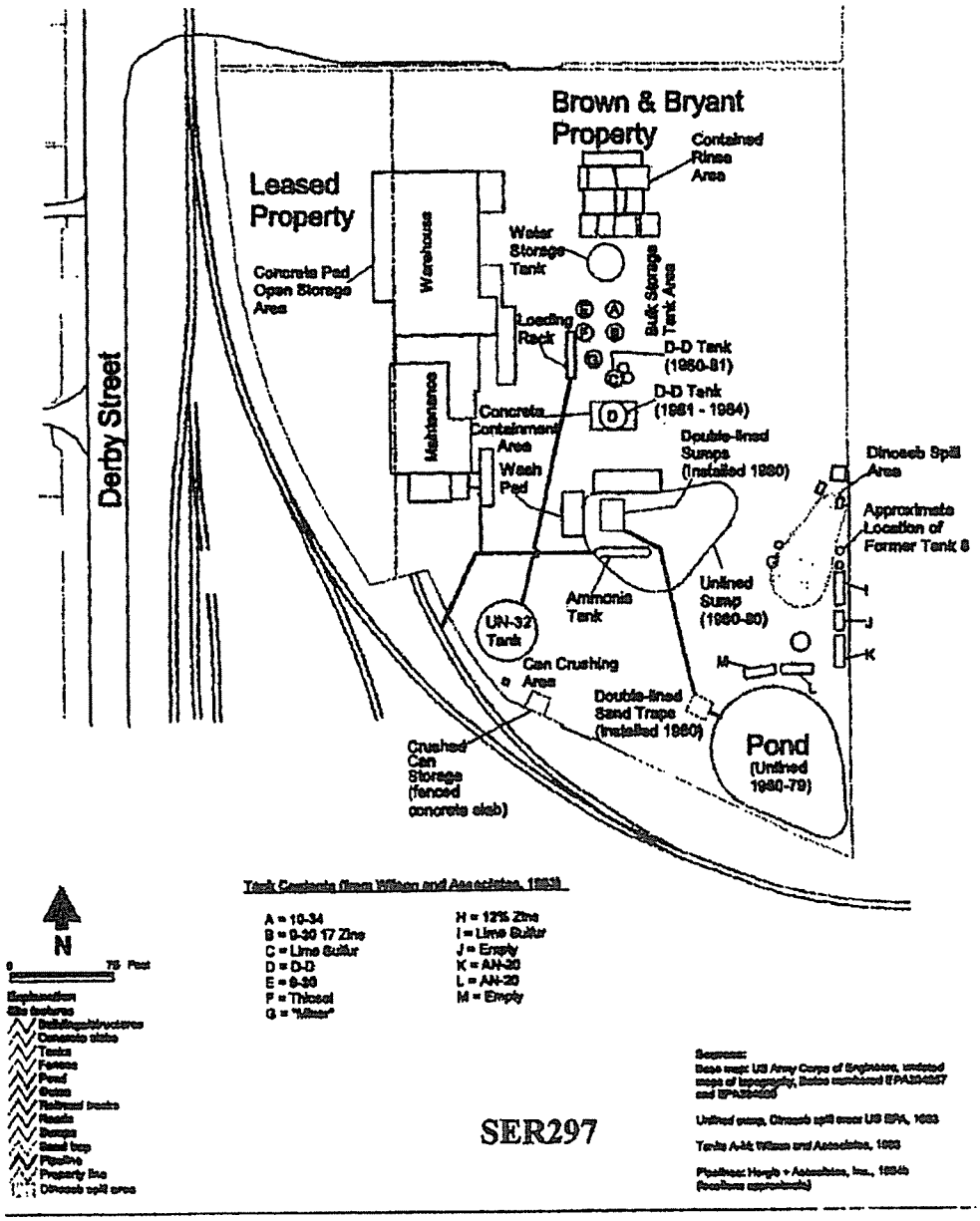
1. The Contamination

In 1960, Brown & Bryant, Inc. ("B&B") began operating as an agricultural chemical distribution business on a 3.8 Acre parcel of land that it owned. It stored and distributed various hazardous materials at the site, including "D-D" (a pesticide), and "Nemagon" (also a pesticide) that it purchased from Shell. In 1975, B&B began leasing an adjacent 0.9 acre parcel owned by neighboring railroad companies (the "Railroads"). Both properties were graded to drain to a pond in the south-east corner of the property, which was not lined until 1979. As the following sketch of the site[3] shows, the pond, where the majority of the contamination was

[1] 2009 WL 1174849 (U.S. 2009).
[2] *Id.*, at *3-5 (U.S. May 4, 2009).
[3] *Id.* at *11.

believed to originate, was the furthest point from the Railroads' property.

Throughout the time that B&B was operating, Shell would arrange for delivery of the pesticides to B&B, where B&B would transfer the pesticides from a tanker truck to a bulk storage tank, located on the 3.8 acre tract, not the 0.9 acre tract. During the transfers, leaks commonly occurred. Shell was aware that its buyers commonly spilled chemicals, and took steps to minimize leaks, including providing detailed safety manuals, offering discounts to buyers that made improvements to their facilities, and ultimately requiring buyers to provide Shell with a certification and an inspection of the facilities. Despite these efforts by Shell, B&B continued to spill the three chemicals on the property.



In 1983, the California Department of Toxic Substances Control ("DTSC") and the EPA (collectively, the "Governments") discovered soil and groundwater contamination on the site. B&B became insolvent in 1989, after beginning remediation efforts. The EPA added the site to the National Priorities List shortly thereafter, ultimately spending more than $8 million for the clean up. The EPA issued an administrative order in 1991 requiring the Railroads to undertake some of the clean up on both parcels. After spending over $3 million, the Railroads brought suit against B&B. That suit was consolidated with recovery actions by the EPA and DTSC in 1996, and became the case that was ultimately decided by the U.S. Supreme Court.

2. The District Court

The District Court held the Railroads were Potentially Responsible Parties (PRPs) under CERCLA, because they owned a portion of the facility.[4] Shell was also held to be a PRP as an "arranger" under CERCLA, based on its sale of the herbicide D-D to B&B.[5] However, the District Court, instead of holding the Railroads and Shell jointly and severally liable, found that the contamination was divisible and could be apportioned. Significantly, the District Court made this finding despite the fact that apportionment was not argued by either party. Notwithstanding the fact that the Railroads did not argue for apportionment, the Court on its own motion used three factors to calculate the Railroads' portion: the amount of area of the facility that was owned by the Railroads, the amount of time that the Railroads leased the property to B&B, and an estimate of the portion of the chemicals spilled on the Railroads' property that required remediation - resulting in a finding that the Railroads portion of the clean up should be allocated at 9%.[6] Similarly, Shell's portion was allocated as 6% of the clean up. The Government and Shell both appealed the decision.

3. The Court of Appeals

Shell appealed the District Court's opinion, claiming that it should not be held to be an "arranger" at all, and should therefore not be responsible for any of the clean up. The Court of Appeals disagreed and upheld the District Court's finding that Shell was an "arranger". The Court noted that "disposal" as defined in CERCLA includes "leaking" and "spilling".[7] Therefore, the Court reasoned, Shell could be an "arranger" since the spilling of the chemicals was foreseeable, even though it was not the purpose of the transaction.

The Governments appealed the District Court's opinion, claiming that the Railroads and Shell should be held jointly and severally liable for the entire $8 million clean up cost. On this point, the Court of Appeals reversed the District Court, finding that apportionment, although possible where there is adequate information, was not proper in this case. The Court of Appeals noted that the burden of proof was on Shell and the Railroads to establish a reasonable basis for apportionment and that Shell and the Railroads had not met that burden. Thus, they were jointly

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[4] See 42 U.S.C. §§ 9607(a)(1)-(2).
[5] See §9607(a)(3).
[6] The Court provided more detail later in the opinion. *See Id.* at 9. (The Railroad parcel was 19% of the area of the site; the lease 45% of the time that B&B operated the site; the two chemicals, Nemagon and dinoseb (not D-D) substantially contributed to the contamination and they contributed to 2/3 of the overall site contamination. After rounding up and adding a 50% factor for errors, the total was 9%. 0.19 x 0.45 x 0.66 x 1.5 = 0.84%
[7] See 42 U.S.C. §6903(3).

and severally liable for the entire cost of the clean up. The Railroads and Shell filed for certiorari to the Supreme Court.

4. The Supreme Court:

The Supreme Court held that 1) the Court of Appeals erred in finding that Shell was an "arranger" and 2) the Court of Appeals erred in finding that the clean up could not be apportioned.

Although it appears that this case will significantly change superfund litigation going forward, we caution that the facts of this case helped drive the decision, and nuanced distinctions between this case and others are likely to be carved out in future cases. It is unusual in superfund litigation for a case to involve such a "clean" set of facts: only three PRPs only one of which was an "orphan" share, only two distinct properties, and a groundwater plume that was clearly traceable to a source (the pond) located entirely on one of the tracts. This relatively simple set of facts likely led to the District Court's decision to apportion liability sua sponte, and to the Supreme Court's decision to accept the case. The 8-1 majority decision by the Supreme Court also implies that the Court seized on this case because the facts enabled it to more easily render a decision that corralled aspects of superfund litigation it felt needed reform.

C. Arranger Liability

Perhaps the least surprising of the two most important holdings of this case is the Supreme Court's reversal of the Court of Appeals on the question of whether Shell was an "arranger" under the CERCLA statute. A company becomes a "Potentially Responsible Party" or "PRP" under CERCLA, and therefore subject to liability for at least a portion of the costs of cleaning up a site, in one of three ways: it is either an "Owner," an "Arranger," or a "Transporter."[8] An Arranger is "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..."[9] Both the District Court and the Court of Appeals found that Shell was an Arranger under this definition, and both were reversed by the Supreme Court.

The key words at issue in the case were "arranged for disposal." The Governments argued that there is no requirement to show intent for an entity to be an Arranger.[10] "Disposal," the Governments pointed out, is defined in the statute as "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste of hazardous waste into or on any land or water."[11] Since the "disposal" includes at least two terms that do not require intent, "spilling" and "leaking," they argued that the broader term "arranged for disposal" also did not require a showing of intent.[12] Knowledge that some of the D-D would spill or leak during the process of transferring the D-D to B&B's tanks, according to the Governments, was sufficient for Shell to be an Arranger.

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[8] 42 U.S.C. §9607(a)
[9] *Id.*
[10] *BNSF* at *7.
[11] § 6903(3).
[12] *BNSF* at *7.

The Court instead followed an ordinary reading of the term "arranged." "In common parlance, the word "arrange"," said the Court, "implies action directed to a specific purpose."[13] The Court described a continuum, where on one extreme, "CERCLA liability would attach under § 9607(a)(3) if an entity were to enter into a transaction for the sole purpose of discarding a used and no longer useful hazardous substance," and on the other extreme, "an entity could not be held liable as an arranger merely for selling a new and useful product if the purchaser of that product later, and unbeknownst to the seller, disposed of the product in a way that led to contamination."[14] However, the Court noted that the determination is highly fact-specific, and "in some instances an entity's knowledge that its product will be leaked [or] spilled...may provide evidence of the entity's intent to dispose of its hazardous waste." In this case the Court determined that Shell did not intend for spills to occur, and in fact took steps to reduce the likelihood of spills.[15]

Although this portion of the BNSF decision may have broad implications in those circuits that have read the term "arrange" expansively, the decision is consistent with existing Texas law on the subject.[16] However, the decision will still likely have some impact going forward. For one, entities that are looking at potential CERCLA liability for existing contamination will likely try to uncover more facts to support a lack of intent (and likewise, governments seeking to impose CERCLA liability will seek more discovery to show intent). In addition, entities that are selling useful products that may be spilled during transfer to the buyer are likely to take significant steps to encourage the buyers to minimize the potential for accidental spills. Also, where there are fewer Arrangers, there are fewer PRPs available and those PRPs that remain risk even more liability. Finally, litigation on "intent" will certainly increase as a result of this ruling.

D. Apportionment

The more far-reaching portion of the decision addressed CERCLA joint-and-several liability. Joint-and-several liability in the context of CERCLA essentially means that any entity that is held to have contributed pollution to a site is liable for the entire cost of remediating the site (or must reimburse the government for costs that it paid in cleaning up the site). In order for that entity to recoup its costs, it must sue other PRPs in an action for contribution.[17] Where other PRPs can not be reached, for example where some are insolvent, the entities that still exist remain liable for the costs of those "orphan shares."

Joint-and-several liability is not spelled out in the CERCLA statute; rather, it is a judicial doctrine based on the common law.[18] Section 443a of the Restatement (Second) of Torts states that:

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[13] *Id.* at 6.
[14] *Id.*
[15] *Id.* at 7. It is notable that at least one prior case has held that intent is required for CERCLA liability. *See U.S. v. Aceto Agric. Chem. Corp.* 872 F.2d 1373 (8th Cir. 1989). However, the *Aceto* case did not concern the sale of a useful product.
[16] *See, e.g., R.R St. & Co. v. Pilgrim Enter.*, 166 S.W.3d 232 (Tex. 2005) ("courts consider factors such as the parties' intent and the usefulness and value of the product when sold" in determining whether a sale of a product that is ultimately disposed of constitutes an arrangement for disposal.").
[17] *See* 42 U.S.C.§ 9613(f).
[18] *See U.S. v. Chem-Dyne Corp.*, 572 F. Supp. 802 (S.D. Ohio, 1983).

> "when two or more persons acting independently caus[e] a distinct or single harm for which there is a reasonable basis for division according to the contribution of each, each is subject to liability only for the portion of the total harm that he has himself caused...but where two or more persons cause a single and indivisible harm, each is subject to liability for the entire harm."[19]

However, although the Supreme Court reaffirmed that the burden of showing that a harm is divisible and thereby avoiding Joint-and-several liability, is on the defendant,[20] it did so despite the fact that the Railroads never argued for divisibility.

As applied to CERCLA cases, "harm" is a somewhat amorphous concept. The term is not defined in the CERCLA statute, and it can theoretically be measured in any number of ways, including by the cost of remediation, the relative toxicity of the chemicals involved, the volumes of the chemicals involved, or the potential for exposure from the chemicals involved. The Court, in deciding this case, lowered the burden on defendants attempting to establish a case for apportionment, and increased the discretion of the District Courts. Where the Court of Appeals held that, due to the complexity involved, virtually all of the data and assumptions relied on by the District Court were insufficient to establish the apportionment, the Supreme Court concluded that the "the facts contained in the record reasonably supported the apportionment of liability" despite the criticisms of the Court of Appeals that the evidence failed to "establish the precise proportion of contamination."[21] Therefore, under this ruling, the District Court's method for determining apportionment will stand so long as it is "reasonably supported."

This portion of the decision will likely have far-reaching effects on future CERCLA litigation. First and most important, it will make it much more difficult for EPA to reach settlements with PRPs who may believe that their risk of joint-and-several liability is low or that they can establish their apportionment in court. Second, PRPs will likely shift some of their focus from avoiding liability to limiting their liability by developing facts to support an apportionment favorable to them. In complex, multiparty litigation, this creates a danger that multiple parties, all arguing different theories of apportionment, will in effect convince the District Court that apportionment can not be "reasonably supported", leading to the third effect: that PRPs will try to work together in advance of trial to develop one coherent theory of apportionment to present to the District Court.

From a public policy standpoint, perhaps the most important outcome of this case is that, where the PRPs can establish apportionment, whoever conducts the clean up (the government in most cases, or the initiator of a voluntary clean up in some cases) will be left to pick up the costs of the orphan shares (in this case, 91% of the total cost of cleaning up the B&B site). This will likely result in a decrease in the number of voluntary clean-ups, and may make the Government more selective about what sites it chooses to remediate, perhaps focusing on those with the highest potential for endangering health or the environment. The Government may also be more

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[19] *BNSF* at *9 (citing the Restatement (Second) of Torts §§433A, 881, and 875).
[20] *Id.*
[21] *Id.* at *10.

inclined to attempt to lower the costs of cleanups by considering innovative solutions or lower levels of remediation.

E. Conclusion:

The results of this decision could lead to additional efforts to reinstate the Superfund tax. As of the time of this paper Rep. Blumenauer (D-OR) has introduced H.R. 564, the "Superfund Reinvestment Act of 2009" and Rep. Pallone (D-NJ) has introduced H.R. 832, the "Superfund Polluter Pays Act". Both bills would reauthorize the Superfund Tax. And recall that last fall then Senator Obama co-sponsored a bill with Sen. Laufenberg (D-NJ) to reinstate the Superfund tax. Although that bill did not make it out of committee, President Obama has included one billion dollars from such a tax in his proposed 2011 budget.

II. *UNITED HAULERS ASS'N, INC. V. ONEIDA-HERKIMER SOLID WASTE MGMT. AUTH.*

A. Introduction

The federal courts have had a long history of considering the constitutional balance between allowing states and local governments to provide for the public health and safety of their citizens and preventing economic protectionist measures that would run afoul of the dormant Commerce Clause. The Supreme Court specifically applied the Commerce Clause to a local solid waste flow control ordinance in the 1994 case of *C & A Carbone, Inc. v. Clarkstown* ("Carbone")[22] where the Court struck down the ordinance because it directed solid waste to a local private transfer station.[23] The Court held that "[s]tate and local governments may not use their regulatory power to favor local enterprise by prohibiting patronage of out-of-state competitors or their facilities."[24] In 2007 the Court distinguished its holding in Carbone when it decided the case of *United Haulers Ass'n, Inc. v. Oneida – Herkimer Solid Waste Mgmt. Auth.* ("Oneida").[25] In Oneida, the Court upheld two counties' flow control ordinances that benefitted a public facility and treated all private facilities equally.[26] The implications of the Oneida decision for the solid waste industry, both its public and private members, are game changing.

B. Background

Two counties in New York, Oneida and Herkimer ("Counties"), faced with waste disposal problems during the 1980's, commissioned several professional studies and conducted a series of public and legislative hearings and debates in order to fashion a long term comprehensive solid waste management plan.[27] The Counties were challenged by environmental issues so extreme that they were potentially subject to "...exposure to federal and state

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[22] 511 U.S. 383 (1994).
[23] *Id.* Although the dissent in *Carbone* recognized the facility in that case as essentially public; the majority declined to treat it differently from a purely private facility.
[24] *Id.* at 394.
[25] 550 U.S. 330 (2007).
[26] *Id.* at 334.
[27] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 2000 WL 33955170 at *1 (N.D. N.Y. 2000).

liability...."[28] Despite the Counties' extensive efforts, the problems remained unresolved and the Counties faced "...price fixing, pervasive overcharging, and the influence of organized crime [on private waste management companies]."[29] These problems led the Counties to lobby for and ultimately persuade the legislature to approve the creation of a public waste management system.[30] The Oneida-Herkimer Solid Waste Management Authority Act created a public benefit corporation, the Oneida-Herkimer Solid Waste Management Authority ("Authority"), and vested it with " . . .power to collect, transport, process and dispose of solid waste; to plan, develop and construct waste management projects; to contract with the Counties regarding waste management; to issue regulations and set and collect fees related to waste management projects; and to borrow money and issue bonds."[31]

In 1989, the Authority contracted with the Counties to manage and dispose of all solid waste within the Counties.[32] The Counties agreed to deliver "all solid waste originated or brought within their respective jurisdictions to the transfer station or stations or other facility designated by the Authority."[33] Among other things, the Authority agreed to take control of the operation of the county-owned recycling center and to collect tipping fees sufficient to pay its operating and maintenance costs.[34] Within the next year, the Counties passed their respective flow control laws, both of which mandated that all solid waste within the Counties be delivered to an Authority designated facility and directed recyclables to the recycling center.[35] The Authority also issued revenue bonds to fund the purchase and construction of a transfer station and accepted bids from ". . . all private waste disposal companies, in-state and out-of-state"[36] to operate the transfer station and accept the waste for ultimate disposal.[37] In 1995, the Authority began charging tipping fees for bringing solid waste to its facility which were higher than similar fees at various New York and out-of-state landfills.[38] According to the private haulers involved in the *Oneida* case[39] these tipping fees were partially to blame for essentially doubling their operating costs.[40] The haulers further claimed that the flow control laws prevented them from accessing a viable and cheaper interstate market for waste disposal.[41] In response, the haulers brought suit against the Authority and the Counties claiming that the flow control laws violate the Commerce Clause by discriminating against interstate commerce to finance the Counties' solid waste management program.[42]

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[28] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 261 F.3d 245, 248 (2nd Cir. 2001).
[29] *Oneida* at 335.
[30] *Id.* at 335. *See* N.Y.Pub.Auth.L. §§ 2049-aa, et seq. (McKinney 2000).
[31] *Id.* § 2049-ee.
[32] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 261 F.3d 245, 249 (2nd Cir. 2001).
[33] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 2000 WL 33955170 at *3 (N.D.N.Y. 2000).
[34] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 261 F.3d 245, 249 (2nd Cir. 2001).
[35] *Id.* at 249-250.
[36] *Id.* at 250.
[37] *Id.*
[38] *Oneida* at 336.
[39] *Id.* at 337. "Petitioners are United Haulers Association, Inc., a trade association made up of solid waste management companies, and six haulers that operated in Oneida and Herkimer Counties when this action was filed." *Id.*
[40] *Id.* at 337.
[41] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 261 F.3d 245, 251 (2nd Cir. 2001).
[42] *Id.* at 252.

C. Discussion

The Northern District of New York first considered this case and found the flow control laws ". . . virtually indistinguishable from the laws examined and struck down . . ." in *Carbone* and granted summary judgment in favor of the haulers.[43] Upon appeal to the Second Circuit in 2001, that court decided: 1) that the *Carbone* case left open the possibility that laws passed for the benefit of the public could be legitimate, and 2) that "...a statute does not discriminate against interstate commerce when it favors local government at the expense of *all* private industry."[44] The Second Circuit reversed and remanded the case, and charged the District Court with making the determination of what it called the second line of inquiry: whether the Counties' ordinances imposed burdens on interstate commerce that were clearly excessive in relation to the putative local benefits.[45] Upon remand, the District Court, and later the Second Circuit, found that any arguable burden posed by the ordinances did not outweigh their benefits.[46] The Supreme Court granted certiorari to resolve a circuit split[47] on the issue of whether it is constitutionally acceptable to pass laws in favor of a public entity.[48]

In *Oneida*, the Supreme Court specifically distinguished *Carbone* as not having decided the "public-private" question. In other words, the *Carbone* court only considered whether an ordinance that benefitted a private local enterprise was unconstitutional, "studiously avoid[ing]" an analysis of laws favoring public entities.[49] The majority further decided that "[t]he flow control ordinances in this case benefit a clearly public facility, while treating all private companies exactly the same...[and therefore]...such flow control ordinances *do not* discriminate against interstate commerce for purposes of the dormant Commerce Clause."[50]

The Supreme Court analyzed *Oneida* under the dormant Commerce Clause, which it recognized "...as an implicit restraint on state authority, even in the absence of a conflicting federal statute."[51] Dormant Commerce Clause analysis directs the court to look at the law in question to see if it is facially discriminatory against interstate commerce.[52] The Court emphasized the fact that it considered it constitutionally acceptable to pass an ordinance such as the one in this case, which treats all private businesses, whether in-state or out-of-state, exactly the same.[53] In-state and out-of-state private entities receive equal treatment under the ordinances

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[43] *Id.* at 248. No discovery took place prior to the determination of the summary judgment motion. *Id.* at 252.
[44] *Id.* at 263 (emphasis added).
[45] *Id.* at 256, *citing Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970).
[46] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 438 F.3d 150, 155 (2nd Cir. 2006). The District Court found that the ordinances did not impose any cognizable burden interstate commerce. *Id.*
[47] *Oneida* at 338 ("Because the Sixth Circuit had recently issued a conflicting decision holding that a flow control ordinance favoring a public entity *does* facially discriminate against interstate commerce...we granted certiorari..."). *See National Solid Wastes Mgmt. Ass'n. v. Daviess Cty.*, 434 F.3d 898 (6th Cir. 2006).
[48] *Id.* at 338. The review and appeals process for this case took over 12 years before the Supreme Court made its final ruling.
[49] *Id.* at 339.
[50] *Id.* at 342 (emphasis added).
[51] *Id.* at 338; *citing Case of the State Freight Tax*, 15 Wall. 232, 279 (1873); *Cooley v. Board of Wardens of Port of Philadelphia ex rel. Soc. Of Relief of Distressed Pilots*, 12 How. 299, 318 (1852).
[52] *Oneida* at 338; *citing American Trucking Assns., Inc. v. Michigan Pub. Serv. Comm'n*, 545 U.S. 429, 433 (2005); *Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dept. of Natural Resources*, 504 U.S. 353, 359 (1992).
[53] *Oneida* at 334, 342.

in that they both: 1) may bid for the ability to operate the Authority's transfer station and dispose of the waste,[54] and 2) have an equal opportunity to collect solid waste from citizens' homes.[55]

In Part II-D of the opinion, Chief Justice Roberts, joined by Justices Souter, Ginsburg, and Breyer, opined that this case should also be examined under *Pike v. Bruce Church Inc.*,[56] which would allow the ordinances to stand " '...unless the burden imposed on [interstate] commerce is clearly excessive in relation to the putative local benefits.'"[57] The justices examining this case under the *Pike* balancing test found that "...any arguable burden the ordinances impose on interstate commerce does not exceed their public benefits."[58]

Thus, the majority of the Court determined that the ordinances do not facially discriminate against the Commerce Clause,[59] and a plurality of the Court concluded that the ordinances do not unduly burden interstate commerce.[60]

D. Analysis

The Supreme Court recognized several reasons to treat a public entity differently from a private company for purposes of the Commerce Clause.[61] The Court differentiated government from a private business by pointing out its "...responsibility of protecting the health, safety, and welfare of its citizens."[62] According to the Court, "[t]hese important responsibilities set state and local government apart from a typical private business... [and] [g]iven these differences, it does not make sense to regard laws favoring local government and laws favoring private industry with equal skepticism." [63]

Further, the Court noted that the Counties' motives for passing legislation favoring local government were more likely to be acceptable than if they were trying to favor local businesses.[64] In this case, the Court pointed out that "...the flow control ordinances enable[d] the Counties to pursue particular policies with respect to the handling and treatment of waste generated in the Counties, while allocating the costs of those policies on citizens and businesses according to the volume of waste they generate."[65]

Finally, the Court pointed to the fact that the residents of the Counties passed the flow control ordinances by vote, and declined to extend the Commerce Clause to invalidate this choice.[66] Chief Justice Roberts, who wrote the majority opinion, respected the designation of

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[54] *United Haulers Ass'n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 261 F.3d 245, 250 (2nd Cir. 2001).
[55] *Oneida* at 335.
[56] *Id.* at 346; *citing Philadelphia v. New Jersey*, 437 U.S. 617, 624 (1978).
[57] *Id.* at 346; *citing Pike v. Bruce Church Inc.*, 397 U.S. 137, 142 (1970); *Northwest Central Pipeline Corp. v. State Corporation Comm'n of Kan.*, 489 U.S. 493, 525-526 (1989).
[58] *Oneida* at 346-47.
[59] *Id.* at 342.
[60] *Id.* at 347.
[61] *Id.* at 342.
[62] *Id., citing Metropolitan Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 756 (1985).
[63] *Oneida* at 343.
[64] *Id.*
[65] *Id.*
[66] *Id.* at 344.

"...'[w]aste disposal [as] both typically and traditionally a local government function....'"[67] He also pointed to the fact that the citizens who voted for the flow control ordinances would also bear the burdens they imposed: the higher cost of waste disposal.[68]

Because the effect of the flow control ordinances at issue in Oneida was to treat in-state and out of state private business equally,[69] and because of the differences found by the Court between favoring government as opposed to favoring private businesses,[70] the Court held that the Commerce Clause had not been violated.

E. Post "*Oneida*" Issues

The differing results in the *Carbone* and *Oneida* cases clearly rest on the distinction between public and private facilities. However, that distinction may not be as clear as it seems. For example, what does it take to be considered "public"? In *Oneida*, the Authority both owned and operated the transfer station and this was considered "public". In *Carbone*, the town of Clarkstown neither owned nor operated that transfer station, and, even though the contract involved conveyed the facility to Clarkstown in 5 years, the Court still considered it "private". There are obviously lots of permutations in between. How will a Court treat a case where the government owns but does not operate a facility? This fact pattern exists all over Texas. Is ownership enough to be included within the "typical and traditional" public function stressed by the Supreme Court? If mere ownership satisfies this test, how attenuated can that ownership rule be? Can the town lease the facility and just retain a reversionary interest?

Another not fully defined issue is what does it take to satisfy the local cognizable benefit criteria in the Pike balancing test. While always a fact intensive inquiry, will revenue generation be enough? The first court to answer this issue said "yes." Specifically, the District Court in the *Quality Compliance Services v. Dougherty County, Georgia*[71] held that Dougherty County's flow control ordinance, enacted for the acknowledged purpose of revenue generation, was a sufficient rationale. However, note that this is just one District Court and the burdens on interstate commerce against which the local revenue benefit was being weighed were fairly insubstantial.

Yet another challenge is exemplified by the case of *Escambia County, Florida v. Allied Waste Services of North America, LLC*[72] where the waste company claimed that the County's flow control ordinance was a violation of its rights under the Contracts Clause of the U.S. Constitution because it impaired the waste company's rights under contracts it had entered into with the County itself as well as other municipalities. The Contracts Clause argument recently withstood a summary judgment challenge and, if the case does not settle, it could establish the first carve out from *Oneida*.

Consider what effect the *Oneida* case would have on the business plans, of a private company considering siting a new landfill and relying upon its continued ability to bring the

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[67] *Id.*
[68] *Id.* at 345.
[69] *Id.*
[70] *Id.* at 342-45.
[71] 553 F. Supp.2d 1374 (M.D. Ga. 2008)
[72] 2008 WL 4999229 (N.D. Fla)

waste collected in the host city or cities to its proposed new landfill. How could such a company deal with the risk that it will spend millions of dollars on the property and the permitting process only to subsequently discover that the city in which its customers live could pass a flow control ordinance?

III. CHANGES TO THE DEFINITION OF SOLID WASTE

A. Introduction

The Environmental Protection Agency ("EPA") adopted revisions to the Definition of Solid Waste (DSW) Rule, effective December 29, 2008. The DSW Rule provisions are a central part of the EPA's regulations of hazardous waste under the Resource Conservation and Recovery Act of 1976 (RCRA).[73] The main revisions allow secondary materials recycled by reclamation that have previously been regulated as hazardous waste to be excluded from the definition of solid waste (and therefore regulation as hazardous waste) if they are legitimately recycled and are:

- generated and reclaimed under the control of the generator;
- generated and transferred to another company for reclamation;
- exported for reclamation ("export exclusion); or
- determined by the Administrator to be non-wastes on a case-by-case basis.[74]

In order to be considered legitimately recycled and thereby distinguished from sham recycling the materials must be reclaimed rather than discarded. The rule provides examples of both.[75]

The revisions are intended to encourage and expand recycling of hazardous secondary materials by removing unnecessary controls over materials that are not discarded.[76] The provisions potentially affect approximately 5,600 facilities that generate hazardous secondary materials previously regulated as RCRA Subtitle C hazardous wastes such as industrial by-products.[77]

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[73] Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6921-39(e) (West 2003).
[74] 40 C.F.R. § 261.2(a)(2)(ii) (2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 261.4(a)(17), (23), (24)(2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 260.30 (2009), *available at* http://ecfr.gpoaccess.gov/.
[75] Examples of reclaimed materials eligible for exclusion include spent solvents that are regenerated and reused and manufacturing residues from which metals are recovered for reuse. Examples of materials that are not eligible for the exclusion include: materials burned for energy recovery; materials recycled in ways that involve placement on the land; spent lead-acid batteries; and spent petroleum catalysts (K171 and K172).
[76] *See* Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,668-75 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).
[77] *Id.* at 64,668.

The 2008 revision to the DSW Rule is being challenged at the EPA and in the D.C. Circuit Court of Appeals.[78] These challenges may result in the EPA amending the rule provisions, or the court ordering the provisions to be set aside. On January 27, 2009, the American Petroleum Institute (API) filed a Petition for Review with the D.C. Circuit.[79] On January 28, 2009, the Sierra Club filed a Petition for Review with the D.C. Circuit.[80] The Petitions for Review are currently in abeyance pending further court order.[81] On January 29, 2009, the Sierra Club filed a Petition for Reconsideration with the EPA.[82] In the latter petition, the Sierra Club set forth two main reasons for its challenges to the DSW Rule:

- the rule substantially increases threats to public health and the environment without producing compensatory benefits; and
- the rule is "unlawful" and should be repealed.[83]

On March 6, 2009 a coalition of industry associations submitted a letter requesting that the EPA deny the Sierra Club Petition.

The EPA will hold a public meeting June 30, 2009, regarding the Petition for Reconsideration.[84] The EPA indicated that it does not plan to repeal the rule in whole or stay its implementation, but will consider revisions.[85]

The 2008 DSW Rule represents yet another attempt by the EPA to clarify the meaning of "solid waste" and the EPA's jurisdiction under RCRA. Since RCRA was adopted in 1976, the EPA has undergone numerous rulemakings and been subject to numerous lawsuits. Throughout that history parties have continued to believe that the EPA is either under-regulating, exceeding its jurisdiction, or both. This adoption is no exception. Under the Petition for Reconsideration and associated filings, the Sierra Club and other groups oppose the rule, while Industry supports it. From surface level, it may seem counter-intuitive for the Sierra Club to oppose a provision to encourage recycling and Industry to support the EPA rule. However, the concern of the Sierra Club and others is that the decreased regulations will result in harm to public health and the environment, while Industry is supportive of decreased regulations, which would decrease the costs and therefore encourage recycling.

Affected entities should be aware of the rule provisions that have been adopted by the EPA and that may be adopted in the states authorized to administer RCRA provisions. However, this paper will not focus on specific changes to the rule and the entire scope of their implications for three reasons.

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[78] Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009); Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).
[79] Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).
[80] Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009).
[81] Order, No. 09-1038 (Mar. 3, 2009).
[82] Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[83] Petition for Reconsideration at 1 and 6, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[84] Definition of Solid Waste Public Meeting, 74 Fed. Reg. 25,200, 25,200 (May 27, 2009).
[85] *Id.*

- The changes to the rule provisions and the final rule provisions are lengthy and complex and exceed the scope of this paper. The changes (both preamble and rule language) were published in over 100 pages of the Federal Register, and have implications throughout the hundreds of pages of EPA rules addressing RCRA Subtitle C.

- Due to the legal challenges and uncertainty surrounding the rule, any discussion of the specifics of these provisions seems premature.

- Texas is in the majority of authorized states that have not adopted the revised rule provisions.

What this paper will focus on, instead, are the arguments for and against amendment or repeal that were filed in the Petition for Reconsideration and responses to the petition. These arguments provide a context for understanding what the final rule looks like and the effects that it will have. This paper will first give a brief background of the rule, as well as an overview of the rule and its revisions. It will then discuss the Petition for Reconsideration and responses, followed by a brief discussion of the Petitions for Review, the status of state implementation, and next steps.

B. Background

The EPA regulates hazardous waste under the authority of RCRA Subtitle C, which established a federal program to regulate hazardous waste from "cradle-to-grave" (including treatment, storage, and disposal).[86] Hazardous waste cannot be disposed of unless treated to reduce hazardous constituents or stored to ensure that "the hazardous constituents will not migrate from the disposal unit."[87] Within the EPA's rule, the definitions of "solid waste" and "discarded material" are significant. A material cannot be a "hazardous waste" if it is not a "solid waste."[88] Therefore, "[w]hat constitutes a 'solid waste' is really the definitional starting point for the hazardous waste management system."[89] Additionally, a material must be "discarded" to be a "solid waste."[90] Accordingly, to be subject to regulation by the EPA under RCRA Subtitle C, materials must meet the definitions of "discarded material," "solid waste," and "hazardous waste," and not meet the criteria for exclusions. Therefore, the increased exclusions from the definition of "solid waste" and the decrease in material considered "discarded" reduce the amount of material subject to jurisdiction by the EPA under RCRA Subtitle C.

Defining "solid waste" has been a problem for some time, with numerous rulemakings and lawsuits from 1980 to the present. Prior to its 2008 adoption, the latest version of the DSW Rule was first proposed in 2003, and then reproposed in 2007. (See Appendix A for a timeline of the main rulemakings and lawsuits.) The controversy centers around 40 C.F.R. § 261.2(a)(2),

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[86] Hazardous Waste Management System: General, 45 Fed. Reg. 33,066, 33,066 (May 19, 1980) (to be codified at 40 C.F.R. pt. 260); *Am. Petroleum Inst. v. EPA*, 906 F.2d 729, 732 (D.C. Cir. 1990).
[87] *Ass'n of Battery Recyclers v. EPA*, 208 F.3d 1047, 1050 (D.C. Cir. 2000).
[88] Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33,084, 33,090 (May 19, 1980) (to be codified at 40 C.F.R. pt. 261).
[89] *Id.*
[90] 40 C.F.R. § 261.2 (2009), *available at* http://ecfr.gpoaccess.gov/; *Am. Mining Cong. v. EPA*, 824 F.2d 1177, 1193 (D.C. Cir. 1987).

which contains the regulatory definition of "solid waste," but also involves associated definitions, conditions, and exclusions. Generally, the controversy has involved whether recycled materials are "discarded" and can therefore be "solid waste"; whether recycling is legitimate; and the exact scope of EPA's jurisdiction under RCRA. Through the court cases, the D.C. Circuit has found that the EPA has exceeded its jurisdiction when it regulates certain recycled materials, but has stopped short of determining that the EPA has no jurisdiction over any recycled materials.[91]

There are different perceptions of how the 2008 DSW Rule will impact recycling and the environment. From the industry perspective, it is costly to comply with RCRA regulations. When businesses add this to the cost to recycle rather than dispose of the materials, they are discouraged from recycling. Accordingly, if the regulatory costs associated with recycling are reduced or eliminated, the businesses are more likely to recycle. Additionally, industry believes that the EPA's jurisdiction is limited under RCRA, and that EPA has previously exceeded its jurisdiction with its regulations of recycled materials. Not surprisingly, from the perspective of the Sierra Club and others, when fewer materials are under the regulation of the EPA, it is more likely that there will be harm to the environment and public health.

C. Overview of Rule and Revisions

1. Purpose:

The purpose of the revised rule is to both "encourage safe, environmentally sound recycling and resource conservation and to respond to several court decisions concerning the definition of solid waste."[92]

2. Overview of Rule Provisions

Persons who generate, transport, treat, store, or dispose of hazardous wastes that are identified by characteristic, or because they are specifically listed within the DSW Rule provisions are subject to regulation under the hazardous waste management system.[93] The regulations encompass requirements spanning from record keeping to security to emergency procedures. Under the previous and 2008 versions of the rule, certain recycled materials are designated as solid wastes depending on what they are and the recycling activity (such as reclamation or speculative accumulation).[94] Under the previous and 2008 versions of the rule, materials that can be considered solid wastes if recycled by reclamation, and not otherwise excluded under 40 C.F.R. § 261, are certain spent materials; sludges listed in the rule; by-products listed in the rule; and scrap metal.[95] The 2008 revisions provide new exclusions so that

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[91] *See Safe Food & Fertilizer v. EPA*, 350 F.3d 1263, 1268 (D.C. Cir. 2003) (*citing Am. Mining Cong. v. EPA*, 824 F.2d 1177, 1186 (D.C. Cir. 1987); *Ass'n of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047, 1056 (D.C. Cir. 2000); *Am. Petroleum Inst. v. EPA*, 906 F.2d 729, 740-41 (D.C. Cir. 1990); *Am. Mining Cong. v. EPA*, 907 F.2d 1179, 1186-87 (D.C. Cir. 1990)).

[92] Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,668 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

[93] Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33, 084, 33,084-85.

[94] 40 C.F.R. § 261.2(c) (2008); 40 C.F.R. § 261.2(c) (2009), *available at* http://ecfr.gpoaccess.gov/.

[95] 40 C.F.R. § 261.2(c) (2008); 40 C.F.R. § 261.2(c) (2009), *available at* http://ecfr.gpoaccess.gov/.

these newly excluded materials may not be considered solid waste (and therefore hazardous waste) if recycled by reclamation. The new exclusions are applicable for materials that are:

- generated and reclaimed under the control of the generator ("generator-controlled exclusion");
- generated and transferred to another company for reclamation ("transfer-based exclusion");
- exported for reclamation ("export exclusion"); or
- determined by the Administrator to be non-wastes on a case-by-case basis ("non-waste determination").[96]

It is important to note that the full rule provisions are much more complex. The full rule provisions include conditions that must be met for the exclusions to apply, including that the material must be legitimately recycled within the criteria of the rule provisions which set forth two mandatory criteria and two criteria that must be considered but are not determinative.[97] Additionally, the rule provisions contain a requirement that those planning to operate under the generator-controlled, transfer-based, or export exclusions notify the Regional Administrator. Selected rule provisions are provided in Appendix B for reference purposes, however, affected parties should fully evaluate any provisions proposed or adopted in their state or territory to ensure compliance.

D. Legal Challenges and Uncertainty

The 2008 revision to the DSW rule is being challenged at the EPA and in the D.C. Circuit Court of Appeals.[98] On January 27, 2009, the American Petroleum Institute (API) filed a Petition for Review with the D.C. Circuit.[99] On January 28, 2009, the Sierra Club filed a Petition for Review with the D.C. Circuit.[100] On January 29, 2009, the Sierra Club filed a Petition for Reconsideration with the EPA.[101] The challenges at both levels introduce legal uncertainty to the DSW Rule because it is unknown whether the provisions will remain in place, be set aside by the court, or amended by the EPA. Additionally, most authorized states have not adopted the

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[96] 40 C.F.R. § 261.2(a)(2)(ii) (2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 261.4(a)(17), (23), (24), (25) (2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 260.30 (2009), *available at* http://ecfr.gpoaccess.gov/.

[97] The two mandatory factors are that (1) the materials must provide a useful contribution to the recycling process into a product or intermediate and (2) recycling must produce a valuable produce or intermediate. The two factors that must be considered are (1) the materials must be managed as valuable commodities and (2) the products of recycling must not contain significantly higher levels of hazardous constituents than are in analagons products. This factor seeks to address the EPA's longstanding concern about what the critics have called the "toxics along for the ride" issue. As explained later, this EPA effort has been both supported and still criticized depending on your point of view.

[98] Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009); Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).

[99] Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009).

[100] Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009).

[101] Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

provisions and have the discretion whether or not to do so. The Petition for Reconsideration sets forth the concerns of the Sierra Club behind both the Petition for Reconsideration and Petition for Review. This discussion will focus on the Petition for Reconsideration and associated responses, and then briefly address the Petitions for Review, the status of state implementation, and next steps.

1. Petition for Reconsideration and Responses

It may be surprising to hear that the Sierra Club opposes provisions that were adopted with the intent to encourage recycling. However, the Sierra Club and other organizations (collectively "Opponents") express concern that the rule decreases the EPA's oversight over dangerous substances by excluding certain wastes destined for recycling from the definition of "solid waste."[102] Their concern is based upon the potential environmental harm that could occur if the recycling is not done responsibly. The Petition for Reconsideration requests that EPA reconsider and repeal the rule, and stay its implementation for two main reasons:

- the rule substantially increases threats to public health and the environment without producing compensatory benefits; and
- the rule is "unlawful" and should be repealed.[103]

Responses to this Petition were filed by Industry-Respondents; IPC, Association Connecting Electronics Industries; and the National Mining Association (collectively, "Proponents").[104] (Notably, API did not file a response to the Petition for Reconsideration.) Proponents generally disagree with Opponents, believe the rule to be lawful, and do not believe that the rule should be amended.

(a) The Threats to Public Health and the Environment and Associated Benefits - The first reason given in the request by the Opponents for reconsideration and repeal is that the rule substantially increases threats to public health and the environment without producing compensatory benefits.[105] This concern is broken down into three parts: 1) health and environmental threats; 2) environmental benefits; and 3) economic benefits. Specifically, Opponents believe that the rule increases threats to public health and the environment, brings negligible environmental benefits and only results in small economic benefits to the deregulated industries. Proponents disagree, and contend that the rule provides environmental protections, results in environmental benefits, and produces significant cost savings.

(i) Health and Environmental Threats

[102] Petition for Reconsideration at 1-2, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Letter to EPA at 1-2, Earthjustice, et al., EPA-HQ-RCRA-2009-0315 (Apr. 20, 2009) (see Appendix C).
[103] Petition for Reconsideration at 1 and 6, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[104] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 1, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009) (see Appendix C); Request to Affirm "Revisions to Definition of Solid Waste" at 1, IPC Association Connecting Electronics Industries, EPA-HQ-RCRA-2009-0315 (Apr. 23, 2009) (IPC is a trade association representing over 2,700 companies from the electronics interconnect industry); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 1, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).
[105] Petition for Reconsideration at 1, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

Opponents - Opponents generally believe that while recycling these wastes may be advantageous in certain circumstances, the recycling operations "pose all of the same risks that other hazardous waste operations pose to human health and the environment."[106] They contend that removing such operations from regulation will increase threats to public health and the environment. As evidence, Opponents point to EPA's own reports of evidence of damage at facilities that recycle hazardous waste or store it prior to recycling, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* ("*2007 Assessment*") and *Addendum: An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* ("*2008 Addendum*").[107] In these "damage cases," "toxic releases from recycling activities caused serious contamination of air, water and soil, necessitating costly clean-ups."[108] Opponents believe these reports, which identify 218 cases of damage, present "compelling evidence of damage to health and the environment from mismanagement of hazardous wastes at recycling operations."[109] Adding to this concern is that the report was non-exhaustive, as acknowledged by the EPA.[110] Opponents note that the documented sites required over $200 million in remedial response costs.[111] Opponents state that the large majority of damage cases identified in these reports were at facilities already subject to exemptions under 40 C.F.R. § 261.4.[112] They contend that this and other data demonstrate that exempting additional materials will increase the risk of harm to health and the environment and that facilities operating without RCRA permits are far more likely to cause damage.[113] Opponents also note that of the 208 cases identified in the *2007 Assessment,* only 6% involved wholly on-site recycling.[114] They point out that 95% of the facilities that EPA is deregulating under the DSW Rule involve off-site recycling.[115] This is important because while Opponents believe that the off-site facilities "constitute the great majority of the damage cases," these facilities are part of the group now deregulated.[116] Opponents conclude that the evidence demonstrates that recycling of hazardous materials is dangerous to human health and the environment if not done under a "stringent regulatory

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[106] Letter to EPA at 2, Earthjustice, et al., EPA-HQ-RCRA-2009-0315 (Apr. 20, 2009).
[107] Petition for Reconsideration at 2, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (*citing* EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Mat*erials (2007); EPA, EPA-HQ-RCRA-2002-0031-0601, *Addendum: An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2008)).
[108] Letter to EPA at 1, Earthjustice, et al., EPA-HQ-RCRA-2009-0315 (Apr. 20, 2009).
[109] Petition for Reconsideration at 2-3, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[110] *Id.* at 2-3.
[111] *Id.* at 3 (*citing* EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007); EPA, EPA-HQ-RCRA-2002-0031-0601, *Addendum: An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2008)).
[112] *Id.*
[113] *Id.* at 3-4.
[114] *Id.*
[115] Petition for Reconsideration at 3-4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (*citing* EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008).
[116] *See id.*

system;" that off-site recycling is inherently more dangerous than on-site recycling; and that the regulations applicable at the time of the *2007 Assessment* were not enough.[117]

Part of the Opponents' concern regarding the increased threats to health and the environment is their belief that the DSW Rule "does not account for the instability of recycling markets, and current financial conditions increase the risk of hazardous waste abandonment."[118] This concern centers on the new transfer-based exclusion under which certain secondary materials generated and transferred to another company for reclamation are not considered solid waste if they meet certain criteria. Opponents further note that 25% of the facilities that EPA is deregulating under the DSW Rule involve "transfer facilities or 'middlemen'" (i.e. intermediate facilities eligible for the transfer-based exclusion).[119] Opponents note that EPA documentation shows that abandonment prior to recycling accounted for a third of the damage cases in the 2007 Assessment, and "economic pressures are the most common reason" for this.[120] Opponents state that the new rule only requires generators to make "'reasonable efforts' to determine the legitimacy and financial viability of middlemen and recycling facilities" that they send their waste to once every three years.[121] Opponents believe that this relaxes requirements that previously "prohibited 'fly-by-night' operations and allowed only companies with RCRA Part B permits that met strict storage and handling requirements, as well as financial standards, to recycle hazardous waste."[122] For these reasons, Opponents believe that the rule increases threats to public health and the environment.

Proponents - Proponents believe that the conditions placed on the exclusions are sufficient and ensure that the rule is environmentally protective. Proponents believe that the Petition for Review ignores the conditions imposed by the DSW Rule.[123] Proponents contend that the rule imposes stringent conditions under which generators and reclaimers as well as transporters and intermediate facilities must comply to be excluded from regulation under Subtitle C.[124] Proponents state that these conditions will ensure that the recycling conducted under the rule will not result in the type of incidents addressed in the *2007 Assessment*.[125]

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[117] Petition for Reconsideration at 3, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (citing EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007)).

[118] Petition for Reconsideration at 4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009)/

[119] *Id.* (*citing* EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008).

[120] Petition for Reconsideration at 4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (*citing* Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,678 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270); EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007)).

[121] Petition for Reconsideration at 4, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (*citing* 73 Fed. Reg. at 64,689; 40 C.F.R. § 261(a)(24)(v)(B) (2009), *available at* http://ecfr.gpoaccess.gov/).

[122] *Id.* at 4.

[123] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 9, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

[124] *Id.* at 6 and 9.

[125] *Id.* at 6 *citing* EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007)).

Proponents note that in 209 of the 218 total damage cases, the damage occurred where almost none of the controls set by the revised rule were in place.[126] Proponents assert that the damage, which was primarily caused by mismanagement and abandonment, was addressed by rule requirements, including that the hazardous secondary materials:

> be properly contained (or managed in a manner that is at least as protective as an analogous raw material), that materials not be speculatively accumulated, that generators perform comprehensive due diligence on reclamation facilities that do not have RCRA Part B permits, and that each reclamation facility (or intermediate facility where appropriate) obtain full financial assurance, among other requirements."[127]

Proponents believe the requirements are acceptable and will likely be exceeded. Specifically, under the transfer-based exclusion, Proponents believe that the reasonable efforts requirements reflect the "best practices within the industry." [128] Proponents expect that good business practice as well as concern for liability and enforcement will result in additional measures "such as site-specific audits or detailed examinations of the company's financial and technical capabilities" by the generators.[129] Proponents believe that since reclamation facilities typically have many customers that will each be required by the rule and internal practices to perform reviews, but are unlikely to perform them on the same schedules, the facilities will likely be subjected to frequent and ongoing due diligence reviews.[130] Additionally, Proponents believe that the financial assurance requirements are substantial, and the legitimacy criteria will provide another layer of environmental protection.[131] Proponents believe that these and other requirements will reduce, if not eliminate, the potential for mismanagement and abandonment.[132] Therefore, Proponents believe the rule is environmentally protective.[133]

(ii) Environmental Benefits

Opponents - An additional issue is whether there will be corresponding environmental benefits. Opponents note that hazardous waste recycling is only expected to increase by 23,000 tons per year as a result of these exclusions, a 1.1% increase over

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[126] *Id.*
[127] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 9, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[128] *Id.* at 10.
[129] *Id.* at 11.
[130] *Id.*
[131] *Id.* at 12; *Id.* at 10.
[132] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 10, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[133] *Id.*

the 2005 baseline of 2.045 million tons.[134] They believe that a "substantial amount" of recycling occurred despite the more stringent regulations that were previously in place, and that any increase in hazardous waste recycling will be negligible.[135]

Proponents - Proponents disagree that environmental benefits will be negligible, contending that by decreasing the costs and encouraging recycling, landfill volumes and environmental impacts will be reduced.[136] Proponents note that in addition to the 23,000 tons per year of "potentially recoverable materials contained in metals, solvents and other chemicals" that "may now be recycled rather than being disposed" of, the "EPA estimates that the rule will conserve over 900 tons per year of virgin materials, at a market value of $4.7 million dollars."[137] Proponents disagree that the rule must substantially increase hazardous waste recycling to be successful because the objective under RCRA is to simply encourage hazardous waste recycling, an objective that is fulfilled by the rule.[138]

Without regard to their contention that the success of the Rule should not be measured by how many tons are recycled, Proponents expect that the Agency's estimate of an additional 23,000 tons per year that could switch from disposal to recycling is low, referencing the EPA's report indicating that a potential of an additional 327,000 tons per year could be recycled.[139] Further, Proponents believe that the exclusion for middlemen will enable recycling among small and medium-sized businesses.[140] Since small and medium-sized businesses do not produce enough secondary material to work directly with a recycling facility, the ability to work with middlemen to aggregate the materials will allow small and medium-sized companies to utilize the exclusion and recycle their secondary materials.[141] Therefore, Proponents disagree with Opponents that the rule is not successful in producing environmental benefits.

(iii) Economic Benefits

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[134] Petition for Reconsideration at 5, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (*citing* EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008)).

[135] Petition for Reconsideration at 5, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (*citing* EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008)).

[136] *See* Request to Affirm "Revisions to Definition of Solid Waste" at 2, IPC Association Connecting Electronics, EPA-HQ-RCRA-2009-0315 (Apr. 23, 2009); *see* Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

[137] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009) (*citing* EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008)).

[138] *Id.* at 12.

[139] *Id.* at 13 (*citing see* EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008)).

[140] Request to Affirm "Revisions to Definition of Solid Waste" at 2, IPC Association Connecting Electronics, EPA-HQ-RCRA-2009-0315 (Apr. 23, 2009).

[141] *Id.*

Opponents - The next disagreement is whether the economic benefits are sufficient. Opponents believe that the economic benefits of the rule are small and will accrue only to the deregulated industries.[142] Opponents note that the economic benefit, not accounting for costs of health and environmental damage, is estimated by EPA to be $95 million per year for up to 5,600 companies, but possibly as low as $19 million.[143] Opponents are also concerned that jobs will be lost by a decreased need for licensed professionals handling hazardous waste recycling.[144] In sum, on the issue of economic benefits, Opponents believe that some business costs will be decreased, but the overall cost in terms of health and potential environmental damage for the negligible return is not worth it.

Proponents - Proponents disagree with Opponents' view of the economic impact. Proponents believe that the rule promotes recycling by removing regulatory barriers, and can provide cost savings that are "critical in today's economy."[145] Proponents believe that an economic benefit of approximately $95 million per year is "not insignificant."[146] Moreover, Proponents reference EPA's own report that indicates that the economic impact could be up to $333 million per year.[147] Proponents disagree with the potential for job losses and point to comments by the Environmental Technology Council, the national trade association representing firms that comprise the commercial hazardous waste recycling industry which "overwhelmingly supported" the promulgation of the rule.[148] Proponents state that the economic and environmental benefits are "driven in large measure by reduced regulatory transactional costs, *viz.*, the reduced monetary and related burdens associated with hazardous waste manifesting and transportation requirements, reporting and recordkeeping obligations, and status as a large quantity generator."[149]

Summary of First Issue - While Opponents believe the economic impacts are minimal and are only a benefit to industry, not surprisingly, Proponents believe the economic benefits to be an important aspect of the rule. Overall, Opponents contend that the rule increases the risks to public health and the environment, with negligible return, while Proponents believe that the rule provides sufficient controls and significant benefits.

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[142] Petition for Reconsideration at 5, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[143] *Id.* (*citing* EPA, EPA-HQ-RCRA-2002-0031-0602, *Regulatory Impact Analysis: USEPA's 2008 Final Rule Amendments to the Industrial Recycling Exclusions of the RCRA Definition of Solid Waste* (2008)).
[144] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 5, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[145] Request to Affirm "Revisions to Definition of Solid Waste" at 1, IPC Association Connecting Electronics, EPA-HQ-RCRA-2009-0315 (Apr. 23, 2009).
[146] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 13, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[147] *Id.*
[148] *Id.* at 13-14.
[149] Follow-Up From the March 26th Meeting With Industry-Respondents to Discuss Sierra Club's Petition for Reconsideration of the Definition of Solid Waste Rule at 2, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Apr. 15, 2009).

(b) Administrative Procedure Act Compliance - The second reason for the request for reconsideration and repeal is that the rule is unlawful under the Administrative Procedure Act (APA).[150] Opponents conclude this for two reasons:

- "EPA's adoption of the [r]ule was arbitrary and capricious and otherwise not in accordance with law because several terms essential to the [r]ule are so vague as to deny regulators, regulated entities, and the public an intelligible standard for compliance and enforcement efforts."[151]

- "[W]ithout support in the administrative record, the EPA arbitrarily and capriciously concluded that the DSW Rule carried no potential for adverse environmental impacts, including for the low-income and minority communities disproportionately located near facilities deregulated by the [r]ule."[152]

Opponents' first reason is based on the lack of a definition for the terms "contained" and "significant release." Opponents' second reason is based on the EPA's determination that the rule would have no environmental impact. However, Proponents, on the other hand, disagree that the adoption was arbitrary and capricious and otherwise not in accordance with the law, and that the EPA did not have support for its conclusions. Proponents believe the rule to be lawful.

(i) "Contained" and "Significant Release" Are Undefined

Opponents - By not defining "contained" and "significant release," Opponents contend that the rule is "arbitrary and capricious, an abuse of discretion, and not in accordance with the law."[153] Opponents believe that the provisions of the rule excluding certain recycled hazardous secondary materials from the definition of solid waste are contingent on those materials being "contained."[154] Opponents state that while the EPA responded to comments by clarifying the meaning of control, the description is insufficient.[155] Opponents additionally contend that a "significant release," which the preamble indicates will result in materials being considered a hazardous waste, is not defined and is only located in the preamble.[156] Opponents contend that with no basis to determine if materials are contained, or have been significantly released, there is no basis for companies to know their compliance status, or inspectors to make enforcement determinations.[157] Therefore, Opponents conclude that the

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[150] Petition for Reconsideration at 6, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[151] *Id.*
[152] *Id.*
[153] *Id.*
[154] *Id.* (*citing* 40 C.F.R. §§ 261.2(a)(2)(ii), 261.4(a)(23)(i), 261.4(a)(24)(v)(A), and (a)(24)(vi)(D) (2009), *available at* http://ecfr.gpoaccess.gov/.)
[155] Petition for Reconsideration at 6-7, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,748 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).
[156] Petition for Reconsideration at 7, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,781 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).
[157] Petition for Reconsideration at 7, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

rule is so vague" that it fails to constrain regulatory decision-making, is arbitrary and capricious, an abuse of agency discretion, and otherwise a violation of the law."[158]

Proponents - Proponents disagree and point to the guidance provided in the preamble for "contained" contending that it is sufficient and lawful.[159] Proponents argue that the EPA "is not required to define every operative term in a regulation. EPA is merely required to conduct reasoned rulemaking in light of the evidence in the record."[160] Proponents point to language in the "controlling case" providing that:

> Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of an agency expertise.[161]

In the case of the DSW Rule, Proponents contend that that the use of "contained" addresses and responds to concerns about mismanagement and abandonment identified in the damage cases. Consequently, they conclude that the use of the term is appropriate under the "purposes of RCRA as set forth by Congress and judicial precedent."[162] Additionally, this treatment is consistent with past agency actions regarding 40 C.F.R. § 261.4, *Exclusions*, under which EPA often imposes containment requirements while only generally defining what containment should mean.[163] Proponents further contend that it would be impractical if not impossible for EPA to define "contained" to address every type of containment required for each secondary material stream at all facilities affected by the rule.[164] With the existing performance standards and the approach outlined in the DSW Rule, Proponents believe that the EPA "delineated an objective, workable concept of 'contained'" that will allow facilities and inspectors to determine whether a material is contained.[165] Therefore, Proponents contend that EPA's treatment of "contained" is lawful and should be upheld.

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[158] *Id.* (*citing Atlas Copco, Inc. v. EPA*, 642 F.2d 458, 465 (D.C. Cir. 1979), *South Terminal Corp v. EPA*, 504 F.2d 646, 670 (1st Cir. 1974)).

[159] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 1 and 4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).

[160] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

[161] *Motor Vehicle Mfr.s Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983); *see Int'l Ladies' Garment Workers' Union v. Donovan,* 722 F.2d 795 (D.C. Cir. 1983); *U.S. Telecom Ass'n v. FCC*, 400 F.3d 29 (D.C. Cir. 2005)(an agency regulation need not address every conceivable question (*citing Shalala v. Guernsey Mem'l Hosp.*, 512 U.S. 87, 96 (1995).

[162] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

[163] *Id.*

[164] *Id.* at 15.

[165] *Id.*; Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).

Proponents also take the position that the guidance in the preamble for "significant release" is sufficient.[166] As with "contained" it is impossible for the Agency to define "significant release" to address every scenario.[167] Proponents believe that courts construing RCRA or the APA do not require agencies to define all operative terms.[168] Proponents contend that EPA's treatment of "significant release" is lawful and should be upheld.

(ii) EPA Determined That the DSW Rule Would Have No Environmental Impact

Opponents – Another reason the Opponents contend that the rule is unlawful is because they believe the administrative record does not support EPA's determination that the DSW Rule would not have an environmental impact.[169] Opponents contend that the EPA bases its determination on three unsupported assumptions:

- an undefined 'containment' standard will be as environmentally protective as detailed permit requirements, such as those set forth in RCRA Part B;
- a self-regulatory regime will be as effective in preventing damage as agency oversight and enforcement proceedings; and
- the threat of liability under RCRA or CERCLA [Comprehensive Environmental Response, Compensation, and Liability Act] will be enough to deter improper management of hazardous secondary materials, even though that threat was insufficient under the more rigorous regime that the [r]ule replaced.[170]

Opponents conclude that because the EPA did not offer record evidence defending these assumptions "which defy common sense and years of experience," their "adoption of the [r]ule was arbitrary and unlawful."[171]

Additionally, Opponents complain that the EPA purported "to justify its conclusion that the deregulation of 3 billion pounds of hazardous secondary materials poses no environmental threat on 'its assessment of potential countervailing risks and its determination 'that the conditions [of the [r]ule] address those risks'."[172] This assessment was

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[166] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 14, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

[167] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 15, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

[168] *Id.* at 15-16.

[169] Petition for Reconsideration at 7, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

[170] *Id.* at 7-8.

[171] *Id.* at 8 (*citing Natural Res. Def. Council v. Herrington*, 768 F.2d 1355, 1421 (D.C. Cir. 1985)).

[172] Petition for Reconsideration at 8, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009) (*citing* Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,757 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

based on a "screening" risk analysis that, according to Opponents, was inappropriate as it was not a statistical or engineering model and EPA admitted it was a "relatively low level-of-effort."[173] EPA's conclusion that there is no actual risk of environmental harm as long as a provision of the [r]ule potentially addresses an environmental risk in any manner, Opponents contend was a "simplistic analysis" that was insufficient against the record. Further, the Agency failed to give a "reasonable explanation" why such damage would not be repeated at the same or greater frequency under the revised rule.[174]

Opponents also assert that the EPA's finding of "no net impact" was used to justify avoiding the analysis required by Executive Order 12,898.[175] The Order requires each Federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minorities and low-income populations."[176] However, Opponents contend that the EPA avoided the analysis by conclusively asserting that there could be no disproportionate impacts when there is no environmental impact.[177] Opponents believe that the record contradicts the EPA's conclusion because the *2007 Assessment* indicates that environmental damage is likely to increase at facilities recycling hazardous secondary materials because of the rule, including more than 100 Superfund sites because industrial facilities and Superfund sites are located disproportionately in low-income and minority neighborhoods.[178] Opponents believe that because EPA failed to determine the nature and extent of the impact and ensure the rule will not disproportionately impact any segment of the population, it violated Executive Order 12,898.[179] Therefore, Opponents believe the adoption of the rule was unlawful.

Proponents - Proponents disagree with the Sierra Club's assessment of the studies. They note that the approach "sought to examine the best industry practices as well as determine the types of sites where hazardous secondary materials recycling had resulted in environmental damage."[180] Proponents state that the three-year study resulted in a determination that the damages were overwhelmingly reducible to three causes: 1)

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[173] Petition for Reconsideration at 8, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[174] *Id.*
[175] Petition for Reconsideration at 8, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); (*citing* Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64,757 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270); Federal Actions to Address Environmental Justice in Minority Populations, 59 Fed. Reg. 7,629 (Feb. 16, 1994).
[176] *Id.*
[177] *Id.*
[178] *Id.* at 9 *(citing* EPA, EPA-HQ-RCRA-2002-0031-0355, *An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007); Robert B. Bullard, PhD. et al., *Toxic Wastes and Race at Twenty, 1987-2007, A Report Prepared for the United Church of Christ and Witness Ministries* (2007), *available at* http://www.ejrc.cau.edu/TWART%20 Final.pdf.); Letter to EPA at 1, Earthjustice, et al., *EPA-HQ-RCRA-2009-0315 (Apr. 20, 2009) (citing EPA, EPA-HQ-RCRA-2002-0031-0355, An Assessment of Environmental Problems Associated with Recycling of Hazardous Secondary Materials* (2007); Robert B. Bullard, PhD. et al., *Toxic Wastes and Race at Twenty, 1987-2007, A Report Prepared for the United Church of Christ and Witness Ministries* (2007), *available at* http://www.ejrc.cau.edu/TWART%20 Final.pdf).
[179] Petition for Reconsideration at 9, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Letter to EPA at 1, Earthjustice, et al., EPA-HQ-RCRA-2009-0315 (Apr. 20, 2009).
[180] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 8, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).

mismanagement; 2) improper disposal; and 3) abandonment.[181] They state that the study also produced information on how to prevent harm to the environment.[182] Proponents believe that a more exhaustive study was not necessary for the rulemaking, and that the study was careful, comprehensive, and tailored to the needs of the rule.[183]

Proponents disagree that the screening analysis was inappropriate or unlawful.[184] They state that the assessment was the only means that EPA had of assessing the impact of the rule with the variety of industries, facilities, and operations affected.[185] Additionally, the screening-level assessment "is a recognized and accepted method of assessing a rule's impact where elaborate statistical or engineering models would be impractical or impossible" and "was conducted in accordance with EPA's Information and Data Quality Guidelines, which, in turn, are in accordance with the Office of Management and Budget's ("OMB") government-wide policy regarding information dissemination to the public."[186] Proponents contend that the conditions of the exclusions in the rule were designed and targeted to prevent the identified risks."[187] Industry believes the approach to be lawful and appropriate for the rulemaking, resulting in a proper conclusion that "the [r]ule poses no environmental threat."[188]

Proponents also contend that the finding of "no net impact" was proper. They contend that the EPA appropriately concluded that the rule poses no environmental threat, and that the EPA was "justified in concluding that the rule has no net impact for the purposes of Executive Order 12,898."[189]

Finally, Proponents also asserted that Sierra Club has no standing to argue non-compliance with Executive Order 12,898 because the order "expressly precludes a private right of action based on alleged noncompliance with the Order."[190]

Summary of Second Issue - Opponents believe the rule is unlawful under the APA due to both the absence of definitions for "contained" and "significant release," and because they believe EPA inappropriately concluded that the DSW Rule would not have an environmental impact. However, Proponents contend that the absence of definitions for

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[181] *Id.*
[182] *Id.*
[183] *Id.*
[184] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 16, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[185] *Id.*
[186] *Id.* (*citing see e.g.,* National Research Council, *Science and Judgment in Risk Assessment* (Nat'l Acad. Press, 1994); *see* EPA, EPA/260R-02-008, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by the Environmental Protection Agency* (Oct. 2002), *available at* http://www.epa.gov/quality/informationguidelines/documents/EPA_InfoQualityGuidelines.pdf; Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication, 67 Fed. Reg. 8,452 (Feb. 22, 2002).)
[187] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 16-17, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[188] *Id.* at 17.
[189] *Id.*
[190] *Id.* (*citing* Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7,629, 7,629 (Feb. 16, 1994); and *Kuhl v. Hampton*, 451 F.2d 340, 342 (8th Cir. 1971)).

"contained" and "significant release" does not result in a rule that is unacceptably vague or unenforceable, and that the EPA's conclusion that the DSW Rule would not have an environmental impact was based on information obtained through proper studies. Not surprisingly, Proponents disagree with Opponents that the rule is unlawful under APA.

(c) Additional Issues - The Parties identified other issues in addition to the two categories discussed. These issues include:

- Reasoned balance of existing rule. In their response, Proponents supported the DSW rule as adopted as a "reasoned balance" between providing regulatory relief to encourage resource conservation and recycling and the need to protect public health.[191] On the other hand, Proponents also contended that the rule exceeds the EPA's authority by adopting conditions for the generator-controlled and transfer-based exclusions, thereby improperly asserting authority over secondary materials that are not discarded, contrary to court decisions.[192] Proponents caveat that their support for the current rule would be withdrawn if the EPA reconsiders the final rule, particularly if it adds standards regarding "containment" and "significant release."[193]

- Rulemaking timing. Opponents assert that there was a rush to complete the rule before the administration changed.[194] Proponents disagree, citing the litigation and rulemaking history.[195] Proponents contend that the parties have been engaged in developing this rule to address legitimately reclaimed materials for over fifteen years.[196]

- Consistency with the intent of RCRA. Opponents believe that exempting 1.5 million tons of hazardous waste from regulation is contrary to a primary RCRA objective to "promote the protection of health and the environment and to conserve resources by adopting *preventative* measures 'requiring that hazardous waste be properly managed in the first instance thereby reducing the need for corrective action at a future date.'"[197] They also believe that allowing the industry to self-regulate is contrary to

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[191] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).
[192] *Id.* at 2-4 (*citing Am. Mining Cong. v. EPA*, 824 F.2d 1177 (D.C. Cir. 1987); *Ass'n of Battery Recyclers v. EPA*, 208 F.3d 1047 (D.C. Cir. 2000)).
[193] *Id.* at 5.
[194] Petition for Reconsideration at 1, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Letter to EPA at 1, Earthjustice, et al. (EPA-HQ-RCRA-2009-0315).
[195] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 2-4, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009); Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7-8, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[196] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 7, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[197] Petition for Reconsideration at 2, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).

RCRA.[198] However, Proponents believe that the rule meets all of RCRA's objectives, including the recovery, recycling, and reuse of valuable resources, and discouraging disposal, while protecting public health and the environment."[199]

(d) Next Steps - The EPA held a Public Meeting on June 30, 2009, to discuss possible revisions to the rule. By and large each side reiterated their prior positions. One focus was more noticeable in this round of comments: many Opponents stressed the non-compliance with Executive Order 12,898 and the alleged environmental justice implications of the rule as presently written. The EPA stated in its May 27, 2009, Federal Register meeting notice that it "does not plan to repeal the rule in whole or stay its implementation"[200] and repeated that predisposition at the outset of the public meeting. Instead, the EPA has identified areas for discussion and possible revision that address issues directly discussed in the Petition for Review as well as related issues that could result in strengthening or clarifying rule requirements. The topics for discussion and possible revision are:

- whether the term "contained," which is an undefined term that is part of the requirements of the exclusions, should be further clarified or defined;
- whether the criteria that materials be legitimately recycled that is required for materials to qualify for the new exclusions should apply to all recycled materials;
- whether the provisions to determine whether material is legitimately recycled, which contains two mandatory criteria and two criteria that need only be considered should be amended so that that all four criteria are mandatory;
- whether the requirement that a facility notify the EPA that it will utilize an exclusion should be a condition, that if not met, would mean that the exclusion did not apply, rather than a requirement that, if not met, would only be a violation of notification regulations; and
- whether the transfer-based exclusion should be limited or repealed. [201]

It should be noted that regardless of whether the finalization of the rulemaking was rushed through at the end of the Bush administration, the review is being done under the Obama administration that has already set forth criteria the EPA must follow in all rulemakings. Those are: 1) science must be the backbone for EPA programs; 2) EPA must follow the rule of law; and 3) EPA's actions must be transparent.[202] The EPA has indicated that the third criteria must be conducted with "special pains to connect with those who have been historically underrepresented

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[198] *Id.*
[199] Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at 6, Industry-Respondents, EPA-HQ-RCRA-2009-0315 (Mar. 6, 2009).
[200] Definition of Solid Waste Public Meeting, 74 Fed. Reg. 25,200, 25,200 (May 27, 2009).
[201] *Id.* at 25,200-04.
[202] EPA, EPA-HQ-OW-2009-0082, *Spring 2009 Regulatory Agenda* (May 11, 2009).

in EPA decision making."[203] Based on the claims that Opponents have set forth regarding environmental harms and the impact on low-income communities, these criteria may make a difference in the outcome of the challenge.

After reviewing all comments, EPA will make a tentative decision on the Petition as required by 40 CFR 260.20(c). They will publish the tentative decision in the Federal Register for public comment. After evaluating all public comments, EPA will publish its final decision in the Federal Register. No timeframe has yet been announced.

2. Pending Petitions for Review

Two parties have filed a Petition for Review with the United States Court of Appeals for the D.C. Circuit.[204] The American Petroleum Institute (API) filed on January 27, 2009, and the Sierra Club filed on January 28, 2009.[205] The petitions seek relief under 5 U.S.C. § 706, which provides that the court shall hold unlawful and set aside an agency action if it is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law...."[206] On March 3, 2009, a Clerk Order was issued consolidating the cases, and holding them in abeyance pending further order of the court.[207] The order directed parties "to file motions to govern further proceedings on or before May 4, 2009." As of June 15, 2009, a subsequent order has not been filed.

The Sierra Club's reasoning for its Petition for Review was amply discussed in its Petition for Reconsideration but may be even further developed during briefing for the Petition for Review.[208]

API is challenging the rule for entirely different reasons than the Sierra Club, as indicated in its Statement of Issues. The API challenge is based on the rule's treatment of petroleum refinery catalysts as solid waste. API preliminarily raises two issues: [209]

- whether the EPA's "assertion of jurisdiction" under RCRA "over used petroleum refinery catalysts that are not discarded, but are instead legitimately recycled, was arbitrary or capricious, in excess of statutory authority, or otherwise not in accordance with the law;" and

- whether the EPA's "decision not to exclude from the regulatory definition of 'solid waste' used petroleum refinery catalysts that are not discarded,

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[203] *Id.*
[204] Petition for Reconsideration, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009); Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009). (Petitions filed pursuant to RCRA § 7006(a) (42 U.S.C. § 6976(a)); 5 U.S.C.A. §§ 701-06 (West 2007); Fed. R. App. P. 15(a).)
[205] Petition for Review, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Jan. 27, 2009); Petition for Review, Sierra Club v. EPA, No. 09-1041 (D.C. Cir. Jan. 28, 2009).
[206] 5 U.S.C.A. § 706 (West 2007).
[207] Order, No. 09-1038 (Mar. 3, 2009).
[208] Petition for Reconsideration at 9, Sierra Club, EPA-HQ-RCRA-2009-0315 (Jan. 29, 2009).
[209] Statement of Issues to be Raised at 1, Am. Petroleum Inst. v. EPA, No. 09-1038 (D.C. Cir. Feb. 26, 2009).

but instead are legitimately recycled, was arbitrary or capricious, in excess of statutory authority, or otherwise not in accordance with the law."[210]

API's challenge appears to be addressing specific language under the transfer-based and generator-controlled exclusions that specify that materials qualifying for the exemption cannot meet the listing description for K171 or K172 in 40 C.F.R. § 261.32.[211]

3. Status of State Implementation

States, such as Texas, approved to administer RCRA are required to adopt definitions that are at least as strict as the EPA definitions. Because the revised rule relaxes requirements, states or territories authorized to administer RCRA may decide whether they will adopt the new provisions.[212] Texas is still revising its definition of solid waste consistent with previous EPA rulemakings. Any changes to the definition based on the DSW Rule effective December 29, 2008, will not be addressed until after the current rulemaking is completed.

E. Conclusion

The revisions to the DSW Rule increase the amount of recycled materials excluded from regulations under RCRA Subtitle C. These conditions provide safeguards, but whether the safeguards are sufficient or excessive is a matter of debate. Affected entities should be aware of the adopted rule and its provisions that have been adopted by the EPA and may be adopted in the states authorized to administer RCRA provisions. However, due to the legal challenges and uncertainty surrounding the rule, the ultimate requirements of the rule are yet to be finally determined. In the meantime, the DSW final rule remains in effect, except in those cases, such as Texas, which have not yet adopted it.

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[210] *Id.* at 1-2.

[211] 40 C.F.R. § 261.2(a)(2)(ii) (2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 261.4(a)(23)-(24) (2009), *available at* http://ecfr.gpoaccess.gov/.

[212] Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668, 64753 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).

Appendix A – Timeline and Highlights[213]

The following timeline and highlights of rulemakings and lawsuits in the history of the DSW Rule is provided for reference purposes.

1976 – *Resource Conservation and Recovery Act* (RCRA). [214]

1980 – *Hazardous Waste Management System: Identification and Listing of Hazardous Waste* (Interim Final Rule). The adopted rule largely deferred the issue of recycled materials. Recycled secondary materials were considered waste.[215]

1985 – *Hazardous Waste Management System; Definition of Solid Waste* (Final Rule) (Proposed 1983).[216] The rule included clarification of EPA's jurisdiction over hazardous waste recycling and established a regulatory regime for recycling activities under EPA jurisdiction.[217]

1987 – *American Mining Congress v. EPA ("AMC I").*[218] This suit challenged reuse and recycle rules applied to inprocess secondary materials.[219] The court held that "Congress clearly and unambiguously expressed its intent that 'solid waste' (and therefore EPA's regulatory authority) be limited to materials that are 'discarded' by virtue of being disposed of, abandoned, or thrown away," and that "EPA has acted in contravention of Congress' intent."[220]

1990 – *American Petroleum Institute v. EPA ("API").*[221] This suit challenged the EPA rule.[222] The EPA had determined that "high zinc" (15%+ zinc composition) K061 had to be treated with high temperature metals recovery, but that the EPA did not have authority once it reached the metal reclamation facility because it was no longer "discarded" and therefore no longer a "solid waste."[223] The court remanded, finding that EPA "failed to give a reasoned explanation for its construction of the RCRA" and that EPA mistakenly construed the case law.[224]

1990 – *American Mining Congress v. EPA ("AMC II").*[225] This suit was a challenge to the rule following the relisting of certain wastes as hazardous that had previously been delisted in response to a congressional enactment.[226] The EPA had concluded that because the sludges were "the product of wastewater and [were] stored in impoundments that threaten harm to the health

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[213] *See* Response to Sierra Club's Petition for Reconsideration of "Revisions to the Definition of Solid Waste" at Appendix A, National Mining Association, EPA-HQ-RCRA-2009-0315 (Apr. 21, 2009).
[214] Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §6901 et seq. (West 2003).
[215] Hazardous Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33,084 (May 19, 1980) (to be codified at 40 C.F.R. pt. 261).
[216] Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. 614 (Jan. 4, 1985) (to be codified at 40 C.F.R. pts 260-61, 264-66); Hazardous Waste Management System: General; Identification and Listing of Hazardous Waste; Standards, 48 Fed. Reg. 14,472 (Apr. 4, 1983) (to be codified at 40 C.F.R. pts 260-61, 264-66).
[217] Hazardous Waste Management System; Definition of Solid Waste, 50 Fed. Reg. at 614.
[218] *Am. Mining Cong. v. EPA*, 824 F.2d 1177 (D.C. Cir. 1987).
[219] *See Id.* at 1180.
[220] *Id.*
[221] *Am. Petroleum Inst. v. EPA*, 906 F.2d 729 (D.C. Cir. 1990).
[222] *See Id.* at 732; *Id.* at 734.
[223] *Id.* at 740.
[224] *Id.* at 739.
[225] *Am. Mining Cong. v. EPA*, 907 F.2d 1179 (D.C. Cir. 1990).
[226] *See Id.* at 1181-83.

and environs of those living nearby" the materials were "discarded."[227] The court determined the agency's interpretation of "discarded" to be "reasonable and consistent with the statutory purposes of the RCRA."[228] However, it failed "to articulate a rational connection between the data on which it purportedly relied and its decision to reject the petitioners' admittedly significant challenges."[229] The court remanded for fuller explanation."[230]

1998 – *Land Disposal Restrictions Phase IV – Final Rule.* [231] The rule included special criteria to specify when secondary materials within the mineral processing industry would and would not be considered solid waste. [232]

2000 – *Association of Battery Recyclers v. EPA ("ABR").*[233] This suit was a challenge to the EPA Phase IV rule, and included a challenge to the definition of "solid waste" regarding how materials "'generated and reclaimed within the primary mineral processing industry' are stored."[234] The court stated that the point of *AMC II* and *API* was that "once material qualifies as 'solid waste,' something derived from it retains that designation even if it might be reclaimed and reused at some future time."[235] However, "the Phase IV Rule seeks to regulate materials that are not a by-product of solid waste, but a direct by[-]product of industrial processes."[236] The court stated that at least some of the secondary material EPA sought to regulate as solid waste was destined for reuse as part of a continuous industrial process, not abandoned or thrown away. [237] The court ordered the EPA to define "solid waste" in accordance the opinion, and set aside a parenthetical that purportedly expanded EPA regulation of mineral processing secondary materials.[238]

2002 – *Hazardous Waste Management System; Definition of Solid Waste; Toxicity Characteristic.* (Final Rule)[239] The adopted rule was an EPA response to ABR. Changes included deletion of language that classified "mineral processing characteristic sludges and by-products being reclaimed as solid wastes."[240] In the rulemaking, the EPA announced plans for a solid waste rule.[241]

2007 – *Safe Food & Fertilizer v. EPA.*[242] The suit was a challenge to the EPA rule that specified that RCRA Subtitle C did not apply to recycled materials used to make zinc fertilizers, or to the

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[227] *Id.* at 1186.
[228] *Id.* at 1187.
[229] *Id.* at 1192.
[230] *Am. Mining Cong. v. EPA*, 907 F.2d 1179, 1192 (D.C. Cir. 1990).
[231] Land Disposal Restrictions Phase IV, 63 Fed. Reg. 28,555 (May 26, 1998) (to be codified at 40 C.F.R. pts 148, 261, 266, 268, and 271).
[232] *Id.* at 28,636-38
[233] *Ass'n of Battery Recyclers v. EPA*, 208 F.3d 1047 (D.C. Cir. 2000).
[234] *Id.* at 1050.
[235] *Id.* at 1056 (*citing Am. Petroleum Inst. v. EPA*, 906 F.2d 729 (D.C. Cir. 1990); *Am. Mining Cong. v. EPA*, 907 F.2d 1179 (D.C. Cir. 1990)).
[236] *Id.*
[237] *Ass'n of Battery Recyclers v. EPA*, 208 F.3d 1047, 1056 (D.C. Cir. 2000) (*citing Am. Mining Cong. v. EPA*, 907 F.2d 1179, 1193 (D.C. Cir. 1990)).
[238] *Id.* at 1060.
[239] Hazardous Waste Management System; Definition of Solid Waste; Toxicity Characteristic, 67 Fed. Reg. 11251 (Mar. 13, 2002) (to be codified at 40 C.F.R. pt. 261).
[240] *Id.*
[241] *Id.*
[242] *Safe Food & Fertilizer v. EPA*, 350 F.3d 1263 (D.C. Cir. 2003).

resulting fertilizers themselves, subject to certain conditions.[243] One way of making zinc fertilizers is through recycled by-products of certain industrial processes.[244] The EPA had determined that if the materials met certain conditions, they were not "discarded" under RCRA and therefore not "solid waste."[245] Petitioners' assertions included that the materials in question were "discarded" even though they were recycled, claiming that under the cases "recycled material destined for immediate reuse within an ongoing industrial process is never considered 'discarded,' whereas material transferred to another firm or industry for subsequent recycling must always be so viewed."[246] The court disagreed with this interpretation of the cases, stating:

> We have held that the term "discarded" cannot encompass materials that "are destined for beneficial reuse or recycling in a continuous process by the generating industry itself." *Am. Mining Cong. v. EPA ("AMC I"),* 824 F.2d 1177, 1186 (D.C. Cir. 1987); see also *Ass'n of Battery Recyclers, Inc. v. EPA,* 208 F.3d 1047, 1056 (D.C. Cir. 2000). We have also held that materials destined for future recycling by another industry *may* be considered "discarded"; the statutory definition does not preclude application of RCRA to such materials if they can reasonably be considered part of the waste disposal problem. *Am. Petroleum Inst. v. EPA,* 906 F.2d 729, 740-41 (D.C. Cir. 1990); *Am. Mining Cong. v. EPA ("AMC" II")* 907 F.2d 1179, 1186-87 (D.C. Cir. 1990). But we have never said that RCRA compels the conclusion that material destined for recycling in another industry is necessarily "discarded." Although ordinary language seems inconsistent with treating immediate reuse within an industry's ongoing industrial process as a "discard," see *AMC I,* 824 F.2d at 1185, the converse is not true.[247]

The court did not find that the statutory text precluded EPA's reading, and determined that the EPA's reasons for determining the materials to be discarded were reasonable and consistent with the statutory purpose.[248] The court remanded on the narrow issue of the EPA's selection of an exemption level for chromium, and affirmed in all other respects, denying the petition for review.[249]

2008 – *Definition of Solid Waste Final Rule.*[250] (Originally proposed 2003, supplemental proposal 2007.[251])

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[243] *Id.* at 1265.
[244] *Id.*
[245] *Id.*
[246] *Id.* at 1268.
[247] *Safe Food & Fertilizer v. EPA*, 350 F.3d 1263, 1268 (D.C. Cir. 2003).
[248] *Id.* at 1269.
[249] *Id.* at 1265; *Id.* at 1272.
[250] Revisions to the Definition of Solid Waste, 73 Fed. Reg. 64,668 (Oct. 30, 2008) (to be codified at 40 C.F.R. pts. 260-61, 270).
[251] Revisions to the Definition Solid Waste, 72 Fed. Reg. 14,172 (Mar. 26, 2007) (to be codified at 40 C.F.R. pts. 260-61); Revisions to the Definition of Solid Waste, 68 Fed. Reg. 61,558 (Oct. 28, 2003) (to be codified at 40 C.F.R. pt. 261).

Appendix B: Rule Language

For reference purposes, selected language from 40 C.F.R. §§ 260 and 261 is being provided. Underlines have been added to indicate new language from the 2008 revision. All language is available at: ***http://ecfr.gpoaccess.gov/***. The language provided shows selected changes regarding:

1) The Definition of "hazardous secondary material";
2) Non-Waste Determinations;
3) Notification requirement;
4) Legitimacy Criteria; and
5) Exclusions (generator-controlled, transfer-based, and export).

1) **Definition of "hazardous secondary material."** Amended 40 C.F.R. § 260.10 includes a new definition for "hazardous secondary material," a term used throughout the new provisions.

§ 260.10 Definitions.
Hazardous secondary material means a secondary material (e.g., spent material, by-product, or sludge) that, when discarded, would be identified as hazardous waste under part 261 of this chapter.[252]

2) **Non-Waste Determinations.** Amended 40 C.F.R. § 260.30 sets forth the materials that can be determined to be non-wastes on a case-by-case basis, with two new provisions listed as (d) and (e). New 40 C.F.R. § 260.34 specifies the standards and criteria that the Administrator will apply in granting those determinations.

§ 260.30 Non-waste determinations and variances from classification as a solid waste.
In accordance with the standards and criteria in §260.31 and §260.34 and the procedures in §260.33, the Administrator may determine on a case-by-case basis that the following recycled materials are not solid wastes:

a) Materials that are accumulated speculatively without sufficient amounts being recycled (as defined in §261.1(c)(8) of this chapter);
b) Materials that are reclaimed and then reused within the original production process in which they were generated;
c) Materials that have been reclaimed but must be reclaimed further before the materials are completely recovered.[sic]
d) Hazardous secondary materials that are reclaimed in a continuous industrial process; and
e) Hazardous secondary materials that are indistinguishable in all relevant aspects from a product or intermediate.[253]

§ 260.34 Standards and criteria for non-waste determinations.
(a) An applicant may apply to the Administrator for a formal determination that a hazardous secondary material is not discarded and therefore not a solid waste. The determinations will be based on the criteria contained in paragraphs (b) or (c) of this section, as

[252] 40 C.F.R. § 260.10 (2009), *available at* http://ecfr.gpoaccess.gov/
[253] 40 C.F.R. § 260.30 (2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 260.30 (2008).

applicable. If an application is denied, the hazardous secondary material might still be eligible for a solid waste variance or exclusion (for example, one of the solid waste variances under §260.31). Determinations may also be granted by the State if the State is either authorized for this provision or if the following conditions are met:

(1) The State determines the hazardous secondary material meets the criteria in paragraphs (b) or (c) of this section, as applicable;

(2) The State requests that EPA review its determination; and

(3) EPA approves the State determination.

(b) The Administrator may grant a non-waste determination for hazardous secondary material which is reclaimed in a continuous industrial process if the applicant demonstrates that the hazardous secondary material is a part of the production process and is not discarded. The determination will be based on whether the hazardous secondary material is legitimately recycled as specified in §260.43 and on the following criteria:

(1) The extent that the management of the hazardous secondary material is part of the continuous primary production process and is not waste treatment;

(2) Whether the capacity of the production process would use the hazardous secondary material in a reasonable time frame and ensure that the hazardous secondary material will not be abandoned (for example, based on past practices, market factors, the nature of the hazardous secondary material, or any contractual arrangements);

(3) Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than released to the air, water or land at significantly higher levels from either a statistical or from a health and environmental risk perspective than would otherwise be released by the production process; and

(4) Other relevant factors that demonstrate the hazardous secondary material is not discarded.

(c) The Administrator may grant a non-waste determination for hazardous secondary material which is indistinguishable in all relevant aspects from a product or intermediate if the applicant demonstrates that the hazardous secondary material is comparable to a product or intermediate and is not discarded. The determination will be based on whether the hazardous secondary material is legitimately recycled as specified in §260.43 and on the following criteria:

(1) Whether market participants treat the hazardous secondary material as a product or intermediate rather than a waste (for example, based on the current positive value of the hazardous secondary material, stability of demand, or any contractual arrangements);

(2) Whether the chemical and physical identity of the hazardous secondary material is comparable to commercial products or intermediates;

(3) Whether the capacity of the market would use the hazardous secondary material in a reasonable time frame and ensure that the hazardous secondary material will not be abandoned (for example, based on past practices, market factors, the nature of the hazardous secondary material, or any contractual arrangements);

(4) Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than released to the air, water or land at significantly higher levels from either a statistical or from a health and environmental risk perspective than would otherwise be released by the production process; and

(5) Other relevant factors that demonstrate the hazardous secondary material is not discarded.[254]

3) **Notification Requirement.** New § 260.42 contains notice requirements for generators, tolling contractors, toll manufacturers, reclaimers, and intermediate facilities managing hazardous secondary materials that want to operate under the exclusions.

§ 260.42 Notification requirement for hazardous secondary materials.

(a) Hazardous secondary material generators, tolling contractors, toll manufacturers, reclaimers, and intermediate facilities managing hazardous secondary materials which are excluded from regulation under §261.2(a)(2)(ii), §261.4(a)(23), (24), or (25) must send a notification prior to operating under the exclusion(s) and by March 1 of each even numbered year thereafter to the Regional Administrator using EPA Form 8700–12 that includes the following information:

(1) The name, address, and EPA ID number (if applicable) of the facility;

(2) The name and telephone number of a contact person;

(3) The NAICS code of the facility;

(4) The exclusion under which the hazardous secondary materials will be managed (e.g., §261.2(a)(2)(ii), §261.4(a)(23), (24), and/or (25));

(5) For reclaimers and intermediate facilities managing hazardous secondary materials in accordance with §261.4(a)(24) or (25), whether the reclaimer or intermediate facility has financial assurance (not applicable for persons managing hazardous secondary materials generated and reclaimed under the control of the generator);

(6) When the facility expects to begin managing the hazardous secondary materials in accordance with the exclusion;

(7) A list of hazardous secondary materials that will be managed according to the exclusion (reported as the EPA hazardous waste numbers that would apply if the hazardous secondary materials were managed as hazardous wastes);

(8) For each hazardous secondary material, whether the hazardous secondary material, or any portion thereof, will be managed in a land-based unit;

(9) The quantity of each hazardous secondary material to be managed annually; and

(10) The certification (included in EPA Form 8700–12) signed and dated by an authorized representative of the facility.

(b) If a hazardous secondary material generator, tolling contractor, toll manufacturer, reclaimer or intermediate facility has submitted a notification, but then subsequently stops managing hazardous secondary materials in accordance with the exclusion(s), the facility must notify the Regional Administrator within thirty (30) days using EPA Form 8700–12. For purposes of this section, a facility has stopped managing hazardous secondary materials if the facility no longer generates, manages and/or reclaims hazardous secondary materials under the exclusion(s) and does not expect to manage any amount of hazardous secondary materials for at least one year.[255]

4) **Legitimacy Criteria.** New 40 C.F.R. § 260.43 sets forth the legitimacy requirements that must be met for the exclusions to apply.

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[254] 40 C.F.R. § 260.34 (2009), *available at* http://ecfr.gpoaccess.gov/.

[255] 40 C.F.R. § 260.42 (2009), *available at* http://ecfr.gpoaccess.gov/

§ 260.43 Legitimate recycling of hazardous secondary materials regulated under §260.34, §261.2(a)(2)(ii), and §261.4(a)(23), (24), or (25).

a) Persons regulated under §260.34 or claiming to be excluded from hazardous waste regulation under §261.2(a)(2)(ii), §261.4(a)(23), (24), or (25) because they are engaged in reclamation must be able to demonstrate that the recycling is legitimate. Hazardous secondary material that is not legitimately recycled is discarded material and is a solid waste. In determining if their recycling is legitimate, persons must address the requirements of §260.43(b) and must consider the requirements of §260.43(c) below.

b) Legitimate recycling must involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process, and the recycling process must produce a valuable product or intermediate.

1) The hazardous secondary material provides a useful contribution if it

(i) Contributes valuable ingredients to a product or intermediate; or

(ii) Replaces a catalyst or carrier in the recycling process; or

(iii) Is the source of a valuable constituent recovered in the recycling process; or

(iv) Is recovered or regenerated by the recycling process; or

(v) Is used as an effective substitute for a commercial product.

2) The product or intermediate is valuable if it is

(i) Sold to a third party; or

(ii) Used by the recycler or the generator as an effective substitute for a commercial product or as an ingredient or intermediate in an industrial process.

c) The following factors must be considered in making a determination as to the overall legitimacy of a specific recycling activity.

1) The generator and the recycler should manage the hazardous secondary material as a valuable commodity. Where there is an analogous raw material, the hazardous secondary material should be managed, at a minimum, in a manner consistent with the management of the raw material. Where there is no analogous raw material, the hazardous secondary material should be contained. Hazardous secondary materials that are released to the environment and are not recovered immediately are discarded.

2) The product of the recycling process does not

(i) Contain significant concentrations of any hazardous constituents found in Appendix VIII of part 261 that are not found in analogous products; or

(ii) Contain concentrations of any hazardous constituents found in Appendix VIII of part 261 at levels that are significantly elevated from those found in analogous products; or

(iii) Exhibit a hazardous characteristic (as defined in part 261 subpart C) that analogous products do not exhibit.

3) In making a determination that a hazardous secondary material is legitimately recycled, persons must evaluate all factors and consider legitimacy as a whole. If, after careful evaluation of these other considerations, one or both of the factors are not met, then this fact may be an indication that the material is not legitimately recycled.

4) However, the factors in this paragraph do not have to be met for the recycling to be considered legitimate. In evaluating the extent to which these factors are met and in determining whether a process that does not meet one or both of these factors is still

legitimate, persons can consider the protectiveness of the storage methods, exposure from toxics in the product, the bioavailability of the toxics in the product, and other relevant considerations.[256]

5) **Exclusions.** In both versions of 40 C.F.R. § 261, both 40 C.F.R. § 261.2, Definition of solid waste, and 40 C.F.R. § 261.4, Exclusions, specify materials that are excluded from the definition of solid waste including recycled materials. Likewise, the controversial exclusions adopted in the 2008 rulemaking are located in both sections. These exclusions are in addition to the non-waste determinations previously discussed. The controversial exclusions are the generator-controlled exclusion (land-based and non-land-based); and the transfer-based exclusion. A less controversial exclusion that is also new as of 2008 is the export exclusion. The majority of the new language for the new provisions is below.

§ 261.2 Definition of solid waste.

[Generator-controlled exclusion – non-land-based]

(ii) A hazardous secondary material is not discarded if it is generated and reclaimed under the control of the generator as defined in §260.10, it is not speculatively accumulated as defined in §261.1(c)(8), it is handled only in non-land-based units and is contained in such units, it is generated and reclaimed within the United States and its territories, it is not otherwise subject to material-specific management conditions under §261.4(a) when reclaimed, it is not a spent lead acid battery (see §266.80 and §273.2), it does not meet the listing description for K171 or K172 in §261.32, and the reclamation of the material is legitimate, as specified under §260.43. (See also the notification requirements of §260.42). (For hazardous secondary materials managed in land-based units, see §261.4(a)(23)).[257]

Note:

- K171 is "Spent Hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media)."
- K172 is "Spent Hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media)."[258]

§ 261.4 Exclusions.

a) *Materials which are not solid wastes.* The following materials are not solid wastes for the purpose of this part:

. . .

[Generator-controlled exclusion – land-based]

(23) Hazardous secondary material generated and reclaimed within the United States or its territories and managed in land-based units as defined in §260.10 of this chapter is not a solid waste provided that:

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[256] 40 C.F.R. § 260.43 (2009), *available at* http://ecfr.gpoaccess.gov/.
[257] 40 C.F.R. § 261.2 (2009), *available at* http://ecfr.gpoaccess.gov/.
[258] 40 C.F.R. § 261.32 (2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 261.32 (2008).

(i) The material is contained;

(ii) The material is a hazardous secondary material generated and reclaimed under the control of the generator, as defined in §260.10;

(iii) The material is not speculatively accumulated, as defined in §261.1(c)(8);

(iv) The material is not otherwise subject to material-specific management conditions under paragraph (a) of this section when reclaimed, it is not a spent lead acid battery (see §266.80 and §273.2 of this chapter), and it does not meet the listing description for K171 or K172 in §261.32;

(v) The reclamation of the material is legitimate, as specified under §260.43 of this chapter; and

(vi) In addition, persons claiming the exclusion under this paragraph (a)(23) must provide notification as required by §260.42 of this chapter. (For hazardous secondary material managed in a non-land-based unit, see §261.2(a)(2)(ii)).

[Transfer-based exclusion]

(24) Hazardous secondary material that is generated and then transferred to another person for the purpose of reclamation is not a solid waste, provided that:

(i) The material is not speculatively accumulated, as defined in §261.1(c)(8);

(ii) The material is not handled by any person or facility other than the hazardous secondary material generator, the transporter, an intermediate facility or a reclaimer, and, while in transport, is not stored for more than 10 days at a transfer facility, as defined in §260.10 of this chapter, and is packaged according to applicable Department of Transportation regulations at 49 CFR Parts 173, 178, and 179 while in transport;

(iii) The material is not otherwise subject to material-specific management conditions under paragraph (a) of this section when reclaimed, it is not a spent lead-acid battery (see §266.80 and §273.2 of this chapter), and it does not meet the listing description for K171 or K172 in §261.32;

(iv) The reclamation of the material is legitimate, as specified under §260.43 of this chapter;

(v) The hazardous secondary material generator satisfies all of the following conditions:

(A) The material must be contained.

(B) Prior to arranging for transport of hazardous secondary materials to a reclamation facility (or facilities) where the management of the hazardous secondary materials is not addressed under a RCRA Part B permit or interim status standards, the hazardous secondary material generator must make reasonable efforts to ensure that each reclaimer intends to properly and legitimately reclaim the hazardous secondary material and not discard it, and that each reclaimer will manage the hazardous secondary material in a manner that is protective of human health and the environment. If the hazardous secondary material will be passing through an intermediate facility where the management of the hazardous secondary materials is not addressed under a RCRA Part B permit or interim status standards, the hazardous secondary material generator must make contractual arrangements with the intermediate facility to ensure that the hazardous secondary material is sent to the reclamation facility identified by the hazardous secondary material generator,

and the hazardous secondary material generator must perform reasonable efforts to ensure that the intermediate facility will manage the hazardous secondary material in a manner that is protective of human health and the environment. Reasonable efforts must be repeated at a minimum of every three years for the hazardous secondary material generator to claim the exclusion and to send the hazardous secondary materials to each reclaimer and any intermediate facility. In making these reasonable efforts, the generator may use any credible evidence available, including information gathered by the hazardous secondary material generator, provided by the reclaimer or intermediate facility, and/or provided by a third party. The hazardous secondary material generator must affirmatively answer all of the following questions for each reclamation facility and any intermediate facility:

(*1*) Does the available information indicate that the reclamation process is legitimate pursuant to §260.43 of this chapter? In answering this question, the hazardous secondary material generator can rely on their existing knowledge of the physical and chemical properties of the hazardous secondary material, as well as information from other sources (e.g., the reclamation facility, audit reports, etc.) about the reclamation process. (By responding to this question, the hazardous secondary material generator has also satisfied its requirement in §260.43(a) of this chapter to be able to demonstrate that the recycling is legitimate).

(*2*) Does the publicly available information indicate that the reclamation facility and any intermediate facility that is used by the hazardous secondary material generator notified the appropriate authorities of hazardous secondary materials reclamation activities pursuant to §260.42 of this chapter and have they notified the appropriate authorities that the financial assurance condition is satisfied per paragraph (a)(24)(vi)(F) of this section? In answering these questions, the hazardous secondary material generator can rely on the available information documenting the reclamation facility's and any intermediate facility's compliance with the notification requirements per §260.42 of this chapter, including the requirement in §260.42(a)(5) to notify EPA whether the reclaimer or intermediate facility has financial assurance.

(*3*) Does publicly available information indicate that the reclamation facility or any intermediate facility that is used by the hazardous secondary material generator has not had any formal enforcement actions taken against the facility in the previous three years for violations of the RCRA hazardous waste regulations and has not been classified as a significant non-complier with RCRA Subtitle C? In answering this question, the hazardous secondary material generator can rely on the publicly available information from EPA or the state. If the reclamation facility or any intermediate facility that is used by the hazardous secondary material generator has had a formal enforcement action taken against the facility in the previous three years for violations of the RCRA hazardous waste regulations and has been classified as a significant non-complier with RCRA Subtitle C, does the hazardous secondary material generator have

credible evidence that the facilities will manage the hazardous secondary materials properly? In answering this question, the hazardous secondary material generator can obtain additional information from EPA, the state, or the facility itself that the facility has addressed the violations, taken remedial steps to address the violations and prevent future violations, or that the violations are not relevant to the proper management of the hazardous secondary materials.

(*4*) Does the available information indicate that the reclamation facility and any intermediate facility that is used by the hazardous secondary material generator have the equipment and trained personnel to safely recycle the hazardous secondary material? In answering this question, the generator may rely on a description by the reclamation facility or by an independent third party of the equipment and trained personnel to be used to recycle the generator's hazardous secondary material.

(*5*) If residuals are generated from the reclamation of the excluded hazardous secondary materials, does the reclamation facility have the permits required (if any) to manage the residuals? If not, does the reclamation facility have a contract with an appropriately permitted facility to dispose of the residuals? If not, does the hazardous secondary material generator have credible evidence that the residuals will be managed in a manner that is protective of human health and the environment? In answering these questions, the hazardous secondary material generator can rely on publicly available information from EPA or the state, or information provided by the facility itself.

(C) The hazardous secondary material generator must maintain for a minimum of three years documentation and certification that reasonable efforts were made for each reclamation facility and, if applicable, intermediate facility where the management of the hazardous secondary materials is not addressed under a RCRA Part B permit or interim status standards prior to transferring hazardous secondary material. Documentation and certification must be made available upon request by a regulatory authority within 72 hours, or within a longer period of time as specified by the regulatory authority. The certification statement must:

(*1*) Include the printed name and official title of an authorized representative of the hazardous secondary material generator company, the authorized representative's signature, and the date signed;

(*2*) Incorporate the following language: "I hereby certify in good faith and to the best of my knowledge that, prior to arranging for transport of excluded hazardous secondary materials to [insert name(s) of reclamation facility and any intermediate facility], reasonable efforts were made in accordance with §261.4(a)(24)(v)(B) to ensure that the hazardous secondary materials would be recycled legitimately, and otherwise managed in a manner that is protective of human health and the environment, and that such efforts were based on current and accurate information."

(D) The hazardous secondary material generator must maintain at the generating facility for no less than three (3) years records of all off-site shipments of

hazardous secondary materials. For each shipment, these records must, at a minimum, contain the following information:

(*1*) Name of the transporter and date of the shipment;

(*2*) Name and address of each reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent;

(*3*) The type and quantity of hazardous secondary material in the shipment.

(E) The hazardous secondary material generator must maintain at the generating facility for no less than three (3) years confirmations of receipt from each reclaimer and, if applicable, each intermediate facility for all off-site shipments of hazardous secondary materials. Confirmations of receipt must include the name and address of the reclaimer (or intermediate facility), the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt); and

(vi) Reclaimers of hazardous secondary material excluded from regulation under this exclusion and intermediate facilities as defined in §260.10 of this chapter satisfy all of the following conditions:

(A) The reclaimer and intermediate facility must maintain at its facility for no less than three (3) years records of all shipments of hazardous secondary material that were received at the facility and, if applicable, for all shipments of hazardous secondary materials that were received and subsequently sent off-site from the facility for further reclamation. For each shipment, these records must at a minimum contain the following information:

(*1*) Name of the transporter and date of the shipment;

(*2*) Name and address of the hazardous secondary material generator and, if applicable, the name and address of the reclaimer or intermediate facility which the hazardous secondary materials were received from;

(*3*) The type and quantity of hazardous secondary material in the shipment; and

(*4*) For hazardous secondary materials that, after being received by the reclaimer or intermediate facility, were subsequently transferred off-site for further reclamation, the name and address of the (subsequent) reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent.

(B) The intermediate facility must send the hazardous secondary material to the reclaimer(s) designated by the hazardous secondary materials generator.

(C) The reclaimer and intermediate facility must send to the hazardous secondary material generator confirmations of receipt for all off-site shipments of hazardous secondary materials. Confirmations of receipt must include the name and address of the reclaimer (or intermediate facility), the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be

satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt).

(D) The reclaimer and intermediate facility must manage the hazardous secondary material in a manner that is at least as protective as that employed for analogous raw material and must be contained. An "analogous raw material" is a raw material for which a hazardous secondary material is a substitute and serves the same function and has similar physical and chemical properties as the hazardous secondary material.

(E) Any residuals that are generated from reclamation processes will be managed in a manner that is protective of human health and the environment. If any residuals exhibit a hazardous characteristic according to subpart C of 40 CFR part 261, or if they themselves are specifically listed in subpart D of 40 CFR part 261, such residuals are hazardous wastes and must be managed in accordance with the applicable requirements of 40 CFR parts 260 through 272.

(F) The reclaimer and intermediate facility has financial assurance as required under subpart H of 40 CFR part 261.

(vii) In addition, all persons claiming the exclusion under this paragraph (a)(24) of this section must provide notification as required under §260.42 of this chapter.

[Export exclusion]

(25) Hazardous secondary material that is exported from the United States and reclaimed at a reclamation facility located in a foreign country is not a solid waste, provided that the hazardous secondary material generator complies with the applicable requirements of paragraph (a)(24)(i)–(v) of this section (excepting paragraph (a)(v)(B)(2) of this section for foreign reclaimers and foreign intermediate facilities), and that the hazardous secondary material generator also complies with the following requirements:

(i) Notify EPA of an intended export before the hazardous secondary material is scheduled to leave the United States. A complete notification must be submitted at least sixty (60) days before the initial shipment is intended to be shipped off-site. This notification may cover export activities extending over a twelve (12) month or lesser period. The notification must be in writing, signed by the hazardous secondary material generator, and include the following information:

. . .

(iv) Upon request by EPA, the hazardous secondary material generator shall furnish to EPA any additional information which a receiving country requests in order to respond to a notification.

. . .[259]

[259] 40 C.F.R. § 261.4 (2009), *available at* http://ecfr.gpoaccess.gov/; 40 C.F.R. § 261.4 (2008).

Appendix C – Group Filings

Earthjustice, et al.: Signatories were Earthjustice; Clean Water Action; Environmental Defense Fund; Natural Resource Defense Council; Greenpeace; Breast Cancer Fund; American Nurses Association; Environmental Working Group/EWG Action Fund; Environment America; League of Conservation Voters; Center for International Environmental Law; Worksafe; New Jersey Environmental Justice Alliance; Ironbound Community Corp; Sciencecorps; Environmental Health Fund; Be Safe Campaign; Alternatives for Community & Environment; Natural Resources Council of Maine; Indiana Toxics Action; Citizens for a Clean Environment; and Parents Against Lindane.

Industry-Respondents: Kelley Drye & Warren LLP filed on behalf of the Metal Industries Recycling Coalition, the American Chemistry Council, the Alliance of Automobile Manufacturers, the American Coke & Coal Chemicals Institute; the National Paint and Coatings Association, the Treated Wood Council, the American Forest and Paper Association; and the Synthetic Organic Chemical Manufacturers Association.

Lloyd Gosselink
ATTORNEYS AT LAW

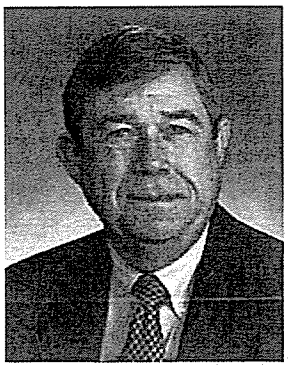
Paul G. Gosselink
PRINCIPAL ATTORNEY

816 Congress Avenue, Suite 1900
Austin, Texas 78701
Ph: 512.322.5806
Fax: 512.472.0532
pgosselink@lglawfirm.com



Paul Gosselink is the co-founding partner of Lloyd Gosselink Rochelle & Townsend, P.C. an environmental and utility firm that has recently celebrated its 25th year anniversary by being selected as a "Best Place to Work" in Austin. Paul began his legal career as an Assistant Attorney General in Environmental Protection for the State of Texas. Over the past 34 years Paul has represented municipal and commercial/industrial clients in just about every possible forum (from Federal and State Court to the EPA, TCEQ, Railroad Commission, PUC, Corps of Engineers and Texas Parks and Wildlife) involving an equally wide array of issues ranging from Superfund litigation to permitting and remediation to compliance counseling to transactional work regarding brownfields and MSD projects to landfill gas to energy and carbon credit contracts. He has more recently focused his practice on municipal, industrial and hazardous waste issues and the emerging areas of carbon markets and climate change. He heads the firm's Air and Waste Practice Group.

Paul is a frequent speaker and author. For the past several years he has authored the Solid Waste chapter of the Environmental Law section of the Texas Practice Series. He has been a member of the board of the Texas Chapter of the Solid Waste Association of North America for the last 15 years and was recently selected as a Texas Super Lawyer for 2009.



Commissioner Larry R. Soward

Larry R. Soward of Austin was appointed by Gov. Rick Perry on October 17, 2003, to the Texas Commission on Environmental Quality. The Texas Senate confirmed his appointment on May 11, 2004.

Soward served as executive assistant to the Texas lieutenant governor during the 78th Legislative Session and during two special legislative sessions held during 2003.

He has more than 31 years of experience leading state agencies, and served as the deputy land commissioner of the Texas General Land Office and Veterans' Land Board, the deputy commissioner of the Texas Department of Agriculture, and the deputy executive director of the Texas Public Utility Commission. In addition, Soward has been executive director of the Texas Water Commission, the culmination of a 12-year tenure at that agency. During his time at the Water Commission, he was its general counsel and chief hearings examiner. He was also appointed by the Governor to serve on the Texas Energy Planning Council in 2004.

He graduated from the University of Texas (UT) with a law degree in 1974 and has practiced environmental law and water law as a solo practitioner and as partner of a small law firm. Soward also holds a bachelor's degree in mathematics from UT.

Soward's term will expire Aug. 31, 2009.

ETHICS AND THE PRACTICE OF PUBLIC WELFARE LAW

Environmental law is one of the most exciting fields of law and it is about to get much more exciting. In my new role as the Director of the Minor in Sustainable Development at Rice University, I have been struck time and again by the insight that I have into important societal issues because I practice environmental law. With climate change issues upon us, those of us practicing environmental law know about the past regulation of sulfur dioxide and the basic concepts of cap and trade. We know about the use of models, both the strengths and weaknesses. We know about water – how it is allocated, how it is regulated and not.

More than anything, our society is running up against physical limits and our social system does not know how to recognize those limits or integrate those limits into our way of life. This is true of climate change. This is true of water supply. This is true of air quality. This is true of flooding. This is true of wetland loss and endangered species. And then there is the question of fair and honest administration of these limits – assuring that environmental justice is done, so that some groups do not unfairly bear these burdens. And ultimately, I believe that a new economic system will emerge that is based upon these issues and equitable allocation of risk and benefit associated with these limits.

Environmental law will be a core issue in this new century, which will focus upon environmental limits, assimilative capacity of the natural system, the availability of raw materials and societal feedstocks, and the disposal and reuse of wastes. However, I don't think that we as environmental lawyers have ever come to grips with what I consider to be our unique ethical issues.

First, I would like to ask you to consider the treatment of environmental crimes under federal criminal law. Although I usually practice on the citizen group side of the docket, I have helped out Dick DeGuerin on a couple of environmental criminal defense efforts. In one case, we represented a plant manager and in another case we represented the company. I was literally blown away by the realization that many plant managers and environmental managers are not represented by counsel when decisions are made on important compliance issues – that legal opinions from lawyers representing the company are framed not with the individual plant manager but with the corporation in mind. That is an issue that we may take up in greater detail in the discussion group.

More generally and importantly, I was struck by the elimination of the mens rea requirement in environmental crimes. In essence, these are strict liability crimes – crimes where classic criminal intent is not an element to be proven by the prosecution. Now, think about that for a moment. We are practicing in an area of law where the normal rules for criminal prosecution are set aside because of the importance of the subject matter to the population at large. Air pollution, water pollution and hazardous waste all involve the public welfare – the health and safety of large numbers of people. And because of that, an individual can be sent to prison for years for crimes that do not require a classic criminal intent.

While I have seen this issue discussed in relationship to criminal liability, I have never seen it turned around on those of us in the environmental law profession. If the rules for sending a person to jail can be and are altered because of the special nature of environmental crimes, is there a different ethical standard that should attach to those of us practicing in the environmental field than is the case more generally in the legal profession? And if that is the case, what are the manifestations of that higher responsibility? If we practice in the public welfare, do we owe some duty to the public in addition to our clients.

The reason that this criminal requirement is so low in public welfare cases is because the stakes are so high that large numbers of people could be harmed by these actions - that the welfare of the public is at stake. And that is the area within which we practice – the area where the welfare of the public is at stake.

Of today's issues, no single one looms larger than does climate change. The Intergovernmental Panel on Climate Change (IPCC), a consensus-based group that evaluates the science at the international level, has clearly concluded that climate change is occurring and that it is most likely caused by human action. We are likely to pass a United States climate change bill this fall even as we try to rethink our international program in Copenhagen this coming December. Climate change is both current and important.

In this regard, the public welfare concept definitely should and likely will apply to climate change issues once the system gets established. The stakes of climate change are global, with the prospects of hundreds of millions of people being displaced by sea level rise, and millions more threatened by loss of food and water security and global spread of disease. The impacts of climate change clearly affect the welfare of billions world wide. It's a big deal.

Now, I would also like to interject two observations coming from a different direction. The first is the ENRON scenario. After-the-fact reevaluations of this disaster have led to a critical restructuring of the role and more importantly the ethical responsibility of members of the board of directors of publicly traded companies, emphasizing their fiduciary roles and oversight responsibility. I would add to that the ethical role of lawyers and accountants has also been reevaluated and restructured in light of this debacle. The second is the changes that are occurring in light of the near catastrophic failure of our financial system coming out of the trading of derivatives and the various Ponzi schemes that are now in the news. As a result of these actions, there is a new emphasis on ethics to the point that half of the students graduating from Harvard Business School, a place at the center of these disasters, have signed pledges disavowing greed. Now, there must be an analogy to lawyers there somewhere.

So with these thoughts in mind, I want to bring a recent article published in the Proceedings of the National Academy of Sciences to your attention. This article is titled "Sharing Global CO2 Emission Reductions Among One Billion High Emitters". In it, authors from the Princeton Environmental Institute, the Harvard Belfer Center for Science and International Affairs and two European Institutions suggest an innovative carbon dioxide allocation concept to address climate change. Their proposal is to cap individual emissions rather than country emissions, essentially regulating high carbon emitting individuals the same regardless of which country they are from. Under their concept, the focus is upon the role of the individual in emissions. A country such as the United States may have more regulated or limited individuals than would say India, which also has its fair share of individuals with large carbon footprints.

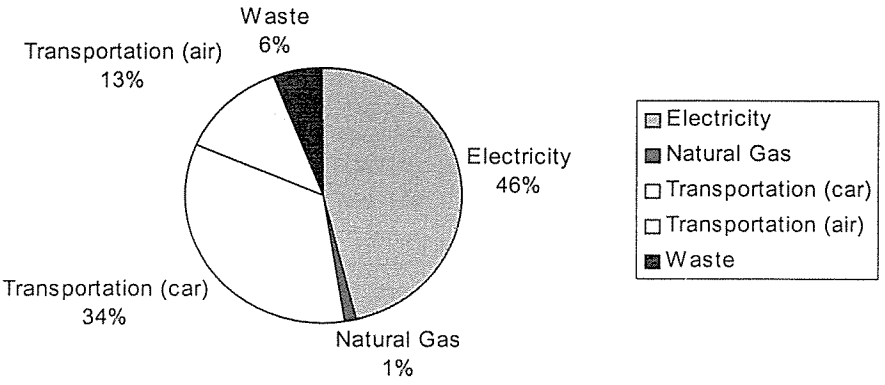
In many respects, this is the climate change equivalent of the greed pledge made by the Harvard Business Graduate students. It is an attempt to impose some type of collective ethic on behavior that is contrary to the public welfare. In this context, I repeat the question I asked earlier – do we as environmental lawyers have some unique ethical requirement given the fact that we practice environmental law – that we practice in this arena of the public welfare? I think we do.

So, what can we do? One alternative is to become attentive to climate change issues and to take the lead in addressing climate change. Now, many of you are not in a position to argue with your clients about their position on climate change but you may be in a position to take a position within your law offices. Law offices have carbon footprints. We analyzed the

carbon footprint of our office that has five attorneys and five staff members. The result was interesting to say the least.

We totaled our carbon emissions using the EPA carbon calculator and a smart student from Rice. We identified the vehicle type and miles traveled by each us to and from work and we totaled up the air transportation and electrical and gas usage for our building, which is a converted house. The allocation is as shown in the figure below.

Blackburn & Carter's Carbon Emission Sources



The total amount that was calculated came to almost sixty tons of carbon dioxide per year. Once we identified this number, we then had to determine what to do about it. We did change the thermostat setting, although that was not and is not a happy topic in our office. However, there is no reason to be wearing sweaters in the middle of a hot Texas summer, yet that is what many of us do. To offset the carbon dioxide emissions, two different types of solutions were pursued. First, we put a reflective film on our windows and we added solar panels to our roof, which led to a 50% reduction in our electrical usage, thereby reducing our carbon emissions by a little over twelve tons per year. Second, we have purchased the sequestration rights to 50 acres of Galveston Bay marshland for the next three years from the Galveston Bay Foundation for which we can claim a credit of one ton per acre. So, we arguably have a net zero emissions.

Granted, this is a small step. But it is a step - one that I urge each of you to take in your practice. If nothing else, it will acquaint you with the activities that lead to carbon emissions and to the challenges that we as a society have in addressing these issues. I don't know whether you can pass this cost on to your customers, but in a business world more and more concerned with supply chain carbon emissions, the emissions, or lack thereof, from legal services will be noted.

As to the larger question of our responsibility to the public welfare, I have no grand solution. I think each of us must think our way through this issue, just like we have to consider whether we contact someone to contact someone to contact a decision-maker. And like that situation which we will discuss in more detail during the panel discussion, there will be those who will try to seek advantage – ethical or not – in any way that they can. I have no control over that behavior. In my opinion, the attitude of our legislature and our executive branch sets the standard. If they were clear about these things, the ethical dilemma would be easy. But they aren't and it isn't.

Each of us must find our own way. In my opinion, there are major changes ahead of us, changes that will put each of us practicing environmental law on the front lines of ethical issues about how we as lawyers discharge our responsibility to the public welfare. It promises to be interesting. Thank you.

James B. Blackburn, Jr., J.D.
Attorney
Blackburn Carter (Houston, Texas)

An attorney for more than 30 years, Jim Blackburn is a partner in Blackburn Carter, P.C., a firm devoted to environmental law and planning. Cases include environmental impact and energy facility siting, wetlands, air and hazardous waste litigation; strategic environmental planning; flood-related litigation; and sustainable development and environmental dispute resolution. Blackburn is also a Professor in the Practice in the Department of Civil and Environmental Engineering at Rice University, teaching courses in sustainable development. He serves as Director, Interdisciplinary Minor in Energy and Water Sustainability, Civil and Environmental Engineering, Rice University and is a Faculty Associate for the SSPEED Center and China-U.S. Center at Rice University. Mr. Blackburn is also active in community issues. He is the co-founder of Houston Wilderness, the Matagorda Bay Foundation and the Galveston Bay Foundation. He serves on the Board of Directors of the Galveston Bay Conservation and Preservation Association, GHASP, Houston Wilderness and Matagorda Bay Foundation. Among his honors, he was the recipient of The Barbara C. Jordan Community Advocate Award presented by Texas Southern University in 2007, the National Conservation Achievement Award in 2001 from the National Wildlife Federation and the Bob Eckhardt Lifetime Achievement Award for coastal preservation efforts from the General Land Office of the State of Texas in 1998. He was awarded an honorary membership in the American Institute of Architects for legal work associated with urban quality of life issues in 2003. In October 2004, Texas A&M press published his manuscript titled *The Book of Texas Bays*, which focuses upon the current environmental health of bays in Texas and the efforts undertaken to protect them. Blackburn received both a B.A. in History and a J.D. at the University of Texas at Austin and an M.S. in Environmental Science at Rice University.

21ST ANNUAL
TEXAS ENVIRONMENTAL
SUPERCONFERENCE
AUGUST 6-7, 2009



ENVIRONMENTAL ETHICS -- "VIVA LAS VEGAS"

Snehal R. Medina
Harris County Attorney's Office

David P. Young
Union Pacific Railroad Company

Introduction[1]

Everyone wants what happens in Vegas to stay in Vegas. Unfortunately, in today's age, of electronic communications, it grows increasingly difficult to control or protect communications. Memoranda are no longer typed on individual sheets of paper. Virtually every person or employee carries an electronic device of some sort allowing her to instantly transmit what was once private to an entire interconnected, networked world. It is difficult to know who is communicating to whom at any given moment in time. Electronic media makes gaining access to decision makers as easy as pressing a button and there is no single answer to protecting communication in today's world. We suggest that writing rules for tools is impractical. As soon as a rule is devised, the tool will change. (Does anyone remember carbon paper?).

Moreover, those practicing in the governmental arena have higher obligations that require them to balance guarding their clients' confidences side by side with the policy of transparency and open government. After all, in the words of the great Justice Louis Brandies, "Sunlight is said to be best of disinfectants."[2]

While this paper does not purport to answer all ethical questions, it examines and offers suggestions regarding fundamental ethical obligations in the contexts of the corporate counsel and the government attorney, and provides some suggestions for today's practitioner in the areas of who's the client and permissible communications.

Part I: Remembering Who's the Client in a Corporation

Keeping things in Vegas can get tricky when you represent a corporation instead of a person. The Texas Disciplinary Rules of Professional Conduct make it clear that a lawyer employed by an organization such as a corporation owes her duty to the entity.[3] This representation of the organization is "distinct from its directors, officers, employees, members, shareholders or other constituents."[4] It is easy to say you represent an entity, but organizations can only act through the "constituents" who work for them.[5] Those constituents are, of course,

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[1] The views expressed in this paper represent the perspectives of the two authors as related to their respective practice areas as corporate counsel and government attorney. We appreciate the assistance of our panel moderator, Debra Tsuchiyama Baker, in helping coordinate this joint paper, as well as the support from law clerks Theresa Young, Gretchen Kersten, and Jessica Worden. Debra Tsuchiyama Baker is a founding partner of the Houston law firm of Connelly Baker Wotring LLP and has focused her practice on environmental law for over 24 years. Theresa Young, a summer clerk at Connelly Baker Wotring LLP, is beginning her third year of law school at the University of Houston Law Center. Gretchen Kersten, a summer clerk at Union Pacific Railroad Company, is also beginning her third year of law school at the University of Houston Law Center. Jessica Worden, a former law clerk with Harris County, is a 2009 Thurgood Marshall School of Law graduate.

[2] Louis D. Brandeis, Other People's Money and How the Bankers Use it (New York: Frederick A. Stokes Co. 1914).

[3] Tex. Disciplinary R. Prof'l Conduct R. 1.12.

[4] Id.

[5] Id.

the same human beings whose actions or communications you are trying to investigate or protect. In many cases, those "constituents" are also the people running the entity and possibly supervising you. So what is a lawyer to do?

The rules and their commentary give lawyers explicit guidance on how their duty to the organization overrides the individual constituent, and what they should do to protect the entity.[6] A lawyer must take reasonable remedial actions if she learns or knows in the course of representing an organization that:

1. an officer, employee, or other person associated with the organization has committed or intends to commit a violation of a legal obligation to the organization or a violation of law which reasonably might be imputed to the organization;

2. the violation is likely to result in substantial injury to the organization; and

3. the violation is related to a matter within the scope of the lawyer's representation of the organization.[7]

The lawyer is obligated to proceed as reasonably necessary to protect the best interests of the organization without involving "unreasonable risks of disrupting the organization or revealing information relating to the representation to persons outside the organization."[8] The rules even specify how the lawyer should resolve issues within the organization.[9] As for those pesky constituents, the rule commentary provides a detailed list of things a lawyer should tell them if she believes their interests could be adverse to the entity:

> There are times when the organization's interest may be or become adverse to those of one or more of its constituents. In such circumstances the lawyers should advise any constituent, whose interest the lawyer finds adverse to that of the organization of the conflict or potential conflict of interest, that the lawyer cannot represent such constituent, and that such person may wish to obtain independent representation. Care should be taken to assure that the individual understands that, when there is such adversity of interest, the lawyer for the organization cannot provide legal representation for that constituent individual, and that discussions between the lawyer for the organization and the individual may not be privileged insofar as that individual is concerned.[10]

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[6] Id.

[7] Tex. Disciplinary R. Prof'l Conduct R. 1.12(b).

[8] Tex. Disciplinary R. Prof'l Conduct R. 1.12(a).

[9] See, e.g. Tex. Disciplinary R. Prof'l Conduct R. 1.12(c).

[10] Id. at cmt. 4.

We suggest that the best practice is to prepare constituents for the possibility of a conflict before one exists. Constituents do not like surprises and may become angered or upset if their first understanding that a lawyer represents the entity occurs after a conflict is apparent. Prior disclosure to constituents that you represent the entity in the ordinary course of business dealings may avoid such problems. It may also garner increased cooperation if there is a need to work with the affected constituent. Many entities enhance this cooperation by providing separate counsel to the constituent in the event of a conflict. Again, be mindful of what constituents expect and the attorney's role. Although you are in Vegas, never forget who the client is.

Part II: Ethical Obligations of Government Attorneys and Additional Ethical Requirements Rising from Interactions with Governmental Entities

As attorneys, our professional rules of conduct focus on the relationship between an attorney and her client, the attorney's duties of loyalty to the client, and the standards of conduct that the attorney is obligated to consider.[11] For government attorneys, however, these guidelines can become very unclear in practice. Government attorneys must consciously determine who their client is and whose interests they serve. In order to answer these questions while effectively balancing their own ethical obligations, the government attorney must strategically wear many different hats and loyally endeavor to balance many different objectives.

Professional Responsibility of Government Attorneys: Who is the Client?

Before government attorneys can begin serving specific interests, one of the most important tasks becomes answering a seemingly simple question: Who is the client? As will be discussed, the answer is often quite complex. Where should the government attorney's loyalty lie? Under what circumstances should she keep the confidences of other government officials?

The Texas Disciplinary Rules of Professional Conduct describe the various functions an attorney must perform. These functions include: an advisor role, where the "lawyer provides the client with an informed understanding of the clients' legal rights and obligations and explains their practical implications;" and, a negotiator role, where a "lawyer seeks a result advantageous to the client but consistent with the requirements of dealing honestly with others."[12]

Government attorneys focusing on environmental law often work closely with many different governmental agencies, elected officials, regulated entities, and environmental organizations. The responsibilities of these attorneys can concern legal matters that ordinarily have different outcomes than in private client-lawyer relationships. For example, a government

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[11] There are additional statutes, rules and agency-specific policies relevant to governmental entities, over and beyond the disciplinary rules of professional conduct, such as:

- Tex. Penal Code, Chapter 36 (relating to bribery and corrupt influences).
- Tex. Penal Code, Chapter 39 (relating to abuse of office).
- Tex. Gov't Code, Chapter 305 (registration of lobbyists).
- Tex. Gov't Code, Chapter 572 (personal financial disclosure, standards of conduct, and conflict of interest).

[12] Tex. Disciplinary R. Prof'l Conduct preamble 2.

attorney "may have authority on behalf of the government to decide upon settlement or whether to appeal from an adverse judgment," "may be authorized to represent several government agencies in intra-governmental legal controversies in circumstances where a private lawyer could not represent multiple private clients," and "may have the authority to represent the public in circumstances where a private lawyer would not be authorized to do so."[13] Government attorneys are often charged with protecting the public interest, a mission that can be difficult to decipher in some cases. The role that government lawyers will be expected to take when representing different entities becomes more clearly defined once they have an understanding of who it is that they are representing in a particular case.

For government attorneys, the role that they are asked to play can be further determined by statutes and regulations.[14] For these reasons, defining precisely the identity of the client and prescribing the resulting obligations of such attorneys may be more difficult in the governmental context.[15] While government attorneys receive referrals from organizations, specific officials, and even everyday individuals, they must remember that they are obligated to protect the interests of the governmental agency as an entity. The entity theory approach described in the Texas Disciplinary Rules of Professional Conduct Rule 1.12 requires the government attorney to generally represent the government as a whole, distinct from its individual officers or employees.[16]

While representing the interests of the government under this entity approach, government attorneys should carefully remember that regardless of the individual that referred the case to them, the governmental entity is the client and because of this, the objective should be to protect the interest of the governmental body as a whole. Stemming from this foundation comes the practical task of looking for direction, information, and guidance from individuals representing different government agencies, while remaining cognizant of the primary obligation of working in the best interest of the governmental entity which inherently represents the public. Moreover, a government attorney needs to be mindful that, "in a matter involving the conduct of government officials, a government lawyer may have authority to question such conduct more extensively than that of a lawyer for a private organization in similar circumstances."[17]

While at times it can be challenging for the government attorney to determine who the client is, the attorney must never lose sight of the objective to loyally represent the public interest. Understanding this objective will always help the government attorney answer the fundamental question: Who is the client?

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[13] Tex. Disciplinary R. Prof'l Conduct preamble 13.

[14] Tex. Disciplinary R. Prof'l Conduct 1.12 cmt. 9.

[15] Id.

[16] Id. (The comment provides the following example: "if the action or failure to act involves the head of a bureau, either the department of which the bureau is a part or the government as a whole may be a client for purpose of this Rule.").

[17] Id.

Contacting Government Entities Represented by Counsel

Those who interact regularly with governmental entities need to understand the nuances involved in contacting government employees, especially in adjudicatory settings where the entity is represented by counsel. Generally, in representing a client, Texas Disciplinary Rules of Professional Conduct Rule 4.02 states that "a lawyer shall not communicate or cause or encourage another to communicate about the subject of the representation with a person, organization or entity of government the lawyer knows to be represented by another lawyer regarding that subject, the lawyer has the consent of the other lawyer or is authorized by law to do so."[18] It is intended to curb any attempts by attorneys "to circumvent the lawyer-client relationship existing between other persons, organizations or entities of government and their respective counsel."[19] This is accomplished by prohibiting "communication by a lawyer for one party concerning the subject of the representation with persons having a managerial responsibility on behalf of the organization that relates to the subject matter of the representation . . . ."[20] Of course, this prohibition does not apply if the attorney has consent from opposing counsel to communicate with her clients. Comment 2 clarifies that "[c]onsent may be implied as well as express," and "does not impose a duty on a lawyer to affirmatively discourage communication between the lawyer's client and other represented persons organizations or entities of the government."[21] And, this rule also does not prohibit "communications concerning matters outside the subject of the representation."[22]

Opinion No. 474 that was issued by the Professional Ethics Committee of the Texas Supreme Court (Professional Ethics Committee) in June, 1991 sheds further light on this rule's applicability to governmental entities.[23] The question presented was whether communication by plaintiff's counsel with city council members in a situation where the plaintiff sued a municipality and the plaintiff called an individual council member to express his disapproval of city attorney's settlement officer is a violation of Rule 4.02 of the Texas Disciplinary Rules of Professional Conduct.[24] In a short response, the Professional Ethics Committee found this communication to be an obvious violation of the rule.[25]

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[18] Tex. Disciplinary R. Prof'l Conduct R. 4.02.

[19] Tex. Disciplinary R. Prof'l Conduct R. 4.02 cmt. 1.

[20] Id. at cmt. 4.

[21] Id.

[22] Id. at cmt. 2.

[23] Tex. Comm. on Prof'l Ethics, Op. 474 (1991).

[24] Id.

[25] Id.

Determining the Scope of Ex-Parte Communications in Contested Case Hearings

Environmental attorneys have relied on the Texas Administrative Procedures Act, Tex. Gov't Code § 2001.061 and 30 Tex. Admin. Code § 80.15 for requirements relating to ex parte communications in contested case hearings. Specifically, the TCEQ rule states that, "[u]nless required for the disposition of an ex parte matter authorized by law, during the pendency of a contested case either at SOAH or before the commission, no party, person, or their representatives shall communicate directly or indirectly with any commissioner or the judge concerning any issue of fact or law relative to the pending case, except on notice and opportunity for all parties to participate."[26]

Recently, the Professional Ethics Committee for the State Bar of Texas has reinterpreted the breadth of ex parte communications in the context of administrative hearings[27] as it applies under the Texas Disciplinary Rules of Professional Conduct Rule 3.05 which states that a lawyer shall not: "seek to influence a tribunal concerning a pending matter by means prohibited by law or applicable rules of practice or procedure; [and]. . . except as otherwise permitted by law and not prohibited by applicable rules of practice or procedure, communicate or cause another to communicate ex parte with a tribunal for the purpose of influencing that entity or person concerning a pending matter" except through three specific ways including, official proceedings; in writing with copies to all parties; or orally with adequate notice to all parties.[28]

Traditionally, this rule has been applied to courts and their officers. However, with the issuance of this opinion, this prohibition against ex parte communications for potential or pending matters will now be applied to government agencies.[29] Agencies are recognized as "legal hybrids that may have legislative, judicial and executive and ministerial functions," and according to the new opinion, Texas Disciplinary Rules of Professional Conduct Rule 3.05 will only be applied to "administrative agencies when they are, or will be, functioning as 'tribunals.'"[30] Namely, the opinion prohibits ex parte communications with the "decision makers" at the government agency.[31] But, who is the "decision maker"? The opinion lists some examples, such as an administrative law judge, a hearing officer, the executive in charge of the agency, or a board or other governing body of the agency.[32] The committee carefully distinguishes the decision maker from the agency itself, its members, representatives, or employees and does not prohibit communications, either before or after the filing of a matter,

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[26] 30 Tex. Admin. Code § 80.15(a).

[27] Tex. Comm. on Prof'l Ethics, Op. 587 (2009).

[28] Tex. Disciplinary R. Prof'l Conduct R. 3.05.

[29] Supra note 27.

[30] Id.

[31] Id.

[32] Id.

with non-decision makers unless the communication is made for the purpose of indirectly influencing the outcome of the agency's decision in the matter.[33] The opinion also reiterates that ex parte communications allowed by other statutes or rules are not prohibited.[34]

But what does this now mean for attorneys? For clients? For the agencies themselves?[35] At the very least, attorneys need to be mindful that this opinion removes any ambiguity regarding the language in the TCEQ ex parte communication rule pertaining to when the prohibition applies in the permitting process.[36] The question before the Professional Ethics Committee was whether a lawyer may communicate with the decision makers *prior* to filing a matter with the agency that has decision making authority over the matter for the purpose of ultimately obtaining a favorable decision from the agency. The clear answer was no.

Another key issue is that the applicability of Texas Disciplinary Rules of Professional Conduct Rule 3.05 to contested case matters now seems to expand to the decision makers who take an advocacy position in the matter, and this of course clearly engages the Executive Director of an agency who has taken a position on whether to grant or deny a permit. It is not uncommon for an applicant and the executive director and his staff to communicate directly on contested permitting matters without including in the communication all other parties in the matter, and the opinion seems to indicate that such communications may come under Texas Disciplinary Rules of Professional Conduct Rule 3.05(b) under certain circumstances. This is clearly an area that leaves room for much discussion and will be scrutinized closely by environmental practitioners.

Conclusion

In closing, attorneys need to keep in mind the basics. Remember that you must be certain to identify your client. Both you and your client need to know who you represent. In representing public or private entities, you must be clear about identifying and separating the interests of the entity from the individual. In representing governmental entities, you must pay particular attention to the interests of the government and the people it represents. Government attorneys are entrusted with considerable authority as well as public trust and it is incumbent upon each public attorney to conduct herself with honesty, fairness, and integrity. Finally, in communications with governmental officials, careful attention must be paid to the role the official is playing to prevent impermissible ex parte communications or the appearance of impropriety.

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[33] Id.

[34] Id.

[35] See, e.g. Mary Alice Robbins, Ex Parte Contacts in Administrative Cases at Issue in Ethics Opinion, 25 Tex. Lawyer 11 (June 15, 2009) (discussing the possible implications and questions raised regarding this new opinion).

[36] Supra note 26.

THE PROFESSIONAL ETHICS COMMITTEE FOR
THE STATE BAR OF TEXAS
Opinion No. 587

May 2009

QUESTION PRESENTED

Before filing a matter with an administrative agency having decision-making authority over the matter, may a lawyer communicate with the administrative agency concerning the matter?

STATEMENT OF FACTS

A lawyer plans to file a matter with a state administrative agency that has decision-making authority over the matter. Before filing the matter, the lawyer proposes to communicate concerning the matter with persons in the agency for the purpose of ultimately obtaining a favorable decision from the agency. In such communications concerning the matter, the lawyer does not propose to provide copies of written communications or notice of oral communications to other potential parties in the matter.

DISCUSSION

Rule 3.05 of the Texas Disciplinary Rules of Professional Conduct provides as follows:

"Maintaining Impartiality of Tribunal
A lawyer shall not:

(a) seek to influence a tribunal concerning a pending matter by means prohibited by law or applicable rules of practice or procedure;

(b) except as otherwise permitted by law and not prohibited by applicable rules of practice or procedure, communicate or cause another to communicate ex parte with a tribunal for the purpose of influencing that entity or person concerning a pending matter other than:

(1) in the course of official proceedings in the cause;

(2) in writing if he promptly delivers a copy of the writing to opposing counsel or the adverse party if he is not represented by a lawyer;

(3) orally upon adequate notice to opposing counsel or to the adverse party if he is not represented by a lawyer.

(c) For purposes of this rule:

(1) 'Matter' has the meanings ascribed by it in Rule 1.10(f) of these Rules;

(2) A matter is 'pending' before a particular tribunal either when that entity has been selected to determine the matter or when it is reasonably foreseeable that that entity will be so selected."

Rule 3.05 provides that a lawyer shall not seek to influence a tribunal concerning a pending matter by means prohibited by law or applicable rules and that, except as permitted by law and not prohibited by applicable rules, a lawyer may not communicate ex parte with a tribunal for the purpose of influencing the tribunal concerning a pending matter except in one of three limited ways specified in Rule 3.05(b) – in official proceedings, in writing with copies to all parties, or orally with adequate notice to all parties.

Rule 3.05(c)(1) defines the term "matter" by reference to Rule 1.10(f). Rule 1.10(f) provides that the term "matter" does not include regulation-making or rule-making proceedings or assignments but that the term includes the following:

> "(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."

Rule 3.05(c)(2) specifies that a matter is pending before a tribunal when the tribunal has been selected to determine the matter or it is reasonably foreseeable that the tribunal will be so selected. In the circumstances here considered, the matter is clearly "pending" for purposes of Rule 3.05 because the agency with which the communication occurs is expected to make a decision on the matter. As discussed in more detail below, the agency decision maker in these circumstances is a "tribunal" as that term is defined for purposes of the Texas Disciplinary Rules of Professional Conduct. Therefore, unless there is some applicable law that permits the lawyer to do so, under Rule 3.05 the lawyer may not communicate ex parte with the agency decision maker (or cause another to do so) for the purpose of influencing the outcome of the matter except in the limited ways specified in Rule 3.05(b). For purposes of applying Rule 3.05(b), there is no generally applicable law in Texas that permits the lawyer in these circumstances to communicate with the agency's decision maker, before a matter is filed, for the purpose of influencing the outcome of the matter. The Texas Supreme Court in *Vandygriff* v. *First Savings and Loan Association of Borger,* 617 S.W.2d 669 (Tex. 1981) held that the prohibition of what is now the Texas Administrative Procedure Act against ex parte communications in a pending matter does not apply to communications before a matter has been filed with an agency. However, that decision did not hold that such communications are affirmatively permitted by applicable Texas law. Accordingly, since under Rule 3.05(c)(2) of the Texas Disciplinary Rules of Professional Conduct a matter is "pending" before an administrative agency when future adjudicatory proceedings in the agency are reasonably foreseeable, ex parte communications with the agency decision maker prior to filing for the purpose of influencing the matter (except using a means specifically permitted by Rule 3.05(b)) would constitute a violation of Rule 3.05. This result applies even though the same communication would not be a violation of the Texas Administrative Procedure Act as interpreted by the Texas Supreme Court in the *Vandygriff* decision.

The question remains as to who is included within the term "tribunal" for purposes of applying the requirements of Rule 3.05. The Terminology section of the Texas Disciplinary Rules of Professional Conduct provides that

> ""Tribunal' denotes any governmental body or official or any other person engaged in a process of resolving a particular dispute or controversy. 'Tribunal' includes such institutions as courts and administrative agencies when engaging in adjudicatory or licensing activities as defined by applicable law or rules of practice or procedure, as well as judges, magistrates, special masters, referees, arbitrators, mediators, hearing officers and comparable persons empowered to resolve or to recommend a resolution of a particular matter; but it does not include jurors, prospective jurors, legislative bodies or their committees, members or staffs, nor does it include other governmental bodies when acting in a legislative or rule-making capacity."

In the application of this definition to administrative agencies, it is important to recognize that these agencies are legal hybrids that may have judicial, legislative, executive and ministerial functions. Rule 3.05 applies only to administrative agencies when they are, or will be, functioning as "tribunals," that is in a dispute-resolution, licensing or adjudicatory capacity and not when such agencies are functioning in a legislative, executive or ministerial capacity.

Whether applied to a court or an administrative agency, the restrictions of Rule 3.05 on communications with a tribunal could be read either to apply to communications with all personnel associated with a court or administrative agency or to apply only to communications with the judge or agency decision maker or decision-making body. The Committee is of the opinion that the term "tribunal" as defined in the Terminology section of the Texas Disciplinary Rules and as used in Rule 3.05 refers only to the judge or agency decision maker or decision-making body and not to all personnel associated with a court or administrative agency. In the case of an administrative agency, the decision maker could be an administrative law judge, a hearing officer, the executive in charge of the agency, or a board or other governing body of the agency. The decision maker, however, is not the agency itself or all of its members, representatives or employees. Lawyers routinely contact court and agency personnel other than decision makers to obtain answers to administrative questions, to obtain settings, to check on the status of pending matters and for a variety of other reasons where there could normally be no effect on the court's or agency's decision in the matter. In the case of communications with non-decision-making personnel of an agency, Rule 3.05 would apply only if such a communication was intended by the lawyer as an indirect communication, through non-decision-making personnel, with the decision maker for the purpose of influencing the outcome of the agency's decision in the matter.

This interpretation of Rule 3.05 as applicable only to communications with decision makers is consistent with the requirements of section 2001.061 of the Texas Government Code, the provision of the Texas Administrative Procedure Act specifically addressing ex parte communications. Section 2001.061(a) of the Texas Government Code provides in part:

". . . a member or employee of a state agency assigned to render a decision or to make findings of fact and conclusions of law in a contested case may not directly or indirectly communicate in connection with an issue of fact or law with a state agency, person, party, or a representative of those entities, except on notice and opportunity for each party to participate."

This provision generally prohibits certain ex parte communications in connection with an issue of fact or law in a contested case. The prohibition however, is only upon "a member or employee of a state agency assigned to render a decision or to make findings of fact and conclusions of law," in other words, the decision maker. See *County of Galveston* v. *Texas Department of Health,* 724 S.W.2d 115 (Tex. App. – Austin 1987, writ ref'd, n.r.e.); *Coalition Advocating A Safe Environment* v. *Texas Water Commission,* 798 S.W.2d 639 (Tex. App. – Austin 1990), vacated as moot, 819 S.W.2d 799 (Tex. 1991).

This interpretation of Rule 3.05 appropriately treats the situation in which an administrative agency that has authority to make the decision on a contested matter also is a party that takes an advocacy position in the matter through other agency personnel. The parties to the contested case, including the representatives of the agency taking an advocacy position, are not permitted to have ex parte communications with the agency decision maker for the purpose of influencing the outcome of the matter unless as required by Rule 3.05(b) all parties participate or are given an opportunity to participate. However, representatives of another party in the matter may communicate directly with the advocacy representatives of the agency in the matter without including in the communication all other parties in the matter, as would be required if the communication were subject to Rule 3.05(b).

Special laws or rules may apply to specific situations and govern communications in those specific situations. Comment 4 to Rule 3.05 notes the following:

"There are certain types of adjudicatory proceedings, however, which have permitted pending issues to be discussed ex parte with a tribunal. Certain classes of zoning questions, for example, are frequently handled in that way. As long as such contacts are not prohibited by law or applicable rules of practice and procedure, and so long as paragraph (a) of this Rule is adhered to, such ex parte contacts will not serve as a basis for discipline."

See also Texas Attorney General Opinion No. DM-144 (July 24, 1992) (special provisions applicable to the Texas Water Commission impose additional limitations, beyond the limitations of general administrative law, on ex parte communications of hearings examiners with other employees of the agency).

In the factual situation here considered, if there are no other applicable laws or rules of practice or procedure that prohibit or specifically permit ex parte communications with respect to the matter coming before the agency, Rule 3.05 imposes strict limits on a lawyer's ex parte communications with the decision maker of the agency for the purpose of influencing the decision maker concerning the matter. These limitations apply only to communications directly or indirectly with the decision maker within the agency as established by applicable law (such as

an administrative law judge, a hearing officer, the executive in charge of the agency, or a board or other governing body of the agency, including any individual member of that board or body). These limitations apply before the filing of the matter if it is reasonably foreseeable that the decision on the matter will be made by the agency. However, the limitations do not apply to communications with the members, employees or representatives of the agency who are not the decision maker or a member of the decision making body with respect to the matter provided that the communications with such persons are not intended to be indirect ex parte communications with the decision maker for the purpose of influencing the decision in the matter.

CONCLUSION

In the absence of applicable law that permits ex parte communications in a particular situation, Rule 3.05 of the Texas Disciplinary Rules of Professional Conduct imposes strict limits on ex parte communications with an agency's decision maker prior to the filing of a matter with an agency that is expected to act concerning the matter in a dispute resolution, licensing or adjudicatory capacity, if a purpose of the ex parte communication is to influence the agency's decision in the matter. However, in these circumstances, Rule 3.05 does not limit ex parte communications, either before or after the filing of the matter, with members, representatives or employees of the agency who are not the applicable decision maker or a member of the applicable decision making body unless such communications are intended to be indirect ex parte communications with the decision maker for the purpose of influencing the outcome of the matter.

Vince Ryan
Harris County Attorney

SNEHAL R. MEDINA

Snehal R. Medina is the Chief of the Environmental & Regulatory Affairs Section in Harris County Attorney's Office. Ms. Medina represents Harris County, the third most populous county in the U.S., and Harris County Flood Control District, in environmental matters including regulatory compliance, permitting, legislation, and rulemaking. Ms. Medina counsels and coordinates with precincts, various departments within Harris County, and Harris County Flood Control District; in the areas of water quality/TMDLs, water rights, air quality, industrial, municipal, and hazardous waste, remediation, and superfund. Her practice also includes representing Harris County in environmental contested case hearings before the State Office of Administrative Hearings. Ms. Medina is appointed to serve on various Houston-Galveston Area Council committees including the Regional Air Quality Planning Committee and Clean Rivers Steering Committee. Prior to her current position, Ms. Medina, as Senior Assistant County Attorney, also handled a civil environmental litigation caseload representing Harris County in enforcing federal, state, and local environmental laws and regulations in district court.

Prior to joining the County Attorney's Office, Ms. Medina was an attorney with the Texas Commission on Environmental Quality (TCEQ). From 1998-2003, Ms. Medina worked in the TCEQ's Austin Office and her practice area included permitting and rulemaking matters related to air quality, water quality, industrial and hazardous waste, and radioactive waste issues. In 2004, Ms. Medina transferred to the TCEQ Region 12 Office in Houston where she focused her practice on environmental enforcement, and she provided legal counsel to the regional offices in Houston, Beaumont, and Corpus Christi. While at TCEQ, Ms. Medina also served as a member of the Air and Waste Rule Interpretation Teams and the Emissions Events Review Team.

Ms. Medina serves on the Executive Committee of the State Bar of Texas Environmental and Natural Resources Law Section. She was also elected as the treasurer and secretary, and currently serves as vice chair of the Houston Bar Association's Environmental Law Section.

Ms. Medina was born and raised in Tanzania, East Africa until the age of 10, attended boarding school in India, and completed her secondary education in England. In 1992, Ms. Medina received her B.A. in Sociology with honors and special honors in Sociology from the University of Texas at Austin. She continued her U.T. education in the four-year joint-degree program at the LBJ School of Public Affairs and the School of Law. In May 1997, Ms. Medina graduated with a Juris Doctor and a Masters in Public Affairs.

1019 Congress, 15th Floor • Houston, TX 77002-1700 • Phone: 713-755-5101 • Fax: 713-755-8924

BIO – DAVID P. YOUNG

David is a General Solicitor for Union Pacific Railroad Company. In his role at Union Pacific David supervises all environmental legal matters and hazardous material emergency responses. In addition, he supervises all litigation in Texas and Louisiana. To manage this docket, David utilizes a staff of nine in-house attorneys and over 50 outside law firms. David has been with Union Pacific since 1994. Prior to joining the railroad, he worked at a litigation boutique firm in Houston.

David has a B.A. majoring in Urban Studies from Michigan State University (1980) and a J. D. from the University of Houston (1988).

David is licensed to practice in Texas and Nebraska and is a past President of the Houston Chapter of ACCA. David is also the President of the Board of Directors of the Fort Bend Regional Council on Substance Abuse and a member of the Board of Trustees of the Contemporary Arts Museum Houston.

Lisa K. Hodges
Senior Counsel, Environmental & Regulatory Affairs
The Valero Companies
P.O. Box 696000
San Antonio, TX 78269-6000
210-345-4255
210-353-8363 Fax

Lisa Hodges is senior counsel to the Valero companies. She handles a variety of environmental and regulatory matters: permitting for both active and closed terminals and refineries; pipeline safety; regulatory compliance; environmental enforcement and litigation; and the development of local, state and federal rules.

Ms. Hodges received her undergraduate degree from the University of Texas, Plan II Honors Program and also received her law degree from the University of Texas at Austin. She is licensed to practice in both Texas and California. After law school, she started her career with the Texas Water Commission, now the Texas Commission on Environmental Quality. She then moved to California and practiced in the areas of general civil litigation, IP litigation, IP licensing and contracting, corporate law, SEC and other regulatory compliance matters. Upon her return to Texas, she practiced at the Public Utility Commission of Texas as a senior attorney in the Policy Development Division and again at the Texas Commission on Environmental Quality handling water quality and industrial and hazardous waste matters. She has been with Valero since December 2004.

July, 2009

BIOGRAPHY

HAL F. MORRIS
Assistant Attorney General
Managing Attorney - Bankruptcy Regulatory Section
The Texas Attorney General's Office
Telephone (Direct): (512) 475-4550
hal.morris@oag.state.tx.us

Hal F. Morris joined the Office of the Texas Attorney General in May, 1994, where he now supervises the team of bankruptcy attorneys primarily responsible for all non-tax related bankruptcy matters for the State of Texas.

Mr. Morris specializes in environmental bankruptcy law and healthcare bankruptcy law, having begun his tenure with the Attorney General's Environmental Protection Division and later with the Natural Resources Division. His practice is devoted exclusively to bankruptcy law where he regularly represents the Texas Commission on Environmental Quality (environmental), the Railroad Commission of Texas (Oil & Gas), the Texas General Land Office (state lands, offshore oil and gas leases, and beaches), Texas Health & Human Services Commission, the Texas Department of State Health Services (hospitals), the Texas Department of Aging & Disability Services (nursing homes), the Public Utility Commission of Texas (electric & telecommunications), the Texas Department of Agriculture, the Texas State Securities Board, the Texas Department of Criminal Justice, and other state agencies in bankruptcy matters. Mr. Morris also represents the Antitrust and Consumer Protection & Public Health Divisions of the Attorney General's office, along with other state agencies in non-tax related bankruptcy matters. He served on the Attorney General's *Enron* and *WorldCom* task forces and was lead bankruptcy counsel to the Texas Department of Insurance in the *Conseco* bankruptcy. He presently serves as lead bankruptcy counsel to the Texas Commission on Environmental Quality in the *ASARCO, Lyondell*, and *Tronox* environmental bankruptcy cases.

Mr. Morris holds numerous board certifications in bankruptcy law including dual certifications in both business bankruptcy law and consumer bankruptcy law from the Texas Board of Legal Specialization in Austin and the American Bankruptcy Board of Certification formerly in Washington, D.C. He was also board certified by the Academy of Commercial Law Specialists in Chicago. He is admitted to practice in Texas, Oklahoma, and Missouri; the United States Courts of Appeals for the 3rd, 5th, 8th, 9th, and 10th Circuits, in eight United States District Courts, and the United States Supreme Court.

Mr. Morris is a frequent lecturer on governmental bankruptcy issues and has taught at The Texas State Bar Advanced Business Bankruptcy Courses, American Bankruptcy Institute Conferences, and at the United States Department of Justice National Advocacy Center. In January, 2001, the then Attorney General John Cornyn [now United States Senator] received a Grant from the U. S. Environmental Protection Agency specifically to allow Mr. Morris to teach environmental bankruptcy law to EPA and DOJ attorneys around the country.

Mr. Morris's publications include the American Bankruptcy Institute Journal article, *The Care and Feeding of State Regulators in Chapter 11 Cases*, (XXII Vol. 6, July/August, 2003), State Bar of Texas Environmental Law Journal article, *The Expanding Impact of Bankruptcy Law on Environmental Cases: An Introduction*, (Vol. 26, No. 3, Winter, 1996), *Environmental Issues for Trustees,* in the Journal of the National Association of Bankruptcy Trustees, NABTalk, Winter 1997, and *Texas Attorney General: Privacy Is Not For Sale* in the October, 2000 issue of the American Bankruptcy Institute Journal.

Prior to his move to represent state government, Mr. Morris had been a bankruptcy partner at a 52-attorney, 120-year old law firm in El Paso.

Environmental Issues in Bankruptcy

Mary W. Koks
Tim Million
Munsch, Hardt, Kopf & Harr, P.C.
700 Louisiana, Suite 4600
Houston, TX 77002

Environmental Superconference
August 6 – 7, 2009

ENVIRONMENTAL ISSUES IN BANKRUPTCY

I. INTRODUCTION

The current bankruptcy code, 11 U.S.C. §§ 101–1532 (as amended, the "Bankruptcy Code"), was enacted in 1978 and took effect late in 1979. Many of the federal environmental statutes were enacted around the same time – i.e. the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") was enacted in 1980. Thus, Congress did not consider environmental liability schemes when it created the bankruptcy code. Many of the environmental liabilities are new with the enactment of these new statutory provisions. These liabilities do not fit well into the bankruptcy framework, thus causing confusion and conflicts. Environmental statutes create liabilities that bankruptcy laws will discharge. Obligations created by environmental laws directly conflict with the bankruptcy policy of a "fresh start" for the debtors. For instance, the environmental concept of obligations do not necessarily fit into the bankruptcy code's definition of a "claim". An environmental liability can either be an obligation to remediate property under a Consent Order or Injunction, which may not give rise to a claim, or an obligation to pay a third party or the government for remediation already conducted, which can give rise to a "claim". Also, it can be difficult to properly assess when an environmental claim "arises", which directly impacts whether it will be dealt with in the Debtors Plan of Reorganization or whether the Debtor will have post-petition liability regardless of the bankruptcy.

The "fresh start" concept requires that an individual debtor be discharged of those debts where insufficient assets exist to pay all claims in a Chapter 7, and insufficient assets and income exists to pay debts through a plan of reorganization in a Chapter 13. The "fresh start" concept for corporate entities allows a company through a Chapter 11 to be rehabilitated by discharging

certain debts and paying out certain others in a plan of reorganization through "classification" of claims into different classes, each of which has a priority ranking system vis-à-vis other claims. For instance, "administrative claims" which are those "actual and necessary" to preserve the estate, include current operating expenses of the debtor, and are provided with the highest priority in payment. Secured Creditors are provided payments per the value of their collateral. Unsecured Creditors are provided with a percentage payment of the full claim. Finally, Equity Creditors are provided with some new reduced value to their equity. The rationale is to provide equality to classes of creditors such that each creditor in a class is treated equally or on a pro rata basis. It is also the purpose of the bankruptcy code to save costs and expenses in dealing with a multitude of creditors, and to maximize the size of the estate for the benefit of all creditors. It is necessary to determine into which of these classes an environmental obligation will be placed should it be a true bankruptcy "claim", or whether it will be considered a post-petition obligation which is outside the bankruptcy and not impacted by the bankruptcy.

The primary purpose of environmental statutes, on the other hand, is to provide vehicles for remediation of contaminated property, especially in instances of imminent and substantial endangerment to health and the environment and in holding a broad group of entities and individuals responsible for the remediation – including, in some instances, joint and several liability. The primary statute under which such liability is customarily assessed is Comprehensive Environmental Response, Compensation & Liability Act ("CERCLA") 42 U.S.C.§ 9601 *et. seq.,* which is for abandoned properties, or those in which the owner can not afford to remediate the property. The responsibility for remediation then, often falls to those parties who: 1) arranged to have hazardous substances disposed of; 2) generators of the waste; 3) transporters of the waste to the site; 4) current owners and those owners who owned the site at

the time of "disposal"; and 5) operators of the site. 42 U.S.C.§ 9607(a). Additionally, this liability can be "joint and several". Liability can also be assessed under a number of other environmental statutes including: the Resource Conservation and Recovery Act 42 U.S.C §6901 *et. seq.* ("RCRA") designed for the reduction of the manufacture or generation of hazardous waste from existing facilities and providing a comprehensive scheme for disposal of hazardous substances; the Clean Water Act 33 U.S.C. §1251 *et. seq.* ("CWA") which sets effluent limitations for different types of pollution sources; the Clean Air Act ("CAA") 42 U.S.C. §7401 *et. seq.* which sets the ambient air quality standards that must be achieved by each point source for specified pollutants. There are other federal statutes imposing liability for cleanup of contaminated property, as well as comparable state statutes and common law liability for property damage.

This paper will provide an analysis of how the two bodies of law mesh to allow environmental liabilities to be handled in the bankruptcy context.

II. WHEN IS AN ENVIRONMENTAL OBLIGATION A "CLAIM" AND WHEN DOES IT "ARISE"

A. WHAT ARE ENVIRONMENTAL "CLAIMS" UNDER BANKRUPTCY LAW

Whether an environmental obligation is a "claim" against the bankruptcy estate determines the manner in which it will be treated under a plan of reorganization in a Chapter 11 or 13 case (or scheduled as a claim to be paid out of assets of the estate in a Chapter 7 liquidation case). Treatment as a "claim" is not necessarily the best result, because if it is treated as an unsecured claim (thus, lower in the priority scale), the likelihood that it will be paid in full is normally very remote. If it is treated as an administrative claim, then it is more likely to be paid in full. However, if the obligation is not a "claim" as that term is defined under bankruptcy law,

then it may not be affected by the bankruptcy at all and may survive the bankruptcy to be a continuing obligation of the estate, should the estate continue to exist.

Whether an obligation is a "claim" has two important consequences. First, there can only be distributions of assets of the estate to the holder of a claim. Second, the Debtor only receives discharge of "debts" which the bankruptcy code defines as "liability on a claim". 11 U.S.C. §101(12) Thus, if an obligation is not a claim, it is not a debt and not discharged in bankruptcy, so the Debtor's liability continues on the obligation. Whether this would result in an increased ability to recover for the environmental obligations strictly depends on the type of bankruptcy case involved. For instance, if it is a chapter 7 liquidation case of a corporation, there will be no surviving entity, and the obligation will not get paid as there would be no surviving entity to pay it. Thus, the government or the PRP making the claim should attempt to argue that it is a "claim" or run the risk of no recovery. However, if it is the Chapter 7 of an individual, then only past debts will be discharged, the environmental obligation will continue to exist, and it will continue to be an obligation of the individual after the bankruptcy. Similarly, if it is a Chapter 11 reorganization of a corporation or Chapter 13 reorganization of an individual, the obligation will continue to be an obligation of the Debtor despite the bankruptcy and outside of the Plan of Reorganization; in which case, the government would want to argue that it is not a "claim".

Under bankruptcy law, a "claim" is defined as the:

> (A) right to payment, whether or not such right is reduced to judgment, liquidated, unliquidated, fixed, contingent, matured, unmatured, disputed, undisputed, legal, equitable, secured, or unsecured; or
>
> (B) right to an equitable remedy for breach of performance if such breach gives rise to a right to payment, whether or not such right to an equitable remedy is reduced to judgment fixed, contingent, matured, unmatured, disputed, undisputed, secured, or unsecured.

11 U.S.C. § 101(5).

A creditor is an entity "that has a claim against the Debtor at the time of or before the order for relief concerning the Debtor" is entered.[1] 11 U.S.C. §101(10)(A). In a chapter 11 or 13 case, all debts arising pre-confirmation of the plan of reorganization are included in the bankruptcy. 11 U.S.C. §1141(d). Thus, two criteria must be met before and obligation will be treated as a claim. It must be a "debt" of the Debtor and it must have existed prior to the filing of the case in a chapter 7 or prior to the confirmation of a plan in a chapter 11 or 13.

1. Claims and equitable remedies v governmental police power

Two separate sections of the Bankruptcy Code must be construed to determine whether many environmental obligations fall into the category of a "claim" or are instead the subject of governmental enforcement powers under Orders or Injunctions and thus non-dischargeable. The Bankruptcy Code defines a "claim" as not only a simple "right to payment," but also a "right to an equitable remedy for breach of performance if such breach gives rise to a right to payment." 11 U.S.C. §101(5). Thus, if money is an available alternate remedy for performance of the equitable obligation, that obligation is a "claim" under §101(5)(B) of the Bankruptcy Code.

Alternatively, governmental entities have the right, despite a bankruptcy filing, to commence or continue actions to enforce their police or regulatory powers and to enforce nonmonetary judgments in pursuit of those powers. 11 U.S.C. § 362(b)(4) Legislative history reveals that these exceptions are to be narrowly construed to permit the government to pursue matters affecting public health and safety, such as environmental pollution, but are not intended to apply when the governmental unit is pursuing purely monetary interests. As will be discussed

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[1] In a voluntary bankruptcy case, the Order for relief is entered is when the Debtor's bankruptcy petition is filed. In an involuntary case, where creditors place a Debtor in bankrutpcy, it is when the Court signs the "order for relief" determining that the creditors have met their burden of proof and the entity is one that is eligible for bankruptcy.

below, whether an environmental obligation gives "rise to a right to payment" or is an equitable remedy for breach of performance giving rise to a "right of payment", or alternatively, is an action covered by the enforcement of governmental police powers and therefore is neither a "claim" nor dischargeable, is one of the most contentious areas of litigation for environmental obligations.

The three basic environmental obligations faced by a Debtor are the obligation to: 1) pay money to the government or to a PRP for investigating and cleaning up a contaminated site usually under CERCLA or similar state statute; 2) remediate a site pursuant to EPA or state order; or 3) cease and desist the release of hazardous substances at a site pursuant to an injunctive order.

(a) Claims for remediation already conducted

The simplest of scenarios is when the government (or PRP) has already conducted the remediation and (presuming that remediation occurred prior to the filing of the petition – or "arose" prior to the bankruptcy), then the Debtors only remaining obligation is to pay money to the government. This obligation is a "right to payment" and falls squarely within the definition of a "claim". The government (or PRP) is a creditor because the claim arose prepetition (see below for a discussion of when claims "arise"). Thus, any right to payment would be covered in the Debtor's plan of reorganization as an unsecured claim, or would stand to be paid as an unsecured creditor in a Chapter 7 liquidation.

(b) Injunctions prohibiting further contamination

Equally straightforward are injunctions pursuant to orders or judgments instructing the Debtor to cease activities that are giving rise to a release or threat of release of a hazardous substance. The order is not a "right to payment", and is not dischargeable because it is not a

"claim" or "debt". There is no "right of payment" that can be paid by money contemplated by such an Order and thus, money can not be substituted for the action required of the Debtor.

(c) The obligation to perform a remediation

Much more difficult, are the obligations imposed by the government on a Debtor to remediate a site. This must be broken down into several sub-categories depending on the fact situation.

(i) When the Debtor owns the Site

If the Debtor owns the property on which there are hazardous substances and if that contamination has not been addressed pre-petition, the cases are clear that the post-petition obligation is the responsibility of the Debtor, as the "owner" or "operator" of the property (under CERCLA) to remediate the continuing release or threat of release of hazardous substances. *Matter of CMC Heartland Partners,* 966 F.2d 1143 (7th Cir. 1992) While the Debtor may have claims against other operators, generators, or arrangers for contribution, the Debtor will nonetheless be liable outside (or post) the bankruptcy for cleanup responsibilities and this obligation will not be discharged.

(ii) Remediation under the CWA, CAA, RCRA & comparable state statutes – where no "right of payment" exists

Certain environmental statutes, including the CWA, the CWA, the RCRA, and comparable state statutes only provide an "enforcement" component under which the government requires the Debtor to take actions to stop continuing pollution or to remediate existing pollution. There is no alternate provision in these statutes to allow the government to clean up the property and seek cost recovery. Thus, the government is not seeking "payment" and there is no "claim". Further, the fact that the Debtor might have to spend money or pay someone to carry out the

cleanup order to comply with the Order is not the same as the government having a "right to payment" thereby making the obligation a "claim".

In *U.S. v Hubler,* 117 B.R. 160 (W.D. Pa.1990), *aff'd*, 928 F.2d 1131 (3d Cir. 1991) the government, under the Surface Mining Control and Reclamation Act sought to enforce a reclamation order requiring the Debtors, a partnership and its individual partners to reclaim and restore mining lands. The Debtors claimed that their obligations to restore the lands were effectively discharged in bankruptcy. The Court held that the obligation was not a claim because, under the statute, the government had no right to demand payment from the Debtors, but could only compel them to comply with the Order to restore the lands. Thus, the obligation was not discharged in bankruptcy. *Hubler* at 165.

Therefore, Congress has dictated that where non-bankruptcy law provides an equitable remedy for performance and recognizes no alternative right to payment for a breach of performance, the equitable remedy survives the bankruptcy. *In re Udell,* 18 F.3d 403,406-10 (7th Cir. 1994); *AM Int'l, Inc. v Datacard Corp.,* 106 F.3d 1342, 1348 (7th Cir. 1997) (A right to a RCRA injunction does not fall within the Code's definition of a dischargeable "claim".) *Davenport v Neely*, 7 F.Supp. 2d 1219 (M.D. Alab. 1998).

Similarly, in *Torwico Elecs., Inc. v New Jersey Dep't of Envtl. Prot.* 8 F.3d 146 (3rd Cir. 1993) the Debtor leased a site in New Jersey on which it operated a manufacturing facility. Torwico later moved from this location, and eventually filed for bankruptcy protection. It listed the New Jersey Department of Environmental Protection ("NJDEP") as a creditor, but the NJDEP did not file a claim. Subsequently, the NJDEP issued an Administrative Order demanding that the Debtor remediate the property and assessing a fine. The Order specifically stated that the obligations imposed by it were not debts or damage claims that could be

discharged in bankruptcy. *Torwico,*8 f.3d at 148. The Court found that the NJDEP did not seek money nor did it have a right to payment under the state statute pursuant to which the Order was issued. The Debtor had an ongoing responsibility for the wastes that it was responsible for and an obligation to remediate same, despite the bankruptcy. *Torwico*, 8 F.3d at 151.

The only Supreme Court case to address the issue regarding statutes that provide only enforcement rights to require a Debtor to remediate property, reached a different result, but based on very specific facts. In *Ohio v Kovacs*, 469 U.S. 274 (1985), the State of Ohio, had ordered the individual debtor to clean up a site contaminated by the Debtor and his corporation. When the Debtor refused to perform the cleanup, the state pursued the appointment of a receiver under a general state statute providing that right. The state court appointed a receiver who took control of the Debtor's assets including the property. Thus, the Debtor could no longer comply with the Order. Therefore, the Court held that by the state's appointment of a receiver, the cleanup order had effectively been transformed into an obligation to pay money. Thus, an equitable obligation is not transformed into a right of payment of money unless the Debtor is unable to conduct the remediation and payment of money is the only alternative. The Court was careful to say that it wan not deciding what the result would have been had the receiver not actually been appointed and the state had only sought enforcement of its order. *Kovacs* at 284.

(iii) Remediation where the statute give alternate right to compensation or to order remediation – CERCLA

More complicated still are the statutes that give an enforcement right and an alternate right to payment for remedial costs – like CERCLA. Under CERCLA and many comparable state statutes, the government has the right to enforce remedial actions or in the alternative, to clean up the property and seek cost recovery from responsible parties.[2] The clean up order

[2] 42 U.S.C. §§9604(a)(1), 9607(a) and 9606.

requiring remediation fits the definition of police power, and the demand for cost recovery fits the definition of a "claim".

Some Courts have held that the very nature of the statute giving an alternate right to enforce remediation or to recover costs of the government conducting same, means that the statute gives rise to a "claim" regardless which alternative the government chooses. In *In re Goodwin,* 163 B.R. 825 (Bankr. D. Idaho 1993) the Court held that where the state statute gave the government the option of ordering a person to clean up or alternatively allowed to government to clean up the property, the obligation was a "claim" regardless which option the government chose. The Court held that the cleanup remedy was squarely within the Bankruptcy Code definition of a "claim" in light of the alternative right to seek money. *Goodwin*, 163 B.R. at 831.

Other courts, however, look to which alternative the government has actually chosen to determine whether the obligation is a "claim" or is a continuing obligation of the Debtor and thus, not dischargeable. Specifically, the Third, Fourth and Fifth Circuits have all found that governmental actions to enforce compliance with environmental requirements did not amount to "enforcement of a ..... money judgment" within the meaning of the statute, despite an alternative right to payment even if compliance would require the expenditure of money. *Safety-Kleen, Inc. (Pinewood) v Wyche,* 274 F.3d 846, 864 (4th Cir. 2001); *Penn Terra, Ltd. v Dept of Envtl. Res.,* 733 F.2d 267, 278 (3d Cir. 1984); *Commonwealth Oil,* 805 F.2d 1183, 1186-87 (5th Cir. 1986) Additionally, in the Fifth Circuit, in a non-bankruptcy context, the Court held that the ability to select damages in lieu of an equitable remedy does not make the equitable obligation a "claim" when the claimant has pursued only the equitable remedy. *Matter of Davis,* 3 F.3d 113, 116 (5th Cir. 1993)

In *In re Chateaugay Corp.*, 944 F.2d 997 (2nd Cir. 1991), the Debtor was potentially responsible for the cleanup of a number of sites around the country. The Debtor's position was that its bankruptcy discharged all environmental liabilities. The government brought a declaratory judgment action to establish that the post-petition remediation was not dischargeable as they were not pre-petition claims. The Court did not discuss the distinction in the statute concerning those obligations that have an alternative right to seek payment of money and those that do not. Instead, the Court interjected a requirement not found in the statute: that the cleanup injunction found in the Order is a claim only if there is no "ongoing pollution" (presumably inferring the existence of solid but not hazardous wastes) irrespective of the ability to seek money instead of enforcing cleanup. The Court held that the future obligations were not claims and thus the government's orders were enforceable if the cleanup will end or prevent "future pollution" (inferring cleanup of hazardous waste). Thus, the ultimate result was that the although the EPA has the right to cleanup and to seek recovery, if the EPA does not perform the cleanup and instead requires the Debtor to cleanup the "continuing pollution", then the debt is not dischargeable.

There are one or two courts which have applied what is known as the "practical effects" test to whether an environmental obligation is a "claim". Specifically, the case of *United States v Whizco, Inc.*, 841 F.2d 147 (6th Cir. 1998). The case involved a coal mine reclamation Order and corresponding injunction that the government obtained against an individual after a bankruptcy trustee took all of his assets and after his debts had been discharged in a Chapter 7 proceeding. The Court determined that the injunction would have required the Debtor to hire others to perform work for him because he had surrendered all his mining equipment and his coal leases in the course of his bankruptcy proceeding, and he was 63 years old and incapable of

conducting the work on his own. Under these facts, the Court ruled that the injunction was a dischargeable "claim" to the extent that fulfilling his obligation to reclaim the site would force the Debtor to spend money. *Whizco*, 841 F.2d at 150. To lessen the stretch necessary to come to this conclusion, the Court attempted to soften the result by saying: "To the extent that the defendant can comply with the...orders without spending money, his bankruptcy did not discharge his obligation to comply with the orders...The defendant may, in the future, own equipment which would permit him to personally reclaim some portion of the site." *Whizco*, 841 F.2d at 151. *Whizco* has not been followed by any subsequent reported Court of Appeals decision.

The *Whizco* result has specifically been rejected in the Fifth Circuit in the case *In the Matter of Commonwealth Oil Refining Co., Inc. v U.S. EPA*, 805 F.2d 1175 (5th Cir. 1986). In that matter the EPA sought to enforce provision of a RCRA provision over the operations of a refinery. The refinery had filed for bankruptcy and argued that the compliance with the permit process would require it to spend money and thus, be an action to enforce a money judgment. The Fifth Circuit disagreed with this analysis and stated that the necessity to expend funds

> cannot be the test for determining whether a governmental unit seeks to enforce a money judgment, such that its enforcement actions fall within the §362(b)(5) "exception to the exception" to the automatic stay...the EPA's administrative action is not, in form or in substance, an action to enforce a money judgment proscribed by §362(b)(5). The action is one to compel compliance with federal and state environmental laws.

Commonwealth, 805 F.2d at 1186-1187.

Because compliance with injunctive obligations will almost always cost money, an improper focus on compliance expenditures would negate the statute's "if" qualifier and make most injunction subject to discharge. Thus the "practical effect" test violates the "cardinal principal of statutory construction...that, if it can be prevented, no clause, sentence or word shall

be superfluous, void or insignificant". *TRW, Inc. v Andrews,* 534 U.S. 19, 31; 122 S.Ct. 441 (2001).

(iv) Posting financial assurance – does not give rise to a "claim"

In many environmental operations or in conjunction with administrative orders to remediate contaminated properties, the owner, operator, arranger, or generator is required to post financial assurance to establish that there will be sufficient funds to ensure compliance with environmental obligations or the terms of the order. Such was the case in, *In re Industrial Salvage, Inc.,* 196 B.R. 784 (Bankr. S.D. Ill. 1996). In this case, an order was issued to close three landfills belonging to the Debtor. The Debtor argued that because it had to post financial assurance, the state could recover the money from the fund and thus, the obligation was a "claim". The Court held that the requirement of providing financial assurance did not transform the closure obligation into a "right of payment" that would fit within the definition of a "claim". Further, since the Debtor continued to own the property post-petition, the obligation to remediate the property became a post-petition, non-dischargeable debt. *Industrial Salvage*, 196 B.R. at 788-89.

B. WHEN DO THE "CLAIMS" ARISE?

The first determination in a bankruptcy context is to determine whether or not the environmental obligation is a "claim". If it is not a claim, then when it arose is meaningless. However, the determination of whether it is a claim is often blurred by the determination of when the claim arose. In large part, the strategic decision whether to argue that the claim arose pre or post petition (or post confirmation in a Chapter 11 case) depends on whether the claimant believes that the recovery will be greater under the plan of reorganization or will have a greater

recovery as a post-petition administrative claim or is a claim outside the bankruptcy – thus payable in full and not subject to the limitations that might exist under the plan of reorganization.

It can sometimes be difficult to determine when the environmental obligations arose. The easier situations are where the obligation fully accrued at the time of the filing of the bankruptcy – i.e. where the government fully remediated a site and is looking for payment under cost recovery. Those obligations are clearly "claims" which arose pre–petition and would be payable through the bankruptcy – thus, subject to discharge. Pollution which occurs post-petition, (i.e. after the Plan of Reorganization is confirmed) is also easily determined to be a post-petition obligation not subject to the bankruptcy and thus, fully payable.

Somewhat more complicated are situations where the pollution occurred pre-petition, but continues to be an imminent and substantial endangerment to health and the environment post-petition. More specifically, in cases where the Debtor is the actual owner of the property, the obligation to remediate falls to the Debtor as the owner of the property post-petition. The obligation of a Debtor to remediate its property arises in the context of CERCLA law where the "owner" of property has liability for remediation. 42 U.S.C. § 9607(a)(1); *In re Conseco Life Ins. Co.Cost of Ins Litigation,* 2005 WL2203150 (C.D. Cal. 2005), *Matter of CMC Heartland Partners,* 966 F.2d 1143 (7th Cir. 1992) . However, some courts have held that if pollution is not ongoing post-petition, it may not be a continuing obligation of the Debtor and may be subject to discharge in bankruptcy. *In re Chateaugay Corp.,* 944 F.2d 997 (2d Cir. 1991).

More complicated still, are cases where the Debtor was responsible for pre-petition contamination at a property that it does not own. In these cases, the relationship between the Debtor and the government becomes important indetermining when the claim "arose". If the government knew or had the possibiity of knowing of the harm that may result from the existing

contamination, the court may hold that it is a "claim" that arose pre-petition and thus dischargable. If the government could not have known that there may have been liability by the Debtor at a particular site, then the court may hold that it was not a claim that arose pre-petition.

Additional factors which various Courts have considered in relation to when a claim "arises" includes: 1) When the debtor did the action that resulted in pollution; 2) when the cause of action accrued under federal or state law as to the government or third party; 3) when the government incurred the remediation costs; 4) whether the government knew of the environmental obligations of the Debtor at a Site; and 5) whether the government had a significant relationship with the Debtor that would have resulted in the government being aware that a claim could potentially exist.

1. Conduct test – the claim arises when the acts of the Debtor first occurs. Courts that follow this approach hold that a claim for response costs under CERCLA is "a dischargable prepetition claim when a release or threat of release of hazardous wastes has occurred pre-petition". *In re New York Trap Rock Corp.,* 153 B.R. 642 (Bankr. S.D. N.Y. 1993). In *In re Tutu Wells Contamination Litigation,* 846 F. Supp 1243 (D.V.I. 1993), the Court refused to hold that the cleanup obligation was discharged since the conduct giving rise to the contamination was conducted post-petition.

2. Accrual test- the claim does not arise until all of the acts on which the cause of action is based have occurred. The Court in *United States v Union Scrap Iron & Metal.* 123 B.R. 831, 832 (D. Minn. 1990) stated that "a claim only exists when the pre-bankruptcy relationship between the Debtor and third party contained all the elements necessary to give rise to a legal obligation under the relevant substantive non-bankruptcy law." *Id.* at 883. Since CERCLA requires that the government actually incur costs before it can bring a cost recovery

action, then where the government first incurs costs postpetition, the claim is a post-petition claim. However, the cases that do not agree with this test do so on the basis that the government's obligation need not be ripe so long as all of the acts giving rise to CERCLA liabilities have occurred. *National Gypsum Co.,* 139 B.R. 397 (N.D. Tex. 1992). In which case the claim would be a contingent claim, but a claim nonetheless.

3. The prepetition relationship test – the Debtor's conduct gives rise to a claim only if there is a relationship established between the Debtor and the creditor before the bankruptcy is filed (or plan is confirmed). Related to this is the concept that a claim does not arise until the claimant has some knowledge or notice of the claim. The *Matter of Chicago Milwaukee, St. Paul & Pacific R. Co.,* 974 F.2d 775(7th Cir. 1992), outlined the information necessary to raise sufficient notice of a claim:

> When a potential CERCLA claimant can tie the bankruptcy debtor to a known release of a hazardous substance which the potential claimant knows will lead to CERCLA response costs, and when this potential claimant has, in fact, conducted tests with regard to this contamination problem, then the potential claimant has, at least, a contingent CERCLA claim under section 77.

Id at 786.

Thus, the government or a PRP attempting to determine whether it has a claim in a bankruptcy, must look to both the nature of the obligation as a "claim" and when the claim "arose" in order to properly assess its position.

III. TRUSTEE OBLIGATIONS REGARDING CONTAMINATION

Section 959(b) of title 28 of the United States Code, provides that "a trustee . . . appointed in any case pending in any court of the United States, including a debtor-in-possession, shall manage and operate the property in his possession as such trustee . . . according to the requirements of the valid laws of the State in which such property is situated, in the same manner that the owner or possessor thereof would be bound to do if in possession thereof." 28 U.S.C. §

959(b). While section 959(b) only specifically mentions state laws, courts have generally interpreted the section to require trustees to also comply with all applicable law. LAWRENCE R. AHERN, III & DARLENE T. MARSH, ENVIRONMENTAL OBLIGATIONS IN BANKRUPTCY § 8:36 (SCOTT M. RATCLIFFE & ELAINE KELLER-PETRYK EDS., 2009). Thus, trustees must comply with all valid local, state, and federal laws.

A split of authority exists as to whether section 959(b) applies in all bankruptcy cases or rather to just those cases in which the trustee (or debtor-in-possession) is operating as opposed to merely liquidating. Id. at § 8:37. The majority position is that section 959 applies in both operating and liquidating bankruptcy cases. *See In re Wall Tube & Metal Prods., Co.*, 831 F.2d 118 (6th Cir. 1987); *In re Grace Coal Co., Inc.*, 155 B.R. 5 (Bankr. E.D. Ky. 1993); *In re Stevens*, 68 B.R. 774 (D. Me. 1987); *In re Microfab, Inc.*, 105 B.R. 161 (Bankr. D. Mass. 1989). While the minority position maintains that section 959(b) does not apply in liquidation proceedings. *In re N.P. Mining Co., Inc.*, 963 F.2d 1449 (11th Cir. 1992); *In re Catamount Dyers, Inc.*, 50 B.R. 790 (Bankr. D.Vt. 1985). Accordingly, a trustee will have an obligation to comply with all local, state and federal laws in those cases in which the debtor is operating, but in liquidation cases the trustee's obligations will depend on the state of the law within the jurisdiction in which the case is pending.

IV. SALES OF CONTAMINATED PROPERTY PURSUANT TO SECTION 363 OF THE BANKRUPTCY CODE

Pursuant to section 363 of the Bankruptcy Code, a trustee or debtor-in-possession may use, sell, or lease property of the bankruptcy estate in the ordinary course of the debtor's business. 11 U.S.C. § 363. Moreover, section 363(f) allows a trustee or debtor-in-possession, under certain conditions, to sell estate property free and clear of all liens, claims, and encumbrances. 11 U.S.C. § 363(f). Sales pursuant to section 363(f) are conditioned, *inter alia*,

upon either the consent of secured parties or the sale price being greater than the value of all liens on the property. 11 U.S.C. § 363(f); see also LAWRENCE R. AHERN, III & DARLENE T. MARSH, ENVIRONMENTAL OBLIGATIONS IN BANKRUPTCY § 9:42 (SCOTT M. RATCLIFFE & ELAINE KELLER-PETRYK EDS., 2009).

Section 363(f)(1) provides that a trustee may sell property fee and clear of all interests if "applicable non-bankruptcy law permits sale of such property free and clear of such interests . . " 11 U.S.C. § 363(f)(1). Thus, even in those instances in which a secured creditor consents to the sale of contaminated property, questions may arise as to whether such a sale is permissible under applicable environmental laws.

A. COURT APPROVED SALES OF CONTAMINATED PROPERTY

While the decision was later determined to be moot and vacated by the Third Circuit Court of Appeals, the bankruptcy court in *In re Heldor Indus., Inc.* allowed the debtor to sale contaminated property without complying with the state's environmental laws due in large part to the fact that the state failed to lodge a timely objection to the sale. *In re Heldor Indus., Inc.*, 131 B.R. 578 (Bankr. D.N.J. 1991), order vacated, 982 F.2d 702 (3rd Cir. 1993).

In *Heldor*, the debtor first proposed to sell contaminated property for less than it owed to the secured creditor and pursuant to the sales contract, comply with all environmental laws. *In re Heldor Indus., Inc.*, 131 B.R. at 581. The secured creditor objected to the proposed sale, but later withdrew its objection when the sale terms were altered to remove the debtor's obligation to comply with all environmental laws. The court issued an order approving the sale and the proceeds of the sale were placed into escrow until a settlement agreement, allocating said proceeds could be approved. Once the settlement agreement was presented, the court issued a show cause order as to why the settlement should not be approved. The state department of

environmental protection filed an objection to the settlement because the sale did not require the debtor to comply with state environmental law. Thus, the issue before the court was whether it could approve the settlement without requiring compliance with state environmental law. *In re Heldor Indus., Inc.*, 131 B.R. at 581-84.

Rejecting the state's argument, that despite its failure to object to the sale the court could still avoid the sale due to the failure to comply with state environmental law, the court held that the state was given proper notice of the sale; the state failed to timely object; and thus, the order approving the sale was final and binding. *In re Heldor Indus., Inc.*, 131 B.R. at 584. Citing concern for the finality of orders dealing with the sale of estate property, the court further held that state environmental law could not change the result of the order approving the sale, that such an attack was barred by *res judicata*, and that once a sale is approved applying state law to avoid the sale would violate the supremacy clause of the United States Constitution. *In re Heldor Indus., Inc.*, 131 B.R. at 584-85.

B. SECTION 363(F)(1) AND ENVIRONMENTAL LAW RESTRICTIONS ON TRANSFERS

As discussed *supra*, section 363(f)(1) provides that a trustee may sell property free and clear of interest so long as such a transfer is not prohibited by applicable non-bankruptcy law. 11 U.S.C. § 363(f)(1). In *In re Pintlar Corp.*, 187 B.R. 680 (Bankr. D. Idaho 1995), the debtor attempted to convey contaminated property to certain of its environmental creditors, one of which was the Environmental Protection Agency. Due to restrictions under CERCLA, which prevented the EPA from taking property subject to certain interests, section 363(f)(1) became an impediment to the transfer of the property free and clear pursuant to section 363(f). *In re Pintlar Corp.*, 187 B.R. at 681-82.

In *Pintlar*, the debtor's predecessor had granted certain mining companies a release of liability related to dumping activities and an easement to continue said activities. The release and easement prevented the EPA, due to CERCLA, from taking title to the property. The EPA was successful in arguing to the court that the release did not run with the land, but rather was personal in nature and thus, did not violate CERCLA. However, despite the court's recognition that the easement ran afoul of current environmental laws and therefore was a "worthless property right", it held that environmental law would not allow the transfer free and clear of the easement. Thus, the court had the authority to approve the sale free and clear of the release but not free and clear of the easements. *In re Pintlar Corp.*, 187 B.R. at 681 – 682.

1. Do Purchasers take Property Free and Clear of Environmental Obligations Under 363(f) Sales?

Whether or not a buyer can purchase property pursuant to a section 363(f) sale, free and clear of environmental obligations has received consideration by both commentators and courts. LAWRENCE R. AHERN, III & DARLENE T. MARSH, ENVIRONMENTAL OBLIGATIONS IN BANKRUPTCY § 9:43 (SCOTT M. RATCLIFFE & ELAINE KELLER-PETRYK EDS., 2009). In *Ninth Ave. Remedial Group v. Allis-Chalmers Corp.*, the court determined that a purchaser taking property pursuant to a 363(f) sale did not acquire the property free of claims which were not subject to the bankruptcy process. *Ninth Ave. Remedial Group v. Allis-Chalmers, Corp.*, 195 B.R. 716 (N.D. Ind. 1996). The court explained that claims not subject to the bankruptcy process meant "future claims that did not arise until after the bankruptcy proceeding." *Allis-Chalmers, Corp.*, 195 B.R. at 732. Thus, under the *Allis-Chalmers, Corp.* holding, a sale pursuant to section 363(f) can be free and clear of those environmental claims against a Debtor that arose prior to the completion of the bankruptcy proceeding. However, this is separate from the

obligation of an owner of property under CERCLA to remediate its own property – this is a separate in *personam* liability.[3]

While not decided in the context of an environmental bankruptcy case, courts have held that a sale pursuant to section 363(f) is not intended to extinguish *in personam* liabilities. *In re Fairchild Aircraft Corp.*, 184 B.R. 910, 917-18 (Bankr. W.D. Tex. 1995), decision vacated on other grounds, 220 B.R. 909 (Bankr. W.D. Tex. 1998) (holding that purchase of the assets of the debtor airplane manufacturer could not be free and clear of claims of parties who were or would be injured by plane crashes post-petition and post-confirmation). However, in another non-environmental case, the Fourth Circuit Court of Appeals held that a debtor could sell its assets free and clear of its obligations, pursuant to federal law, to make future contributions to the retirement plans for coal miners. *In re Leckie Smokeless Coal Co.*, 99 F.3d 573 (4th Cir. 1996) (in reaching its holding, the court reasoned, *inter alia*, that the obligations were based upon the debtor's pre-petition actions). However, the court did recognize that there is a split of authority among the courts to have decided this issue. *In re Leckie Smokeless Coal Co.*, 99 F.3d at 581-82.

V. ABANDONMENT OF CONTAMINATED PROPERTY

Section 544 of the Bankruptcy Code allows a trustee or debtor-in-possession to "abandon any property of the estate that is burdensome to the estate or that is of inconsequential value and benefit to the estate." 11 U.S.C. § 554(a). In the case of real property, this power is commonly exercised to rid the estate of property whose value is outweighed by mortgages or other liens. *See Midlantic Nat'l Bank v. New Jersey Dep't Envtl. Prot.*, 474 U.S. 494 (1986). However, difficult questions arise when the property the trustee wants to abandon is contaminated.

[3] Thus, section 363(f) sales will not relieve a purchaser from its obligations to clean up a contaminated site if the purchaser continues to own the property. Matter of CMC Heartland Partners, 966 F2d 1143 (7th Cir. 1992).

Allowing abandonment of the site to free the estate of a burdensome asset creates a potential conflict with the general duty placed on the trustee to "manage and operate" estate property "according to the requirements of the valid laws of the State in which such property is situated, in the same manner that the owner or possessor thereof would be bound to do if in possession thereof." 28 U.S.C. § 959(b) (placing same requirement on debtors-in-possession as those placed upon trustees). In an effort to maximize the benefit to the estate (and in turn, the creditors), can a trustee abandon burdensome contaminated property without running afoul of the duty to operate the property within the bounds of state environmental laws?

A. THE MIDLANTIC DECISION

The Supreme Court addressed the ability of a trustee to abandon contaminated property in the *Midlantic case*. *Midlantic Nat'l Bank v. New Jersey Dep't Envtl. Prot.*, 474 U.S. 494 (1986). The states of New York and New Jersey discovered that a waste oil processor with a facility in each state had accepted hundreds of thousands of gallons of oil contaminated with PCB's. *Midlantic Nat'l Bank*, 474 U.S. at 497. When unable to sell the New York facility, the trustee gave notice of his intent to abandon the property. All parties to the processor's bankruptcy agreed that the New York site was burdensome within the meaning of section 554, but New York objected to the trustee's abandonment plan, arguing that the proposed abandonment posed a risk to the public's health and safety. *Midlantic Nat'l Bank*, 474 U.S. at 495-99. The trustee also later moved to abandon the personal property at the New Jersey site, primarily consisting of the PCB contaminated oil. *Midlantic Nat'l Bank*, 474 U.S. at 498.

In a 5-4 decision, the Court found support for restricting the trustee's power to abandon in "repeated congressional emphasis on its goal of protecting the environment against toxic pollution," as evidenced by the then newly-enacted Resource Conservation and Recovery Act

and the Comprehensive Environmental Response, Compensation, and Liability Act. 42 U.S.C. §§ 6901-6987; 42 U.S.C. §§ 9601-9675. *Midlantic Nat'l Bank*, 474 U.S. at 505-06. The majority held that "a trustee may not abandon property in contravention of a state statute or regulation that is reasonably designed to protect the public health or safety from identified hazards." *Midlantic Nat'l Bank*, 474 U.S. at 507. The decision went on to note that:

> This exception to the abandonment power vested in the trustee by § 554 is a narrow one. It does not encompass a speculative or indeterminate future violation of such laws that may stem from abandonment. The abandonment power is not to be fettered by laws or regulations not reasonably calculated to protect the public health or safety from imminent and identifiable harm.

Midlantic Nat'l Bank, 474 U.S. at 507 n. 9.

B. THE MIDLANTIC FACTORS

Since the *Midlantic* decision, the courts have utilized a number of factors when considering the abandonment of contaminated property. Such factors include:

(1) whether the court can formulate conditions to protect the public health and safety if abandonment is allowed;
(2) whether state law may be so onerous as to interfere with the bankruptcy proceeding;
(3) whether the state (of federal) statute is reasonably designed to protect the public health and safety from identified hazards, or is reasonably calculated to protect public health and safety from imminent danger and identifiable harm;
(4) whether the harm is speculative;
(5) whether the debtor has unencumbered assets from which to pay for the cleanup or other environmental obligation;
(6) whether allowing abandonment will aggravate an existing condition that is imminently dangerous; and
(7) whether there is a present or imminent threat to the public health and safety.

LAWRENCE R. AHERN, III & DARLENE T. MARSH, ENVIRONMENTAL OBLIGATIONS IN BANKRUPTCY § 5:22 (SCOTT M. RATCLIFFE & ELAINE KELLER-PETRYK EDS., 2009). While in some instances redundant, all of these factors were derived from the *Midlantic* opinion. *Id.* at

§ 5:23. Although courts interpreting *Midlantic* differ on the precise extent of the exception discussed above, the developing case law tends to place the emphasis on footnote 9 and the presence or absence of "imminent and identifiable harm" in a given case. *Id.* at § 5:23.

C. THE MAJORITY POSITION

The majority of courts to consider the issue have adopted a narrow interpretation of the *Midlantic* decision, allowing trustees to abandon property despite it being environmentally impacted when there was no showing of imminent and identifiable harm or when the estate had no unencumbered assets available to fund compliance with environmental laws. *See, e.g.*, *In re Smith-Douglas, Inc.*, 856 F.2d 12 (4th Cir. 1988); *N.M. Env't. Dep't v. Foulston* (*In re L.F. Jennings Oil Co.*), 4 F.3d 887 (10th Cir. 1993); *In re Unidigital, Inc.*, 262 B.R. 283 (Bankr. D. Del. 2001); *State of N.J. Dep't of Envtl. Prot. v. North American Prods. Acquisition Corp.*, 137 B.R. 8 (D.N.J. 1992); *In re St. Lawrence Corp.*, 248 B.R. 734 (D.N.J. 2000); *In re H.F. Radandt, Inc.*, 160 B.R. 323 (Bankr. W.D. Wis. 1993); *In re Doyle Lumber, Inc.*, 137 B.R. 197 (Bankr. W.D. Va. 1992); *In re Guterl Special Steel Corp.*, 316 B.R. 843 (Bankr. W.D. Pa. 2004); *In re Shore Co., Inc.*, 134 B.R. 572 (Bankr. E.D. Tex. 1991); *In re Better-Brite Plating, Inc.*, 105 B.R. 912 (Bankr. E.D. Wis. 1989); *In re Purco, Inc.*, 76 B.R. 523 (Bankr. W.D. Pa. 1987); *In re Okla. Refining Co.*, 63 B.R. 562 (Bankr. W.D. Okla. 1986); *In re Brio Refining, Inc.*, 86 B.R. 487 (Bankr. N.D. Tex. 1988); *In re FCX, Inc.*, 96 B.R. 49 (Bankr. E.D. N.C. 1989)). However, the various courts' interpretations of *Midlantic* differ significantly and therefore, result in the application of restrictions on the trustee's abandonment power in a variety of ways.

In *In re Okl. Refining Co.*, a refinery filed for chapter 11 protection. 63 B.R. at 562. The trustee eventually ceased operations at the plant, and closed down the facility. The trustee cooperated with state environmental agencies and employed a consulting firm to prepare an

environmental investigation of the site; the trustee was also in compliance with a consent agreement with state agencies, with the exception of obtaining approval of a closure plan and providing financial assurances consistent with state law. If cleaned up and restored, the land would have been worth approximately $100,000; however, clean up costs were estimated to be at least $2.5 million, and the estate held no unencumbered assets. *In re Okla. Refining Co.*, 63 B.R. at 562 – 564.[4]

Noting that *Midlantic* neither addressed how a trustee was to pay for clean up nor reached the question of the ultimate disposition of the property, the *Oklahoma Refining* court reasoned that the Supreme Court did not intend to place a trustee in the catch-22 of requiring strict compliance with state environmental requirements while lacking the assets to fully comply with them. *In re Okla. Refining Co.*, 63 B.R. at 565-66. Rather, "*Midlantic* requires the bankruptcy court, in determining whether to permit abandonment, take state environmental laws and regulations *into consideration*." *In re Okla. Refining Co.*, 63 B.R. at 565 (emphasis added).

Although there was testimony of a long history of dumping substances onto the ground and into an adjacent creek in the years prior to environmental controls, and evidence of subsurface hydrocarbon contamination reaching an underground aquifer, testimony indicated that no toxic substances had been found in nearby public water supplies and that there was no "immediate and menacing harm to public health and safety." *In re Okla. Refining Co.*, 63 B.R. at 565. Based on these factors, the court approved the motion for abandonment, noting:

> To require strict compliance with State environmental laws under the facts of this case could create a bankruptcy in perpetuity and fetter the estate to a situation without resolve. . . . To pre-empt the administration of this estate would derogate the spirit and purpose

[4] This was in addition to $40 million in secured claims, $8 million of unsecured claims, and a total value of estate assets of only $4 million.

> of the bankruptcy laws requiring prompt and effectual administration within a limited time period.

In re Okla. Refining Co., 63 B.R. at 565-66 (internal citations omitted).

Similarly, a Texas bankruptcy court adopted the more narrow view of *Midlantic*, holding that the "trustee's right to abandon environmentally impacted estate property is limited only by the precondition that the trustee remediate any imminent and identifiable danger present on the property. . . ." *In re Shore Co., Inc.*, 134 B.R. at 578; *see also*, *In re Doyle Lumber, Inc.*, 137 B.R. at 203; *In re L.F. Jennings Oil Co.*, 4 F.3d at 890; *In re Anthony Ferrante & Sons, Inc.*, 119 B.R at 50; *In re Brio Refining, Inc.*, 86 B.R. at 489; *In re Purco, Inc.*, 76 B.R. at 533. With the defunct refinery at issue in *Shore*, the Texas Water Commission and EPA failed to demonstrate to the court that there was an immediate and identifiable harm. *In re Shore Co., Inc.*, 134 B.R. at 580. As in *Oklahoma Refining*, there was a lack of surplus funds to clean up the property, and in spite of the presence of cadmium, chromium, lead, unlined earthen pits, 55 gallon drums of acidic liquids, and 200,000 gallons of oil sludge, TWC's field officer testified that there was nothing at the property to cause imminent harm to the people around the site. *In re Shore Co., Inc.*, 134 B.R. at 574; *see also In re Smith-Douglass, Inc.*, 856 F.2d at 17 (holding that chapter 11 trustee could abandon fertilizer plant in absence of evidence of imminent harm, in spite of repeated violations of Illinois environmental laws, and further holding that "where the estate has unencumbered assets, the bankruptcy court should require stricter compliance with state environmental law before abandonment is permitted."). Accordingly, the court allowed the trustee to abandon the property. *In re Shore Co., Inc.*, 134 B.R. at 579; *see also In re Anthony Ferrante & Sons, Inc.*, 119 B.R at 50; *In re Microfab, Inc.*, 105 B.R. at 161 (Bankr. D. Mass. 1989) (allowing trustee to abandon even with demonstrated identifiable harm because court was unwilling to exhaust estate funds when doing so would not significantly improve property).

Further, in reaching its holding, the *Shore* court placed "great weight" on TWC's "tepid" history of enforcement over a long period of time prior to and during the pendency of the bankruptcy in determining there was no imminent risk of harm to the public. *In re Shore Co., Inc.*, 134 B.R. at 579; s*ee also In re Anthony Ferrante & Sons, Inc.*, 119 B.R. at 50; *In re Purco, Inc.*, 76 B.R. at 533.

D. THE MINORITY POSITION

A minority of courts have taken a broader view of *Midlantic* and placed additional hurdles in front of trustees attempting to abandon environmentally compromised properties. *See, e.g., In re: Wall Tube & Metal Prods. Co.*, 831 F.2d at 122 (opining that trustee would not allowed to abandon property which would result in health hazard); *In re Stevens*, 68 B.R. at 780-81 (holding that abandonment would not be allowed because it would result in violation of state law and cause threat to public safety). The court in *Peerless Plating* found that *Midlantic* created an implicit duty on the trustee to remediate by expending all of the estate's unencumbered funds even though the EPA failed to offer evidence of immediate and identifiable danger. *In re Peerless Plating Co.*, 70 B.R. 943 (Bankr. W.D. Mich. 1987); *see also In re: Wall Tube & Metal Prods. Co.*, 831 F.2d at 122 (holding that chapter 7 trustee was not permitted to abandon or to possess property "in continuous violation of that same law.").

The majority of courts have adopted a narrow reading of *Midlantic* and placed great emphasis on the "narrow exception" language found in footnote 9 of the opinion. While the minority position has interpreted *Midlantic* to mean that a trustee may not abandon property unless and until the property complies with all state and federal environmental regulations. Regardless of the view adopted by a particular court, the touchstone for opposing the

abandonment of contaminated property is the demonstration of "imminent and identifiable" harm to the public health and safety.

VI. ENVIRONMENTAL CLAIMS AND THE AUTOMATIC STAY UNDER SECTION 362 OF THE BANKRUPTCY CODE

A. THE AUTOMATIC STAY

When a debtor files a bankruptcy case it is automatically afforded certain protections from its creditors; namely those protections provided by section 362 of the Bankruptcy Code, which is commonly referred to as the "Automatic Stay". 11 U.S.C.§ 362. Section 362 of the Bankruptcy Code provides, in pertinent part, that:

> (a) Except as provided in subsection (b) of this section, a petition filed under section 301, 302, or 303 of this title . . . operates as a stay, applicable to all entities, of –
>
> 1. the commencement or continuation, including the issuance of employment of process, of a judicial, administrative, or other action or proceeding against the debtor that was or could have been commenced before the commencement of the case under this title, or to recover a claim against the debtor that arose before the commencement of the case under this title;
>
> 2. the enforcement, against the debtor or against property of the estate, of a judgment obtained before the commencement of the case under this title;
>
> 3. any act to obtain possession of property of the estate or of property from the estate or to exercise control over property of the estate;
>
> 4. any act to create, perfect, or enforce any lien against property of the estate;
>
> 5. any act to create, perfect, or enforce against property of the debtor any lien to the extent that such lien secures a claim that arose before the commencement of the case under this title;
>
> 6. any act to collect, assess, or recover a claim against the debtor that arose before the commencement of the case under this title;
>
> . . . .

11 U.S.C.§ 362(a). Thus, the Automatic Stay prevents entities from undertaking various actions against a debtor once its bankruptcy case has been filed.

Among the many justifications routinely given to explain the Automatic Stay is that it provides debtors a breathing spell in which to get their affairs in order. *U.S. v. Nicolet, Inc.*, 857 F.2d 202, 207 (3d Cir. 1988); *Matter of Commonwealth Oil Refining Co., Inc.*, 805 F.2d 1175, 1182 (5th Cir. 1986). The Automatic Stay also serves to preserve the estate for the benefit of all creditors, by preventing levy, execution, or repossession, and stopping litigation that would otherwise drain estate resources. LAWRENCE R. AHERN, III & DARLENE T. MARSH, ENVIRONMENTAL OBLIGATIONS IN BANKRUPTCY § 4:4 (SCOTT M. RATCLIFFE & ELAINE KELLER-PETRYK EDS., 2009). Moreover, the Automatic Stay serves to ensure that certain creditors do not gain advantages over other creditors (*i.e.* by racing to the courthouse or enforcing judgments thereby leaving nothing for other creditors). *Id.*

In the context of environmental cases, subsections (a)(1), (a)(2), (a)(3), (a)(4), and (a)(6) of section 362 are the most commonly involved automatic stay provisions. *Id.* at § 4:5. Subsection (a)(1) works to stay formal proceedings against a debtor, which were or could have been commenced against the debtor before it filed its bankruptcy petition. 11 U.S.C. § 362(a)(1). Subsection (a)(2) prevents parties from enforcing judgments against the debtor, which were obtained prior to the filing of the bankruptcy case. 11 U.S.C. § 362(a)(2). Subsection (a)(3) prevents parties, such as secured creditors, from taking actions to gain control over estate property. 11 U.S.C. § 362(a)(3). Finally, subsection (a)(6) serves to stay any act meant to collect, establish, or recover a claim against the debtor that arose before the debtor filed its bankruptcy case. 11 U.S.C. § 362(a)(6).

B. EXCEPTIONS TO THE AUTOMATIC STAY

While section 362 of the Bankruptcy Code generally prohibits entities from taking actions against a debtor, subsection 362(b) provides certain exceptions to the automatic stay

thereby allowing creditors, in some instances, to continue taking certain actions against the debtor and/or its property. 11 U.S.C. § 362(a) and (b). However, courts generally hold that exceptions to the protections afforded by the automatic stay are to be narrowly construed. *McMullen v. Sevigny (In re McMullen)*, 386 F.3d 320 (1st Cir. 2004); *Hillis Motors, Inc. v. Hawaii Auto. Dealers' Ass'n*, 997 F.2d 581, 590 (9th Cir. 1993); *In re Goodwin*, 163 B.R. 825, 827 (Bankr. D. Idaho 1993).

> Section 362(b) provides in pertinent part that:
>
> The filing of a petition under section 301, 302, or 303 of this title . . . does not operate as a stay –
>
> (1) under subsection (a) of this section, of the commencement or continuation of a criminal action or proceeding against the debtor;
> . . .
> (3) under subsection (a) of this section, of any act to perfect, or to maintain or continue the perfection of , an interest in property to the extent that the trustee's rights and powers are subject to such perfection under section 546(b) of this title or to the extent that such act is accomplished within the time period provided under section 547(e)(2)(A) of this title;
> . . .
> (4) under paragraph (1), (2), (3), or (6) of subsection (a) of this section, of the commencement or continuation of an action or proceeding by a governmental unit or any organization exercising authority under the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, opened for signature on January 13, 1993, to enforce such *governmental unit's or organization's police and regulatory power*, including the enforcement of a judgment *other than a money judgment*, obtained in an action or proceeding by the governmental unit to enforce such governmental unit's or organization's police or regulatory power; . . . .

11 U.S.C. § 362(b) (emphasis added). Thus, under subsection (b)(1) the debtor can not stay criminal proceedings by filing a bankruptcy petition. 11 U.S.C. § 362(b)(1); *see also* LAWRENCE R. AHERN, III & DARLENE T. MARSH, ENVIRONMENTAL OBLIGATIONS IN BANKRUPTCY § 4:6 (SCOTT M. RATCLIFFE & ELAINE KELLER-PETRYK EDS., 2009) (noting that the exception may be

of importance to a governmental unit seeking to enforce criminal sanctions and/or seeking to pursue criminal enforcement of environmental laws). The exception under subsection (b)(3) allows creditors, in certain instances, to perfect, maintain, or continue liens subject to the limitations set out in sections 546(b) and 547(e)(2)(A) of the Bankruptcy Code. 11 U.S.C. § 362(b)(3).

Subsection (b)(4), however, is unique in that it only applies to governmental units or organizations seeking to enforce their police and regulatory powers. 11 U.S.C. § 362(b)(4); *see also Matter of Commonwealth Oil Refining Co., Inc.*, 805 F.2d 1175 (5th Cir. 1986) (holding that under its police powers the government could continue action to force debtor to comply Resource Conservation and Recovery Act). For fairly obvious reasons, this exception is commonly referred to as the "police and regulatory power exception". In order to determine which entities qualify as "governmental units or organizations" under subsection (b)(4), one must look to the definition of "governmental unit" under the Bankruptcy Code.

The Bankruptcy Code defines a "governmental unit" by stating that the term:

> means United States; State; Commonwealth; District; Territory; municipality; foreign state; department, agency, or instrumentality of the United States (but not a United States trustee while serving as a trustee in a case under this title), a State, a Commonwealth, a District, a Territory, a municipality, or a foreign state; or other foreign or domestic government.

11 U.S.C. § 101(27). Thus, federal, state, and local governments as well as administrative agencies, such as the Environmental Protection Agency and state and local environmental agencies, are included under the Bankruptcy Code's definition of "governmental unit" and therefore, are allowed to utilize the exception. *See, e.g., N.L.R.B. v. Continental Hagen Corp.*, 932 F.2d 828, 832 (9th Cir. 1991); *City of New York v. Exxon Corp.*, 932 F.2d 1020, 1025 (2d Cir. 1991). However, at least one court has held that private parties attempting to act on behalf

of a government to enforce environmental laws are not included among those allowed to utilize the exception afforded by subsection (b)(4). *In re B & I Realty Co., Inc.*, 158 B.R. 220 (Bankr. W.D. Wash. 1993).

In order to determine whether a particular action qualifies for the enforcing environmental laws (b)(4) exception, the courts utilize two tests to determine whether the action is intended to primarily to promote the public safety and welfare. *See, e.g., In re McMullen*, 386 F.3d at 325; *In re Fitch*, 123 B.R. 61, 63 (Bankr. D. Idaho 1991); *City of San Francisco v. PG & E Corp.*, 433 F.3d 1115 (9th Cir. 2006), *cert denied*, 127 S. Ct. 208 (2006); *N.L.R.B. v. Continental Hagen Corp.*, 932 B.R. at 833-35; *In re FV Steel and Wire Co.*, 324 B.R. 701 (Bankr. E.D. Wis. 2005); *Penn Terra Ltd. v. Dep't of Envtl. Services, Com. Of Pa.*, 733 F.2d 267 (3d Cir. 1984).

The first of these test is known as the "pecuniary purpose test." When applying the pecuniary purpose test, the court considers the totality of the circumstances in order to determine whether the primary purpose of the action is pecuniary in nature. *Id.* If the court ultimately determines that the action is for pecuniary purposes, then subsection (b)(4) does not apply and the action is stayed. *Id.* The second test is known as the "public policy test." Under the public policy test, a court must consider whether the action seeks to promote public policies or rather seeks to protect private rights. *See N.L.R.B. v. Edward Cooper Painting, Inc.*, 804 F.2d 934, 942 (6th Cir. 1986); *Lockyer v. Mirant Corp.*, 398 F.3d 1098 (9th Cir. 2005). If the action is ultimately determined to be for the purposes of effectuating public policy, as opposed to protecting private rights, then the (b)(4) exception applies and the action is not subject to the automatic stay. *Id.* If, however, the court determines that the actions is meant to protect private rights then the exception does not apply and the action is subject to the automatic stay. *Id.*

Courts have generally held that governmental units are not stayed from pursing the following types of actions: a) actions to compel ongoing compliance with environmental laws; b) actions to fix (but not recover) damages; c) actions to compel debtor/owners of contaminated sites to proceed with cleanup; and d) actions to enforce pre-petition judgments ordering cleanup. *See, e.g., U.S. v. Wheeling-Pittsburgh Steel Corp.*, 818 F.2d 1077 (3d. Cir. 1987); *In re Albion Disposal, Inc.*, 217 B.R. 394 (W.D.N.Y. 1997); *Safety-Kleen, Inc. (Pinewood) v. Wyche*, 274 F.3d 846 (4th Cir. 2001) (holding that action to require debtor to comply with it financial requirements was an exercise of government's police powers and not subject to automatic stay); *Graham v. State of W. Va. (In re War Eagle Const. Co., Inc.)*, 283 B.R. 193 (S.D. W. Va. 2002) (holding that action to revoke permit was permissible exercise of regulatory power that did not violate automatic stay); *City of New York v. Exxon Corp.*, 932 F.2d 1020 (2d Cir. 1991); *U.S. v. Nicolet, Inc.*, 857 F.2d 202 (3d Cir. 1988); *Word v. Commerce Oil Co.*, (*In re Commerce Oil Co.*), 847 F.2d 291 (6th Cir. 1988); *U.S. v. Oil Transport Co., Inc.*, 172 B.R. 834 (E.D. La. 1994); *U.S. v. ILCO, Inc.*, 48 B.R. 1016 (N.D. Ala. 1985); *In re Madison Indus., Inc.*, 161 B.R. 363 (D.N.J. 1993); *Penn Terra Ltd. v. Dep't of Envtl. Services, Commonwealth of Pa.*, 733 F.2d 267 (3d Cir. 1984); *New York v. Mirant New York, Inc.*, 300 B.R. 174 (S.D.N.Y. 2003).

Even in the event that an action is subject to the automatic stay, parties in interest, both private and governmental, have the right to move to have the automatic stay lifted in order to pursue such actions against a debtor in bankruptcy. *See* 11 U.S.C. § 362(d). Section 362(d) provides, in pertinent part, that:

> On request of a party in interest and after notice and a hearing, the court shall grant relief from the stay provided under subsection (a) of this section, such as by terminating, annulling, modifying, or conditioning such stay –
>
> (1) for cause, including the lack of adequate protection of an interest in property of such party in interest;

> (2) with respect to a stay of an act against property under subsection (a) of this section, if –
> (A) the debtor does not have equity in such property; and
> (B) such property is not necessary to an effective reorganization; . .
> . .

11 U.S.C. § 362(d). Courts have held that section 362(d) of the Bankruptcy Code provides the courts with great latitude with respect to granting relief from the automatic stay and that whether "cause" exists requires a balancing of the equities of the circumstances. *In re Nat'l Envtl. Waste Corp.*, 129 F.3d 1052, 1054 (9th Cir. 1997); *Compass Bank for Savings v. Billingham* (*In re Graves*), 212 B.R. 692 (B.A.P. 1st Cir. 1997); *Marder v. Turner* (*In re Turner*), 161 B.R. 1 (Bankr. D. Me. 1993).

VII. ENVIRONMENTAL LIENS

A. LIEN TREATMENT UNDER THE BANKRUPTCY CODE

Regardless of whether they arise under federal, state, or local law, liens are typically recognized in bankruptcy proceedings. *See e.g.*, 11 U.S.C. §§ 101(37), 101(50), 101(51), 506, 544, and 546. Under the Bankruptcy Code, parties that hold valid liens against property of the bankruptcy estate are considered to be holders of "secured claims". 11 U.S.C. § 506.

Section 101(37) of the Bankruptcy Code defines a lien as a "charge against or interest in property to secure the payment of a debt or performance of an obligation." 11 U.S.C. § 101(37). Section 506(a)(1) of the Bankruptcy Code provides that:

> An allowed claim of a creditor secured by a lien on property in which the estate has an interest, or that is subject to setoff under section 553 of this title, is a secured claim to the extent of the value of such creditor's interest in such property, or to the extent of the amount subject to setoff, as the case may be, and is an unsecured claim to the extent that the value of such creditor's interest or the amount so subject to setoff is less than the amount of such allowed claim. . . .

11 U.S.C. § 506(a)(1). Thus, the holder of a lien against property of a debtor's bankruptcy estate, will have a secured claim for amounts owed to the extent that the amounts owed do not exceed the value of the property which secures the lien. However, the Bankruptcy Code does not govern the creation of liens. Rather whether a creditor holds a valid lien is governed by non-bankruptcy law.

While liens are generally recognized by the Bankruptcy Code, in certain instances a trustee or debtor-in-possession has the ability to avoid such security interests. *See* 11 U.S.C. § 544, 545, 547, and 548. Pursuant to section 544, an unperfected security interest may be avoided by a trustee or debtor-in-possession, who is granted the rights of a lien creditor and a bona fide purchaser for value of real property as of the commencement date of the bankruptcy case. 11 U.S.C. § 544. Similarly, section 545 allows a trustee or debtor-in-possession to avoid the statutory lien of a government, if its lien has not been fully perfected prior to the filing of the bankruptcy case. 11 U.S.C. § 545. Even if a lien has been fully perfected prior to the bankruptcy filing, a trustee or debtor-in-possession may avoid the lien pursuant to section 547 if the act of perfection is determined to have been a preference. 11 U.S.C. § 547. In order for a lien to be avoided as a preference certain conditions must be met, including, *inter alia*, that the lienholder has acquired the lien within ninety (90) days of the bankruptcy filing and that the lien was granted on account of antecedent debt. 11 U.S.C. § 547. Thus, while the holder of a lien is typically afforded priority treatment under the Bankruptcy Code, there are instances in which the Bankruptcy Code transforms the holder of a lien, who believed that they held a secured claim, to the lowly status of a general unsecured creditor.

B. STATUTORY ENVIRONMENTAL LIENS

The federal government and several states have enacted laws that create nonconsensual liens on account of environmental obligations. Under these laws, the various governments are granted liens against the responsible party's property in order to secure the payment for or performance of environmental obligations.

While the various environmental lien laws have all been enacted to provide a government with a lien to secure environmental obligations, each typically have distinguishing characteristics. These variances include: 1) the property covered by the lien (*i.e.* all property, contaminated property only (real and/or personal in both instances)); 2) whether the lien is against the owner or all responsible parties; 3) the requirements to establish a valid lien (*i.e.* notice and perfection); 4) the lien dispute procedures; and 5) the requirements for government to obtain priority over third parties. LAWRENCE R. AHERN, III & DARLENE T. MARSH, ENVIRONMENTAL OBLIGATIONS IN BANKRUPTCY § 7:12 (SCOTT M. RATCLIFFE & ELAINE KELLER-PETRYK EDS., 2009).

Some of these laws have been drafted in such a manner as to provide the government with a lien that takes priority over all other liens, regardless of when the other liens came into existence. *Id.* These liens are commonly referred to as "superliens". Three states, Massachusetts, New Hampshire, and New Jersey have enacted superlien laws, however, the federal environmental laws do not provide for superliens. *See* Mass. Gen. Laws Ann. Ch 21E §§ 2 and 13 (West Supp. 1993); NH Stat. Ann. § 147-B:10-b (1991); NJ Stat. Ann. 58:10-23.11f(f) (West 1992).

Other states such as Connecticut and Maine, have drafted their laws to provide a more limited superlien. *See* Conn. Gen Stat. Ann. § 22a-452(a) (West Supp. 1993); Me. Rev. Stat. Ann. tit. 38, § 1371 (West 1993 Supp.). These more limited superliens provide the government

with a priority lien but only as to those third party liens that were filed after the date on which the statute creating the environmental lien took effect. *Id.* It is worth noting, however, that the majority of the environmental lien statutes that have been enacted do not provide superliens. Instead, the majority of environmental lien statutes provide that the government will only have priority over those liens that are perfected after the government has undertaken the necessary steps to perfect its lien.

C. ENVIRONMENTAL LIENS UNDER TEXAS LAW

Texas' environmental lien laws provide that "all remediation costs for which a person is liable to the state constitute a lien in favor of the state on the real property and the rights to the real property that are subject to or affected by a remedial action." Tex. Health & Safety Code Ann. §361.194(a) (2002). However, under Texas law, the lien does not arise or is not perfected until such time as a lien affidavit is recorded. Tex. Health & Safety Code Ann. §361.194(b) (2002). Moreover, the priority of the lien "does not relate back to a time before the date on which the affidavit is recorded, which date is the lien inception date." *Id.* In fact, the statue specifically provides that the environmental lien is "not valid or enforceable if real property, an interest in real property, or a mortgage, lien or other encumbrance on or against real property is acquired before the affidavit is recorded, ..." Tex. Health & Safety Code Ann. §361.194(g) (2002).

However, there is an exception whereby the environmental lien would be enforceable against such parties. The statute provides that the environmental lien is valid and enforceable against a mortgagee or lienholder, if they "had or reasonably should have had actual notice or knowledge that the real property is subject to or affected by a clean-up action or has knowledge

that this state has incurred clean-up costs." Tex. Health & Safety Code Ann. §361.194(g) (2002).

D. LIENS UNDER CERCLA

CERCLA, provides the EPA with the ability to obtain a lien on property on account of environmental liabilities to the federal government. 42 U.S.C. § 9607(1). Section 9607(1) provides that:

> All costs and damages for which a person is liable to the United States under subsection (a) of this section . . . shall constitute a lien in favor of the United States upon all real property and rights to such property which -- (A) belong to such person; and (B) are subject to or affected by a removal or remedial action.

42 U.S.C. § 9607(1). Section 9607(2) describes the time at which such a lien arises as follows:

> Duration. The lien imposed by this subsection shall arise at the later of the following:
>
> (A) The time costs are first incurred by the United States with respect to a response action under this chapter.
> (B) The time that the person referred to in paragraph (1) is provided (by certified or registered mail) written notice of potential liability. Such lien shall continue until the liability for the costs (or a judgment against the person arising out of such liability) is satisfied or becomes unenforceable through operation of the statue of limitations provided in § 9613 of this title.

42 U.S.C. § 9607(2). Thus, upon either the occurrence of notification of liability or upon incurring the removal or remedial costs, the EPA has a lien against the property affected. However, that lien is not perfected, as is required under bankruptcy law in order to be considered a secured claim, until the EPA actually files the liens in the Real Property Records of the state. 42 U.S.C. § 9607(1)(3). Pursuant to 42 U.S.C. §9607(1)(3), the lien becomes perfected at the time it is filed in an office that a state has designated for receipt of notice of liens or if no such office is designated at the time it is filed in the office of the clerk of the United States District Court. 42 U.S.C. § 9607(1)(3).

Interestingly, CERCLA provides that governmental action (*i.e.* the environmental lien), may not be attacked until such time as the government brings an enforcement action against the responsible party. 42 U.S.C. § 9613(h). One court has held that the attachment of a CERCLA lien without allowing the owner to dispute the attachment of the lien, effectively takes the owner's property without affording due process in violation of the Fifth Amendment. *Reardon v. United States*, 947 F.2d 1509 (1st Cir. 1991).

VIII. THIRD PARTY LIABILITY FOR CONTAMINATION

Third party and successor liability under CERCLA has historically been expanded beyond general, federal and state common law concepts for such liability. Under the CERCLA statutory scheme, any "**person** who, at the time of disposal of any hazardous substance owned or operated in a facility," or "any **person** who . . . arranged for disposal of any hazardous substance," or "any **person** who accepts. . . hazardous substances for transport . . ." has liability for costs of removal and remediation incurred by the EPA. 42 U.S.C. § 9607(a)(2)(3) and (4).

A "person" was defined in 42 U.S.C. § 9601(21) to include both individuals and corporations. Thus, for years in an effort to give effect to the congressional mandate to cover both corporate officers and parent corporations as arrangers, transporters and operators, the courts devised various test, including, *inter alia*, the "substantial control" and "actual control" tests to determine whether parent corporations actually controlled the subsidiary even in matters not relating to environmental activities. *See*, *Landsford-Coaldale Joint Water Authority v. Tonolli Corp.*, 4 F.3d 1209, 1220 (3rd Cir. 1993); *FMC Corp. v. U.S. Dep't of Commerce*, 29 F.3d 833, 843 (3rd Cir. 1994); *Aluminum Co. of America v. Beazer East, Inc.*, 124 F.3d 551 (3d Cir. 1997); *Schiavone v. Pearce*, 79 F.3d 248 (2d Cir. 1996); *John S. Boyd Co., Inc. v. Boston Gas Co.*, 992 F.2d 401 (1st Cir. 1993). Moreover, courts rendered decisions which allowed

company shareholders, officers, and secured lenders to be subjected to direct liability for environmental obligations. *See U.S. v. Kayser-Roth Corp.*, 910 F.2d 24 (1st Cir. 1990) (holding shareholders directly liable without having to resort to traditional theories shareholder liability); *Guidice v. BFG Electroplating & Mfg. Co., Inc.*, 732 F.Supp. 556 (W.D. Pa. 1989) (holding that post foreclosure secured creditor was liable); *U.S. v. Fleet Factors Corp.*, 901 F.2d 1550 (11th Cir. 1990), *reh'g denied*, No. 89-8094 (11th Cir. 1990) (holding secured creditor could in certain circumstances be liable). *But see Joslyn Mfg. Co. v. T.L. James & Co., Inc.*, 893 F.2d 80 (5th Cir. 1990) (holding that shareholders not directly liable, but instead may be liable in those instance in which the corporate veil could be pierced).

However, these broad and expansive third party and successor liability theories have been significantly curtailed by the decision in *U.S. v. Bestfoods*, 542 U.S. 51 (1998). Although *Bestfoods* dealt primarily with whether a parent corporation could be held derivatively liable for the actions of its subsidiary it will, nonetheless, have a direct effect on liability for various third parties as well. In *Best Foods*, the Supreme Court held that a parent corporation can be held derivatively liable only if the corporate veil could be pierced under federal common law standards. *Id.* at 55. Moreover, the holding is likely applicable to shareholders, as the court explicitly recognized the principal that the limited liability of corporate shareholders is generally to be respected, but also recognized the ability to subject shareholders to liability in instances in which the "corporate form would otherwise be misused to accomplish wrongful purposes, most notably fraud, on the shareholder's behalf." *Id.* at 61-62 (citations omitted).

The *Bestfoods* holding will likely also have a direct impact on successor liability, as most courts have held that the Supreme Court intended to include all known forms of business and commercial enterprises. *See, e.g., North Shore Gas Co v. Solomon, Inc.*, 152 F.3d 642, 649 (7th

Cir. 1998); *BF Goodrich v. Betkoski*, 112 F.3d 88 (2d Cir. 1997). Thus, it appears that courts, after *Bestfoods*, may provide a more restrictive reading for the proper standard of successor liability and revert back to principles announced in federal common law as opposed to environmental theories of successor liability broadened under CERCLA case law. *See, e.g., New York v. National Services Indus., Inc.*, 352 F.3d 682, 684-85 (2d Cir. 2003); *New York v. Westwood-Squibb Pharmacy Co., Inc.*, No. 90-CV-1324C, 2004 WL 1570261 (W.D.N.Y. May 25, 2004); *North Shore Gas Co. v. Salomon, Inc.*, 152 F.3d 642 (7th Cir. 1998).

IX. CONCLUSION

The analysis of the nature and extent of environmental obligations in a bankruptcy case and how those obligations will be treated can be extremely complex and will many times depend on not only the type of debtor, the type of obligation, when the obligation arose, the type of creditor but even on public policy involved in the case. Extra care must be given regarding the position that the government or PRP creditor should take prior to asserting any obligation against the debtor.

MUNSCH HARDT KOPF & HARR PC

ATTORNEYS & COUNSELORS



713.222.4030 Direct
713.222.5830 Fax
mkoks@munsch.com

Bank of America Center
700 Louisiana Street
Suite 4600
Houston, Texas 77002-2845

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- University of South Carolina, Master of Arts in Government
- University of South Carolina, Bachelor of Arts in Political Science

MARY W. KOKS

Shareholder

OVERVIEW

Mary has more than 26 years of experience in a practice focusing on environmental compliance and litigation. Her experience includes:

- Representation of potentially responsible parties in environmental lawsuits including bankruptcy matters, toxic tort and property claims, and petitions brought under various environmental acts.
- Representation of clients in administrative and civil enforcement cases before the Environmental Protection Agency (EPA), Texas Commission on Environmental Quality (TCEQ) and State Office of Administrative Hearings (SOAH).
- Assisting and advising clients on environmental aspects in real estate related transactions as well as interpretation of federal and state environmental regulations, supervision of environmental compliance audits and the Spill Prevention Control and Countermeasures (SPCC) plans.

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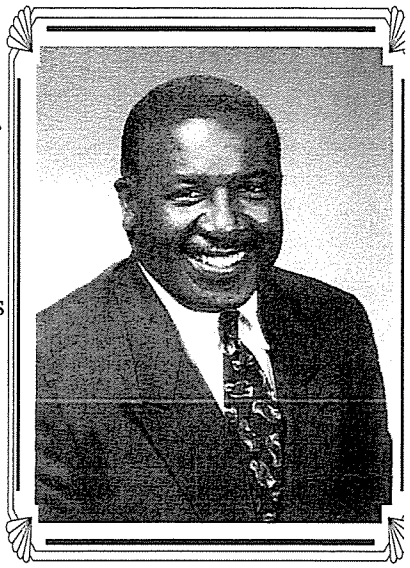
Samuel Coleman, P.E.

Director,
Superfund Division



Samuel (Sam) was born in Shreveport, LA, to the parents Sam and Mildred Coleman, both long time residents of Shreveport. He graduated from Captain Shreve High School in 1974. He went on to attend Prairie View A & M University, where he received his Bachelor of Science degree in Civil Engineering in 1977.

Sam is currently the Director of the Superfund Division in the Environmental Protection Agency's (EPA) Dallas, TX Office. In this assignment he manages a wide array of complex regulatory and remediation projects, for example; response actions, including the remediation at abandoned hazardous waste sites to protect health of people and promote the reuse of the property; emergency response activities, such as, coordinating EPA response to natural or man made disasters, oversight of clean-ups, and removal of accidental spills and releases of oil and hazardous materials; EPA's Regional Emergency readiness/preparedness and counter-terrorism programs; and Public participation in activities relating to abandoned site clean-up, including, comprehensive community involvement plans and communication strategies to educate and involve the public and elected officials. He served as EPA's Senior Federal Official during the response to Hurricanes Katrina and Rita, and supervised a large cadre of EPA and contractor staff.

Sam began his career with the U. S. Army Corps of Engineers in Fort Worth, Texas as an engineering intern. He worked his way through the ranks with the Corps managing complex multi-million dollar construction projects ranging from dams and spillways to complex facilities to support the US military. In 1984 he accepted a position in Seoul, Korea. While in Korea, he worked as the Resident Engineer for the DMZ and the area known as the Western Corridor, which included the Panmunjom Peace Village. Upon returning to the US in 1987, Sam was named the Resident Engineer for Ray Roberts Resident Office in Sangar, Texas. He continued his career with the Corps, ultimately being named Assistant Area Engineer for North Texas.

Sam sought new challenges in 1989 when he accepted a position with the EPA in Dallas, Texas. He began his EPA career in the Hazardous Waste Enforcement Branch. In 1993, Sam accepted a position in Washington, DC which led to his appointment to the Federal Senior Executive Service in 1995 as Deputy Director of the Office of Site Remediation Enforcement. He returned to Dallas in 1995, as the Director of the Compliance Assurance and Enforcement Division, where he served until his current assignment in 2003.

He is married to the former Esther M. Foster and currently lives in Cedar Hill, Texas. They have two wonderful children, Meredith and Zachary, and a grand daughter, Vivian.

Vapor Intrusion:

An Emerging Environmental Liability In Texas

Prepared by:

Susan Litherland, PE

Susan.Litherland@WestonSolutions.com

Roger Smith, PG

Roger.Smith@WestonSolutions.com

Bob Chapin, PG

Robert.Chapin@WestonSolutions.com

For Presentation at:

Texas Environmental Superconference 2009

August 6-7 2009

WESTON SOLUTIONS

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Vapor Intrusion: An Emerging Environmental Liability Issue in Texas

Susan Litherland, PE, Roger Smith, PG, and Bob Chapin, PG
Weston Solutions, Inc.

Vapor Intrusion (VI) is emerging as an environmental liability issue in Texas. Development of national and state regulatory programs and the release of the American Society for Testing and Materials (ASTM) standard for vapor intrusion assessment have increased the awareness and relevance of this issue. High-profile environmental projects with vapor intrusion driving assessment and remediation in residential neighborhoods have increased consciousness of VI in the marketplace and at the grass-roots level. While current Texas Risk Reduction Program (TRRP) rules do not require consideration of human exposure through inhalation of indoor air, and no applicable protective concentration limits (PCLs) have been established for soil or groundwater, TRRP rules do require evaluation of "... other complete or reasonably anticipated to be complete exposure pathways." Many factors influence whether the presence of volatile chemicals beneath a particular building will result in an actual exposure. In many cases it is difficult (or impossible) to ascertain with a high degree of certainty whether a problem exists or may develop. These factors result in considerable technical and regulatory ambiguity regarding VI in Texas. These ambiguities can complicate real estate transactions and increase the difficulty of obtaining regulatory closure of sites where volatile chemicals are present under buildings, or in areas where buildings might be built in the future. This paper provides background on the issue, a summary of the general methodology for conducting assessments, a survey of potentially applicable standards, and recommendations regarding risk management.

Background

Vapor intrusion occurs when contaminants in subsurface soil or groundwater volatize and are subsequently transported indoors where they may be inhaled by occupants of a building. The potential exposure can occur in both residential and commercial settings. Although some semi-volatile chemicals and even some metals can potentially create VI issues, chemicals categorized as "volatile organics" are the most commonly associated with VI. Lists of potential VI chemicals are provided in the available guidance[1] [2] [3]. The most common VI chemicals of concern (COCs) are chlorinated solvents, such as trichloroethylene (TCE) and perchloroethylene (PCE), and constituents of petroleum hydrocarbons such as benzene. Common sources of potential VI chemicals are liquids and gasses associated with dry cleaners, manufacturing facilities, machining facilities, gas stations, and landfills. Volatile organics in soil and/or groundwater equilibrate with the vapor phase in the interstitial spaces above the water table, so that a portion of the volatile chemical is present in the "soil gas." The presence of volatile organics in soil and/or groundwater, and even relatively high concentrations of a chemical in the soil vapor beneath a building, may not result in VI issues. The two largest influences on the movement of soil vapor are 1) differences in pressure (vapors move from areas of higher pressure to areas of lower pressure), and 2)

[1] Environmental Quality Management, Inc. 2004, "User's Guide for Evaluating Subsurface Vapor Intrusion Into Buildings", Table 1. Screening List of Chemicals, p. 7 of 77.

[2] ASTM International, 2008, Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions- E 2600-08.

[3] California Environmental Protection Agency, Department of Toxic Substances Control, "Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" 2004, December 15, 2004 (Revised February 7, 2005), 59 pp.

differences in concentration (chemicals in the vapor phase will move from areas of higher concentration to areas of lower concentration). Soil vapors enter a building when the pressure of the air within a building is lower than the pressure of the soil vapor, the chemical concentration in the soil vapor is higher than that chemical in the indoor air, AND there is an insufficient barrier (the presence of gaps, cracks, or holes in the foundation) to prevent migration into the building. Vapors will follow the path of least resistance.

The potential for a VI issue exists when a volatile chemical is present in the vicinity of a building, and when a complete migration pathway exists. However, the conditions that could result in an actual, unacceptable human risk are dependent on the concentration of the chemical in the indoor air. Although ascertaining the potential concentration of a chemical in the indoor air is the most critical step of a VI assessment, it is also the most difficult to evaluate because of the various factors that can influence the movement of the soil vapor into a building and the subsequent dilution of the vapor within a building. Some of the most significant factors in calculating the potential indoor air concentration are the rate that the soil vapor enters the building (which is difficult, if not impossible, to measure directly), the amount of fresh air that is circulated into the building, and the operation of the air handling equipment within the building (how well mixed is the air).

Even after significant evaluation, a VI assessment may not determine potential risk with a high degree of certainty. For some cases, implementation of pre-emptive mitigation measures may be the most efficient resolution of potential VI issues from a time and a cost perspective.

Development Of Regulatory Programs

Indoor air quality and VI have been recognized by environmental regulators as potential concerns for a number of years. However, in the early days of development of risk-based environmental regulatory programs, indoor air quality was, at best, secondary to concerns associated with the potential for human ingestion of contaminated groundwater and preventing human exposure to contaminated soils. As a result, few of these early risk-based programs explicitly required evaluation of the potential for VI.

In addition, the statutory authority of Environmental Protection Agency (EPA) and the Occupational Health and Safety Administration (OSHA) over the regulation of indoor air quality was somewhat uncertain. Over time, the roles of EPA and OSHA have become more defined. OSHA regulates indoor air quality in commercial settings where the chemicals potentially resulting in human exposure are used as part of the business. It does not appear that OSHA has gotten involved in indoor air quality issues related to VI. EPA, through the authority granted in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) programs, can regulate indoor air quality issues related to VI.

National and state regulatory guidance and programs have been created in response to VI concerns. The initial regulatory guidance documents on VI date back to the early 1990s[4]. The seminal EPA guidance documents on VI are the 2001 RCRA draft guidance document[5] on VI and 2002 Office of Solid

[4] United States Environmental Protection Agency. 1992. Assessing Potential Indoor Air Impacts for Superfund Sites; Air/Superfund National Technical Guidance Study Series. Office of Air Quality, Planning and Standards, Research Triangle Park. Document No. EPA-451/R-92-002. September 1992.

[5] United States Environmental Protection Agency. 2001. Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway (Vapor Intrusion Guidance). December 2001.

Waste and Emergency Response (OSWER) draft guidance[6]. These documents provide a basic approach to the assessment and evaluation of potential VI issues. They are the basis for development of subsequent EPA regional and state regulatory programs. Currently, EPA Regions 3, 6, and 9 have developed or are developing VI guidance. States with their own regulatory guidance or programs include Alabama, Alaska, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Indiana, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Washington, and Wisconsin. Links to many of these states' VI-related documents can be found at an internet site maintained by EnviroGroup Limited: http://www.envirogroup.com/links.

For most properties in Texas that require environmental evaluation and/or where environmental evaluation is being voluntarily performed, TRRP provides a framework for evaluation of risks associated with COCs in outdoor air [350.71(c)(3-6)]. Under 350.71(c) of TRRP, the Texas Commission on Environmental Quality (TCEQ) lists specific human exposure pathways that must be considered. In addition, under TRRP 350.71(c)(8) "evaluation of other complete or reasonably anticipated to be complete exposure pathways," is required. TRRP includes risk-based concentrations in soil and groundwater that are unlikely to result in an excess risk through the inhalation of outdoor air, and acceptable breathing space concentrations are provided in look-up tables. However, TRRP does not provide look-up values for soil or groundwater to demonstrate that existing concentrations will not result in a VI issue. No specific TRRP guidance has been written on how to evaluate this issue.

TCEQ has not consistently required evaluation of the indoor air pathway to obtain regulatory closure of properties where volatile chemicals are present. Rather, the agency considers this issue on a case-by-case basis. TCEQ has rarely (if ever) specifically concurred that no VI risk exists based on an evaluation performed for a particular property. This lack of guidance in Texas is primarily a function of the uncertainties involved in VI assessments in general.

In addition, the typical settings in Texas (geologic conditions; weather; building construction; heating ventilation and air conditioning [HVAC] operation; etc) may make VI a less significant issue than in other locations (for instance where basements are more common and less fresh air is circulated through buildings). Although TCEQ may not require evaluation of the VI pathway to obtain a regulatory closure of a property, this issue should be considered by those seeking closure, especially if volatile organics are to remain in soil and/or groundwater beneath existing buildings, or in areas where future buildings are anticipated.

Risk-Based Corrective Action and VI

The regulatory trend towards risk-based cleanups of contaminated properties has exacerbated the issues associated with VI. Early environmental programs were based on an assumption that a property was either clean (the absence of person-added chemicals) or contaminated (the presence of any non-natural chemicals). In the early to mid 1990s, there was an increasing awareness that the presence of some levels of chemicals at a property did not necessarily result in an unacceptable risks for users of the property. At this time, national and state regulatory agencies began developing and implementing risk-based environmental programs. In general, the allowable risk-based concentrations were either

[6] United States Environmental Protection Agency. 2002. Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance). Office of Solid Waste and Emergency Response. November 2002.

calculated, based on potential site-specific exposure, and/or look-up tables were published that provided risk-based numbers based on generic exposure assumptions. These programs typically included consideration of direct human exposure and/or ingestion of groundwater, soil, surface water and/or sediment. Although these programs were based on the evaluation of risk associated with specific exposure pathways, few if any programs considered VI to be a significant concern. As a result of these programs, many sites considered to be low risk received closure with significant levels of volatile contaminants remaining in the soil and/or groundwater.

As VI continues to develop as a national concern, some of the properties that had been issued regulatory closures are potentially subject to reevaluation. In the case of New York, this evaluation has been mandated by the state agency[7] [8]. As of 14 May 2009, 421 legacy VI sites in New York were in various states of re-evaluation[9]. In many of the cases where re-evaluation was complete, the result was a decision to require mitigation specifically to address the VI pathway.

In states where no agency program requires re-evaluation of properties with regulatory closure, such evaluations may still occur when properties are sold or redeveloped. Property owners, buyers, lenders, and insurers are now asking questions more often regarding the potential for VI. The perception of a potential VI issue and the ambiguity in whether there is (or could be) an actual VI problem may affect the value of the property or the ability to redevelop the property. When such evaluations are conducted, properties that have received regulatory closure in one state would not necessarily receive closure in a state where VI was considered.

In Texas, many such examples exist. Under the Petroleum Storage Tank (PST) program, the previous Risk Reduction Program rules, and the TRRP rules, sites have been closed with concentrations of volatile chemicals in soil and/or groundwater that were demonstrated to be protective based on the required pathways, but these sites may require additional evaluation and/or mitigation to demonstrate protectiveness based on the VI pathway. Because of the absence of a specific regulatory framework and agency concurrence, stakeholders may perceive VI as un-quantified and a developing risk in Texas.

Stakeholder Concerns

Vapor intrusion is not only a regulatory concern, but it has also become an issue with the public due to a number of high-profile sites where large plumes of contaminated groundwater have traveled into residential neighborhoods. Examples of such projects include the Endicott site in New York[10] and the Redfield Site in Colorado[11]. Summaries of both sites, along with a summary of results for 39 other sites

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[7] Freeman, David J and Hiney, Jesse.2007 "New York Agencies Take Lead in Addressing Soil Vapor Concerns" BNA's Environmental Due Diligence Guide, pp. 231:1871-231:1876).

[8] New York State, Department of Environmental Conservation, 2009, Vapor Intrusion Guidance, http://www.dec.ny.gov/regulations/2588.html,

[9] New York State, Department of Environmental Conservation, 2009, Status of Vapor Intrusion Evaluations at Legacy Sites, 14 May, 2009, http://www.dec.ny.gov/regulations/51715.html

[10] New York State Department of Health. n.d. *Endicott Soil Vapor Project.* Available at http://www.health.state.ny.us/environmental/investigations/soil_gas/index.htm. Accessed July 2009.

[11] United States Environmental Protection Agency. 2002. *U.S. EPA Technical Support Project Technical Session Summary*, June 3–6, 2002, Denver, CO. Technology Innovation Office. Washington, DC. Available at http://www.epa.gov/tio/tsp/download/2002_meet/denver_2002.pdf

around the country, can be found in the EPA's VI Database[12]. At Endicott, groundwater contamination was discovered in 1980 after a 1,1,1-TCA spill at a former manufacturing facility. The plume extends beneath adjacent and nearby residential and commercial properties. Over 200 commercial and residential buildings have been assessed for VI. At Redfield, the VI source is a solvent plume discovered in 1994 that is associated with a former rifle manufacturing facility. The primary chemical of concern is 1,1-DCE. The land use in the area is a mix of residential and commercial. The assessment includes sampling in and around over 300 homes. Vapor mitigation systems have been installed in 118 homes. The Redfield site is unique in that it has a publically accessible website to share information with the affected community[13]. The information includes assessment and remediation results, health information, and information regarding real estate activity in the affected area.

Increased public awareness about VI has spawned requests from citizen groups that regulatory agencies address specific concerns. In New York, the New York Vapor Intrusion Alliance[14] has requested that the state legislature require landowner disclosure of potential VI issues. In Texas, local concern regarding the proposed location of an elementary school at a former chemical and research testing laboratory resulted in EPA Region 6[15] , TCEQ, and U.S. Department of Health and Human Services (Agency for Toxic Substances and Disease Registry)[16] [17] involvement. To address community concerns, VI assessment work was conducted prior to construction of the school, and a vapor mitigation system was installed. After construction of the school, preoccupancy testing was conducted to verify that no unacceptable risks were associated with indoor air. In Grand Prairie, Texas in 2008, EPA Region 6 conducted VI assessments at 16 residences and 2 businesses located above a plume of groundwater contamination believed by EPA to be associated with the former Delfasco Forge facility. After evaluating the results of the testing and meeting with Delfasco, EPA issued a RCRA 7003 Unilateral Administrative Order[18] requiring VI assessment and mitigation. Delfasco declared bankruptcy shortly after receiving the order. This same property was associated with a failed attempt to obtain a Municipal Setting Designation

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[12] United States Environmental Protection Agency. 2008. Draft U.S. EPA's Vapor Intrusion Database: Preliminary Evaluation of Attenuation Factors. Office of Solid Waste. March 4, 2008

[13] Brown Group Retail. 2007. *Redfield Site.* Brown Group Retail online information. Available at: http://www.redfieldsite.org/index.php (accessed September 2007).

[14] Fischbein, Neil, 2008. "New York State Vapor Intrusion Alliance formed." The TCE Blog, Available at http://www.tceblog.com/posts/1201529495.shtml. 28 January 2008.

[15] United States Environmental Protection Agency Region 6. 2007. Letter from Sam Coleman, Director Superfund Division, to Ellen Skoviera, Assistant Superintendent, Leander ISD, regarding Clarification letter on the Leander ISD proposed Grandview Hills Elementary School Building, Austin, Texas. Letter not dated

[16] United Stated Department of Health and Human Services. 2008. Letter Health Consultation, Review of Vapor Intrusion Pathway, Grandview Hills Elementary School, Austin, Travis County, Texas. Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, Georgia. 28 July 2008.

[17] United Stated Department of Health and Human Services. 2009. Letter Health Consultation, Review of Preoccupancy Data, Grandview Hills Elementary School, Austin, Travis County, Texas. Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, Georgia, in cooperation with the Texas Department of State Health Services. 4 February 2009.

[18] United States Environmental Protection Agency Region 6. 2008. Letter from John Blevins, Director Compliance Assurance and Enforcement Division to Phillip Kadlecek, President, Delfasco Inc. Unilateral Administrative Order Enclosed. EPA Docket No. RCRA-06-2008-0997. 2 July 2008.

(MSD) from the City of Grand Prairie. Some of the City's concerns about the proposed MSD were related to VI[19].

With increased regulatory and public interest, VI has also made its way into the courts. Clients have filed errors and omissions claims against consultants for failure to consider VI as an issue of import. Other potential causes of legal action could arise from property owner concerns about diminution of value, loss of revenue, and exposure to hazardous substances. Tenants may have similar concerns as well. Entities with owner/operator status, current or historical, may have liabilities related to toxic torts claims due to VI. Insurance companies have been involved in litigation regarding the extent to which policies cover VI liability. The increase in litigation surrounding VI further illustrates the need to develop sound strategies to assess and mitigate risk.

Potentially Applicable Standards

Ultimately, VI assessment data are used in an effort to resolve the issue of whether VI is a current or possible future problem at a given site. Unfortunately, there are considerable variations between regulatory programs regarding what indoor air concentrations represent an unacceptable risk. If TCE is taken as an example, "acceptable" levels of TCE in indoor air can vary over seven orders of magnitude depending on which regulatory program is applicable, the setting (occupational, commercial, or residential), and the assumed cancer risk level (10^{-4}, 10^{-5}, 10^{-6}).

For sites in Texas, where TRRP is applicable, the risk-based exposure limits (RBELs) for inhalation ($^{Air}RBEL_{Inh}$)[20] are most likely the appropriate indoor air concentrations for comparison. The TRRP inhalation RBELs are the health-based values that have been calculated using published toxicity information and equations provided in TRRP. Theoretically, the air RBELs could be used to develop PCLs for soil and groundwater that are protective of human exposure through indoor air. However, there is currently no consensus in Texas regarding appropriate calculations to estimate the concentration of a volatile chemical in soil and groundwater beneath a building that would not result in an exceedance of the RBEL.

A significant number of site-specific factors can influence the migration of a volatile chemical into a building and the actual concentration of a chemical in the breathing space. These factors include the building construction (with or without a basement, pier and beam, concrete slab-on-grade, etc), the relative pressure difference between the building and the soil vapor, how often doors and windows are opened, etc.

For properties in Texas where TRRP is not applicable, other potentially applicable standards include Texas Department of Health standards for indoor air quality[21]. These are voluntary standards for government buildings that include guidelines for temperature, humidity, air velocity, and Minimum Risk Levels (MRLs) for common air contaminants. The TCEQ Effects Screening Level (ESL) List[22] may also be a

[19] City of Grand Prairie, Texas. 2007. City Council Briefing Session Minutes. 20 November 2007.

[20] Texas Commission on Environmental Quality. 2009. TRRP Protective Concentration Levels, Table 9- Individual RBELs, Residential. 25 March 2009

[21] Texas Department of Health. 2002. Indoor Air Quality, Government Buildings. 25 TAC Chapter 297, Subchapter 297A. December 2002.

[22] Texas Commission on Environmental Quality. 2009. Effects Screening Level Lists. Available at: http://www.tceq.state.tx.us/implementation/tox/esl/list_main.html#esl_1. 13 February 2009.

relevant standard in some situations. The ESL list provides concentrations for COCs, below which no adverse health effect would be expected. The following table is a comparison of RBELS, MRLs, and ESLs for benzene, PCE and TCE.

Comparison of Potentially Applicable Texas Standards for Common VI Chemicals

Chemical (mg/m^3)	RBEL*	MRL**	ESL***
Benzene	0.011	0.016	0.0045
PCE	0.064	1.4	0.026
TCE	0.012	0.940	0.054

*Risk-Based Exposure Limit, 30 year, 350 days per year exposure
**Minimum Risk Level, 8-hour exposure for government building worker
***Effects Screening Level, Long-term (annual average) exposure

Although the TRRP RBELs are likely to be the appropriate standards most applicable to VI issues in Texas, exceptions are made under TRRP for commercial/industrial workers at properties where the chemical is used[23]. In these cases, occupation criteria such as OSHA Permissible Exposure Limits (PELs) may be used. However, proof is required that a health and safety plan exists and is followed and that potential off-site receptors are protected. Institutional controls must be used to keep the plan in place. The following is a summary of occupational standards for benzene, PCE, and TCE.

Comparison of Occupational Standards for Common VI Chemicals

Chemical (mg/m3)	ACGIH TLV[24]	OSHA PEL[25]	Odor Threshold[26]
Benzene	**1.6**	**3.19**	**5 (1.5 ppm)**
PCE	**170**	**678**	**6.8 (1 ppm)**
TCE	**269**	**537**	**150 (28 ppm)**

When and How to Assess the Potential for Vapor Intrusion

Based on the current atmosphere, some level of assessment of VI is likely appropriate for properties undergoing real estate transactions in areas with current or past industrial and/or commercial uses, and properties that are currently in residential use where volatile chemicals are known to be present in soil and/or groundwater. States that have regulatory programs or guidance in place often provide clear paths for the evaluation of potential risk associated with VI. Such evaluations are a standard part of assessing and receiving regulatory closure on contaminated properties. In states where regulatory

[23] Texas Commission on Environmental Quality. 2009. TRRP Development of Protective Concentration Levels, Development of Risk-Based Exposure Limits, 30 TAC Part 1, Chapter 335, Subchapter D, 350.74(b)(1). 19 March 2009

[24] ACGIH– 2006 TLVs® and BEIs®

[25] OSHA – http://www.osha.gov/SLTC/pel/recognition.html

[26] Odor – http://www.atsdr.cdc.gov/toxfaq.html; http://www.epa.gov/ttn/atw/

programs are absent and/or non-specific (such as Texas), assessing the potential for VI frequently will follow procedures outlined by other states, the EPA, or the recent ASTM standard[2].

Current VI assessment guidance typically recommends that a tiered approach be used. The EPA Draft Guidance[6] outlines three tiers of evaluation, which ultimately lead to indoor air testing, if the conditions warrant. ASTM E 2600-08[2] also consists of several progressive levels of assessment/action. Tiers 1 through 3 are similar to the EPA tiers. Tier 1 of ASTM involves initial noninvasive screening, followed by Tier 2, which provides a comparison of data to screening levels, and Tier 3, which includes site-specific modeling and/or indoor air sampling.

One difference between the EPA and ASTM approaches is that the ASTM (under Tier 4), includes the potential for "pre-emptive" mitigation. Mitigation of VI issues can include institutional or engineering controls, and/or intrinsically safe building design. The use of pre-emptive mitigation measures may be more appropriate due to schedule or cost, than performing a Tier 3 assessment. In addition, this approach may provide cost-effective liability protection in states where regulatory concurrence for the outcome of a VI assessment is not provided. Additional details regarding the general approach outlined in the ASTM guidance is provided below.

Tier 1 Assessment: The first tier of assessment focuses on collecting and evaluating existing environmental information so that a decision can be made regarding the potential for VI to be an issue. The factors that are typically considered include the following:

- Past, current, and planned property usage.
- Distance to potential sources.
- The ability of source area chemicals to affect indoor air.
- Layout of subsurface utility lines.
- Soil and groundwater characteristics.

The Tier 1 evaluation is a desk-top evaluation or VI screening-level assessment based on readily available information. This information may come from Phase I Environmental Site Assessments (ESAs) conducted in accordance with ASTM 1527-05 and All Appropriate Inquiry and/or Phase II ESAs with analytical results for soil and groundwater samples. For Tier 1 of the ASTM standard[2], the assessment may either supplement a Phase I ESA or stand alone. Where the available information indicates a potential concern, or not enough information is available to reach a conclusion regarding potential risk, businesses may elect to collect additional data, depending on their risk tolerance.

One of the most significant criticisms of the ASTM Tier 1 assessment is that the "screening" is very conservative. Potential source locations as far as 1 mile upgradient of a subject property could result in a recommendation to progress to a Tier 2 assessment. Essentially, for any property in a location that has had historical industrial and/or commercial activities, the likely outcome of Tier 1 will be the recognition of a Potential Vapor Intrusion Condition (pVIC) and the recommendation to perform a Tier 2 assessment.

Tier 2 Assessment: If the pVIC cannot be resolved through the Tier 1 assessment, a Tier 2 assessment is performed. This tier involves the review of existing soil and/or groundwater data and/or collection of new soil and/or groundwater data to obtain additional information regarding the conditions of the property of interest. As an example, the Tier 1 assessment might have identified a leaking underground storage tank several hundred feet upgradient of the property being evaluated. As part of Tier 2, the existing data from the potential source site could be reviewed to demonstrate that the plume is stable

and is a reasonable distance from the subject property. In this case, the potential for a VI issue on the property of interest could be documented as being very low and would not warrant additional evaluation. If existing data are not available for potential source locations, sampling between the property of interest and the potential source area might be all that is needed. Voluminous guidance exists regarding the field techniques used to collect Tier 2 data. Some of the most comprehensive compilations can be found at the Interstate Technology & Regulatory Council (ITRC) website for vapor intrusion (http://www.itrcweb.org/).

Depending on the specific situation, Tier 2 assessment data are sometimes compared to tables with risk-based values rooted in conservative assumptions. These values include the EPA/OSWER Draft Guidance[6] and state program guidelines showing acceptable concentrations for soil gas, soil, and groundwater in commercial/ residential settings.

Examples of Screening Levels for TCE in Soil Gas, Soil, and Groundwater in Residential Settings

Media	New Jersey[27]	Pennsylvania[28]	California[29]	Massachusetts[30]	EPA*[6]
Soil Gas (ug/mg3)	27	---	528	---	22, 2.2, 0.22
Soil (mg/kg)	---	1.3	---	---	---
Groundwater (ug/L)	1	14,300	Modified J&E evaluation of each site	30	5, 5, 5
	* Three values represent 10^{-4}, 10^{-5}, 10^{-6} risk. Groundwater target concentration is MCL				

These comparison tables provide a conservative assessment of the likely VI risk posed by the COC concentrations in the various media. As shown in the table, the concentrations considered to be protective vary between regulatory programs. The reasons for the variations are differences in the acceptable risk levels for indoor air, the exposure durations (residential vs. commercial settings), and the inputs used to extrapolate from a COC concentration in the tested media to indoor air. It should be noted that in the case of New Jersey the comparison value for groundwater (1 ug/L) is less than the maximum contamination level (MCL) of 5 ug/L. In this case, remediating to drinking water standards, usually the gold standard for site remediation, would not necessarily eliminate questions regarding VI.

[27] New Jersey Department of Environmental Protection (NJDEP), 2005. Vapor Intrusion Guidance (accessible at http://www.state.nj.us/dep/srp/guidance/vaporintrusion/vig.htm). October 2005.

[28] Pennsylvania Department of Environmental Protection, 2004. Land Recycling Program Technical Guidance Manual – Section IV.A.4. Vapor Intrusion into Buildings form Groundwater and Soil under the Act 2 Statewide Health Standard, January 24 2004.

[29] California Environmental Protection Agency (Cal EPA), 2005. Use of California Human Health Screening levels (CHHSLs) in evaluation of Contaminated Properties. January 2005.

[30] Massachusetts Department of Environmental Protection. 2009. GW-2 Standard of Massachusetts Contingency Plan (MCP) Method 1 Groundwater Standards. (accessible at http://www.mass.gov/dep/cleanup/laws/0974_2.htm). Accessed 12 July 2009.

Tier 3 – Site Specific Assessment: The differences between Tier 2 assessment and Tier 3 assessment are in the type of samples collected, where the samples are collected, and how the data are evaluated. Tier 3 samples are generally taken inside and/or beneath the building in question and typically consist of vapor samples from sub-slab sampling points, basements, crawl spaces, indoor air, and/or outdoor background samples. This does not mean that that soil, groundwater, and soil gas samples cannot be collected from points completed inside the building. In fact, it may be advantageous to collect such samples either to rule out the need for additional assessment or to focus the Tier 3 assessment on specific hot spots. Data collected for the Tier 3 assessment can be evaluated by comparison to published risk-based numbers or site-specific values. Under ASTM, Tier 3 evaluations include the use of models to evaluate the potential VI risk associated with COC concentration in samples collected from the exterior of the building. This includes samples collected from beneath the building.

According to EPA guidance[6], the Tier 3 evaluation should consist of the following steps:

- Measurement of sub-slab vapor concentrations prior to sampling indoor air.
- Conducting home or business survey for indoor air sources prior to sampling indoor air.
- Removing indoor air sources, to the extent possible, prior to sampling indoor air.
- Measurement of indoor air concentrations along with outdoor air samples to help assess background levels.
- Conducting numerical modeling, as appropriate to evaluate data.

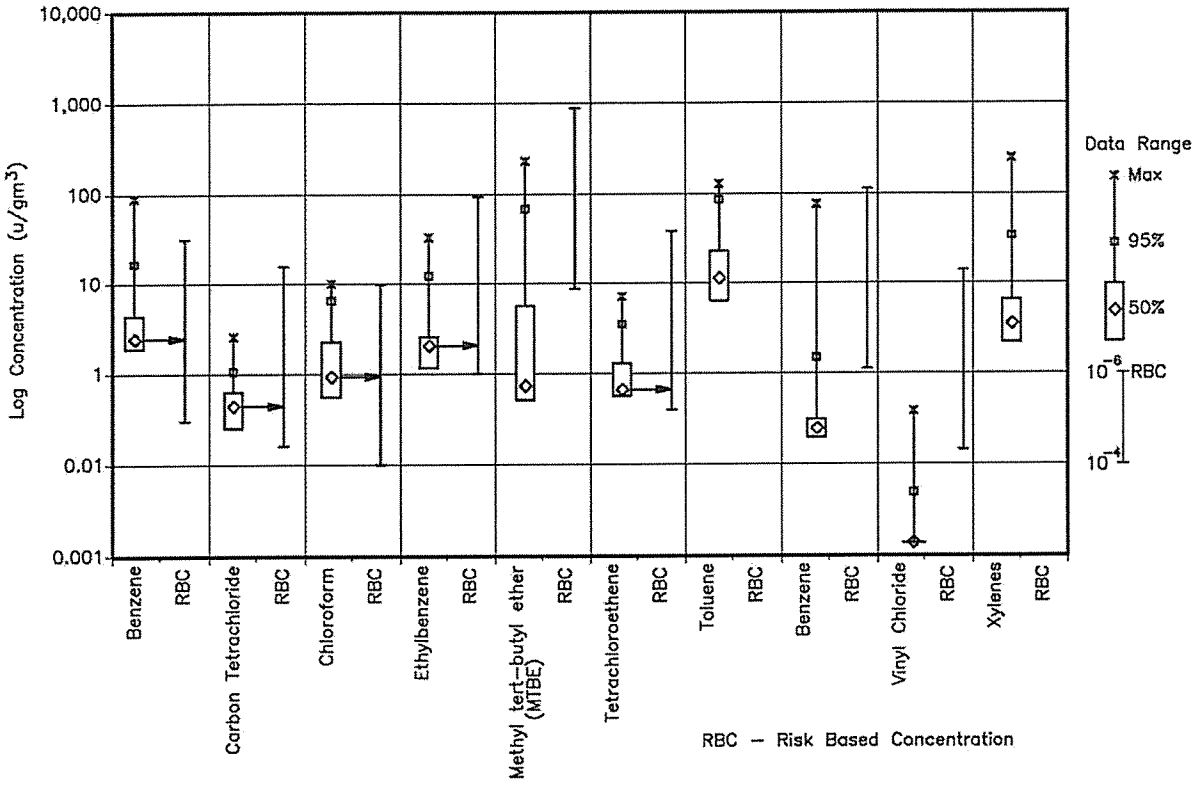
There are well-developed techniques for collection of Tier 3 data. As previously stated, the ITRC website (http://www.itrcweb.org/) has several good compilations of best practices for the collection of samples, determining data quality objections, and implementing quality assurance measures.

The collection of sub-slab vapor and background air samples may be useful in understanding whether background concentrations of COCs unrelated to VI are present in the indoor air samples. The presence of certain COCs in the indoor air, but not the sub-slab samples, may be used to eliminate certain COCs from being VI concerns. Likewise, the presence of COCs in background samples can also be helpful in understanding the contribution of VI to indoor air quality. Unfortunately, due to the low risk-based concentrations of many VI chemicals, and the presence of the same chemicals in commercial products and urban air, the Tier 3 evaluation may result in a study that raises more questions than it answers.

The following figure from Dawson and McAlary, 2009[31] shows the relationship between the ranges of measured background concentrations to ranges of risk-based concentrations for selected COCs. The graph is based on an extensive database of background indoor air concentrations measured in residential settings since 1990. The risk-based concentrations are based upon a cancer risk range of 10^{-4} to 10^{-6} or a hazard quotient of 1 for non-carcinogens. Where no risk-based concentration (RBC) is shown for a COC, the RBC is greater than the upper limits of the graphs. The graph shows that background levels for COCs in indoor air are sometimes greater than risked-based screening levels.

[31] Dawson, H.E. and McAlary, T (2009). "A Compilation of Statistics for VOCs from Post-1990 Indoor Air Concentration Studies in North American Residences Unaffected by Subsurface Vapor Intrusion" Groundwater Monitoring and Remediation 29 no. 1/Winter 2009, pages 60-69.

Background vs. Risk-Based Levels



The interpretation of data from indoor air samples can be problematic to say the least. In addition to complications related to background concentrations, investigators must also consider and address seasonal or even diurnal changes in vapor concentrations. Additionally, significant variations in concentrations between buildings with similar levels of subsurface contamination are possible due to differences in ventilation rates, building construction, and occupant uses. It is often necessary to conduct multiple sampling events to begin to understand the variation in indoor concentrations over time and at different locations. The evaluation of indoor air data is also complicated when there is uncertainty regarding the applicable indoor air standard.

Use of Attenuation Factors: Examples of the use of look up-tables to evaluate data have already been provided. Another way to evaluate data is by using attenuation factors. Attenuation factors are empirical values derived from the comparison of indoor air concentrations to vapor concentrations calculated from groundwater data or directly measured in soil gas, sub-slab vapor, and crawl-space sampling points. The mechanisms for attenuation are dilution in the soil column, sorption, biodegradation, and dilution when vapors mix with indoor air. EPA has published a database with nearly 3,000 paired measurements collected from 913 buildings at 41 sites in 15 states[12]. Statistical evaluation of the relationships between these sample pairs has enabled EPA to provide guidance on the ranges of attenuation factors that can be expected.

The inter-quartile (the 25th to 75th percentile ranges) attenuation factors are provided below:

- Indoor Air vs. Groundwater – 2E-05 to 2E-04
- Indoor Air vs. Soil Gas – 4E-04 to 5E-02
- Indoor Air vs. Sub-Slab – 2E-03 to 3E-02
- Indoor Air vs. Crawl Space – 3E-01 to 1E-1

An example of the use of attenuation factors to evaluate data would be taking a soil gas concentration of 100 ug/m^3 and multiplying the concentration by the range of Indoor Air vs. Soil Gas attenuation factors shown above. The result would be an estimated indoor air concentration of between 0.004 and 5 ug/m^3 (a range of three orders of magnitude). A significant drawback to this approach is the range of factors that might be applicable.

Use of Models: Models may also be used to evaluate groundwater, soil, and soil gas data. The most commonly used models are those based upon the analytical solutions of Johnson & Ettinger (J&E)[32]. Since its introduction in 1991, the model has been modified and adapted for more complicated uses and for uses specific to individual state regulatory programs. Currently, the EPA website has a three-phase J&E model that partitions COCs to groundwater, soil, and soil vapor. A model for estimating indoor air concentration from soil gas data is available as is a model for use on non-aqueous phase liquid (NAPL) sites. The inputs to the model include the chemical properties of the COC, soil and groundwater characteristics, and information regarding the building that is being modeled. The model can be used to back-calculate acceptable soil or groundwater concentrations given a specified risk level, or to forward calculate indoor air risk using soil or groundwater concentration data. By all accounts, use of J&E models results in very conservative estimates of risk, even when site-specific inputs are used.

As with any model, the J&E models are based on assumptions that may or may not reflect actual site conditions. A 2004 user's guide for the J&E model[1] provides a listing of the major model assumptions and limitations. Some of the most notable assumptions include the following:

- Vapor from below the building will enter the building unless floors and walls are perfect vapor barriers (no biodegradation and no flow around building or through preferential pathways).
- The contaminant is homogenously distributed, and the areal extent is greater than the footprint of the building (no "hot spots" or partially affected buildings).
- Soil moisture characteristics, building ventilation rates, and the difference between interior building pressure and the soil pressure are constant (no seasonal variations and continuous negative pressure differential influencing the movement of vapors into the building).
- Building air exchange rates are 0.25 volumes per hour (a very conservative assumption for warmer climates that will likely result in an overestimate of risk).

Although the J&E model can be a cost-effective way to screen out sites, use of the model may be problematic because of its conservative nature. The results from the J&E model can be improved by

[32] Johnson, P. C, and R. A. Ettinger. 1991. Heuristic model for predicting the intrusion rate of contaminant vapors in buildings. Environ. Sci. Technol. 25: 1445-1452.

collecting site-specific information such as: soil type(s), the depth to groundwater, soil vapor permeability, soil moisture, building dimensions, building ventilation rates, sub-slab vapor concentrations, and deep vapor concentrations[6].

Tier 4 – Risk Mitigation: When VI assessment indicates potential or actual unacceptable risk, and/or a decision is made to implement pre-emptive mitigation (and forego the time and effort of the VI assessment), a variety of mitigation options can be used to reduce the potential for VI issues. In cases where potentially explosive atmospheres or acute chemical hazards are present, evacuation of buildings and the immediate relocation of occupants is usually the most prudent option. In other cases, where risks are associated with chronic exposures, or the property is unoccupied or undeveloped, it may be possible to implement engineering solutions or institutional controls to mitigate the risk associated with VI.

For existing buildings, it may be possible to achieve desired goals by some combination of adjusting the HVAC system and sealing cracks and other openings in the foundation. If needed, existing structures may be fitted with passive or active ventilation systems. For properties under development, VI mitigation measures can be implemented during construction to prevent development of a VI issue. During the construction phase, passive measures, such as installation of a vapor barrier, are available. Building designs with elevated occupancy areas can also eliminate VI concerns.

The following tables with information about passive and active VI mitigation are modified versions of tables found in ITRC guidance[33] and Babyak and Welt[34] .

Passive Building Controls

Remedy	Typical Applications	Challenges	Range of Installed Costs
Sealing	Seal cracks and other openings in foundation	Hard to find and seal all cracks	$2 - $3 per linear ft
Passive Barriers	New construction or crawl spaces; combined with other techniques.	Prevent tears during construction. May not be enough by itself. Thinner (less expensive) barriers may not be adequate.	$0.50 - $5 /ft^2
Passive Venting	New construction or low vapor flux sites; can be converted to active system.	Relies on flow of air due to wind and heat stack effects, which may not be sufficient.	$0.75 - $5 /ft^2

[33] Interstate Technology & Regulatory Council. 2007. Vapor Intrusion Pathway: A Practical Guideline. 74pp. January 2007.

[34] Babyak A. and S. Welt. 2006. Vapor Intrusion Mitigation Engineering Controls: Comparison of Methods, Costs and Implementation. Presented at the 16th Annual AEHS Conference on Soil, Sediment and Water San Diego CA, March 15, 2006

Active Building Controls

Technology	Typical Applications	Challenges	Range of Installed Costs
Ventilation	HVAC adjustment to increase outside air and pressurize building	Need to always run HVAC system fan	$0
	Enhanced Ventilation without pressurization	Need to continuously run vent fan. May reduce indoor pressure and increase VI.	$300 - $500 for residential systems
Sub-Slab Depressurization (SSD)	New and existing structures; most common reductions typically 1-2.5 orders of magnitude.	Low perm or wet soils may limit performance; requires periodic maintenance.	$1 - $5 /ft^2
Sub-Membrane Depressurization (SMD)	Existing structures, crawl spaces. Fan-power vent draws vapor from beneath membrane installed on crawlspace floor.	Sealing to foundation wall, pipe penetrations; membranes may be damaged by occupants accessing crawl space.	$1 - $6 /ft^2

For existing buildings, a typical progression for non-acute situations would be to attempt to mitigate vapors by more passive measures such as HVAC adjustment and crack sealing before implementing measures requiring installation and operation of equipment. Much of the active vapor mitigation technology is very mature, having been adapted from techniques used to control radon. Passive vapor barrier technology continues to evolve, and multiple companies provide effective passive vapor barriers, resulting in decreasing costs for this option.

Recommendations for Response to Potential Vapor Intrusion Issues

The increasing awareness of and interest in VI, coupled with the regulatory and technical ambiguities regarding its evaluation, make VI an issue that can complicate real estate transactions and bring into question the appropriateness of previous environmental closures. The current information suggests that VI is not as significant an issue in Texas as it is in some other areas due to specific conditions (i.e., milder weather, fewer residential basements, etc.). The difficulty arises in reaching a definitive conclusion regarding the potential for VI at a particular property due to both the technical issues and current lack of a regulatory concurrence. While this is a difficult issue to address, it is not one that should be ignored. VI should be considered during transactions involving properties in areas with potential volatile sources. It is important to document the information that was considered in the evaluation and the final outcome. Especially for new construction in areas where volatiles are present, installation of vapor barriers and other pre-emptive mitigation systems may be extremely effective. For existing buildings, pre-emptive mitigation measures are not terribly expensive and may be the best approach to resolving a potential VI issue.

Vapor Intrusion

An emerging environmental liability issue in Texas

Susan L. Litherland, P.E.
slitherland@westonsolutions.com
Weston Solutions, Inc.

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Topics

- What is Vapor Intrusion?
- Why it is a problem and why now?
  - Increased visibility of issue
  - Increase in risk-based closures
  - Uncertainty in predictions/sampling
  - Potential to re-open closed sites!!!!
- What can we do about it?

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The perfect issue for attorneys!



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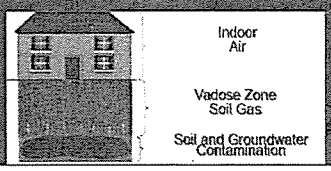
What is Vapor Intrusion?

- Vapor Intrusion (or VI) is the movement of volatile organic compounds (VOCs) into indoor spaces (residential or commercial)
- Common source of VOCs include: dry cleaners, gas stations, automotive repair shops, machine shops, manufacturing facilities, and landfills



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What makes the vapors come indoors?

- The two things that influence vapor movement the most are:
  - Differences in pressure
  - Differences in concentration
- Vapors come indoors when:
  - There is an insufficient barrier (and/or gaps/holes)
  - The pressure inside is lower that the pressure where the contamination is located
  - The concentration of the chemical in the indoor space is less than the concentration outside of the space

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What influences the indoor air concentrations?

- Things related to the contamination, such as:
  - Concentrations in Soil and Groundwater
  - Relative Pressure and Temperature
  - Number of times a Door is Opened
- Things that have nothing to do with the contamination:
  - Building construction and vapor pathways
  - When you last brought your laundry home from the dry cleaners
  - Whether you turned on your car in your garage
  - Etc.

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Why is VI an Emerging Issue?

- Technical Reasons:
  - Increased use of risk-based cleanup programs which may not have considered vapor intrusion issues as part of closure.
  - Urban "Infill" – Residential use of properties previously used for commercial and/or industrial purposes.

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Why is VI an Emerging Issue?

- Other:
  - Increased Awareness of public.
  - Litigation: Class Action, Professional Negligence (EPs sued for not considering VI), toxic tort, property damage
- Regulatory:
  - EPA 2002 OSWER Draft Guidance (currently under review and revision).
  - In 2008, 26 states had VI guidance.
  - Re-opening of "closed" sites.
  - ASTM E 2600-08 Standard.
  - Increased regulatory sensitivity.

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Status of VI in Texas

- Texas Risk Reduction Program (TRRP) Provides Framework for Evaluation of Risk Associated with COCs in Outdoor Air [350.71(c)(3-6)].
- TRRP requires evaluation of "other complete or reasonably anticipated to be complete exposure pathways" under 350.71(c)(8), which now might require an evaluation of VI, but TCEQ may not provide concurrence with conclusions drawn by consultant, and/or provide "closure" of that issue.

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Status of VI at Texas Superconference

- Comments from un-named source:
  - 2008: "Susan, I have discussed this with the committee, and no one seems to be very interested in Vapor Intrusion. Perhaps you could talk about remediation of contaminated properties at the Brownfield Toolkit Session."
  - 2009: "EPA would like to talk about vapor intrusion, so I guess you can talk about it this year."

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ASTM E 2600-08 – Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions

- Purpose: "...define good commercial and customary practice in the USA for conducting a *vapor intrusion assessment*..."
- Four Tiers:
  - Tier 1 – Initial Non-Invasive Screening
  - Tier 2 – Semi-Site Specific Numeric Screening
  - Tier 3 – VI Assessment (Modeling, Sampling)
  - Tier 4 – Mitigation (Institutional and/or Engineering Controls, and/or intrinsically safe building design)

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Tier 1 - Screening

- Record Search for Potential Sources of Volatile Chemicals Around and Upgradient of the Property
  - Potential sources identified as: VCP sites, Brownfield sites, NPL sites, LPST sites, landfills, etc.
  - Petroleum Hydrocarbons within ~330 ft around property or ~2,400 ft (1/2 mile) in upgradient direction
  - Chlorinated Solvents within ~1750 ft of property or ~2,400 ft (1/2 mile) in upgradient direction

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Tier 2 – Semi-Site Specific Numerical Screening

- Evaluation of existing or newly collected data for potential source area(s) or subject property: soil, groundwater, and/or soil vapor.
- Probability of contamination at the property now or in the future:
  - If no reasonable potential exists – done.
  - If reasonable potential cannot be eliminated: go to Tier 3 (modeling and/or additional sampling) or jump to Tier 4 (mitigation).

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Tier 3 – Modeling or Sampling

- Most common model is Johnson-Ettinger
- Sampling could ultimately include indoor air sampling.

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Johnson Ettinger Model

- Input basic information about conditions.
- Just for fun Benzene modeling (1x10-5 risk)

Test Case	Allowable GW Benzene (mg/L)	Soil Type	Depth to Ground water	Soil-Gas Flow into Building	Air Exchange Rate
1	0.023	Sand	20	5 L/min	0.25/hr
2	0.165	Loam	20	5 L/min	0.25/hr
3	0.041	Sand	50	5 L/min	0.25/hr
4	0.037	Sand	20	1 L/min	0.25/hr
5	0.046	Sand	20	5 L/min	0.50/hr

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What are the benzene concentrations at closed sites in Texas?

- Risk Reduction Rules, Residential: 0.005 mg/L
- Texas Risk Reduction Rules, Residential: 0.5 mg/L (Class 3, 100+ mg/L with PAL or ASD)
- Petroleum Storage Tank Rules, Priority 4 I with Expedited Closure: NAPL in place under certain conditions (benzene 100+ mg/L). Deed restrictions rarely used for PST sites.

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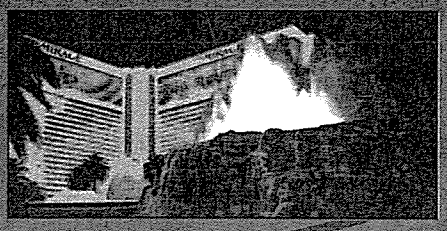
Maybe I ought to just go test the air in the building???



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The indoor air numbers are really little!

- Perchloroethylene, AKA: PCE, Perc, Tetrachloroethylene (dry cleaning fluid)
- Benzene (component of gasoline)

	PCE	Benzene
TRRP RBEL*	0.064 mg/m3	0.011 mg/m3
OSHA PEL TWA**	678 mg/m3	3.19 mg/m3

* TRRP RBEL = Industrial Risk + Residential 1.25x10-6
** OSHA PEL = Air Guide

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So how much is that???

Approximately <u>two</u> drops of PCE and <u>one</u> drop of benzene would result in air concentrations in this ballroom above the TRRP Residential RBEL!

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Indoor Air Testing – Why not?

- Uncertainty about what to do with the data - decide in advance how results will be used!
- Potential to do more harm than good
- High temporal variability - may need multiple sampling events
- Don't have access to building
- Building not there yet
- Background concentrations not related to VI

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Tier 4 – Mitigation Measures

- Relocation of occupants?
- General site remediation
  - Excavation of contaminated soils
  - Soil vapor extraction
  - Groundwater remediation
- Institutional Controls
  - Deed restriction or other land use control
- Building Controls
  - Intrinsically safe building design, HVAC adjustments
  - Passive vapor barrier – new construction
  - Sub slab depressurization – new or retrofit



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Suggestions regarding VI....

- Don't ignore VI. It is not going away.
- Needs to be considered during transactions involving properties in areas with potential volatile sources.
- Documentation of decision is important.
- Consider preemptive vapor barriers or venting systems for new construction in suspect areas.
- Mitigation measures are not terribly expensive and may be the best approach to resolve VI issues!

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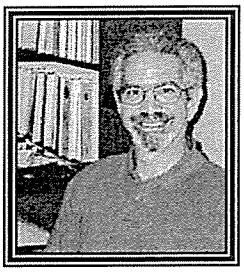
Weston Solutions, Inc.



Susan T. Litherland, PE
Registered Professional Engineer in the States of Texas, Oklahoma, Louisiana, Arkansas, New Mexico, Mississippi, and South Carolina

B.S., Chemical Engineering–University of Texas (1980)

Susan T. Litherland, PE, is a Senior Vice President and Southern Division Manager at WESTON with over 25 years of professional experience in the management of industrial and hazardous wastes. She has specialized in design and implementation of site investigation programs to evaluate the level and extent of contamination and feasibility studies to evaluate and select appropriate remedial activities. Other areas of Ms. Litherland's expertise include litigation support; community relations; environmental site assessments; waste processing or treatment to reduce the volume, mobility, or toxicity of the contaminants; and conceptual design and oversight of remedial activities. Areas of litigation support previously provided by Ms. Litherland include fate and transport of chemicals in the environment, petroleum hydrocarbon fingerprinting and product aging, cost allocation, and remediation cost estimates. Ms. Litherland has also extensive experience with real estate transfer environmental assessments, bioremediation of impacted soils and groundwater, Brownfield property development, and agency negotiations on behalf of Weston clients. Ms. Litherland is currently serving on the TCEQ TRRP Steering Committee. (S.Litherland@westonsolutions.com)



Robert I. Chapin, PG
Texas Licensed Professional Geologist

M.A. Hydrogeology, University of Texas at Austin, 1981
B.S. Geology, University of Oregon, 1975

Robert I. Chapin, PG is a Client Service Manager with over 29 years of experience performing and supervising hydrogeologic studies, with specific emphasis on risk-based remediation and closures of industrial and hazardous waste sites. In that role, he has functioned as a single point of contact for clients, provided project oversight and remedial and regulatory strategy for the clients and the Project Managers, coordinated resources between offices, and maintained and nurtured client and project relationships. Mr. Chapin also has extensive experience with real estate transfer environmental assessments, Brownfield property development, and agency negotiations on behalf of Weston clients. He has provided regulatory and technical strategies and training in RCRA issues. His clients have included chemical manufacturers, petroleum refiners, metal smelters, and aerospace manufacturers. He has participated in a variety of RCRA and CERCLA related projects, including development and implementation of RFI and RI work plans, Part B permit applications and amendments, development and implementation of groundwater quality assessment work plans, corrective measure and feasibility studies, closure plans, remedial action plans, and risk assessments related to closure. Additionally, he has managed and participated in numerous subsurface investigations under regulations governing solid waste and USTs. (Robert.Chapin@WestonSolutions.com)



Roger Smith, PG
Texas Licensed Professional Geologist and Corrective Action Project Manager

MS, Geology, University of New Mexico, 1988
BS, Geology, University of Texas, 1984

Roger Smith, PG, is a Client Service Manager with 21 years of consulting experience for commercial clients. His experience includes completion of investigation and remediation projects under the TRRP, PST Program and the Risk Reduction Rules in support of real estate transactions, Brownfield redevelopment and management of legacy risks. He has worked extensively in the VCP and IOP programs. He assisted with development of the TRRP guidance document for site assessments, and has completed vapor intrusion assessments consisting of Tier I evaluation, vapor intrusion modeling, soil gas sampling, sub-slab vapor sampling, and indoor air sampling. Mr. Smith also has also extensive experience with remediation techniques for chlorinated solvents, hydrocarbons, and metal, including in-situ chemical oxidation, reduction and enhanced biodegradation. (Roger.Smith@WestonSolutions.com)

WATER QUALITY

"Royal Flush"

Brad Castleberry
Lloyd Gosselink
816 Congress Avenue
Suite 1900
Austin, Texas 78701

Lydia González Gromatzky
Beveridge & Diamond, PC
98 San Jacinto Boulevard
Suite 1420
Austin, Texas 78701

Twenty-first Annual Texas Environmental Superconference
"Viva Las Vegas"
Austin, Texas
August 5-7, 2009

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Attachment B - Summary Matrix - Recent Texas Water Quality Rulemakings

WATER QUALITY
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INTRODUCTION

This paper is intended to provide background information for key topics to be covered during the Water Quality panel discussion at the 2009 Texas Environmental Superconference. Specifically, Part One of the paper provides the legal framework for the Texas Surface Water Quality Standards and summarizes various aspects being considered in connection with their pending revision. Part Two of the paper summarizes recent and pending Texas Commission on Environmental Quality (TCEQ) rulemakings related to water quality issues.

PART ONE
Background and Legal Framework
Texas Surface Water Quality Standards

I. Overview

In an attempt to preserve and protect water quality, reducing and eliminating water pollution has long been the subject of governmental regulations. Before the advent of modern environmental law, water pollution was primarily controlled through the enforcement of local nuisance laws. However, the federal government recognized that the inconsistency of such enforcement efforts and the continued degradation of water quality was cause for human health, recreational and ecological concerns. With the passage of the Clean Water Act (CWA), states were required, in part, to develop water quality standards for surface waters within the state so as to protect public health, to protect fish and wildlife, and to enhance water quality.

Prior to the passage of the CWA, governmental involvement in water quality, i.e., controlling water pollution, was left to the individual states through the voluntary enactment of water quality standards. Federal involvement was limited to addressing interstate water quality and subsidizing public wastewater treatment facilities.[1] When Congress extended its reach in 1972 with the CWA, its goal was to eliminate pollutant discharges by 1985 through the imposition of pollution control standards in two general ways: technology-based effluent standards that limited the quantity of pollutants discharged from the source, and water quality standards that limited pollutants in surface water streams.

Texas implements the CWA through Chapter 26 of the Texas Water Code.[2] It is the policy of the State of Texas "to maintain the quality of water in the state consistent with the public health and enjoyment, the propagation and protection of terrestrial and aquatic life, and the operation of existing industries, taking into consideration the economic development of the state."[3] The Water Code establishes the TCEQ as "the sole and exclusive authority to set water quality standards for all water in the state."[4]

II. The Clean Water Act and Water Quality

The CWA has the stated objectives of pollution control and water quality protection. Pollution control is an overarching concern of the CWA that is summarized in 33 U.S.C.A. § 1251(a): "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[5] To achieve this objective, the CWA seeks to control the discharge of pollutants into any and all navigable waters.[6] Additionally, Congress made unlawful the discharge of any pollutant by any person unless authorized by permit or rule.[7]

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[1] River and Harbors Act of 1899; Federal Water Pollution Control Acts of 1948; Water Quality Act of 1965
[2] Tex. Water Code Ann. Chapter 26 (Vernon 2004).
[3] *Id.* at §26.003.
[4] *Id.* at §26.023
[5] 33 U.S.C.A. § 1251(a).
[6] *Id.*
[7] *Id.* at §§ 1311(a), 1342.

The second objective in the CWA is water quality protection. Ideally, the CWA would achieve a quality of water, where attainable, that provides for the protection and propagation of fish and wildlife as well as recreational activities. This is commonly known as the "fishable/swimmable" standard.[8] A few years after implementing the CWA, Congress recognized that by themselves, the technology-based effluent limitations were not stringent enough to achieve this standard; consequently, the Environmental Protection Agency (EPA) imposed additional standards to protect water quality pursuant to the CWA.

Congress established the National Pollutant Discharge Elimination System (NPDES) program as a means for enforcing pollutant loading in relation to the regulation of and permitting for wastewater discharges from industrial and municipal sources. The CWA requires a permit for any discharge of a pollutant from a point source to "waters of the United States,"[9] and an NPDES permit establishes the chemical parameters of treated waste discharged to a surface water body. As previously mentioned, technology-based and water quality-based standards are used to set these effluent limits.

III. Texas Surface Water Quality Standards and the Texas Commission on Environmental Quality

In 1998, the EPA and the state of Texas reached an agreement that delegated NPDES permitting authority from the EPA to Texas.[10] Each state that receives such delegated authority enters into a Memorandum of Agreement (MOA) concerning the specific elements of state programs.[11] Through the MOA, Texas established the Texas Pollution Discharge Elimination System (TPDES) permitting program, which is its version of the NPDES permitting program. The TPDES program is administered through the TCEQ for pollutants discharged into state water.[12]

The MOA specifies a number of requirements that TCEQ must adhere to in administering the TPDES program and provides that the priorities of the TPDES program must be consistent with the CWA and the NPDES program goals and objectives.[13] Further, TCEQ must administer the TPDES program in accordance with applicable TCEQ legal authority and Title 30 of the Texas Administrative Code.[14] In addition, EPA agreed to review the draft permits that the TCEQ transmits to EPA at the same time TCEQ issues public notice.[15]

As noted, Texas codified its version of the CWA in the Texas Water Code, and the Water Code is the enabling statutory authority for TCEQ.[16] Chapter 26 of the Water Code is the statutory

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[8] *Id.* at § 1251(a)(2).
[9] 40 C.F.R. § 122.2.
[10] 63 Fed. Reg. 51163 (September 24, 1998).
[11] 40 CFR § 123.24
[12] Note that § 26.121 regulates discharges "into or adjacent to" waters of the state, which is the foundation for regulating Texas Land Application Permits outside the framework of the Clean Water Act. Note also that the Railroad Commission of Texas has certain state authority to regulate wastewater discharges.
[13] Memorandum of Agreement Between Texas Natural Resource Conservation Commission and the U.S. Environmental Protection Agency, Region 6 Concerning the National Pollutant Discharge Elimination System (May 4, 1998), available at *www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/municipal/c1.pdf.*
[14] *Id.*
[15] *Id.* at 28.
[16] Tex. Water Code Ann. Chapter 26.

authority prohibiting pollution; specifically, § 26.121 prohibits unauthorized discharges.[17] Additionally, § 26.127 designates the TCEQ as the principal authority to implement and enforce water pollution regulations;[18] however, Chapter 26 delegates the authority of enforcement for certain niche areas of regulation. For example, the Parks and Wildlife Department is tasked with enforcement of provisions affecting aquatic life and wildlife[19] and the Department of Health applies the authority vested in it by the Health and Safety Code in the abatement of nuisances resulting from pollution not otherwise covered by the Water Code.[20] The most expansive delegation of authority outside the TCEQ is to the Railroad Commission of Texas; that agency is responsible for enforcement of regulations on discharges associated with oil, gas, and geothermal exploration and development activities.[21]

In order for TCEQ to issue permits under the TPDES program, it had to develop the standards and management programs required by the CWA. To properly implement such permits, the CWA requires the TCEQ to develop a Water Quality Management Plan ("WQMP")[22] that identifies water quality problems within Texas and directs planning for implementation measures that control and or prevent such problems.[23]

Water Code § 26.023 provides the statutory authority to establish and protect receiving water quality.[24] TCEQ has adopted water quality standards ("WQS" or "Standards") that identify applicable general criteria for each stream,[25] as well as promote a general policy statement that is similar to the CWA's "fishable/swimmable" standard:

> "It is the policy of the state and the purpose of this chapter to maintain the quality of water in the state consistent with public health and enjoyment, propagation and protection of terrestrial and aquatic life, operation of existing industries, and economic development of the state; to encourage and promote development and use of regional and area wide wastewater collection, treatment, and disposal systems to serve the wastewater disposal needs of the citizens of the state; and to require the use of all reasonable methods to implement this policy."[26]

Water quality standards consist of three elements: 1) the designated uses of different classes of water, 2) water quality criteria, expressed in numeric or narrative form, reflecting the condition of the water body that is necessary to protect the designated uses, and 3) an anti-degradation policy that protects water quality standards and prevents the further degradation of the water quality. Title 30, Chapter 307 of the Texas Administrative Code identifies the Texas WQS, which are adopted by TCEQ. The Standards individually define and designate certain streams and water bodies within the state and provide site-specific water quality criteria to protect the designated uses of such stream

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[17] *Id.* at § 26.121.
[18] *Id.* at § 26.127.
[19] *Id.* at § 26.129.
[20] *Id.* at § 26.130.
[21] Tex. Water Code Ann. § 26.131.
[22] Tex. Water Code Ann. § 26.036.
[23] *See* Updates to the Texas Water Quality Management Plan, TCEQ, available at *www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/assessments*
[24] Tex. Water Code Ann. § 26.023 .
[25] 30 Tex. Admin. Code Chapter 307.
[26] *Id.* at § 307.1.

segments. The site-specific criteria of the Standards are utilized by TCEQ in issuing TPDES permits.

The Texas WQS, similar to the federal development of WQS, assigns "designated uses" for water bodies in Texas that determine the water quality criteria that is applied when making permitting decisions.[27] Designated uses in Texas include, in part: recreation, domestic water supply, and aquatic life. Various standards are implemented for the water bodies assigned these designated uses.[28] Other uses are not considered "designated," but where these uses can be achieved, then that water body is subject to protection by the same standards as designated uses.[29] These other uses include navigation, agricultural water supply, industrial water supply, sea grass propagation, and wetlands.[30]

Once the designated use is assigned, general criteria are applied for the appropriate use, unless superseded by specific exemptions stated in § 307.8, or by site-specific water quality standards for classified segments.[31] There are two types of general criteria: narrative and numeric.

Section 307.4(b) is a narrative criteria that describes the overall aesthetic criteria;[32] in other words, the Section sets forth the parameters to maintain aesthetically pleasing water bodies. Specifically prohibited, in part, are "concentrations of taste and odor producing substances...that impart unpalatable flavor to food fish [or] result in offensive odors arising from the waters." [33] This Section also prohibits the foaming or frothing of waters or floating debris.[34] Additional narrative general criteria prohibit the discharge of nutrients that cause excessive growth of vegetation,[35] place limits on temperature for industrial cooling impoundments,[36] define aquatic life uses and dissolved oxygen,[37] aquatic life uses and habitat,[38] and aquatic recreation.[39]

Numeric criteria are more specific than narrative criteria. Radiological substances, for instance, "shall not be discharged in excess of the amount regulated by Chapter 336" of the Texas Administrative Code.[40] Toxic substances, while having a narrative preamble, have general numeric criteria that are not to be violated;[41] an example of this is the salinity levels that are capped in § 307.4(g).[42] Unlike narrative criteria, numeric criteria offer objective, bright-line guidelines for water quality.

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[27] *See* 30 Tex. Admin. Code § 307.10.
[28] *Id.* at § 307.7.
[29] *Id.* at § 307.7(b)(5).
[30] *Id.*
[31] *Id.* at § 307.4(a).
[32] *Id.* at § 307.4(b).
[33] *Id.* at § 307.4(b)(1).
[34] *Id.* at § 307.4(b)(2)-(3).
[35] *Id.* at § 307.4(e).
[36] *Id.* at § 307.4(f).
[37] *Id.* at § 307.4(h).
[38] *Id.* at § 307.4(i).
[39] *Id.* at § 307.4(j).
[40] *Id.* at § 307.4(c).
[41] *Id.* at § 307.4(d); *See also* § 307.6.
[42] *Id.* at § 307.4(g).

Although the general criteria that limit effluent that may be discharged are quite extensive, the CWA requires states to also identify "water quality-limited" segments of streams and establish site-specific criteria for classified segments.[43] Consequently, "uses and numerical criteria are established on site-specific bases in Appendices A, D, and E of § 307.10."[44] In addition, "site-specific uses and numerical criteria may also be applied to unclassified waters in accordance with § 307.4(h) and § 307.5(c)."[45] Such site-specific use classifications are narrower than general designated uses, and they fall under three classifications: recreation, domestic water supply, and aquatic life.[46]

Specificity extends not only to site-specific criteria, but also to substance-specific criteria. Toxic substances, for example, are limited based on the total numerical measurement in any given stream.[47] Table 1 in § 307.6 identifies numerous toxic substances and identifies the maximum amount allowed in streams. Not only are certain toxic substances numerically limited, but the total toxicity level of the streams is also capped.[48] However, as with all criteria, there are exceptions; § 307.8. provides site- and toxic-specific exceptions. [49]

The CWA requires that TCEQ review and, if appropriate, modify the state's WQS at least once every three years. Under this review process, TCEQ is required to hold public hearings and obtain public comment regarding any necessary revisions to the WQS. Once a Standard is revised or TCEQ adopts a new WQS, the proposed change must be submitted to EPA for review and approval. This is an on-going process for TCEQ. TCEQ's latest revision of WQS, currently in full swing, is expected to culminate in a rule proposal that will be presented to the TCEQ Commissioners in November of this year. Numerous potential changes are being considered including, among others, those related to recreational uses and criteria, nutrient criteria and toxicity criteria. Highlights of these potential revisions, as well as those changes being considered for the *Procedures to Implement the Texas Surface Water Quality Standards* are further described in Attachment A.

In summary, the federal and state-level statutory and regulatory framework to address water quality degradation is both established and thorough. Still, as with all governmental programs, there is a continuing evolution, which has caused significant change since the CWA was passed in 1972. In the same way, the developments in implementation have improved with advancements in technology and through state-level involvement. In many areas of the United States, the water is cleaner than it has been in more than 100 years. Although the enforcement and compliance with the criteria and limitations that limit and prohibit pollution are not inexpensive, such an investment is necessary to protect the water we all need. And, although the goal of the CWA to eliminate pollutant discharges by 1985 was not met, its imposition of effluent standards that limit the quantity of pollutants discharged and water quality standards that limit pollutants in the streams has been realized.

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[43] *See* § 307.7.
[44] *Id.* at § 307.7(a); *See* § 307.10.
[45] *Id.* at § 307.7(a).
[46] *Id.* at § 307.7(b)(1)-(3).
[47] *Id.* at § 307.6.
[48] *Id.*
[49] *Id.* at § 307.8.

PART TWO
Texas Water Quality Rules

In addition to the Standards revisions currently underway, TCEQ has recently completed or initiated several changes to its water quality rules. Highlights of these rulemakings, covering a broad range of topics -- fees, public notice, and bacteria effluent limitations, to name a few--are included in Attachment B.

ATTACHMENT A

HIGHLIGHTS

DRAFT REVISIONS TO TEXAS SURFACE WATER QUALITY STANDARDS AND IMPLEMENTATION PROCEDURES

HIGHLIGHTS DRAFT TEXAS SURFACE WATER QUALITY STANDARDS (TSWQS) REVISIONS[1]		
ISSUE	**KEY PROPOSED CHANGES**	**NOTES**
Recreational Uses and Bacteria Criteria	• Proposed expansion of recreational uses o Under existing standards, there are two recreational use categories - contact and non-contact recreation. (30 TAC §§ 307.3(12) and (35)) o Under the draft standards revisions, recreational uses would be tiered and include the following: ➢ Primary contact recreation (PCR) defined as "Water recreation activities, such as wading by children, swimming, water skiing, diving, tubing, surfing, and whitewater kayaking, canoeing, and rafting, involving a significant risk of ingestion of water." (Draft 30 TAC § 307.3(46)) ➢ Secondary contact recreation 1 (SCR1defined as " Water recreation activities, such as fishing, commercial and recreational boating, and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion and that commonly occur." (Draft 30 TAC § 307.3(52)) ➢ Secondary contact recreation 2 (SCR2) defined as " Water recreation activities, such as fishing, commercial and recreational boating and limited body contact incidental to shoreline activity, not involving a significant risk of water ingestion but that occur less frequently than for secondary contact recreation 1 due to: (1) physical characteristics of the water body and/or (2) limited public access." (Draft 30 TAC § 307.3(53)) ➢ Noncontact recreation (NCR) defined as "Activities, such as ship and barge traffic, birding, and using hike and bike trails near a water body, not involving a significant risk of water ingestion, and where primary and secondary contact recreation should not occur because of unsafe conditions." (Draft 30 TAC § 307.3(37)) • Proposed revision of standards applicability to classified and unclassified segments (*See,* Overview of Proposed Standards Revision, Water Quality Standards Workgroup - January 6, 2009, TCEQ Staff Draft ("Overview")) o Classified segments - PCR would apply to all classified fresh waters and tidal waters. Remaining recreational use categories would apply only as a site-specific standards, after a UAA. o Unclassified segments - PCR would apply to unclassified fresh waters and tidal waters. SCR1 would apply to streams where: (i) PCR is unlikely to occur; (ii) thalweg (channel) is less than 0.5 meters deep, and (iii) substantial pools greater than 1 meter do not occur. SCR2, NCR would apply as a site-specific standards revision, after a UAA.	• Under current TSWQS, almost all water bodies are assigned contact recreation use. (*See,* 30 TAC §§ 307.4(j), 307.10 App. A and D, and *Procedures to Implement the Texas Surface Water Quality Standards*, January 2003, RG-194 ("Implementation Procedures" or "IPs")) • TCEQ has recently developed procedures for UAAs. (*See, Recreational Use-Attainability Analyses (RUAAs), Procedures for a Comprehensive RUAA and a Basic RUAA Survey*, May 2009 available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html#proc). The draft revisions to the IPs also refer to new procedures for UAAs. (*See,* draft IPs, p. 184-186.) • Under the 2008 303(d) list of impaired water bodies, 274 water bodies are listed as impaired for recreation. (*See, Draft Revisions to Recreation Criteria, Estimated Effect on TCEQ 303(d) List*, Texas Surface Water Quality Standards Workgroup (January 6, 2009) available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html#proc)

[1] The latest version of the TSWQS proposed revisions publicly and readily available is a draft released during the Texas Surface Water Quality Standards Advisory Workgroup meeting on January 6-7, 2009. (*See,* TCEQ website at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html.) This matrix is not intended to be an exhaustive list of the proposed changes underway. [Note: TCEQ staff have prepared a list of potential changes in *Overview of Proposed Standards Revisions* available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html. However, this TCEQ list and any proposed approaches are subject to change.]

<table>
<tr><th>ISSUE</th><th>KEY
PROPOSED CHANGES</th><th>NOTES</th></tr>
<tr><td>Recreational Uses and Bacteria Criteria (cont'd)</td><td>
Associated bacteria criteria would also change as follows:
<table>
<tr><th rowspan="2">Uses</th><th colspan="4">Geometric Mean Criteria (colonies/100 ml)</th></tr>
<tr><th>E. coli (FW)</th><th>Enterococci (Salty Inland FW)</th><th>Enterococci (SW)</th><th>Fecal coliform* (FW & SW)</th></tr>
<tr><td>Existing</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Contact recreation</td><td>126</td><td>--</td><td>35</td><td>200</td></tr>
<tr><td>Noncontact recreation</td><td>605</td><td>--</td><td>168</td><td>2000</td></tr>
<tr><td>Proposed</td><td></td><td></td><td></td><td></td></tr>
<tr><td>PCR</td><td>206</td><td>54</td><td>35</td><td>200</td></tr>
<tr><td>SCR1</td><td>630</td><td>165</td><td>--</td><td>1000</td></tr>
<tr><td>SCR2</td><td>1030</td><td>270</td><td>--</td><td>1000</td></tr>
<tr><td>NCR</td><td>2060</td><td>540</td><td>350</td><td>2000</td></tr>
</table>
*Fecal coliform would be gradually phased out for salty inland waters but would continue to be used for oyster waters criterion (14/100 ml)
Attainment would be assessed with only geometric mean criterion rather than single-sample criterion. Unrepresentative samples (e.g., due to flow or location) would be excluded.
</td><td></td></tr>
</table>

HIGHLIGHTS DRAFT TEXAS SURFACE WATER QUALITY STANDARDS (TSWQS) REVISIONS[1]		
ISSUE	**KEY PROPOSED CHANGES**	**NOTES**
Nutrient Criteria	• TSWQS currently establish narrative criteria for nutrients. o "Nutrients from permitted discharges or other controllable sources shall not cause excessive growth of aquatic vegetation which impairs an existing, attainable, or designated use. Site-specific nutrient criteria, nutrient permit limitations, and/or separate rules to control nutrients in individual watersheds will be established where appropriate after notice and opportunity for public participation and proper hearing." (30 TAC § 307.4(e)) • Under draft staff proposal, TCEQ would: o Establish site-specific criteria for chlorophyll a for about 100 major reservoirs based on historical data. (Screening values for total phosphorus (TP) would be included in Implementation Procedures to determine if nutrient limits are appropriate for a discharge permit.) (*See,* Overview, draft 30 TAC § 307.4(e)(amending the rule to add: "Site-specific criteria related to chlorophyll *a* are listed in Appendix F of this title") and draft Appendix F: Site-specific Nutrient Criteria for Selected Reservoirs available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html o Add definitions for nutrient and nutrient numeric criteria as follows: ➢ Nutrient -- A chemical constituent, mostly a form of nitrogen or phosphorus, that in excess and appropriate ratios can contribute to the growth of nuisance aquatic vegetation and impact uses as defined in this title. (Draft 30 TAC §307.3(40)) ➢ Nutrient numeric criteria -- Criteria that are established to protect surface waters from excessive growth of aquatic plants which includes phytoplankton, floating algae, floating higher plants, attached algae, and rooted plants. Nutrient criteria for reservoirs are expressed in terms of cholorphyll *a* concentration per unit volume as a measure of phytoplankton density. Associated screening levels for total phosphorus are also expressed in terms of concentration pre unit volume in water. (Draft 30 TAC §307.3(39))	• EPA issued guidance in 2001 recommending that States adopt numeric nutrient criteria into standards. (*Nutrient Criteria Development: Notice of Ecoregional Nutrient Criteria*, 66 Fed. Reg. 1671, 1673 (Jan.. 9, 2001), available at http://www.epa.gov/EPA-WATER/2001/January/Day-09/w569.htm.) • In 2006, TCEQ developed an updated *Nutrient Development Plan* that provides that "[p]reliminary criteria development will focus on major reservoirs; criteria for streams and rivers, estuaries, and wetlands will subsequently be evaluated in that order." The *Nutrient Development Plan* is available at http://www.tceq.state.tx.us/permitting/water_quality/wq_assessment/standards/WQ_standards_nutrient_criteria.html. • In 2007, EPA "encourag[ed] all States...to accelerate their efforts and give priority to adopting numeric nutrient standards." (*See,* Memorandum from B. Grumbles, EPA Assistant Administrator for Water to Directors, State Water Programs, et al., regarding Nutrient Pollution and Numeric Water Quality Standards (May 25, 2007) available at http://www.epa.gov/waterscience/criteria/nutrient/policy.html.) • In 2008, a citizen suit was brought by the Florida Wildlife Federation and other environmental groups alleging that EPA has a nondiscretionary duty to set numeric nutrient criteria under Section 303(c)(4) of the Clean Water Act (CWA) and that the narrative standards established by Florida are inadequate. (*Florida Wildlife Federation et. al. v. Stephen L. Johnson,* Case No. 4:08-cv-324-RH-WCS (N.D. Fla.)) • EPA has recently issued a determination under CWA Section 303(c)(4)(B) that numeric nutrient water quality criteria are necessary for the State of Florida. (*See,* Letter from B. Grumbles, EPA Assistant Administrator for Water to M. Sole, Florida Department of Environmental Protection (January 14, 2009) available at http://www.epa.gov/waterscience/standards/rules/fl-determination.htm)

HIGHLIGHTS DRAFT TEXAS SURFACE WATER QUALITY STANDARDS (TSWQS) REVISIONS[1]		
ISSUE	**KEY PROPOSED CHANGES**	**NOTES**
Toxicity Criteria	• Proposed revision of human-health and aquatic-life toxic criteria to incorporate updated EPA guidance and new toxicity data. o Current TSWQS include both narrative and numeric criteria for toxicity. ➢ Narrative criteria. "Surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." (30 TAC § 307.4(d)) *See also,* 30 TAC § 307.6(b) providing, among other things, that "[w]ater in the state shall be maintained to preclude adverse toxic effects on aquatic life, terrestrial wildlife, livestock, or domestic animals, resulting from contact, consumption of aquatic organisms, consumption of water, or any combination of the three.") ➢ Numeric criteria. Specific numeric aquatic life and human health criteria are established in 30 TAC § 307.6(c) and (d). o Under proposed revisions, changes would include: ➢ Changes to numeric aquatic life criteria in Table 1 (specific toxic substances for which adequate toxicity information is available, and which have the potential for exerting adverse impacts on water in the state). (Draft 30 TAC § 307.6(c)(1), Table 1.) Proposed changes include, for example, addition of aquatic life criteria for new toxicants (*e.g.,* diazinon and nonylphenol) and various changes to cadmium, copper, lead criteria). An explanation of the proposed changes to Table 1 prepared by TCEQ staff is available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg.html) ➢ Changes to human health criteria would include: (i) new consideration of childhood exposure for all noncarcinogens (Draft 30 TAC § 307(d)(3)(F)); (ii) higher estimated fish consumption assumptions (*i.e.,* 17.5 grams per person per day) (Draft 30 TAC § 307(d)(3)(C); (iii) application of human health criteria for incidental fishery waters to all waters (including intermittent streams) (Draft 30 TAC §§ 307.4(c) and 307.6(d)(6)); (iv) addition of human-health criteria for new toxicants (*e.g.,* antimony, nickel, and toluene) and fish-tissue criteria for other highly bioaccumulative toxicants (*e.g.,* PCBs) (Draft 30 TAC § 307.6, new Table 2); and (v) a proposed mercury fish tissue criterion of 0.7 mg/kg (based on value used by Texas Department of State Health Services for issuing fish consumption advisories) to replace current human health criteria for mercury (*i.e.,* water-column concentrations of 0.122 µg/L for protection drinking water and freshwater fish consumption and 0.0250 µg/L for the protection of saltwater fish consumption).	• EPA Region 6 has provided preliminary comment on the draft revision to the human health criteria for mercury indicating: (i) the "[t]he 0.7 mg/kg value is less stringent than EPA's 2001 § 304(a) recommended criterion of 0.3 mg/kg" and (ii) "EPA will have difficulty accepting the scientific basis for TCEQ's approach." (See, Letter from S. Spalding, Acting Chief, EPA Region 6 Ecosystems Protection Branch to L'Oreal Stepney, Director, Water Quality Division, TCEQ (July 11, 2008) available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html) • TCEQ established an Advisory Group on Mercury-Impaired Waters. "[I]nformation gathered and discussed by the group indicates that there is no clear or agreed regulatory path forward to address mercury impairments in Texas." (See TCEQ's website at http://www.tceq.com/implementation/water/planning/mercurygroup/index.html)

HIGHLIGHTS DRAFT TEXAS SURFACE WATER QUALITY STANDARDS (TSWQS) REVISIONS[1]		
ISSUE	**KEY PROPOSED CHANGES**	**NOTES**
Site-specific standards	• Proposed revision of site-specific uses and criteria including, among others: o Addition of site-specific toxic criteria for various water bodies based on permittee studies (Draft 30 TAC § 307.10, Appendix E) o Changes to uses and/or criteria for various classified segments including, among others: (i) changes to total dissolved solids (TDS), chloride and sulfate criteria; (ii) pH criteria changes; (iii) dissolved oxygen criteria changes; and (iv) new seagrass use designations. (Draft 30 TAC § 307.10, Appendix A) o Addition of new appendix to list sole-source surface drinking water supplies consistent with Texas Water Code, § 26.0286(c) (Draft 30 TAC § 307.10, Appendix B)	

HIGHLIGHTS REVISIONS TO PROCEDURES TO IMPLEMENT TEXAS SURFACE WATER QUALITY STANDARDS[2]		
ISSUE	**KEY PROPOSED CHANGES**	**NOTES**
Nutrients in discharges	• Proposed change to Implementation Procedures would add an approach to screen proposed discharges for nutrient impacts. o TCEQ would evaluate applications for new or expanding domestic dischargers to reservoirs and to streams and rivers to determine if an effluent limit is needed for total phosphorus (TP) or, in appropriate situations, total nitrogen (TN) to prevent violation of numerical nutrient criteria and/or preclude excessive growth of aquatic vegetation. o On a case-by-case basis, TCEQ would evaluate permit renewals and industrial discharges for potentially significant concentrations of TP (and, if appropriate, TN). o For discharges to reservoirs with numerical nutrient criteria, detailed evaluation would be performed using a completely-mixed, steady-state reservoir model to assess effect on phosphorus level in the main pool of the reservoir. o To assess the local effects of discharges under the narrative nutrient provisions, TCEQ would evaluate site-specific screening factors to assess eutrophication potential rated in terms of low, moderate or high. o If evaluations indicate needed reduction, effluent limits for TP would be recommended based on reasonably achievable technology-based limits, taking into account the sensitivity of the site.	• Additional information regarding proposed Implementation Procedures related to nutrient screening is available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html. (See, Handouts, Texas Surface Water Quality Advisory Group Meeting, April 27, 2009). • Rules governing control of nutrients in wastewater discharges are also found at 30 TAC §§ 307.4 and 307.5 and 30 TAC Chapters 213 and 311.

[2] *See, Draft Procedures to Implement the Texas Surface Water Quality Standards* (January 9, 2009) available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html ("Implementation Procedures" or "IPs"). This matrix is not intended to be an exhaustive list of the proposed changes being considered. [Note: TCEQ staff have developed a list of potential changes to the IPs. (*See, Summary of Significant Potential Changes to the Implementation Procedures (excluding WET)* (November 20, 2008) and *Summary of Significant Potential Changes to the Implementation Procedures for Whole Effluent Toxicity* (January 7, 2009) available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html. However, these TCEQ lists and proposed approaches are subject to change.]

HIGHLIGHTS REVISIONS TO PROCEDURES TO IMPLEMENT TEXAS SURFACE WATER QUALITY STANDARDS[2]		
ISSUE	**KEY PROPOSED CHANGES**	**NOTES**
Whole Effluent Toxicity (WET)	• Provisions relating to reasonable potential (RP) determination for toxicity ,WET testing and WET limits would change. o Under current IPs, TCEQ requires WET testing for facilities that have the potential to cause toxicity in receiving waters. (WET testing is also required for domestic wastewater facilities with a final permitted average flow of 1 MGD or greater and most major industrial facilities .) WET testing is conducted after permit issuance and is generally performed on a quarterly basis. After a test failure, the permittee is required to conduct two additional consecutive monthly tests for lethality to determine persistent toxicity. If both subsequent tests fail, a toxicity reduction evaluation (TRE) is required. If persistent significant lethality continues and the permittee is unable to identify the toxicant, WET limits are established in the permit. (*See,* IPs, at p. 101-125.) o Under revisions to IPs under consideration, RP determination would be performed when a permit is renewed or amended after a review of the previous five years of data. If an RP determination is made, then the permit would be issued with a WET limit that would go into effect after an investigative and compliance period. Contrary to the preferred EPA approach, the existence of only one failure would not require an RP determination. Further, RP determinations would be made separately for lethal and sub-lethal effects. (*See,* draft IPs, at p. 79-110 and TCEQ *Summary of Significant Potential Changes to the Implementation Procedures for Whole Effluent Toxicity,* January 7, 2009.) • Enforcement of WET limits would change. o Under current IPs, noncompliance with a lethal WET limit results in the issuance of a Notice of Violation (NOV). Testing frequencies are then increased to monthly for the species that failed the test. If a second noncompliance occurs during increased testing period, mandatory enforcement is initiated. (*See,* IPs at p. 115.) o Under proposed IPs, first failure (for either a lethal or sublethal WET limit) would result in increased testing frequency but an NOV would not be issued. Mandatory enforcement would be triggered if additional noncompliances occur during the increased testing period as follows: (i) one subsequent lethal WET limit failure or (ii) two additional sublethal WET limit failures. (*See,* draft IPs at p. 99.) • Provisions relating to testing frequencies and WET limit removal would also change.	• Current TSWQS provide that "[d]ischargers whose effluent has a significant potential for exerting toxicity in receiving waters will be required to conduct whole effluent toxicity biomonitoring at appropriate dilutions." (30 TAC § 307.6(e)(2)(A)). • TCEQ approach to WET limits is set forth in IPs approved by EPA. (*See,* IPs at p.101-125) A summary of these procedures may also be found at *Whole Effluent Toxicity (WET) Basics - Current TCEQ Policy* available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html. • EPA rules require limitation on any parameter that has a "reasonable potential to cause, or contributes to an instream excursion...above any state water quality standard, including state narrative criteria.." (40 CFR § 122.44(d)(1)(i) • Over the years, EPA has issued a number of guidance documents and policy statements regarding implementation of the CWA WET program. (*See,* EPA website at http://www.epa.gov/waterscience/methods/wet/) • EPA Region 6 WET Permitting Strategy (May 2005) provides that "if, during permit development, reasonable potential is found to exist for lethal and/or sub-lethal effects, WET limits will be included in the permit." (Emphasis added.) • EPA and TCEQ have exchanged a series of letters relating to implementation of the WET program in Texas. (*See, e.g.,* Letter from M. Flores, Director, Water Quality Division, EPA Region 6 to D. Eden, Deputy Director, Office of Permitting, Remediation and Registration, TCEQ (May 16, 2007), setting a June 30, 2008 deadline for Texas "to establish an EPA-approvable method of predicting reasonable potential for WET limits based on lethal and/or sub-lethal effects.")
Minimum Analytical Levels	• Minimum analytical levels ("MALs") for many pollutants regulated under 30 TAC § 307.6 would be lowered (*See,* draft IPs, Appendix E, Tables E-1 and E-2.) • Use of an analytical test method with a less sensitive MAL would require submittal of documentation and approval by TCEQ. (*See,* draft IPs, p. 152-153)	• Stakeholders have expressed concern regarding cost and compliance implications. (*See,* Comments from the TSWQS Advisory Work Group available at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg.html)

ATTACHMENT B

SUMMARY MATRIX

RECENT TEXAS WATER QUALITY RULEMAKINGS

RECENT TEXAS WATER QUALITY RULEMAKINGS			
RULE DESCRIPTION	**STATUS**	**KEY PROVISIONS**	**NOTES**
Water Quality Management within the Barton Creek and Onion Creek Watersheds; TCEQ Rule Project No. 2009-014-311-PR	Commission consideration of rule proposal anticipated: January 13, 2010	• Would impose certain effluent parameter limitations on wastewater discharges in Barton Creek and Onion Creek.	• TCEQ denied a petition for rulemaking from the Barton Springs/Edwards Aquifer Conservation District and the City of Austin requesting that TCEQ initiate rulemaking proceedings to prohibit discharges into the Onion Creek and Barton Creek water quality areas. • However, TCEQ established the Barton and Onion Creek Stakeholder Group to obtain input on issues raised by petition for rulemaking. • For additional information, see TCEQ website at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/barton_onion.html.
Texas Surface Water Quality Standards, TCEQ Rule Project No. 2007-002-307-EN	Commission consideration of rule proposal anticipated: November 4, 2009	• Would complete proposed revision of Texas Surface Water Quality Standards (30 TAC Chapter 307) to satisfy federal requirements for triennial review (and for which TCEQ began public comment process in 2006.) • Changes under consideration include those relating to nutrient criteria, toxic criteria, expansion of recreational uses and site-specific standards.	• For additional information, see Attachment B and TCEQ website at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg.html.
Revisions to Certain Subchapters of 30 TAC Chapter 321 related to revised EPA CAFO rules	Commission consideration of rule proposal anticipated; September 9, 2009	• Would amend 30 TAC Chapter 321 to address EPA 2008 amendments to its CAFO rules made in response to *Waterkeeper Alliance et al. v. EPA,* 399 F. 3d. 486 (2d. Cir. 2005), as amended, 2005 U.S. App. LEXIS 6533 (April 18, 2005), which vacated the "duty to apply" rule provisions and the provisions allowing permitting authorities to issue permits without requiring that the terms of the Nutrient Management Plans (NMPs) be included in the permit and available to the public.	• EPA 2008 amendments include option for an unpermitted CAFO to certify that the CAFO does not discharge or propose to discharge and require NMPs to be submitted with applications for individual permits or notices of intent to be authorized under general permits. • For additional information related to EPA's 2008 amendments to its CAFO rules, see EPA website at http://cfpub.epa.gov/npdes/afo/cafofinalrule.cfm. • For additional information related to TCEQ CAFO rulemaking, see TCEQ website at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/agriculture_stakeholder_group.html#schedule. [Note: TCEQ CAFO March 17, 2009 Stakeholder Meeting Summary indicates that TCEQ has no plans to implement no discharge certification option.]

RECENT TEXAS WATER QUALITY RULEMAKINGS			
RULE DESCRIPTION	**STATUS**	**KEY PROVISIONS**	**NOTES**
Notice Changes for Certain Water Applications, TCEQ Rule Project No. 2009-295-LS	Approved for Proposal: July 8, 2009 Comment deadline: August 24, 2009	• For water quality permits, rules would require that the applicant provide an updated landowner map and landowner list for the Notice of Application and Preliminary Decision (NAPD) if the NAPD is scheduled to be mailed more than two years after the Notice of Receipt and Intent to Obtain Permit. • Would amend Chapter 39, Public Notice, Chapter 281, Application Processing, and Chapter 295, Water Rights. {Note: This rulemaking would also require notice for water rights applications to be mailed after completion of technical review rather than after administrative completeness.]	• Additional information available at TCEQ website at http://www.tceq.state.tx.us/rules/prop.html.
Bacteria Effluent Limitations and Monitoring in Domestic Water Quality Permits, TCEQ Rule Project No. 2009-005-309-PR	Approved for Proposal: May 20, 2009 Comment deadline: July 6, 2009	• Would satisfy July 2008 agreement between TCEQ Executive Director and U.S. EPA Region 6 under which TCEQ agreed to propose rulemaking to establish requirements for bacteria limitations in all TPDES domestic wastewater permits. • Would add bacteria limits for either *E.coli* for fresh water discharges or *Enterococci* for saltwater discharges, establish frequency of testing and allow reuse water providers to verify disinfection through either *E.coli* or fecal coliform bacteria testing. • Would amend Chapter 210, Use of Reclaimed Water, Chapter 309, Domestic Wastewater Effluent Limitation and Plant Siting, and Chapter 319, General Regulations Incorporated into Permits.	• Under July 2008 agreement, TCEQ committed to "implement the revisions [to include effluent limitations and representative monitoring] in all TPDES domestic wastewater draft permits for which Notice of Application and Preliminary Decision is provided on or after January 1, 2010. New requirements will be effective when the permit goes into effect." (Emphasis added.) • Comments filed include request that TCEQ consider establishing a one-year monitoring period before any proposed permit limits go into effect. • Additional information available at TCEQ website at http://www.tceq.state.tx.us/rules/prop.html
Consolidated Water Quality Fee, Public Health Service Fee and Water Use Assessment Fee, TCEQ Rule Project No. 2009-007-021-PR	Approved for Adoption: July 8, 2009 Effective date: July 30, 2009	• Increases the Public Health Services fee, the Consolidated Water Quality fee, and the Water Use Assessment fee. • Amends Chapter 21, Water Quality Fees and Chapter 290, Public Drinking Water.	• During the 81st Legislative Session, HB 1433 was passed. This bill increases the statutory cap for the Water Use Assessment Fee and the Consolidated Water Quality Fee to $100,000 and provides for annual adjustments based on the Consumer Price Index up to $150,000. For text of HB 1433, see http://www.legis.state.tx.us/BillLookup/Text.aspx?LegSess=81R&Bill=HB1433. • Additional information available at TCEQ website at http://www.tceq.state.tx.us/agency/waterfees.html.
Reclaimed Water Production Facilities Rule, TCEQ Rule Project No. 2008-002-321-PR	Approved for Adoption: November 5, 2008 Effective date: November 27, 2008	• Provides streamlined process to authorize the construction and operation of reclaimed water production facilities at a location other than a permitted wastewater treatment facility. • Amends 30 TAC Chapter 321, Control of Certain Activities by Rule.	• Rulemaking was initiated in response to a petition for rulemaking filed by City of Midland.and granted by TCEQ on July 25, 2007. For additional information, see TCEQ Marked Agenda at http://www.tceq.state.tx.us/comm_exec/agendas/comm/mcindex07.html.

RECENT TEXAS WATER QUALITY RULEMAKINGS			
RULE DESCRIPTION	**STATUS**	**KEY PROVISIONS**	**NOTES**
SB 1037: Evaporation Pits; TCEQ Rule Project No. 2007-034-218-PR	Approved for Adoption: September 24, 2008 Effective date: October 16, 2008	• Implements SB 1037, passed during the 80th Legislative Session, requiring regulation of evaporation pits operated for commercial production of brine water, minerals, salts or other naturally occurring substances not regulated by the Texas Railroad Commission. • Rules include standards to prevent pollution of surface and groundwater resources and require an owner or operator of a brine evaporation pit to apply for and obtain individual wastewater permit. • Adopts new 30 TAC Chapter 218, Brine Evaporation Pits and amends 30 TAC Chapter 37, Financial Assurance.	• For text of SB 1037, see http://www.capitol.state.tx.us/BillLookup/Text.aspx?LegSess=80R&Bill=SB1037.
HB 2482: Onsite Sewage Facilities; TCEQ Rule Project No. 2007-033-285-CE	Approved for Adoption: August 20, 2008 Effective date: September 11, 2008	• Adopts rules implementing requirements of HB 2482, passed during 80th Legislative Session, relating to the requirements for persons who service or maintain on-site sewage disposal systems. • Changes rules relating to various on-site sewage facility (OSSF) requirements including, among others, OSSF testing and reporting, setback, site evaluator, small lot and Model Deed requirements. • Amends 30 TAC Chapter 30, Occupational Licenses and Registrations and 30 TAC Chapter 285, On-Site Sewage Facilities.	• For text of HB 2482, see http://www.capitol.state.tx.us/BillLookup/Text.aspx?LegSess=80R&Bill=HB2482. • Rulemaking also addresses petition for rulemaking filed by Texas Environmental Health Association and granted by TCEQ on June 27, 2007, which asks that designated representatives be prohibited from participating in on-site related work for compensation in areas beyond their jurisdiction. For additional information, see TCEQ Marked Agenda at http://www.tceq.state.tx.us/comm_exec/agendas/comm/mcindex07.html.
Repeal of 30 TAC Ch. 317 and Proposal of 30 TAC Ch. 217, Design Criteria for Domestic Wastewater Systems	Approved for Adoption: August 6, 2008 Effective date: August 28, 2008	• Adopts first major revision of design criteria for domestic wastewater systems since 1990. • Rules are intended to bring standards and criteria for wastewater collection systems and treatment facilities up-to-date with current engineering practices and technology. • Repeals 30 TAC Chapter 317 and adds new 30 TAC Chapter 217.	• Rulemaking followed lengthy stakeholder process. Additional information available at TCEQ website at http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/design_criteria_stakeholder_group.html.

BEVERIDGE & DIAMOND PC



Lydia González Gromatzky

Of Counsel

98 San Jacinto Boulevard
Suite 1420
Austin, TX 78701-4039
(T) (512) 391-8005
lgromatzky@bdlaw.com

PRACTICES

- Administrative Law
- Air
- Clean Water Act
- Environmental Audits and Compliance Assessments
- Hazardous Waste/RCRA
- Latin American Practice
- Solid Waste and Resource Recovery

EDUCATION

- University of Texas at Austin (B.A.)
- University of Texas School of Law (J.D.)

BAR ADMISSIONS & MEMBERSHIPS

- Texas (1986)
- American Bar Association
- Austin Bar Association, Environmental Section

LANGUAGES

- Portuguese
- Spanish

Lydia González Gromatzky is Of Counsel in the Austin, Texas office of Beveridge & Diamond, P.C. with a practice that includes both domestic and international law. Her experience includes advising and representing entities on a broad range of permitting, compliance, enforcement, remediation and other regulatory, transactional and litigation matters. As a member of the Firm's Latin American practice group, she assists clients with compliance and regulatory issues in Latin American countries including Argentina, Brazil, Chile, Colombia, Mexico and Peru.

Prior to joining the firm, Ms. González Gromatzky served as chief legal advisor to the Executive Director of the Texas Commission on Environmental Quality (TCEQ). In that capacity, she provided legal advice and counsel on all matters within the agency's jurisdiction. During her seventeen-year tenure at the TCEQ, she served as lead counsel on numerous contested agency proceedings, managed litigation involving the TCEQ, and provided legal representation on a wide variety of complex and controversial issues facing the state in all environmental media.

In private practice, Ms. González Gromatzky has broad experience counseling clients in a number of different sectors regarding regulatory compliance, defense of environmental enforcement actions, permitting issues and environmental transactions. She has also assisted multinational corporations and trade associations with compliance and regulatory issues arising under Latin American domestic laws including the tracking and analysis of pending and enacted chemicals, waste and product stewardship laws.

Ms. González Gromatzky is a graduate of the University of Texas School of Law.

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Texas Environmental Updates

Latin American Region Environmental Quarterly

Kelly Keel
Director, Water Quality Planning Division
kkeel@tceq.state.tx.us
512-239-3609

Ms. Keel is the director of the TCEQ's Water Quality Planning Division, which was formed in September 2008. In this capacity she is responsible for Texas' water quality standards, surface water quality monitoring, continuous water quality monitoring, the Clean Rivers Program, the bays and estuaries programs, the TMDL program, the Non-Point Source (319) Program, and the Houston Laboratory. Ms. Keel has extensive experience working with federal, state, and local governments and regulatory stakeholders. Ms. Keel is an eight-year TCEQ veteran and she was instrumental in the agency's air quality planning efforts, including improving the process for developing the State Implementation Plan (SIP). She was the 2005 Deputy's Choice Employee of the Year for the Chief Engineer's Office and a 2006 graduate of the TCEQ's Aspiring Leaders Program. Ms. Keel earned a B.S. in Economics from Texas A&M University-College Station. In her free time, Ms. Keel enjoys running and scuba diving.

L'Oreal Stepney, P.E., Director

Water Quality Division
Texas Commission on Environmental Quality

L'Oreal Stepney is the Division Director for the Water Quality Division. L'Oreal started with the Agency in 1991 and worked eight years in the Air Permitting Division. She was a permit engineer for two years in the New Source Review Division. She later became a technical specialist and team leader responsible for the development and implementation of many aspects of the Title V permitting program. She was Section Manager of the Wastewater Permitting section for three years before becoming Division Director in 2003 for the Water Quality Division. Her Division is responsible for implementation of the Texas Pollutant Discharge Elimination System program including issuing wastewater, storm water, CAFO, and sludge permits. The Division is also responsible for 401 certification of USACE 404 Dredge and Fill permits. She has a Bachelor's Degree in Aerospace Engineering and a Master's Degree in Environmental Engineering from the University of Texas. L'Oreal is also a professional engineer in the State of Texas.

Telephone: (512) 239-1321
E-mail: lstepney@tceq.state.tx.us

WILLIAM K. (BILL) HONKER, P.E.
DEPUTY DIRECTOR, WATER QUALITY PROTECTION DIVISION
EPA REGION 6

Bill Honker has served as the Deputy Director of the Water Quality Protection Division for EPA Region 6 since March 2005. Bill has been with the Region 6 Office since 1975 and has served in management positions in the water quality, underground injection control, pesticides, hazardous waste permitting, Superfund, and air enforcement programs, as well as in the Regional Administrator's office. He recently completed a four-month assignment as the Assistant Regional Administrator for Management.

Bill earned a BS degree in Environmental Science from the University of Oklahoma in 1975 and an MS degree in Environmental Science from the University of Texas at Dallas in 1985. He is a registered Professional Engineer in Texas.

CSI: USING EPA'S NEW OWNER AUDIT POLICY IN ACQUISITIONS

21ST TEXAS ENVIRONMENTAL SUPERCONFERENCE – AUGUST 7, 2009

TIM WILKINS, BRACEWELL & GIULIANI, LLP, AUSTIN, TX
tim.wilkins@bgllp.com

In the years following the enactment of CERCLA in 1980, parties to mergers and acquisitions – and, accordingly, the environmental transactional bar that served them – focused very heavily on Superfund and contaminated property issues as a significant potential impediment to and/or a liability to be managed in connection with corporate and real estate transactions. Over the decades since the arrival of Superfund, transactional environmental practitioners have witnessed the development of the ASTM Phase I standard, the creation of extensive guidance in support of the so-called innocent landowner defense, the adoption of brownfields incentives, the enactment of numerous state voluntary cleanup programs, and the availability of pollution legal liability and cost cap insurance policies and "guaranteed remediation" products, all of which are targeted at facilitating transactions in contaminated – or potentially contaminated – property. On the other hand, regulatory and permit compliance and enforcement issues have received substantially less scholarly and policy attention as transactional obstacles and, until very recently, no major policy tools had been available to help a buyer address and mitigate the risk of a seller's noncompliance. Happily, EPA's recent "new owner" audit policy – its "Interim Approach to Applying the Audit Policy to New Owners" adopted in August 2008 -- and the several transactional audit agreements that inspired it offer an important new tool for acquirors in addressing potentially major liability exposures arising from a seller's regulatory and permit compliance concerns.

Quick Background: What is auditing and why do we have an "audit policy"?

In many instances, companies and other entities faced with a myriad of federal, state, and local statutory, regulatory, permit- and guidance-driven environmental protection obligations recognized early on that even the best environmental program required periodic "checkups" to ensure that they were meeting all of these complex requirements on a continuing basis and not letting any particular obligations fall through the cracks. Environmental compliance audits are usually performed voluntarily with the assistance of internal or external environmental compliance specialists, consultants, and/or counsel. Audits ordinarily entail a close examination of a facility's compliance with these applicable requirements in terms of equipment, practices, operations, and documentation along with recommendations for corrective and preventive actions.

In the early days of environmental auditing, many companies were concerned – in some circumstances, for very good reason – that discoveries of noncompliance uncovered through these voluntary, proactive, pro-compliance efforts could be used against them as evidence by prosecutors, the regulatory agencies, non-profit environmental groups, or the plaintiffs' bar. Certainly, whether this risk is material or not, companies facing a decision to advance environmental protection objectives by pursuing audits have experienced the heightened possibility of adverse evidentiary use of audit results as a disincentive and a very real concern.

For many of the same reasons that companies currently audit their own facilities to help uncover and address potential noncompliance issues, companies that are interested in acquiring other facilities or companies can also be highly interested in understanding the compliance status of

those facilities and entities – the potential for incurring substantial compliance expenses, monetary penalties, and/or costly operational interruptions can be strong in many regulatory and transactional settings. Accordingly, in transactional settings, compliance audits of some sort often are performed now as part of the environmental "due diligence" process.

The Arc of EPA's Audit Policy

Turning back to "self-audits" and the fundamental decision of a company to audit its operations for compliance, in 1986 EPA adopted its first policy statement on environmental auditing, largely in response to "adverse use" concerns that were being raised by the regulated community. *See* Environmental Auditing Policy Statement, 51 Fed. Reg. 25,003, 25,006 (1986). That policy explained that EPA wished to encourage the regulated community to conduct environmental audits as a way of maintaining compliance, noting that it would not "routinely seek" audit reports in the course of its inspections and investigations, and suggesting that discretionary enforcement leniency could be available on a case-by-case basis to companies that voluntarily audit and report uncovered violations. This policy offered little comfort to the regulated community. A limited, non-binding promise not to "routinely seek" audits effectively meant that the agency would not request audit information unless it decided there was a reason to do so. And the offer of discretionary leniency was so vague that it attracted little participation. Through the late 1980s and early 1990s, a steady drumbeat of criticism and concern about EPA's approach to audits developed into a groundswell of support for state-by-state legislation protecting audits and auditors.

Partly in reaction to these developments, EPA took an additional step on December 18, 1995 by publishing in the Federal Register a policy on "Incentives for Self-Policing" that provided a much more definitive set of incentives to auditors that pursued a "find, fix, and disclose" approach to environmental compliance auditing. In particular, the 1995 audit policy provided for a waiver of gravity-based penalties – as well as other less defined benefits – for companies that met nine conditions including conducting systematic environmental audits, discovering the violation voluntarily and independent of any government or third party complaint or investigation, disclosing to EPA in writing within 10 days of discovery, correcting the violation within 60 days of discovery, taking steps to prevent future violations, and cooperating with EPA to determine the policy's applicability; these benefits were not to be available, however, for repeat violations, a pattern of violations, or violations involving significant harm. The regulated community's reaction to the 1995 policy was much more favorable than to the 1986 policy and in the period from its effective date at the start of 1996 through late 1999, 670 organizations had disclosed actual or potential violations at over 2700 facilities, increasing annually during each year that the policy was in effect.

This is not to say that improvements to the policy were not sought or needed. In 2000, EPA issued its updated "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations," 65 Fed. Reg. 19618 (April 11, 2000), a document that is referred to today as EPA's "Audit Policy." That policy elaborated on a number of ambiguities in the 1995 version and expanded opportunities for audit disclosure by providing a longer deadline – 21 days from discovery – for submitting the disclosure, clarifying how the "independent discovery" requirement applied in multi-facility companies, and, for the first time, expanding on how

"prompt disclosure" and "repeat violations" standards would apply in an acquisitions context. In general, however, the 2000 Audit Policy principally served to reinforce EPA's support for the Audit Policy and to provide somewhat greater flexibility for the regulated community.

The Concept of a "Transactional Context Audit"

Almost as an afterthought, the 2000 Audit Policy indicated for the first time that the policy could have application in the context of an acquisition or transaction.[i] It specifically noted that "[i]n the acquisitions context," the 21-day deadline to disclose ran from the closing date of the transaction rather than the date of discovery and also observed that the "repeat violation" condition of the policy would apply differently where the facility in question was "newly acquired." Unfortunately, despite these efforts to recognize and encourage the application of the Audit Policy in transactional contexts, many of the practical aspects of pursuing a transactional audit disclosure remained quite vague and these suggested opportunities went unutilized for several additional years. It was clear, however, that a new owner of a facility or company could be quite rightly concerned about the past compliance track record of the acquired facility or entity and that a means of obtaining greater certainty about how past noncompliances may affect the new owner could be every bit as important to the success of a transaction as the myriad policies and mechanisms that have developed over the years to address transactions involving contaminated properties.

Two Major Deals, Two Major Corporate Auditing Agreements: 2004

In 2004, two companies that were parties to major corporate transactions independently approached U.S. EPA after recognizing that the acquisitions they were undertaking involved the

possibility of significant compliance-related exposures. In particular, the French industrial and medical gases company, Air Liquide, entered into a $3.5 billion merger with the German company, Messer Greisheim. The merger involved the addition of over 100 U.S. facilities to the Air Liquide family. During the same time frame, Koch Industries was acquiring DuPont Co.'s Invista resins and fibers business – which owned twelve U.S. facilities including a number of major chemical plants – for $4.2 billion. Both Air Liquide and Koch Industries during this period approached EPA headquarters and inquired about the application of the Audit Policy to their respective transactions. Air Liquide negotiated a Corporate Auditing Agreement with EPA providing that compliance assessments performed prior to the closing of its deal with Messer Greisheim as part of its transactional due diligence and certain followup inquiries thereto would be deemed "audits" and that Air Liquide would have a period of time post-closing to make disclosures and implement corrective actions. Invista at the same time negotiated a Corporate Auditing Agreement with EPA providing that the new owners would conduct numerous compliance audits of the company's U.S. facilities over the coming years and that such audits would be eligible for leniency under the terms of the Audit Policy. These agreements provided a roadmap for how the Audit Policy might be applied in an acquisitions context; they also highlighted a number of ways in which the Audit Policy, applied literally in that context, was either confusing or could lead to suboptimal policy outcomes. These agreements and the subsequent disclosures made by both acquirors laid the groundwork for the development of a restated and clarified policy on the use of the Audit Policy in transactions, but they also raised a number of important practical and policy questions about how to effectively apply the policy.

The Approach to the "Interim Approach"

EPA's experience with these audit disclosure processes, after important tweaks to the standard terms of the Audit Policy through individual Corporate Auditing Agreements – and a new understanding that transactions can turn up compliance issues at least as effectively as those routinely disclosed after audits by companies in the ordinary course – led the agency to issue an April 30, 2007 Memorandum by Granta Nakayama, the head of EPA's Office of Enforcement and Compliance Assurance, which observed that new owners should not be prevented from making audit disclosures in the Clean Air Act context by virtue of the Title V "reasonable inquiry" requirement (which, in major source contexts not involving transactions, has been found to make most air compliance audits not "voluntary" for purposes of the Audit Policy), that new owners' own compliance histories should not prevent them from making disclosures at newly-acquired facilities, and recognizing that the recoverable "economic benefit" derived from a noncompliance was not a simple calculation when a facility had changed hands while a pre-closing violation continued post-closing. This memorandum was followed by a May 14, 2007 Federal Register notice on "Enhancing Environmental Outcomes From Audit Policy Disclosures Through Tailored Incentives for New Owners," 72 Fed. Reg. 27116, which offered the public an opportunity to comment on "whether and to what extent the Agency should consider offering tailored incentives to encourage new owners of regulated entities to discover, disclose, correct, and prevent the recurrence of environmental violations." Some of the key questions raised by EPA related to who would qualify as a "new owner," whether and how "economic benefit" penalties could be collected from a new owner for a prior owner's violations, how the policy would apply in stock transactions versus asset acquisitions, whether the barriers to air-related disclosures at Title V facilities under the Audit Policy would extend equally to new owners,

whether the Agency should worry about contractual indemnities or other agreement terms that might affect who would bear penalties if assessed, and whether EPA should examine whether purchase price reductions may have been taken to account for past noncompliance and potential penalties.

These issues, as one might imagine, were viewed as important public policy considerations by EPA and the outcome of these questions, for obvious reasons, had the potential to dramatically affect the degree of incentive and the level of certainty that the regulated community would perceive when making decisions on whether to utilize such a policy. After public meetings and discussions with thought leaders on these issues in Washington, D.C. and San Francisco, the Agency accepted written comment and began a process of identifying whether and how to provide an "adapted" version of the Audit Policy that would be applicable in the context of transactions and "new owners."

EPA's "New Owner" Audit Policy

On August 1, 2008, U.S. EPA issued a notice announcing its "Interim Approach to Applying the Audit Policy to New Owners." 73 Fed. Reg. 44991. In summary, this "Interim Approach" clarifies the availability of Audit Policy relief in transactional contexts – it allows new owners to use pre-closing diligence discoveries or post-closing audits as the basis for audit disclosures; it offers longer times to detect, disclose, and correct violations and still be eligible for penalty relief; and it provides different treatment of and expanded benefits for new owners with respect to economic benefit and as to air violations at Title V facilities that might otherwise be ineligible for Audit Policy relief.

The Interim Approach notice begins by establishing "new owner" eligibility in scenarios where (1) a person prior to a transaction was not responsible for environmental compliance at a facility and did not cause/could not have prevented the violations being disclosed; (2) the violation disclosed originated with the prior owner; and (3) prior to the transaction, neither buyer nor seller had the largest share of the other and they did not have a common corporate parent. Simply put, in an arms' length transaction – as opposed to an internal corporate reorganization, a buyout of a joint venture partner, or the like - the buyer of a regulated facility should be eligible for the "new owner" policy. Notably, EPA's notice also makes clear that buyers of entities as opposed to buyers of facilities – stock purchasers as opposed to asset purchasers – are also eligible. Further, while a merger of two companies (in which the surviving entity might vary for a variety of reasons) could potentially trip over the first criteria, EPA's notice specifies that its intent is to "allow participation by a new owner which is the product of a merger, so long as neither party had previously held the greatest ownership share of the entity with which it merged." 73 Fed. Reg. at 44996. This conclusion is consistent with EPA's application of the Audit Policy in prior Corporate Auditing Agreements.

Presuming a party qualifies as a "new owner," EPA offers the new owner two principal scenarios for pursuing audits, disclosures, and penalty relief. The "new owner" has nine months to either (1) simply undertake audits and make disclosures, or (2) enter into a formal Corporate Auditing Agreement that lays out timing and logistics for the audits, disclosures, and corrective actions. Beyond the nine month post-closing window, the new owner will be eligible to use EPA's

standard Audit Policy but will not be eligible for the additional benefits of the Interim Approach except pursuant to an Agreement entered into during that nine month window.

For eligible new owners, the Interim Approach offers a number of variances from EPA's standard Audit Policy in recognition of the new owner's different circumstances. First, the Audit Policy provides leniency as to gravity-based penalties but offers no relief from EPA's right to recover the "economic benefit" of disclosed violations. Under the Interim Approach, EPA rightly recognizes that new owners experience no benefit from and should not be penalized for any economic benefit that may have been derived during the pre-closing period. EPA also provides that for the post-closing period it should only assess economic benefit for operations and maintenance costs associated with a disclosed noncompliance that persists post-closing (since the new owner actually does benefit from those avoided costs) but not for violations involving capital expenditures, so long as the latter are corrected within 60 days after closing or such alternate corrective action deadline as EPA may approve.

Second, under the Audit Policy, air violations at Title V facilities are often deemed ineligible for disclosure and penalty relief because Title V facilities have to certify compliance annually after "reasonable inquiry" – in most circumstances, EPA believes, such facilities are required to reasonably review their air compliance status before certifying and, accordingly, an audit of basic air compliance is deemed not to involve "voluntary discovery." Importantly, in the Interim Approach, EPA formally reconfirms its prior conclusions in guidance that new owners of Title V facilities have not yet made annual compliance certifications and, therefore, they should be

eligible for penalty leniency for any audit of air compliance they may perform prior to making their first annual certification.

Third, EPA recognizes that its standard Audit Policy disclosure deadline (within 21 days after the discovery of a violation) is impractical in the transactional context for a variety of reasons. Accordingly, as a default, EPA allows new owners to disclose violations within 21 days after discovery or within 45 days after closing, whichever is later. In addition, for new owners who choose to enter into a Corporate Auditing Agreement with EPA, the deadlines for particular disclosures can be extended, sometimes substantially.

Fourth, EPA observes that under its standard Audit Policy, violations which have been independently discovered by a regulator or third party are ineligible for penalty relief. While EPA has not implemented a blanket change to this term to fit the transactional context, EPA does note in the Interim Approach that the Agency has the authority to use its enforcement discretion to provide relief in a circumstance where some agency or third party investigation or action may exist but where the new owner, in good faith, had no knowledge thereof.

Fifth, EPA acknowledges that a new owner has no ability to correct any violation prior to closing the transaction and taking over ownership and operation of the facility in question. Accordingly, EPA clarifies that a new owner has a default of 60 days after a transaction's closing to complete necessary corrective actions in order to qualify for penalty relief under the Interim Approach. In addition, EPA makes clear that many types of violations can as a practical matter take longer than 60 days to correct, especially as a new owner, and that the Agency will be flexible in

granting extensions of that deadline depending on the circumstances. Experience with EPA headquarters on this issue confirms that such flexible extensions, requested prior to the expiration of the 60-day deadline, are freely granted upon a demonstration of reasonable need.

Sixth, EPA formally reconfirms its prior statements in guidance that a new owner's compliance history at its own legacy facilities will not disqualify as "repeat violations" any similar violation encountered at the new owner's new facility. A company-wide track record of, for example, stormwater permitting omissions by the new owner at its own historic facilities, will not prevent that new owner from identifying, disclosing, and obtaining penalty relief for a stormwater permitting violation at a newly-acquired facility.

Seventh, EPA's standard Audit Policy excludes from disclosure and penalty relief violations that involve serious actual or imminent and substantial harm to health or the environment. The Interim Approach makes clear that that exclusion is inapplicable to a new owner. Eighth, and very importantly for transactional dealings, EPA observes that the new owner is the party eligible for penalty relief under the Interim Approach. A waiver of penalties resulting from audits and disclosures by the new owner does not resolve any claim EPA may have against the former owner on whose watch the violations in question may have originated. While EPA explains that resolution of violations through the new owners audit disclosure and corrective action process accomplishes the public policy objective of achieving compliance, EPA nevertheless "reserves its rights to pursue sellers where the circumstances and equities warrant." 73 Fed. Reg. at 45,004. Ninth, and finally, EPA makes clear that, like the audit documents themselves, despite the requirement that new owners "cooperate" with the Agency to

demonstrate eligibility for penalty relief, the Agency has no intention to request or require the provision of transaction-related documents.

When to Use the Interim Approach; When to be Concerned; What to Watch Out For

EPA's Interim Approach offers certain new owners of facilities or companies an opportunity to extinguish penalty liability for pre-closing violations and a window in which to clean up ongoing compliance issues at newly-acquired locations subject to significant protection from major penalty exposures. This opportunity, however, has greater or lesser application in different contexts and is not appropriate for every transaction or every new owner.

Asset Purchases versus Stock Purchases and Mergers. The use of the Interim Approach to extinguish gravity-based and economic benefit-based penalties for pre-closing periods would principally be of interest to buyers in a stock purchase or merger context as, in an asset purchase, the buyer would rarely be viewed as succeeding to penalties for any period prior to their ownership or operation of an acquired facility. In a stock purchase or merger, however, the acquiror is acquiring the entity, not the facility, and runs a real risk of succeeding – directly or indirectly – to those penalties. Accordingly, parties to stock purchases and mergers may stand to experience the greatest benefit from the Interim Approach.

Both in asset purchases and stock purchases, however, the Interim Approach offers penalty relief for qualifying new owners with respect to all gravity-based penalties and many economic benefit-based penalties for post-closing periods. Given that it often takes time to complete an audit and to perform necessary corrective actions, the Interim Approach offers a real benefit with

respect to penalty exposures arising from pre-closing violations that continue into the post-closing period.

Injunctive Relief. Notably, the Audit Policy provides relief from penalties but it provides no benefit with respect to injunctive relief. This is of special note in contexts like New Source Review, which has involved an EPA enforcement initiative applied to coal-fired electric generation and refineries giving rise to enforcement settlements that have run into the hundreds of millions and even billions of dollars. Although cash penalties in these actions are comparatively small, the NSR initiative has led to massive total settlements involving the installation of costly pollution controls.

This issue was squarely in play in the Invista "new owner" audits referenced above. Although Invista was subject to a Corporate Auditing Agreement and eligible for a variety of "new owner" benefits, Invista reached a final settlement with EPA, entered in U.S. District Court in Delaware as a consent decree, just this Spring with respect to its audit disclosures for the twelve U.S. facilities acquired in 2004. According to EPA's April 13, 2009 press release, as a result of that settlement, "Invista will pay a $1.7 million civil penalty and spend up to an estimated $500 million to correct self-reported environmental violations discovered at facilities in seven states . . . . The company disclosed more than 680 violations of water, air, hazardous waste, emergency planning and preparedness, and pesticide regulations to EPA after auditing 12 facilities it acquired from DuPont in 2004."

While Invista faced overall liability exposures of at least that magnitude – and presumably even greater civil penalty exposures – absent its Corporate Auditing Agreement and its agreed audit disclosures, the headlines announcing the "largest ever" Audit Policy settlement and a nine-figure payout by a "new owner" certainly have the potential make the Interim Approach sound less attractive to buyers considering whether to pursue such an approach. The key facts to know about the Invista settlement and the "up to $500 million" dollar figures announced with respect to the settlement are as follows: (i) the $500 million is the injunctive relief component of the settlement, not part of any cash penalty; (ii) neither the Audit Policy nor the Interim Approach offers any relief from the obligation to perform corrective actions including installing pollution controls and such corrective actions can be embodied in agreed injunctive settlement provisions; (iii) virtually all of the $500 million is associated with injunctive relief requiring the installation of air pollution controls used to resolve NSR violations, and (iv) the costs Invista is incurring in connection with this injunctive relief appear facially to be quite comparable to those incurred by other companies in major NSR settlements.

In other words, despite the large price tag, Invista was likely exposed to the $500 million in injunctive relief anyway (as part of EPA's ongoing NSR enforcement initiatives or otherwise) and Invista may have benefited significantly from cash penalty relief in connection with its audit disclosures. That being said, especially in contexts where NSR violations or comparable issues are in play, new owners should not presume that the Interim Approach offers an opportunity to zero out all potentially significant enforcement exposures; where costly corrective actions are required, such costs are likely to be treated as injunctive relief in a resolution of the audit disclosures.

Title V Facilities. As noted above, EPA has in the Interim Approach and related guidance offered new owners an opportunity to avoid the "reasonable inquiry" disqualification for air-related audit disclosures at facilities subject to the Title V program, at least for any period prior to the first annual compliance certification. In almost any transactional setting, Title V annual compliance certifications can present tricky issues since Title V reporting deadlines and transactional closing schedules are rarely coordinated. Without care, for example, new owners can face an obligation to make a compliance certification that could potentially include periods prior to closing. In the audit disclosure context, new owners of Title V facilities must be cognizant of the window of eligibility for making a disclosure – so long as the new owner performs an audit and makes a disclosure prior to its first annual compliance certification, EPA has said that the new owner will be eligible for Audit Policy relief and will avoid the usual "reasonable inquiry" obstacle. That being said, an annual compliance certification can be due at any time during the year for any given facility; accordingly, the new owner should be alert to this timing so it can timely perform an air audit and not miss this important one-time "catch up" opportunity on air compliance issues.

Reservation of Rights Against Sellers. As noted above, EPA has reserved the right "to pursue sellers where the circumstances and equities warrant," even where a buyer has made a disclosure, performed necessary corrective and preventive actions, and resolved any claims EPA may have against the new owner. This reservation gives rise to two concerns. First, in a stock purchase and merger context, reserving rights against the seller could effectively be read as a reservation of rights that will ultimately run directly or indirectly against the buyer. EPA has acknowledged

this difficulty in past Corporate Auditing Agreements and will, by written agreement, work around this concern. Even in an asset purchase context, however, one can imagine a selling entity being concerned about a buyer's voluntary and public disclosure to EPA of the seller's past environmental violations, especially given that the new owner's disclosure does nothing to extinguish the seller's liability with respect to those violations. While this issue does not yet appear to be regularly arising in transactional negotiations, as understanding of the Interim Approach and its processes, benefits, and shortcomings becomes more widespread, this issue may well begin to become an important point of contention in future transactional negotiations.

State Program Complexity. As should be obvious, EPA's Interim Approach is a federal program that involves the resolution of environmental compliance-related liabilities with the federal government. Participation in the federal program and the resolution of audit disclosures with EPA in many instances will not provide any legal relief with respect to the various States in which a new owner's facilities may be located. While EPA promises to share information about the disclosures with the States and let the relevant State agencies know about the federal resolution of disclosed violations, new owners participating in the Interim Approach will still face potential State exposures. Experience suggests that the States ordinarily view the federal resolution of a disclosed violation as adequate and that the States have chosen not to "pile on" after being made aware of the audit disclosure. To more definitively close this gap, however, new owners may wish to consider approaching the relevant State agencies in addition to EPA in order to more fully resolve potential claims. That being said, no State has yet adopted an audit policy or statute that expressly envisions transaction-related disclosures, leaving new owners with a great deal of uncertainty about how a State would handle such a disclosure and a real

challenge to develop from scratch any necessary understandings and agreements with the States in question.

Conclusion

EPA's August 2008 Interim Approach offers new owners of facilities and companies a powerful tool for extinguishing or minimizing penalty exposures for environmental noncompliance. Despite EPA's significant strides in clarifying how Audit Policy relief applies in transactional contexts and in providing strong encouragement to new owners for participating in the Interim Approach, however, the actual application of auditing and audit disclosures in the transactional context remains a complicated undertaking. Different circumstances make the Interim Approach more or less beneficial for different parties and certainly the use of "new owner" audits will not be viewed as a desirable option for every transaction. Undeniably, however, counsel assisting both buyers and sellers in transactional contexts should be aware of, and should consider the application of, this important new policy tool for addressing environmental liability.

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[i] In its January 1997 "Audit Policy Interpretive Guidance," EPA had mentioned that "repeat violation" and "pattern" concerns could be inapplicable where a facility had changed hands. That guidance also offered a preview of a concern that would later become a significant issue for EPA's "new owner" policy - - whether new owners and former owners are both eligible for penalty relief where the new owner pursues an audit disclosure about violations that originated with the prior owner. *Id.* at 15.

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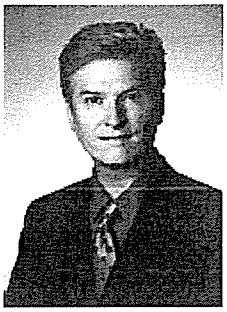

Timothy A. Wilkins
Managing Partner, Austin
Austin
Houston
T: 512.542.2134
T: 713.221.1136
F: 512.479.3934
E: timothy.wilkins@bgllp.com

Experience

Tim Wilkins is the head of Bracewell & Giuliani's firm-wide Environmental and Natural Resources practice group and Managing Partner of the firm's Austin office. He assists companies in identifying and addressing environmental issues in all media, and advises on the legally appropriate design and implementation of systems for corporate environmental governance, management and auditing.

Mr. Wilkins has significant experience with administrative, civil and criminal environmental enforcement actions, the resolution of regulatory and liability issues associated with contaminated properties and their remediation, and counseling on the environmental aspects of transactions, project siting and development.

Mr. Wilkins has published and lectured extensively on privileged auditing, environmental management systems, environmental enforcement defense and transactions-related environmental issues. He teaches the course in Corporate Environmental Law at The University of Texas School of Law and long served as an adjunct professor at the University of Houston Law Center.

Before joining Bracewell, Mr. Wilkins was research assistant to Professor Laurence H. Tribe of Harvard Law School, Editor-in-Chief of the Harvard Environmental Law Review, and a judicial clerk for the Honorable Henry A. Politz, Chief Judge of the United States Court of Appeals for the Fifth Circuit.

Representative Matters

Designed and assisted with the implementation of environmental compliance audit programs for companies engaged in electric power generation, energy production and transportation, chemical manufacturing, cement manufacturing, and printing and publishing, including assistance with audit disclosures under EPA and state audit policies and innovative applications of those policies. Mr. Wilkins pioneered the use of EPA's Audit Policy in transactional contexts to successfully extinguish compliance-related liabilities in mergers and acquisitions. He has directed or participated in privileged environmental compliance audits of more than 400 facilities and handled audit disclosures for well over 100 facilities under federal, Texas and other state environmental audit programs.

Defended numerous air, water, waste and hazardous materials enforcement actions for companies in the power generation, chemical, and forest products sectors, as well as criminal prosecutions alleging waste and water violations.

Advised on siting and environmental permitting issues associated with several new power plants (including coal, gas, cogeneration and wind facilities), chemical manufacturing and energy-related facilities.

Advised on the environmental aspects of numerous acquisitions, divestitures and financing transactions in the energy, refining, electric power, chemicals, telecommunications, real estate, waste handling and municipal sectors.

Publications and Speeches

"Environmental Compliance Auditing: Getting It Right, Now More than Ever," TCC/ACIT Environmental, Health and Safety Seminar, Galveston, Texas, June 11, 2009.

Co-author, "A New Enforcement Reality," *Energy Lawyer*, May 18, 2009.

"Using EPA's Audit Policy in Transactional Contexts," The Auditing Roundtable National Meeting, San Antonio, Texas, April 21, 2009.

Co-author, "Prepare for Tougher Environmental Enforcement," *Bloomberg Environmental Law Report*, Vol. 1, No. 3, March 2009.

Co-author, "The New Look Of Environmental Enforcement And What Companies Can Do To Prepare," *New Jersey Law Journal*, February 23, 2009.

"A Primer on EPA Enforcement," The New Enforcement Agenda and How to Prepare, Bracewell & Giuliani Seminar, February 2009.

Co-author, "Deseret Decision Regarding CO2 Avoids the Key Question and Creates Significant Uncertainty," Environmental Law Update, November 2008.

"Audits Will Protect Your Environmental Compliance Investment," *Oil & Gas Financial Journal*, October 10, 2008

"Brownfields Toolkit: Overview of Liabilities," 20th Annual Texas Environmental Superconference, Austin, Texas, August 6, 2008.

"Environmental Law Update," The Auditing Roundtable, South Central Region meetings, August 6, 2008; March 27, 2008; August 1, 2007; August 2, 2006; April 6, 2006; August 3, 2005; April 23, 2004.

"Environmental Enforcement Trends: What We Face, How to Prepare," *Pipeline & Gas Journal*, May 2008

"Beating the Environmental Enforcement Squeeze," *Upstream Technology*, May 2008

"Compliance Program May Serve as Stitch in Time for Companies," *Houston Business Journal*, February 8, 2008.

"Environmental Audits and Management Systems: An Update from the Front Lines," Austin Bar Association Environmental, Natural Resources and Water Section, February 7, 2008.

"Environmental Auditing and Management Approaches for Compliance," *Biodiesel Magazine*, February 2008.

"Under Pressure: New Drivers and New Risks for Corporate Environmental Disclosure," *Zephyr Currents*, October 2007.

"Accounting for the Environment: Corporate Environmental Disclosure and Reporting," Houston Bar Association 2007 Environmental Law Institute, September 28, 2007.

"An Overview of the Environmental Law System," 19th Annual Texas Environmental Superconference, Austin, Texas, August 1, 2007.

"A Theory of Evolution: How Securities Laws and Markets are Influencing Corporate Sustainability," *EM* - The Magazine for Environmental Managers, Air & Waste Management Association, April 2007.

"The Hydrogen Economy: A Lawyer's Perspective," National Hydrogen Association Annual Conference, San Antonio, Texas, March 21, 2007.

"Required and Voluntary Environmental, Sustainability, and Corporate Social Responsibility Reporting," The Auditing Roundtable - South Central Region Meeting, Austin, Texas, March 13, 2007.

"Transactions and the Environmental Lawyer," 18th Annual Texas Environmental Superconference, Austin, Texas, August 2, 2006.

"The Hydrogen Economy: Practical Legal Issues," American Bar Association Section on Environment, Energy, and Resources. Seminar on Renewable Energy Resources, Houston, Texas, January 18, 2006.

Education

J.D., cum laude, Harvard Law School, 1993
M.P.P., Harvard University, 1993
B.A., magna cum laude, Phi Beta Kappa, Trinity University, 1988

Affiliations

The Audit Roundtable, Immediate Past Chair, South Central Region
Austin Bar Association, Environmental Law Section
State Bar of Texas Environmental Law Journal, Recent Developments Columnist, 2003-2008
State Bar of Texas, Environmental and Natural Resources Section, Executive Committee Member, 2001-2003
Member, Strategic Advisory Board, Board of Environmental, Health & Safety Auditor Certifications (BEAC), 2008-present

Noteworthy

Chambers USA: America's Leading Business Lawyers, Environment, 2006-2009
Practical Law Company, Recommended Individual Attorney, Environmental Law
The Best Lawyers in America, 2009
Super Lawyers, Corporate Counsel Edition, 2009
Texas Super Lawyers, 2004-2008
Martindale-Hubbell A/V rating

Related Practices

Environmental Strategies

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U.S. Court of Appeals for the 5th Circuit