

“On The Road Again”



**The Fifteenth Annual Texas
Environmental Superconference
August 7-8, 2003 • Austin, Texas**



The Fifteenth Annual Texas Environmental Superconference

WELCOME

TO: Attendees

FROM: Planning Committee

DATE: August 7, 2003

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 Fifteenth Annual Texas Environmental Superconference, in honor of Willie Nelson's 70th birthday, "On the Road Again." As you know, the conference is an annual event established to create a dialogue among the attendees, who are drawn from the public and private sector and from the legal and technical professions. The conference provides excellent continental breakfasts, lunches and snacks, and plenty of breaks to encourage participants to discuss environmental issues informally, as well as gifts and quizzes and prizes.

For Friday's open mike session, note cards are provided for you to write your questions. Please place your written questions in the designated box at the registration table. You also may ask questions in person, should you prefer.

As always, there are evaluation forms for the program. We appreciate your taking the time to complete them. The organizers of this program take into account these forms 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. Suggestions for themes for next year also are being solicited. Next year's conference is scheduled for August 5 - 6, 2004. Please mark your calendars. If you would like to receive next year's program electronically, please provide us your e-mail address if you did not include it in your registration.

If you have any questions or comments, please do not hesitate to contact any member of the Planning Committee at the conference, or, thereafter, Jeff Civins at (512) 867-8477 or Jeff.Civins@haynes-boone.com.

Agenda

The Fifteenth Annual Texas Environmental Superconference



Thursday • August 7, 2003

8:00–8:45 **Registration** *Shall We Gather*

8:45–9:00 **Welcoming Remarks** *Hello Walls*

Jeff Civins, Texas Environmental Superconference
Hal Ray, Environmental and Natural Resources Section (ENRLS) SBOT
Cindy Smiley, Air & Waste Management Association – Southwest Section
Carolyn Ahrens, Water Environment Association of Texas
Kim McLean, Texas Association of Environmental Professionals
Michael Byington, The Auditing Roundtable
Keith Hopson, ABA Section of Environment, Energy & Resources

Moderator: Mike Nasi, Lloyd Gosselink

TAB 1 **9:00–9:45** **Legislative Update** *Last Thing I Needed First Thing This Morning
(Was to Have You Walk Out on Me)*

Margaret Hoffman, Executive Director, TCEQ
Martin Rochelle, Lloyd Gosselink

TAB 2 **9:45–10:10** **TCEQ Enforcement** *All of Me (Why Not Take All of Me)*
Leonard Spearman, Deputy Director, TCEQ

10:10–10:30 **Break** *Please Don't Talk About Me When I'm Gone*

Moderator: Betty Williamson, Chief, Superfund Management Branch, USEPA, Region 6

TAB 3 **10:30–11:20** **Brownfields & Revitalization Issues – Initiative, Options, and Legal Implications**
If You've Got the Money Honey (I've Got the Time)

Paul Connor, Division Director, OECA/OSRE/PPED, USEPA - DC
Roliff Purrington, Cherokee Investment Partners, LLC – Private equity
Mark Stacell, Marsh –Environmental Practice
Charles Epperson, Intera, Inc.

TAB 4 **11:20 –11:50*** **Homeland Security** *Someone to Watch Over Me*
Tom Dunne, Associate Administrator, Office of Solid Waste and Emergency Response, USEPA- DC

11:50 –1:00 **Lunch** *Always on My Mind*

Moderator: Cindy Smiley, Baker Botts L.L.P.

TAB 5 **1:00 –1:50** **Water Resources – Hot Issues**
•In-stream Flow • Re-use • Groundwater Regulation *Blue Eyes Crying in the Rain*

Myron Hess, National Wildlife Federation
Ken Ramirez, Bracewell and Patterson
Mary Sahs, Sahs & Associates, P.C.

TAB 6	1:50 –2:40	Water Quality – Hot Issues • SPCC • SWANCC • Stormwater	<i>Whiskey River</i>
		Lynn Bortka, Senior Attorney, BP America, Inc. Steve Ligon, Team Leader, Stormwater and General Permits Team, TCEQ Bane Phillippi, Haynes and Boone, LLP	
TAB 7	2:40 – 3:20	EPA Policy Directions	<i>Time of the Preacher</i>
		Phyllis Harris, Principle Deputy Administrator, Office of Enforcement and Compliance, USEPA - DC	
	3:20–3:40	Break	<i>Milk Cow Blues</i>
		Moderator: Gregg Cooke, Guida Slavich & Flores, P.C.	
TAB 8	3:40–4:40	Air Quality – Hot Issues • NSR Enforcement • Routine Replacement Maintenance • 8 Hour Standard Implementation • Clear Skies	<i>Blue Skies</i>
		Carl Edlund, Director, Multi Media and Planning and Permitting Division, USEPA – Region 6 Mark MacLeod, Environmental Defense David Schanbacher, Chief Engineer, TCEQ Chris Thiele, Vinson & Elkins	
TAB 9	4:40–5:15*	Role and Obligation of the Press	<i>Two Sides to Every Story</i>
		Dina Cappiello, Environment Writer, Houston Chronicle Patrick Crimmins Randy Lee Loftus, Dallas Morning News	
	5:15–6:00	Cash Bar	<i>I Gotta Get Drunk</i>

Friday • August 8, 2003

	8:30–8:45	Introduction	<i>Bloody Mary Morning</i>
		Moderator: Danny Worrell, Brown McCarroll, L.L.P.	
TAB 10	8:45–9:30*	Corporate & Attorney Liability under Sarbanes Oxley	<i>Ain't Nobody's Business</i>
		Elizabeth Bourbon, Senior Counsel, Valero Energy Corporation Gary Prasher, Pricewaterhouse Coopers Bob Stewart, Baker Botts L.L.P.	
TAB 11	9:30–10:20	Risk – Scientific, Legal and Policy Issues	<i>Heartache by the Numbers</i>
		Russ Baier, TCEQ Nathan Block, Project Manager, TRC Dick Record, Cirrus Associates	
	10:20–10:40	Break	<i>Wake Me When It's Over</i>
		Moderator: Ralph Marquez, Commissioner, TCEQ	

TAB 12	10:40–11:15	New Environmental Technologies	<i>Farther Down the Line</i>
		Hank Habicht, Global Environment and Technologies Jerry Matthews, Texas Council on Environmental Technology/UT Jim Lester, Houston Advanced Research Center	
TAB 13	11:15–12:00	EPA/TCEQ Point/Counterpoint	<i>Pancho and Lefty</i>
		Richard Greene, Regional Administrator, USEPA Region 6 Ralph Marquez, Commissioner, TCEQ	
	12:00 –1:15	Lunch	<i>They've All Gone to Mexico</i>
		(Annual ENRLS meeting for those who would like to attend)	
		Moderator: Jim Morriss, Thompson & Knight, L.L.P.	
TAB 14	1:15–2:00	Corporate Initiatives	<i>Do Right Woman, Do Right Man</i>
		• Product Life Cycles • Sustainability • Other	
		Carlos Guimaraes, VP-Environmental Operations Business, The Dow Chemical Company Lisa Shelton, Andrews & Kurth, L.L.P.	
TAB 15	2:00–2:40*	Discovery of Electronic Documents	<i>Remember Me</i>
		-Technical and Legal Issues	
		Bob Robinson, General Counsel & Vice President of Business Development, Renew Data Corp.	
TAB 16	2:40–3:30	Open Mike	<i>Seven Spanish Angels</i>
		Manisha Patel, Strategic Planning Advisor, USEPA - Region 6, Moderator Lydia González Gromatzky, Deputy Director, Office of Legal Services, TCEQ Leonard Spearman, Deputy Director, OCE, TCEQ Larry Starfield, Deputy Regional Administrator, USEPA - Region 6 Mark Vickery, Deputy Director, Office of Permitting, Remediation & Registration, TCEQ	
	3:30	Closing Remarks	<i>Funny How Time Slips Away</i>
		Jeff Civins	
		Sundaes	<i>Sweet Bye and Bye</i>
			<i>*Ethics Credit</i>



LEGISLATIVE UPDATE

78th Legislative Session Update

by
Martin C. Rochelle and Margaret Hoffman

The 78th legislative session was influenced by several factors. New leadership, a \$10 billion budget deficit, tort reform and congressional redistricting all served to make this session a unique experience. While almost 5600 bills were filed this session, less than 1400 passed. Many bills had implications to those of us engaged in environmental law. While the bills that passed will certainly impact the world of environmental law in Texas, even legislation that did not pass may well serve as a foundation for interim studies or future legislation. This paper will profile some of these bills.

What Passed:

GENERAL

Senate Bill 1265

Author: Armbrister

Relating to prosecution of environmental crimes.

Summary: This bill requires a peace officer to notify TCEQ in writing of an alleged violation of an environmental law. TCEQ is then required to evaluate the report, determine if an environmental violation exists, and determine an adequate remedy. This bill only applies in cases where the potential defendant holds a permit by TCEQ or is employed by a person holding such a permit.

House Bill 425

Author: Christian

Relating to procedures to help ensure that certain state agency actions are consistent with the meaning and intent of applicable legislative enactments.

Summary: HB 425 requires that before a state agency gives notice of its intention to adopt a rule the agency must: (1) research the legislative history and prepare a legislative history document on the bill or amendment that authorizes adoption of the rule; (2) establish an internal review process to ensure the proposed rule is consistent with legislative history; and (3) deliver a copy of the proposed rule to each member of the legislature not later than seven days before final adoption and inform the member of any public hearing related to the proposed rule. The agency must also deliver a copy of an emergency rule adopted to the primary author and sponsor of the law under which the rule was adopted. HB 425 mandates that the state agency order adopting a rule include a summary of any written comments received by members of the legislature.

HB 45 provides the Legislative Budget Board with authority to issue letters of legislative intent regarding appropriations matters.

While this bill passed, the Governor vetoed HB 425 on June 20 on the basis that the bill violated the Constitution's separation of powers provision, by improperly infringing on the powers of the executive branch of government. The Governor also opined that the bill would inappropriately allow the legal opinion of an unelected government employee to supercede the expressed will of the Legislature, and would require the executive branch of government to determine legislative intent, a function constitutionally left to the courts of our state.

House Bill 2847 **Author: Farabee**

Relating to the transfer of the powers, duties, and functions under the Texas Aggregate Quarry and Pit Safety Act from the railroad commission to the department of transportation.

Summary: HB 2847 transfers the powers and functions exercised by the Texas Railroad Commission under Chapter 133, Natural Resources Code, to the Texas Department of Transportation.

House Bill 3588 **Author: Krusee**

Relating to the construction, acquisition, financing, maintenance, management, operation, ownership, and control of transportation facilities and the progress, improvement, policing, and safety of transportation in the state; imposing criminal penalties.

Summary: HB 3588 provides for a comprehensive restructuring of the methods of developing, financing, operating, and policing the state's transportation system, so as to enhance safety, efficiency, and mobility. HB 3588 addresses the full scope of transportation issues facing the state. It creates new financing tools to generate the funding required to maintain a working transportation system. These include the use of bonds to generate cash flow, mechanisms for funding the Texas Mobility Fund, and an increase in fines and fees levied for traffic violations. Additional cash flow will be generated by increased reliance on turnpikes -- those funded by tolls paid by motorists and those built by local authorities and funded over time by the state. TxDOT is given the authority to encourage increased reliance on rail transportation. In addition, it will begin to plan and construct a new set of intermodal transportation facilities that will be known as the Trans-Texas Corridor and that will integrate highway, rail, and utility system components. Regional Mobility Authorities will give localities greater flexibility in addressing their local transportation needs

HB 3588 also requires TxDot to mitigate environmental damages associated with transportation projects, and authorizes the adoption of rules for the installation, construction, operation, maintenance, repair, renewal, relocation, or removal of a public utility facility in, on, along, over, or under a transportation project.

WATER

Senate Bill 155

Author: Zaffirini

Relating to the protection of public freshwater areas; providing a penalty.

Summary: Subtitle I, Chapter 90, is added to the Parks and Wildlife Code to prohibit the operation of a motor vehicle in the bed or bank of a navigable stream. Many exemptions apply, however: e.g., operation of a motor vehicle for the lawful construction, operation, or maintenance of facilities used for the production, treatment, or transportation of water or wastewater; a county, municipality, or river authority may adopt a plan for limited use of motor vehicles in protected areas, and the plan must be approved by TPWD. All peace officers of the state shall enforce the provisions of the Act. An offense is a Class C misdemeanor.

Senate Bill 1094

Author: Duncan

Relating to the creation of a task force to evaluate matters regarding water conservation.

Summary: TWDB shall appoint and preside over a conservation task force to review, evaluate and recommend optimum levels of water use efficiency and conservation for the state. Not later than November 1, 2004, the task force shall develop a best management practices guide for use by regional planning groups and political subdivisions and shall make a final report.

Senate Bill 1639

Author: Staples

Relating to regulating the waters of the state, including the spacing and production of groundwater and the control of instream flows.

Summary: SB 1639 amends Chapter 36, Water Code, to authorize a groundwater district to adopt different rules for each geologic strata or each geographic area within a district. This bill also amends Chapter 11 of the Water Code to create a study commission to consider public policy implications for balancing environmental and public water supply demands on surface water resources. The legislation confirms that no authority currently exists for the TCEQ to issue permits for strictly environmental flows and prohibits the agency from issuing such permits until August 31, 2005. The TCEQ may issue an amendment to an existing permit to authorize an environmental purpose of use.

House Bill 645

Author: Puente

Relating to prohibiting the creation or enforcement of certain restrictive covenants that undermine water conservation.

Summary: HB 3645 amends Sec. 202.007, Property Code, to prohibit a homeowners association from including or enforcing a deed restriction or covenant that prohibits or restricts a property owner from implementing measures promoting solid-waste composting of vegetation, including grass clippings, leaves, or brush, or leaving grass clippings uncollected on grass; installing rain barrels or a rainwater harvesting system; or implementing efficient irrigation systems, including underground, drip or other water conservation systems.

House Bill 755

Author: Chisum

Relating to the offense of failing to certify compliance of an underground storage tank before accepting delivery of the regulated substance to be stored in the tank.

Summary: Amends Section 26.3467(b), Water Code, to provide that a person who “knowingly violates,” rather than “violates,” Water Code Section 26.3467(a) commits an offense that is punishable as provided by Section 7.156 (Violation Relating to Underground Storage Tank) for an offense under that section.

This legislation was filed after several petroleum transporters were fined under TCEQ’s PST Program for making deliveries to petroleum storage tanks that were not in compliance with the program (non-certified tanks).

House Bill 803

Author: Geren

Relating to the authority of political subdivisions to exercise the power of eminent domain to acquire rights to water and the assessment of damages in condemnation proceedings initiated for that purpose.

Summary: This bill amends Subchapter B, Chapter 21, Water Code, to establish a procedure for condemnation of water rights. A political subdivision may not exercise its condemnation authority for the purpose of acquiring rights to groundwater or surface water unless it has prepared a drought contingency plan, developed and implemented a plan to achieve the highest practicable levels of water conservation, made a good-faith effort to obtain the rights to the water voluntarily, and demonstrated a need for the water rights for domestic purposes within the next 10-year period. The bill also provides that when a political subdivision proposes to condemn the fee title of property under this chapter, and the court finds that the real property may be used by the political subdivision to develop the right to use groundwater for a public purpose, the court may assess damages separately for the market value of the real property and the market value of the groundwater.

House Bill 1150

Author: Puente

Relating to the financing of certain local water, conservation, and open-space projects in accordance with the law governing sports and community venue projects.

Summary: HB 1150 amends Section 334, Local Government Code, to allow a municipality to use a sales tax to fund a parks venue project outside the municipality or county. To accomplish this, the bill adds to the definition of "venue" a watershed protection and preservation project, a conservation easement, a recharge, recharge area, or recharge feature protection project, and an open-space preservation project as within the list of projects that are authorized under this statute for this type of funding.

House Bill 1152 **Author: Puente**

Relating to the authority of certain nonprofit water supply corporations and sewer service corporations to establish and enforce customer water conservation measures.

Summary: HB 1152 allows water and sewer supply corporations to establish and enforce reasonable conservation practices and prohibit excessive or wasteful use of water by assessing reasonable penalties as provided in its approved tariff. Customers may appeal any such penalties to the TCEQ.

House Bill 1370 **Author: Luna**

Relating to the study and implementation of seawater desalination.

Summary: Amends Section 16.060, Water Code, to require the TWDB to undertake desalination studies to further the development of cost-effective water supplies from desalination. The bill also requires the TWDB to issue a biennial report on the implementation of seawater desalination activities in the state.

House Bill 1378 **Author: Geren**

Relating to certain duties and information regarding water planning and development matters in the state.

Summary: HB 1378 amends Chapter 9, Water Code, relating to the Texas Water Advisory Council. An additional senator and public member are added to the TWAC, required meetings are reduced to two per year, and powers, duties and procedural requirements are modified. The scheduled analysis of surface water authorities is repealed and replaced with a provision allowing the TWAC to request reports from water districts and authorities.

House Bill 1534 **Author: Cook, Robby**

Relating to certain powers of groundwater conservation districts.

Summary: Section 36.105, Water Code, is amended to limit the exercise of eminent domain authority by a groundwater district. HB 1534 provides that a district may only exercise its power of eminent domain to acquire property that is within the boundaries of

the district and necessary for conservation purposes, including recharge and reuse purposes. In addition to existing limitations, eminent domain authority may not be used for production, sale, or distribution of groundwater or surface water, or for acquiring rights to groundwater or surface water.

House Bill 1541 **Author: Callegari**

Relating to the general powers and authority of water districts.

Summary: HB 1541 was billed as a “clean-up” bill for water districts, but it includes many substantive changes to Water Code Chapters 49, 53, 54, 57 and 67. The bill also amends the Health and Safety Code, the Local Government Code, and the Transportation Code. Many administrative, procedural and substantive rights of water districts, too numerous to summarize here, are affected by HB 1541.

House Bill 1979 **Author: Puente**

Relating to preventing the discharge of untreated wastewater into waters of the state.

Summary: Chapter 26, Water Code, is amended to require TCEQ to establish criteria for evaluating whether to initiate enforcement actions related to sanitary sewer overflows that occur as the result of blockage due to grease. TCEQ must adopt model standards for operation of a sanitary sewer system so as to prevent blockage due to grease. Adoption and enforcement of these standards by a sanitary sewer system will provide a reasonable defense against related enforcement actions brought by TCEQ.

House Bill 2031 **Author: Puente**

Relating to the regulation of stormwater management by certain counties.

Summary: Amends 423.001, Local Government Code, to allow a county with a population of 1.3 million for which the primary source of drinking water is an underground aquifer (Bexar County) to take action necessary to comply with storm water permitting program requirements under the National Discharge Elimination System, including the collection of a fee for this purpose. This authorization was already provided to Harris County in 1999.

House Bill 2529 **Author: Madden**

Relating to enforcement actions against a small water supply, sewer, wastewater treatment, or solid waste disposal service being integrated into a regional service.

Summary: Amends Subchapter A, Chapter 7, Water Code, by adding Section 7.0026, to allow the TCEQ to enter into compliance agreements with a water supply, sewer, wastewater treatment, or solid waste disposal facility, operated by or for a municipality or county, and that has been integrated into a regional system of such facilities, in lieu

of taking more aggressive enforcement actions for noncompliance by such facilities prior to such integration.

House Bill 2660

Author: Puente

Relating to the establishment of minimum levels of water conservation in water conservation plans.

Summary: Sections 11.1271, 15.106, 17.277 and 17.857, Water Code are amended. Beginning May 1, 2005, all water conservation plans required under these sections must include quantified 5-year and 10-year targets for water savings. Targets must include goals for water loss programs and goals for municipal use in gallons per capita per day. HB 2660 requires TCEQ and TWDB to develop guidelines for preparing water conservation plans and models for water conservation programs. TCEQ may also require water right holders to submit such implementation reports.

House Bill 2661

Author: Puente

Relating to the use of graywater

Summary: Section 26, Water Code, is amended to encourage the use of graywater, as further defined, in private residences. Criteria are established for the domestic use of up to 400 gallons per day of graywater from a private residence without obtaining a permit from TCEQ. This bill also clarifies that the TCEQ and not the Texas Board of Plumbing Examiners has the authority to draft and enforce rules concerning graywater.

House Bill 2663

Author: Puente

Relating to the establishment of quantifiable goals for drought contingency plans.

Summary: HB 2663 amends Section Chapter 11.1272, Water Code, to require wholesale and retail public water suppliers and irrigation districts to update drought contingency plans to include specific quantified targets for water use reductions to be achieved during periods of water shortage and drought, by May 1, 2005. TCEQ and TWDB are to jointly prepare unenforceable guidelines and best management practices.

House Bill 3030

Author: Van Arsdale

Relating to public notice of groundwater contamination.

Summary: HB 3030 amends Water Code Chapter 26 to require state agencies to notify the TCEQ in the event they become aware of an incident of groundwater contamination, and it requires TCEQ to notify drinking water well owners in the area that may have their drinking water supplies impacted by such contamination.

House Bill 3338

Author: Puente

Relating to the performance of a water audit by a retail public utility providing potable water.

Summary: Chapter 16, Water Code, is amended to require retail public utilities to perform and report to TWDB, every five years, a water audit computing the utilities' most recent annual water loss. TWDB is required to develop appropriate methodologies for a water audit based on system size. Methodologies shall account for various components of water loss, including loss from distribution lines, inaccuracies in meters or accounting practices, and theft. Regional planning groups shall use information in the development of a regional water plan. Political subdivisions which have not completed and filed a water audit with TWDB are ineligible for financial assistance.

AIR

Senate Bill 1159

Author: Barrientos

Relating to the Vehicle Emissions Programs in Early Action Compact counties

Summary: This bill allows an "Early Action Compact" county whose early action plan for attaining the 8-hour ozone NAAQS provides for a motor vehicle emissions inspection and maintenance ("I&M") program to request that TCEQ adopt I&M program requirements for the county. Allows TCEQ to request that the Public Safety Commission establish I&M program requirements for the participating county, which requirements may include exhaust emissions testing, emissions control devices and systems inspections, or other methods that meet or exceed EPA requirements. TCEQ may assess a fee for inspection. The fee must be in an amount reasonable to recover I&M program costs. A portion of the fee may be retained by the station owner, contractor or operator to recover the cost of performing the inspection and provide for a reasonable profit. Allows the following incentives for participating counties: low-income vehicle repair assistance, retrofit and accelerated vehicle retirement programs; designation as a "Clean Air County"; and, preference in any federal or state clean air grant program.

Senate Bill 1272

Author: Armbrister

Relating to air quality permit processing for concrete plants.

Summary: This bill creates a standard air permit for permanent concrete plants that meet 19 specified criteria. Requires the applicant to publish notice and conduct a public meeting regarding the application within specified timeframes. Requires the ED to approve or deny the application within 35 days after the public meeting is held.

House Bill 555

Author: Chisum

Relating to air quality public notice for portable facilities.

Summary: HB 555 provides that public notice for a New Source Review air permit is not required for the relocation or change of location of a portable facility on a site where a portable facility has been located at any time during the previous two years. The existing statute provides this exemption if no portable facility has been located at the proposed site within the past two years. The bill also provides that measurement of distances to determine compliance with any location or distance restriction in the Texas Clean Air Act must be taken toward structures that are in use as of the date that the application is filed with the Commission.

House Bill 638

Author: Chisum

Relating to emissions reductions incentives and the emissions reductions incentives account.

Summary: HB 638 amends the section of the Texas Clean Air Act's reimbursement program for internal combustion engines associated with pipelines as follows: the bill requires, rather than allows, the TCEQ to develop the program; it provides that NOx emissions rates be expressed in terms of grams per brake horsepower-hour; it requires, rather than allows, the program to include certain NOx reduction incentives; it allows emissions reductions under the program to be determined as a rate of emissions rather than the actual emissions of an engine; and, it provides that the rules adopted to implement this section may not require more stringent emissions reduction criteria than those set forth by the program. HB 638 also changes the definition of "affiliate" in the Emissions Reductions Incentives Account and requires that money in the account only be appropriated for emissions reduction incentives projects; it provides that a person who pays or contributes money to the account is ineligible to receive money from the account under a program developed under the Reimbursement Program previously mentioned. HB 638 allows reciprocating internal combustion engines to be considered permitted if certain criteria are met.

House Bill 1287

Author: Chisum

Relating to the location/operation of concrete crushing facilities for purposes of air permits.

Summary: HB 1287 clarifies that a concrete crushing facility may not be operated within 440 yards of a building in use as a residence, school or place of worship on the date the application is filed, although such a facility can be temporarily located within such a distance. (The prior statute had prohibited both the location and the operation of such facilities within 440 yards of such structures.) The bill provides that certain facilities are exempt from this distance requirement. The distance measurement must be taken from the point on the concrete crushing facility site that is nearest to the

residence, school, or place of worship toward the point on the residence, school, or place of worship.

House Bill 1365

Author: Bonnen

Relating to the Texas emissions reduction plan.

Summary: HB 1365 is the comprehensive Texas Emissions Reduction Program (TERP) cleanup legislation that is part of the state's effort to meet the requirements of the federal Clean Air Act. This bill provides funding for the TERP by raising the certificate of title fees of vehicles from \$13 to \$33 in counties located in non-attainment areas of Texas and increases the fee from \$13 to \$28 in all other counties of the state. HB 1365 also prohibits the TCEQ from using speed limits for meeting Clean Air Act requirements. HB 1365 expressly expands some of the programs established under the TERP to enable more projects and persons to be able to participate in the programs. In addition, HB 1365 creates a small business incentive program and enables the TCEQ and other state agencies to give preferences to or require vendors to meet or exceed state and federal environmental standards such as voluntary air standards. HB 1365 increases the TERP funding of the development of technology which will assist the state in reducing air emissions.

House Bill 1481

Author: Allen

Relating to subaccount for Title IV & V fees.

Summary: This bill requires that fees collected pursuant to Title V be deposited in a subaccount in the clean air account, and not be commingled with any other fees. Funds placed in that subaccount can only be used to cover the costs of developing and administering the Title V Operating Permit program or the Title IV Acid Rain Permit program. Any balance left in the subaccount at the end of a fiscal year will be left in the subaccount and used in subsequent fiscal years only for the Title IV and Title V programs.

WASTE

House Bill 1567

Author: West, George "Buddy"

Relating to the disposal of low-level radioactive waste; authorizing the exercise of the power of eminent domain.

Summary: HB 1567 defines unsuitable sites for the disposal of low-level radioactive waste; provides rules for the application process associated with the disposal of such radioactive waste; requires certain procedures for waste disposal and conveyance; allows TCEQ to issue a license for such a facility to a private entity; and, requires certain levels of financial assurances sufficient to provide for the decommissioning and long term care of such facilities.

House Bill 1765

Author: Smith, Wayne

Relating to requiring financial assurance as a condition of issuing a permit or registration to haulers of certain solid wastes.

Summary: Prior law had required a demonstration of financial assurance by certain transporters of waste materials. For example, used oil transporters and medical waste transporters were required to maintain financial assurance under TCEQ rules. However, grit waste and grease trap waste transporters were not required to maintain such financial assurance. HB 1765 addressed this issue by mandating financial assurance as a condition of issuing a permit or registration for the collection, transportation, or processing of grit trap waste or grease trap waste.

House Bill 1791

Author: Chisum

Relating to permits for the commercial composting of certain solid wastes.

Summary: Prior law had allowed grease collected from commercial grease traps to be applied to compost. HB 1791 requires facilities that are composting grease trap waste to be permitted by the TCEQ.

House Bill 1823

Author: Hamric

Relating to financial assurance for certain solid waste processing facilities.

Summary: HB 1823 directs the TCEQ to adopt rules requiring owners and operators of recycling facilities to post financial assurance.

HB 2546

Author: Bonnen

Relating to the land application of certain sludge.

Summary: Land application of Class B sludge has been of concern across the state. HB 2546 provides for more restrictions and requirements to companies involved in the practice of applying Class B sludge to help ensure safety for citizens, land, and water, including: a more vigorous tracking system; identification of crops grown at the site of application; suggested agronomic application rates; proof of certain types of insurance; proper licensing of supervisors; information related to the date, source, quality, and quantity of sludge applied; establishment of criteria which will prohibit such sludge application sites in certain parts of coastal counties; and, transportation requirements.

House Bill 2554**Author: Smith, Wayne**

Relating to the application of new requirements for nonhazardous industrial solid waste disposal to be adopted by the Commission on Environmental Quality.

Summary: HB 2554 requires the TCEQ to adopt rules to regulate the management and operation of new commercial landfill facilities that propose to accept nonhazardous industrial solid waste for which a permit has not been issued on or before the effective date of the legislation. HB 2554 also directs the TCEQ to suspend the permitting process for any pending application for a permit for a new commercial landfill facility that is scheduled to accept nonhazardous industrial solid waste until the rules are adopted by the agency.

Note that proposed rules had been drafted prior to the legislation being passed. (See rule log number: 2002-052-335-WS.) The draft rules are being revised to be consistent with HB 2554. The draft rules are scheduled to go before the Commissioners for their approval to publish on August 20, 2003 and are scheduled to be adopted by March 4, 2004. The approval deadline may, however, be moved up in response to this bill.

House Bill 3152**Author: Bonnen**

Relating to the potability of and requirements for removing contaminants from groundwater.

Summary: HB 3152 was passed with the stated purpose of eliminating unnecessary groundwater investigations/response actions for certain properties with contaminated groundwater. HB 3152 authorizes the TCEQ to approve municipal setting designations ("MSDs") so long as certain affected local governments evidence their support for the designation by way of an ordinance or resolution. The property subject to a proposed MSD must be subject to a municipal ordinance or restrictive covenant that is enforceable by the municipality that prohibits the use of groundwater for potable purposes or certain other uses. HB 3152 authorizes an individual or municipality to apply to the TCEQ for an MSD for certain eligible properties that rely on protected community water systems to supply drinking water. If groundwater use is restricted to non-potable uses and public water is or will be made available (and subject to certain eligibility and notification requirements), the TCEQ could certify the area as an MSD. If the designation is made by the TCEQ, the agency is limited (compared to prior law) in what it can require of the responsible party in terms of investigation and remediation.

A site is eligible for an MSD if the property or properties are located within a city of at least 20,000 residents, public drinking water is provided or is capable of being provided, and the property is ultimately subject to an appropriate ordinance or restrictive covenant restricting the use of designated groundwater. The MSD may not be issued if it would negatively impact the current or future regional water resource needs or obligations of the area or surrounding area where the MSD is sought.

What Did Not Pass:

GENERAL

Senate Bill 326

Author: Shapleigh

Relating to the regulation of certain sales of water through pipelines.

Last Action: 02-06-03 Referred to Natural Resources Committee

Summary: This bill would have given the TCEQ the authority to regulate the price of water transported at least 50 miles or between water basins, for the stated purpose of ensuring that “purchases are protected while allowing private businesses to get a fair rate of return on their investment.” SB 326 would have made many water pipelines common carriers for purposes of their use and regulation.

Senate Bill 397

Author: Shapleigh

Relating to the requirement of a public hearing for certain applicants seeking the issuance, amendment, or renewal of air quality permits.

Last Action: 02-12-03 Referred to Natural Resources Committee

Summary: This bill would have required the TCEQ to hold a public hearing on the issuance, renewal, or amendment of an application for an air quality permit if the EPA named the applicant as a potentially responsible party for environmental contamination.

Senate Bill 1048

Author: Ellis, Rodney

Relating to the abolition of the Public Utility Commission of Texas and the Railroad Commission of Texas, and the creation of the Texas Energy and Communications Commission.

Last Action: 05-16-03 No action taken in committee.

Summary: This bill would have created the Texas Energy and Communications Commission and would have transferred the powers and duties of the PUC and the RCT to the new commission and other state agencies.

Senate Bill 1363

Author: Staples

Relating to the repeal of the authority of the Commission on Environmental Quality to initiate an enforcement action using information provided by a private individual.

Last Action: 03-19-03 S Introduced and referred to committee on Senate Natural Resources

Summary: This bill would have completely repealed current law that allows an agency enforcement actions to be initiated based on information provided by a private individual.

House Bill 2

Author: Swinford

Relating to the reorganization of, efficiency in, and other reform measures applying to state government.

Last Action: 05-13-03 Placed on major state calendar.

Summary: HB2 was a comprehensive bill that, among other things, revised the public participation opportunities in TCEQ's permitting process by adding a "nonadjudicative hearing" to the permitting process for certain permits proposed to be issued under Chapters 26 (water quality permitting) and 27 (injection well permitting) of the Water Code, and Chapters 361 (solid waste permitting) and 382 (air quality permitting) of the Health & Safety Code. The nonadjudicative hearing was designed to address protestants' concerns with a particular project without the need for a contested case hearing.

HB2 also affected the TCEQ's compliance history rules. It repealed the existing Water Code sections regarding compliance history. In its place, HB2 proposed more general compliance history provisions. For example, it provided that the TCEQ can consider any adjudicated decision or compliance proceeding addressing past performance and compliance when considering an application, and it allowed the agency to deny or suspend a permit if the history "contains violations constituting a recurring pattern of egregious conduct that demonstrates a consistent disregard for the regulatory process, including a failure to make a timely and substantial attempt to correct the violations."

House Bill 168

Author: Christian

Relating to enforcement actions initiated by the TCEQ based on information received from a private individual.

Last Action: 02-06-03 Introduced and referred to committee on House Natural Resources

Summary: This bill changed the "citizen collected evidence" laws adopted in the 77th legislative session by allowing enforcement actions to be based on citizen collection evidence only if the TCEQ had conducted an investigation that indicated an enforcement action was warranted.

House Bill 223

Author: Bailey

Companion: SB 1801

Relating to the authority of certain counties to enact noise regulations.

Last Action: 03-26-03 Committee action pending House County Affairs

Summary: This bill allowed the commissioners court of a county to regulate sound levels (including sound levels produced by off-road diesel equipment) to promote the public health, safety, or welfare.

House Bill 877

Author: Rodriguez

Relating to the relationship between the amount of an administrative penalty imposed by the Commission on Environmental Quality and the economic benefit of the violation to the alleged violator.

Last Action: 02-18-03 Introduced and referred to committee on House Environmental Regulation

Summary: This bill would have tied the amount of an administrative penalty to the economic benefit of the violation to the alleged violator.

House Bill 1005

Author: Fraser

Relating to emergency orders and penalties for rock crushers and concrete plants.

Last Action: 05-29-03 Postponed in Senate.

Summary: This bill would have provided the commission with greater discretion in setting the penalty for unpermitted rock crushers and concrete plants. Automatic shutdown and a \$10,000 penalty would no longer be mandatory.

House Bill 1063

Author: Smith, Wayne

Companion: SB 455

Relating to compliance histories for and incentives to reward compliance performance by entities regulated by the Commission on Environmental Quality.

Summary: This bill would have clarified last session's legislation regarding compliance history in several ways favorable to industry (e.g. shortened the time period from five years to three years and required the agency to give entities an opportunity to review and correct their information before it is posted on the internet).

House Bill 1219

Author: Haggerty

Relating to the location and operation of concrete crushing facilities.

Last Action: 03-11-03 Left pending in committee.

Summary: This bill would have allowed for concrete crushing facilities to be located on the site of the demolition of a structure so that the materials being crushed could be used at that location.

House Bill 1792

Author: Chisum

Relating to the authority of the Office of Public Interest Counsel under the Commission on Environmental Quality.

Last Action: 04-09-03 H Reported from committee as substituted House State Affairs

Summary: This bill would have granted the OPIC the right to challenge TCEQ rules in district court.

House Bill 2664

Author: Puente

Relating to the office of public interest counsel.

Last Action: 04-15-03 Reported favorably from committee on House Natural Resources

Summary: This bill would have provided OPIC a budget separate from the TCEQ's budget.

House Bill 2877

Author: Bonnen

Companion: SB 1263

Relating to the permitting procedures of the Commission on Environmental Quality.

Last Action: 05-30-03 Point of order sustained in the House under Rule 11

Summary: This was another comprehensive bill which, among other things, would have revised the "House Bill 801 process" to close some loopholes that favored protestants. For example, the current rules require would-be protestants to file comments and hearing requests in a timely fashion if they want to request that the Commissioners designate them as parties, but the rules allow the ALJ to add additional parties that did not follow any of the procedural requirements.

Special Session Filings:

Senate Bill 19

Author: Ellis

Relating to the reorganization of, efficiency in, and other reform measures applying to state government.

Summary: SB 19 is similar to HB 2, the government reorganization and efficiency bill considered during the regular session. Like that bill, SB 19 includes a broad array of provisions generally designed to enhance the efficiency of state government, enhance the ability of the Governor to manage state agencies, and to save the state money. SB 19 also directs a 7-member study committee to conduct an in-depth evaluation of TCEQ's permitting processes, with input from stakeholders, in order to define appropriate changes to the agency's permitting processes through legislation in the next session.

House Bill 21

Author: Chisum

Relating to efficiency in certain procedures and hearings of the Texas Commission on Environmental Quality.

Summary: HB 21 is largely the same as the "environmental efficiency" components of HB 2, as that bill was considered in the regular session. Like HB2, HB 21 seeks to repeal to the existing code sections regarding compliance history, which would presumably result in the complicated TCEQ rules also being repealed. HB 21 proposes more general compliance history provisions.

Also, like HB 2 during the regular session, HB 21 proposes a "nonadjudicative hearing" process for certain types of air, waste and water permits. For example, it provides that certain air quality permits (certain specified existing facilities, electric generating facilities, pipeline facilities, and permits for voluntary emissions reductions) are to be noticed for a non-adjudicative hearing. Significantly, it also provides that certain air quality permits to be issued pursuant to Health & Safety Code Chapter 382.056, and which represent amendments, modifications, or renewals that would not result in an increase in allowable emissions, are not to be subject to contested case hearings. The bill also includes a whole list of other facilities that are made subject to the exemption from contested case hearings, including rock crushers, concrete batch plants, and hot mix asphalt plants. Notwithstanding this apparent outright exemption from the contested case hearing processes, there is an exception to this "exemption" if the facility seeking the amendment, modification, or renewal does not have a good compliance history. Similarly, with regard to water quality permitting, the bill allows a permit renewal or amendment which does not seek to increase loadings, and that is made by a permittee with a good compliance history, to be issued by the agency without a contested case hearing.

House Bill 73

Author: Bonnen

Relating to the permitting procedures of the Texas Commission on Environmental Quality.

Summary: This bill is very similar to HB 2877, which was considered during the regular session. HB 73 clarifies the content of requests for contested case hearings by requiring that any hearing requests must be related to issues raised in the public comment period by that specific requestor (as opposed to issues raised by anyone), it eliminates a hearing notice requirement to the public in the event the commissioners grant specific hearing requests (i.e. those who had had their requests for hearing granted will get notice, but notice to the general public of such a hearing will no longer be required, and it provides that an ALJ at SOAH cannot expand the list of protestant-parties to include persons other than those whose hearing requests were granted by the commissioners and whose issues were referred to SOAH for hearing.

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BIOGRAPHICAL INFORMATION

On October 7, 2002, Margaret Hoffman assumed the duties and title of Executive Director of the Texas Commission on Environmental Quality (TCEQ).

Prior to being named Executive Director, Ms. Hoffman served as the Deputy Director for the Office of Legal Services. She joined the TCEQ (formerly the TNRCC) as a staff attorney in 1994 and was promoted Director of the Environmental Law Division, then to Deputy Director.

Prior to joining the TNRCC/TCEQ, Ms. Hoffman practiced in the private sector for 18 years, where she specialized in commercial litigation. Ms. Hoffman holds a Bachelor of Arts Degree in History and Political Science from Trinity University, a Juris Doctor from St. Mary=s Law School, and a Masters of Law in Energy and Environmental Law from the University of Houston Law Center.

MARTIN C. ROCHELLE

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BIOGRAPHICAL INFORMATION

Martin Rochelle is a Principal of the law firm of Lloyd, Gosselink, Blevins, Rochelle, Baldwin & Townsend, P.C. in 1984. As head of the firm's Water Practice Group, Mr. Rochelle focuses his practice on water quality, water rights, and water reuse matters. He frequently practices before the TCEQ and EPA, representing a variety of clients, including cities, river authorities, and water districts across the state.

Prior to joining his firm, Mr. Rochelle served as Committee Counsel to the Texas Senate, 1978-79, and Staff Attorney at the Texas Department of Water Resources (a predecessor agency of the TCEQ), 1979-1984. He is a frequent speaker and he has authored numerous water-related articles, including "Water for the 21st Century -- Extending a Finite Supply" for the State Bar of Texas' Professional Development Program, "Developed and Reuse Waters: Growing the Bucket," for CLE International's Water Law Conference, "Return Flows – Permitting and Planning Implications," for the Water for Texas Conference, and "Watershed Management in Texas: A Survey of Local Government Authority to Regulate," for the State Bar of Texas' Environmental Law Journal. Mr. Rochelle also co-authors and maintains the chapter on Agency Structure in the *Environmental Law Handbook* for West's *Texas Practice* Series. Mr. Rochelle is a member of the State Bar of Texas (Sections on Environmental and Natural Resources Law, and Administrative and Public Law). He is a 1977 graduate of the University of Houston Law Center.

**TCEQ
ENFORCEMENT**

Paper not submitted

**BIOGRAPHY OF
LEONARD H.O. SPEARMAN, JR.**

Leonard H.O. Spearman, Jr., is the Deputy Director of the Office of Compliance and Enforcement of the Texas Commission on Environmental Quality (TCEQ) formerly the Texas Natural Resource Conservation Commission (TNRCC). This office oversees the agency's environmental objectives and initiatives for the Compliance Support, Field Operations, Monitoring Operations and Enforcement divisions. Prior to this assignment, he was the Regional Director for the Houston Regional Office of the TCEQ since 1997. The TCEQ is the premier state environmental agency with Houston's Region 12 overseeing the largest inventory of business, utilities, and industries in the state. Before coming to TCEQ, he was with Harris County Judge Robert Eckels serving as legislative coordinator.

Spearman was with the City of Houston as Manager of the Economic Development Division. Prior to that, he was with the U.S. Department of Housing and Urban Development in Washington, D.C. serving as Counselor and Special Assistant to the Assistant Secretary for Housing-Federal Housing Commissioner and served as Deputy Associate Director, Presidential Personnel for The White House.

Spearman is a graduate of the University of Florida and Texas Southern University's Thurgood Marshall School of Law.

**BROWNFIELDS &
REVITALIZATION ISSUES**

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**INITIATIVE, OPTIONS,
and LEGAL IMPLICATIONS**

**American Bar Association
Section of Environment, Energy, and Resources**

**The Small Business Liability Relief and Brownfields Revitalization Act: The Challenge of
Implementing Changes to Superfund Liability**

**Paul Connor
Director, Policy and Program Evaluation Division
Office of Site Remediation Enforcement
United States Environmental Protection Agency**

&

**K.C Schefski
Attorney-Advisor, Policy and Program Evaluation Division
Office of Site Remediation Enforcement
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**10th Section Fall Meeting
Portland, Oregon
October 9-13, 2002**

After years of legislative deliberations on Superfund reform, the 107th Congress passed the most significant amendments to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) ,¹ since the Superfund Amendments and Reauthorization Act of 1986.² The Small Business Liability Relief and Brownfields Revitalization Act (the Act or new law)³ addresses many of the reforms sought, and largely achieved administratively, since the 103rd Congress.⁴ However, the bill is not the comprehensive Superfund reform sought by many in the Superfund community. Rather, Congress enacted amendments targeted at some of the most inequitable consequences of Superfund's broad liability scheme and changes that will encourage the responsible cleanup and re-use of contaminated properties. The result was a bill that received bipartisan support in Congress and endorsement by the Bush Administration, states, and both sides of the fence in the Superfund community.

¹ 42 U.S.C. §§ 9601-9675 (2000).

² Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified in scattered sections of 42 U.S.C. §§ 9601-9675)

³ Pub. L. No. 107-118, 115 Stat. 2356 (2002) (to be codified in scattered sections of 42 U.S.C §§ 9601-9675).

⁴ For a more detailed summary of previous Superfund reform legislation see Charles Openchowski, *Superfund in the 106th Congress*, 30 ENVTL. L. REP. 10648 (2000).

The Act consists of two titles. Title I addresses liability exemptions for parties who generate and transport small quantities of hazardous substances and certain generators of municipal solid waste. Title I also provides for expedited settlements with certain parties that can demonstrate a limited or inability to pay their share of response costs. The Title II amendments focus on facilitating the responsible cleanup and re-use of contaminated properties. The amendments provide specific statutory authority for the U.S. Environmental Protection Agency's (EPA or Agency) brownfields program and authorize appropriations to fund brownfields grants and grants for state and tribal response programs. Title II also provides conditional exemptions from CERCLA liability for contiguous property owners and bona fide prospective purchasers and clarifies the pre-existing innocent landowner defense. Finally, the amendments place certain limits on EPA's use of its enforcement and cost recovery authorities at low-risk sites where a person is conducting a response action in compliance with a state program.

This article primarily focuses on the changes made to Superfund liability. Part I describes in more detail specific liability provisions in the Act and notes particular EPA efforts to implement the law. Part II offers a summary of the brownfields and state and tribal funding provisions. Part III provides a description of EPA's strategy for implementation. Part IV offers a brief conclusion.

III. THE LIABILITY PROVISIONS OF THE NEW LAW

IV. TITLE I: DE MICROMIS AND MUNICIPAL SOLID WASTE LIABILITY RELIEF AND ABILITY TO PAY SETTLEMENTS

Title I, § 102 adopted with some modification three existing EPA policies. For a decade, EPA has maintained a policy of not pursuing, and providing contribution protection for, parties who generated or transported a minuscule (de micromis) amount of waste to a site.⁵ Similarly, prior to passage of the Act, EPA had a policy to handle the liability of generators of municipal solid waste (MSW).⁶ In 1997, EPA issued guidance on making ability to pay determinations in Superfund cases.⁷ Thus, the Act will likely not significantly change EPA's policies to the extent they are consistent with the new law. However, the de micromis and MSW provisions in particular contain notable deviations from these existing EPA policies. For example, while EPA policies

⁵ UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF SITE REMEDIATION ENFORCEMENT, *Methodology for Early De Minimis Waste Contributor Settlements under CERCLA Section 122(g)(1)(A)* (1992). Contribution protection eliminates the threat of private party suits pursuant to CERCLA § 113(f) for contribution of response costs from other liable parties. 42 U.S.C. § 9613(f).

⁶ UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF SITE REMEDIATION ENFORCEMENT, *Policy for Municipality and Municipal Solid Waste CERCLA Settlements at NPL Co-Disposal Sites* (1998). This policy supplements UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF SITE REMEDIATION ENFORCEMENT, *Interim Policy on CERCLA Settlements Involving Municipalities and Municipal Solid Waste* (1989).

⁷ Environmental Protection Agency, Office of Site Remediation Enforcement, *General Policy on Ability to Pay Determinations* (1997).

addressing these parties generally applied at all sites, the new statutory exemptions are limited solely to sites on the National Priorities List (NPL). This section provides a summary of these changes to CERCLA and notable comparisons to EPA policy.

V. De Micromis

Section 102(a) added new § 107(o) to CERCLA and exempts generators and transporters of de micromis quantities of hazardous substances from response cost liability.⁸ The new law requires a person seeking the exemption to demonstrate that “the total amount of the material containing hazardous substances they contributed was less than 110 gallons of liquid materials and 200 pounds of solid materials” and that “all or part of disposal, treatment, or transport occurred before April 1, 2001.” This exemption is subject to the following exceptions: 1) if the materials contribute significantly, either on their own or in the aggregate, to the cost of the response action or natural resource restoration; 2) if the person fails to comply with an information request; 3) if the person impedes a response action or natural resource restoration; or 4) if the person has been convicted of a criminal violation for conduct to which the exemption would apply.⁹

The Act provides significant protection for generators and transporters of de micromis amounts of hazardous substances at NPL sites where disposal, treatment or transport occurred after April 1, 2001.¹⁰ While EPA is not directed to provide contribution protection to these parties, the Act includes substantial disincentives for litigation by private party plaintiffs. First, the exemption shifts the burden of proof to private party plaintiffs to show that the exemption does not apply. Second, the new law makes private party plaintiffs liable for the defendant’s costs and fees if a court finds the defendant to be exempt under this provision. These provisions should force potentially responsible parties seeking contribution for response costs to exercise greater diligence in respect to who they drag into court.

VI. Municipal Solid Waste

Section 102(a) also added § 107(p) to CERCLA which exempts certain generators of municipal solid waste (MSW) from Superfund response cost liability at NPL sites.¹¹ The persons covered by this exemption are owners, operators, and lessees of residential property; small businesses;¹²

⁸ § 102(a), 115 Stat. 2356 (to be codified at 42 U.S.C. § 9607(o))(subsequent citations are to 42 U.S.C.).

⁹ A determination that one or more of these exceptions applies is not subject to judicial review. 42 U.S.C. § 107(o)(3). The same is true of similar exceptions to the MSW exemption discussed *infra*. See *id.* § 107(p)(3).

¹⁰ EPA is currently discussing how to address non-exempt small quantity generators and transporters.

¹¹ 42 U.S.C. § 9607(p).

¹² The Act defines a small business for purposes of this section as the following:

a business entity (including a parent, subsidiary or affiliate of the entity) that, during its 3 taxable years preceding the date of transmittal of written

and certain non-profit organizations.¹³ This exemption is subject to all but one of the same exceptions as found in the de micromis exemption.¹⁴ The new law defines MSW in the following two ways: 1) as waste generated by a household; and 2) as waste generated by a commercial, industrial, or institutional entity which is essentially the same as waste generated by a household, is collected as part of normal MSW collection, and contains no greater amounts of hazardous substances than that contained in the waste of a typical single family household.¹⁵

Similar to the de micromis exemption, the MSW exemption has burden of proof and fee shifting provisions to discourage litigation against exempt parties. However, the burden of proof provision in the MSW exemption is a bit more complicated because it differs based on time of disposal and applies in some cases to both private and governmental plaintiffs.¹⁶ Furthermore, the statute sets forth a complete bar to private party actions against owners, operators, or lessees of residential property which generated MSW. As with the de micromis exemption, the cost and fee shifting provision only applies to nongovernmental entities.

VII. Ability to Pay

notification from the President of its potential liability under this section, employed on average not more than 100 full time individuals, or the equivalent thereof, and that is a small business concern (within the meaning of the Small Business Act (15 U.S.C. § 631 et seq.)) (sic) from which was generated all of the municipal solid waste attributable to the entity with to the facility. . . . 42 U.S.C. § 107(p)(1)(B).

¹³ The Act also sets size limits for non-profits as those employing not more than 100 paid employees at the location which generated the MSW. *Id.* § 107(p)(1)(C).

¹⁴ The MSW exemption does not provide an exception for persons convicted of a criminal violation for conduct to which the exemption would apply.

¹⁵ The new law also provides examples of MSW, which include “food and yard waste, paper, clothing, appliances consumer product packaging, disposable diapers, office supplies, cosmetics, glass and metal food containers, elementary or secondary school science laboratory waste, and household hazardous waste.” *Id.* § 107(p)(4)(B).

¹⁶ In respect to disposal that occurs on or after April 1, 2001 a private party, but not a governmental, plaintiff bears the burden of proof. For disposal before April 1, 2001, the burden of proof rests on all plaintiffs in respect to whether the person qualifies under § 107(p)(1) and whether the waste qualifies as MSW under § 107(p)(4) – these subparagraphs are mentioned specifically so as to avoid confusion over the preclusion from judicial review of governmental determinations that an exception applies.

Section 102(b) of the new law amended § 122(g) and grants EPA the authority to enter into expedited settlements with persons who demonstrate an inability or limited ability to pay response costs.¹⁷ The Act directs EPA to consider whether the person can pay response costs and still maintain basic business operations, which includes consideration of financial condition and ability to raise revenues. Section 122(g) prior to the new act provided for settlements with de minimis parties and some changes apply to these settlements as well. For example, the new law requires EPA to provide a written determination of ineligibility to a potentially responsible party that requests a settlement under any provision in § 122(g). Any determination regarding eligibility is not subject to judicial review.

VIII. TITLE II: CONTIGUOUS PROPERTY OWNERS, BONA FIDE PROSPECTIVE PURCHASERS, AND INNOCENT LANDOWNERS

The new law creates two new conditional exemptions from CERCLA “owner/operator” liability for contiguous property owners and bona fide prospective purchasers (BFPP). Again, these exemptions embody aspects of pre-existing EPA policies.¹⁸ The new law also modified the existing innocent landowner defense by clarifying the meaning of “all appropriate inquiries.” All three provisions embody some common elements for persons to maintain non-liaible status while also including unique provisions and requirements. This section will address the contiguous property owner and BFPP provisions individually and then explain the common elements that apply to all three.

IX. Contiguous Property Owners

Section 221 of the Act adds new § 107(q) which exempts from owner or operator liability persons that own land contaminated solely by a release from contiguous, or similarly situated property owned by someone else. In the case of a contiguous property owner, the owner must not have known or had reason to know of the contamination at the time of purchase and must not have caused or contributed to the contamination. The section also modifies what constitutes appropriate care/reasonable steps for contiguous property owners by clarifying that the requirement does not obligate a contiguous property owner to conduct groundwater investigations or remediate groundwater contamination except in accordance with EPA’s pre-existing policy.¹⁹

The new law generally provides greater protections for contiguous property owners than EPA’s existing policy on owners of contaminated aquifers. The new law does not limit the exemption to properties contaminated by groundwater but may also apply to soil contamination resulting from neighboring properties. The Act also grants EPA the authority to provide assurances that the

¹⁷ *Id.* § 122(g)(7)-(12).

¹⁸ *See* UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF SITE REMEDIATION ENFORCEMENT, *Policy Towards Owners of Property Containing Contaminated Aquifers* (1995)(contiguous property owners)(hereinafter Contaminated Aquifer Policy); ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF SITE REMEDIATION ENFORCEMENT, *Guidance on Settlements with Prospective Purchasers of Contaminated Property* (1995).

¹⁹ The new law cites to EPA’s Contaminated Aquifer Policy. *See supra* note 18.

Agency will not take action against a person and protection from third party suits. As in EPA's Contaminated Aquifer Policy, a person who purchases with knowledge of the contamination cannot claim the exemption; however, the new law notes that a party who does not qualify for the exemption for this reason may still qualify as a BFPP.

X. Bona Fide Prospective Purchasers

The most notable aspect of the BFPP provision is that for the first time Congress has limited the CERCLA liability of a party who purchases real property with knowledge of the contamination. The caveats to this exemption, in addition to the common elements,²⁰ include a requirement that all disposal takes place prior to the date of purchase, that the person does not impede a response action, and that the property may be subject to a "windfall lien". The windfall lien provision provides for a lien on the property of a BFPP if EPA has unrecovered response costs and the response action increased the fair market value of the property. The lien arises as of the date the response cost was incurred and the amount cannot exceed the increase in fair market value attributed to the response action.

EPA's policy on prospective purchaser agreements (PPAs) proved one of the most successful and high profile administrative liability reforms prior to enactment of the new law.²¹ Immediately after passage, EPA was asked repeatedly whether the Agency would continue to issue PPAs. Many people suggested that EPA needs to continue the practice, despite the fact that the legislation provides an exemption and confronts an ongoing complaint, from some of these same people, that EPA should not be involved in private real estate transactions.

To address this issue, on May 31, 2002, EPA's Office of Site Remediation Enforcement issued new guidance entitled *Bona Fide Prospective Purchasers and the New Amendments to CERCLA*.²² This guidance states that "EPA believes that, in most cases, the Brownfields Amendments make PPAs from the federal government unnecessary."²³ Therefore, in the majority of cases EPA intends for the law to be self-implementing. However, the guidance does recognize the following two exceptions where EPA may enter into an agreement with the purchaser: 1) there is likely to be a significant windfall lien needing resolution; and 2) the transaction will provide significant public benefits and a PPA is needed to ensure the transaction will take place.²⁴

²⁰ Discussed *infra* part I.B.3.

²¹ Prior to passage EPA had issued over 160 PPAs. For a comprehensive treatment of EPA's use of PPAs see generally Margie C. Lifsey, *Prospective Purchaser Agreements: EPA's New Outlook on Landowner Liability*, 30 ENVTL L. 177 (2000).

²² UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF SITE REMEDIATION ENFORCEMENT, *Bona Fide Prospective Purchasers and the New Amendments to CERCLA* (2002).

²³ *Id.* at 1.

²⁴ The guidance provides the following three examples for the second exception: 1) the cleanup will result in environmental benefits, reimbursement of EPA response costs, or new use and there is a significant need for a PPA to accomplish these goals; 2) the prospective purchaser

XI. Common Elements and Innocent Landowners

The contiguous property owner exemption, the definition of what constitutes a BFPP, and the innocent landowner defense found in CERCLA § 107(b)(3) and the definition of “contractual relationship” in § 101(35), all contain the following common obligations which persons seeking these exemptions must meet:

- conduct “all appropriate inquiry” prior to purchase of the property;
- not be potentially liable or affiliated with any person potentially liable;
- exercise appropriate care by taking reasonable steps to “stop any continuing release; prevent any threatened future release; and prevent or limit any human, environmental, or natural resource exposure to any previously released hazardous substance;”
- provide full cooperation, assistance, and access to persons undertaking a response action or natural resource restoration;
- comply with all governmental information requests;
- comply with land use restrictions and not impede the performance of institutional controls; and
- provide all legally required notices regarding releases of hazardous substances

At time of publication, EPA is considering whether to produce general guidance on these “common elements.” EPA has heard from stakeholders that they need clarification of these requirements to ensure they take appropriate actions to avoid liability. EPA would like to ensure national consistency and provide direction where needed. However, requirements such as what constitutes appropriate care/reasonable steps will greatly depend on site specific circumstances.

Changes to CERCLA § 101(35)(B) now define “all appropriate inquiries” for purposes of all three provisions.²⁵ First, the Act directs EPA to promulgate regulations based on statutory criteria within two years of date of enactment, establishing standards for all appropriate inquiry. For purchases prior to issuance of these regulations, the Act utilizes two standards based on date of purchase. For purchases prior to May 31, 1997, the Act sets forth a narrative standard, directing courts to consider such factors as, inter alia, specialized knowledge of the defendant, the obviousness of the contamination, and relationship of purchase price to property value. For purchases after May 31, 1997, the Act states that procedures set forth in the American Society for Testing and Materials, Standard Practice for Environmental Site Assessment: Phase 1 Environmental Site Assessment Process, Standard E1527-97 shall satisfy the requirement. The section also provides that for purchasers of property for residential use or similar use by a nongovernmental or noncommercial entity a facility inspection and title search shall fulfill the requirements.

The provisions defining all appropriate inquiry raise two implementation issues for EPA. First, EPA must promulgate a regulation setting forth the standards which will satisfy this requirement.

faces a real threat of being sued by a third party; or 3) situations where a PPA will serve a significant public interest. *Id. at 4,5.*

²⁵ 42 U.S.C. § 9601(35).

To this end, EPA has initiated the process for conducting a negotiated rulemaking under the Negotiated Rulemaking Act.²⁶ If EPA decides to follow this approach, it will allow EPA to work with a broad range of stakeholders to develop practices designed appropriately for their intended use. Also, the Phase 1 Environmental Site Assessment standard referenced in the new law was actually superseded with a new standard in 2000. The 1997 version is no longer available through ASTM. Thus, the Act directs purchasers and EPA to use an obsolete standard – an anomalous situation at best.

XII. TITLE II: LIMITATIONS ON EPA CERCLA ENFORCEMENT AND COST RECOVERY AUTHORITY

Section 231 of the Act amends CERCLA by adding a new § 128.²⁷ Section 128(b) sets forth limitations on EPA’s enforcement authority under § 106(a) and cost recovery authority under § 107(a). These limitations apply to actions against persons who have conducted or are conducting response actions at “eligible response sites” in compliance with a “State program that specifically governs response actions for the protection of public health and the environment.”²⁸ The limitations only apply to response actions commenced after February 15, 2001 and in states that maintain a public record of sites being addressed under a state program in the upcoming year and those addressed in the preceding year. Additionally, these limitations are subject to specified exceptions.

The definition of an “eligible response site” is found in new CERCLA § 101(41). The definition includes “brownfield sites” as defined in § 101(39)(A) and (B). The definition of a brownfield site is very broad in that it essentially captures any real property with real or perceived contamination but excludes facilities (paraphrasing in part):

subject to a planned or ongoing CERCLA removal;
listed or proposed for listing on the national priorities list;
subject to a unilateral administrative order, court order, administrative order on consent, or consent decree under CERCLA;
subject of a unilateral administrative order, court order, administrative order on consent, consent decree, or permit under the Resource Conservation & Recovery Act (RCRA, 42 U.S.C. § 6901 et seq.), the Clean Water Act (CWA, 33 U.S.C. § 1251 et seq.), the Toxic Substances Control Act (TSCA, 15 U.S.C. § 2601 et seq.), or the Safe Drinking Water Act (SDWA, 42 U.S.C. § 300f et seq.);
subject to corrective action under RCRA §§ 3004(u) or 3008(h), to which a corrective action permit or order has been issued or modified requiring the implementation of corrective measures;

²⁶ 5 U.S.C. §§ 561-570 (2000). EPA is in the initial stages of this process. EPA has selected a convener who will identify stakeholders and solicit their input on undertaking a negotiated rulemaking. The convener will then make a recommendation to EPA on whether or not to follow this rulemaking approach and EPA will make the final determination.

²⁷ 42 U.S.C. § 9628(b).

²⁸ *Id.* § 9628(b)(1).

a land disposal unit with closure notification submitted and a closure plan or permit;
on land subject to the custody, jurisdiction, or control of a department, agency, or instrumentality of the United States, except for land held in trust by the United States for an Indian Tribe;
a portion of a facility contaminated by PCBs subject to remediation under TSCA;
or
a portion of a facility receiving assistance from the Leaking Underground Storage Tank Trust Fund (LUST Fund sites).

For purposes of the definition of an eligible response site, LUST Fund sites are included. EPA may include sites excluded under the fourth, fifth, sixth, and eighth bullets on a site-by-site basis.²⁹ The definition of eligible response site contains an additional exclusion for sites at which EPA has conducted a PA or SI and after consulting with the State has determined that the site achieves a preliminary score sufficient for, or otherwise qualifies for, listing on the NPL.³⁰

The limitations on EPA's authority in § 128(b)(1) are subject to a number of statutory exceptions.³¹ EPA is not prohibited from taking action if the state requests EPA assistance; contamination has migrated across state lines or onto federal property; after considering response actions already taken, a release or threatened release poses an imminent and substantial endangerment requiring additional response actions; or new information indicates that conditions or contamination at the site may present a threat. If EPA intends to take an action that may be prohibited under § 128(b)(1), it must notify the state and wait forty-eight hours for a reply, unless one of these exceptions applies, in which case EPA must still notify the state but may act immediately. Additionally, the new law does not prohibit EPA from seeking to recover costs incurred prior to date of enactment or during a period during which the limitations did not apply.

EPA has decided not to issue guidance on these new limits on EPA authority. Congress provided a fairly detailed statutory structure. Also, this provision appears to embody EPA's current practice of generally not getting involved at sites being cleaned up under a state program. Some EPA regional personnel have communicated with their respective states regarding how they anticipate handling the notification requirements and state requests for assistance, if necessary.³² Additionally, a group is assessing the exclusion from the definition of eligible response site for sites which EPA has determined qualify for listing to see how this exclusion works with the

²⁹ EPA may extend the limits on its authorities to these sites if doing so "would be appropriate and protect human health and the environment and promote economic development or facilitate the creation of, preservation of, or addition to a park, a greenway, undeveloped property, recreational property, or other property used for nonprofit purposes." *Id.* § 9601(41)(B)(ii).

³⁰ *Id.* § 9601(41)(C).

³¹ *See id.* § 9628(b)(2).

³² For example, EPA, Region 9 in San Francisco has developed model letters to facilitate this communication between EPA and the States.

current site assessment and scoring process.³³

XIII. BROWNFIELDS GRANTS AND STATE AND TRIBAL FUNDING

In addition to the contiguous property owner, bona fide prospective purchaser, and innocent landowner provisions, Title II for the first time provides explicit statutory authority for EPA's brownfields program. Title II also authorizes EPA to provide grants to states and tribes to develop response programs. While this article focuses on the liability provisions these aspects of the new law are certainly worth mentioning.

Generally, brownfields are considered properties which have real or perceived contamination that discourages redevelopment or reuse due to the potential liability of those persons associated with the site.³⁴ Since 1995, EPA has maintained a successful brownfields program aimed at promoting the cleanup and redevelopment of brownfield properties. The brownfields program has provided numerous grants and assistance to states and communities for brownfields assessments, revolving loan funds for brownfields cleanup, and job training and development. The program has also worked to identify "Showcase Communities" that serve as national models for successful brownfields assessments, cleanups, and redevelopment.

The new law recognizes EPA's efforts and expands the existing program.³⁵ The Act authorizes annual appropriations of \$200 million for the brownfields grant program for fiscal years 2002 through 2006. EPA will use appropriations to provide brownfield characterization and assessment grants, to capitalize revolving loan funds, and for the first time to provide direct grants for brownfields cleanup. The Act also provides an expanded list of persons eligible for these funds that include states, local governments, state chartered redevelopment agencies, tribes, land clearance authorities, and for certain funds nonprofits and other private entities. The Act provides ranking criteria for grant distribution and directs EPA to provide guidance for grant applicants.

Title II also authorizes \$50 million annually from 2002 through 2006 to provide assistance for state and tribal response programs, to capitalize a revolving loan fund for brownfield remediation, or purchase insurance or create a risk sharing pool, an indemnity pool, or insurance mechanism to help fund response actions.³⁶ To receive grants state and tribal programs must meet or be working towards several criteria or the state or tribe must have a memorandum of agreement for

³³ 42 U.S.C. § 9601(41)(C).

³⁴ The new law sets forth the core definition of a brownfield site as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." *Id.* § 9601(39)(A). This definition is subject to specific exclusions, which generally limit brownfields to lesser contaminated sites as discussed *supra* Part II.C.

³⁵ *See* 42 U.S.C. § 9604(k).

³⁶ *See id.* § 9628(a).

voluntary response programs with EPA. States receiving funds must also maintain and update annually a public record of sites going through a state's response program.

XIV. EPA's IMPLEMENTATION EFFORT

The new law's substantial amendments to CERCLA liability and changes to the Agency's brownfields program, have led EPA to initiate a considerable effort to implement the new legislation. EPA has taken a three pronged approach to this effort – developing work products to assist EPA and the public, outreach and communication, and securing an adequate budget. This section will briefly describe EPA's efforts in these three areas.

Both EPA employees and the public need direction, clarification, and guidance on the variety of changes to CERCLA and existing EPA policies. Within EPA, the legislation impacts various programs and offices requiring each to communicate and play an active role in giving effect to the new law. To implement Title II,³⁷ the Agency organized a structure to insure cross program and EPA regional participation.³⁸ A steering committee consisting of senior EPA management leads the effort by setting implementation priorities and resolving significant policy issues. The work of directing implementation efforts falls to an inter-office task force made up of various office and division directors. Actual work products are developed by workgroups, which include representatives from different EPA offices, regions, and in some cases the Department of Justice.

EPA has also reached out to a variety of affected stakeholders to seek input and concerns. First, EPA organized a series of listening sessions attended by stakeholders and representatives from different EPA offices. The list of invitees included state, tribal, and local governments; environmental justice, community, environmental, and land use organizations; private sector companies; and professional associations, such as the American Bar Association.³⁹ These sessions helped focus EPA on specific questions and issues that the public believes need to be addressed during implementation and gave EPA the opportunity to convey its initial thoughts on the new law. EPA intends to hold another round of listening sessions in September, 2002. Second, EPA has targeted certain state and tribal organizations for ongoing involvement in implementation work.⁴⁰ Many of the workgroups that are addressing provisions which will have

³⁷ Title I of the Act specifically targets Superfund liability and therefore the Office of Site Remediation Enforcement (OSRE) has taken the lead on implementation efforts outside the structure for Title II. However, OSRE still seeks involvement from other EPA offices and the stakeholder community.

³⁸ The offices involved include OSRE, the Office of Brownfields Cleanup and Redevelopment, the Office of Emergency and Remedial Response, the Office of Solid Waste, the Office of Underground Storage Tanks, and Office of General Counsel.

³⁹ For a more detailed list and meeting notes see <http://www.epa.gov/brownfields/sblrbra.htm>

⁴⁰ In particular, the enforcement office has communicated with the National Association

significant impact on the states and tribes, such as the state and tribal funding provisions, hold conference calls with state and tribal representatives acting in their official capacities to give progress updates and seek input. Through these interactions EPA hopes to achieve implementation that is widely understood and accepted by its stakeholders.

Finally, the new brownfields and state and tribal funding programs would prove meaningless without adequate funding. The President's fiscal year 2003 budget requests \$200 million for these purposes. If fully appropriated, this would more than double the funding received for fiscal year 2002.

XV. CONCLUSION

EPA, including the enforcement office, has long recognized the benefits of putting remediated property back into productive use and the need to ensure equitable application of CERCLA's broad liability provisions. For nearly a decade, OSRE has embodied these goals in policy and guidance recognized by Congress in enactment of this new legislation. EPA will strive to give effect to the goals and purposes of the new law and do so with significant input from those most affected by these changes.

of Attorneys General, the Association of State and Territorial Solid Waste Managers Officials, and the American Bar Association.

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FINANCING BROWNFIELD REDEVELOPMENT

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Table of Contents

Introduction	- 1 -
Background - The Brownfield Market.....	- 2 -
Brownfield Redevelopment Economics	- 3 -
Capital Sources and Cost.....	- 4 -
Background.....	- 4 -
Equity.....	- 4 -
Debt.....	- 5 -
Government Funding & Incentives.....	- 6 -
Risk Transfer and Indemnification.....	- 6 -
Impact of Proposed/Recent Legislation.....	- 7 -
Brownfield Investment Key Criteria.....	- 8 -
Mini Case Study - The ICI/O'Brien Industrial Park	- 9 -
Background.....	- 9 -
Site Description and Environmental Conditions	- 9 -
Market Analysis	- 10 -
Investment Risks	- 10 -
Epilogue.....	- 11 -

Figures and Exhibits are at the end of the article

Figure 1: Real Estate Investment Risk/Return Diagram

Figure 2: Risk Management and Indemnification Framework

Figure 3: ICI/O'Brien - South San Francisco Site Construction

Figure 4: ICI/O'Brien - South San Francisco Development Conceptual Sketch

Exhibit I: Presentation slides

Financing Brownfield Redevelopment

Introduction

Historically, owners of contaminated real estate often focused resources on avoiding liability rather than site cleanup. The consequence was stagnating properties, eyesores in otherwise growing urban neighborhoods. In response, regulators, environmental activists and business managers have worked to create regulatory and financial mechanisms to revitalize brownfield sites. These stakeholders have effectuated important changes in court rulings, environmental laws and regulations, urbanization, insurance and availability of financing vehicles to address the cleanup and reuse of these brownfield properties. Both municipalities and companies have a strong interest in the cleanup of brownfields and their restoration to productive use.

Municipal officials and urban residents increasingly fight suburban sprawl by encouraging development of urban sites. Communities are supporting redevelopment of in-fill sites they previously avoided due to uncertain or complicated demolition and/or environmental issues. Although challenges remain, federal, state and local governments and private groups are collaborating to explore creative ways to remediate environmentally impaired sites. A survey of 244 cities presented at the 2003 U.S. Conference of Mayors found that 19,000 acres of urban land are under redevelopment, which could boost local tax revenue by \$790 million to \$1.9 billion a year and create as many as 570,000 jobs nationwide.

Companies whose core business is not real estate asset management and remediation or brownfield redevelopment can maximize shareholder value and redeploy resources elsewhere by selling underutilized and environmentally impaired properties to brownfield developers with good track records. By carving out underutilized and environmentally impaired properties, companies improve their liquidity and reduce their liabilities, thereby strengthening both the left- and right-hand sides of their balance sheet. This could be a significant advantage for public companies, which in the wake of Sarbanes-Oxley and accounting disclosure reforms may well face new disclosure requirements relative to potential environmental liabilities. When companies want to maintain the use of such property pending cleanup, sophisticated buyers can structure sale-leaseback agreements.

Moreover, during the merger and acquisition process, environmentally impaired assets often are impediments. An experienced brownfield developer can function as an adjunct to the acquisition process by acquiring non-core and environmentally impaired assets either before or simultaneous with the closing of larger mergers, facilitating otherwise difficult transactions.

This paper focuses on the economic and financial aspects of brownfield redevelopment. It describes salient elements of brownfield redevelopment economics, discusses different financing sources and associated costs, highlights the impact of the recent and proposed legislation on private capital investment, and summarizes the key criteria pertinent to brownfield investment. The last section is a mini-case study based on a transaction executed by Cherokee Investment Partners, LLC (“Cherokee”) to illustrate the role of private equity financing in brownfield redevelopment.

Background – The Brownfield Market

Even more so than the broader real estate market, the brownfield market is disaggregated and local in nature. Lack of reliable information makes it difficult to estimate accurately participants and market size. According to the Environmental Protection Agency (EPA) and the Office of Housing and Urban Development (“HUD”), approximately 500,000 industrial and commercial brownfields exist in the United States. The EPA’s definition of brownfields includes only properties that have both environmental contamination and certain socioeconomic characteristics. Based on George Washington University research using EPA and HUD databases, it is likely that the value of this impaired real estate likely exceeds \$600 billion in its current condition.

Corporations own most brownfield sites. Many companies are consolidating operations and closing facilities, while mergers and acquisitions produce additional surplus sites. Government agencies, individuals and financial institutions that unknowingly foreclosed on brownfield sites also own these properties.

Despite the significant increase in the number of brownfield redevelopments since the early 1990s, the brownfield market continues to experience excess supply (National Brownfield Association – Market Report, 2002). The imbalance between supply and demand results from several factors, including brownfield redevelopment economics, environmental liability potential, capital source limitations available for redevelopment (especially for large redevelopment), capital cost, transaction complexity and market inefficiencies in matching buyers and sellers.

Brownfield Redevelopment Economics

Brownfield redevelopment is a unique real estate development type. The economic drivers are generally the same as in typical real estate/greenfield development, but environmental contamination introduces several hurdles to successful economic redevelopment.

On the revenue side, the future sale price (i.e., exit price) of the land is a function of the highest and best use of the “clean” real estate parcel. Highest and best use values the real estate in accordance with the use that, at the time of appraisal, is likely to produce the highest economic return. On the cost side, the expenses associated with brownfields redevelopment include the purchase price, remediation costs, capital expenditure (e.g., infrastructure, building improvements), soft costs (e.g., legal, rezoning, engineering and consulting) and closing costs.

Remediation cost (i.e., cleanup cost) is not the only hurdle associated with contaminated real estate; as important for the developer is the potentially larger environmental liability and the difficulty of finding debt project financing. Brownfield developers have difficulty using financial leverage (e.g. debt) because brownfield appraised value is generally low, and banks require lower loan-to-value ratios to protect themselves from the risk of having to own and manage stigmatized properties. As a result, the equity requirement for brownfield redevelopment is high. High equity requirements combined with increased expenses due to remediation costs often lead to low return on investment. In 1998, the Urban Land Institute (ULI) reported that average rate of return for brownfields was under three percent, well below the rate of return for greenfields projects, which varies between 10 to 30 percent (ULI, 1998). Both higher site development costs and higher financing costs contribute to the lower brownfields return rate. Low rates of return on investment combined with high project risk constitute a significant impediment to private sector brownfield development financing.

Another hurdle specific to brownfield transactions is that other dilapidated sites frequently surround individual brownfield sites. Successful redevelopment of an individual brownfield site is often contingent upon developing a master plan for an entire area, which requires the development team to buy adjacent sites from multiple owners. The complexity of dealing with multiple sellers adds to the risk inherent in brownfield development projects.

However, brownfield sites still have potential if broad community support exists to restore them, and creative development teams can structure the transactions to maximize the customarily low return. Brownfield investors and developers must think creatively about ways to complete a transaction that appears upside-down (i.e., higher cost than potential sale/exit value), using tools such as private equity funding, environmental insurance, public-private partnerships, Tax Increment Financing ("TIF") and other public financing components. Public financing helps lower the capital cost and thereby increase returns. To overcome some of these challenges, experienced private equity funds and other developers specialized in brownfield development use flexible transaction structures, including sale-leaseback where the sellers sell the property and lease it back once it has been cleaned up and redeveloped, joint ventures with the property owner and partnership or joint venture with developers. These transactions are multifaceted and can be quite complex. Patience, attention to detail and political acumen are critical.

Capital Sources and Cost

Background

The last stock market decline contributed to an increase in capital flow to the real estate market asset class in 2002 and 1st quarter of 2003. Both individual and institutional investors (e.g., pension funds and university endowment funds) have increased their portfolio real estate allocation target. Foreign institutions, particularly in Germany, have been increasing their investment in the U.S. real estate market (PricewaterhouseCoopers, 2003). As of September 2002, the total global real estate capital market was about \$4.63 trillion. Non-institutional and institutional investors represented about \$2.39 trillion and \$2.24 trillion, respectively. Out of the \$2.24 trillion from institutional investors, \$402.8 billion (18%) was equity and \$1,841.4 billion (82%) was debt.

Equity

A very small portion of the \$402.8 billion of real estate equity capital represents brownfield investment, due in part to the risk and illiquidity inherent in that investment class. Figure 1 depicts the risk-return relationship for different types of real estate investment (e.g., core real estate, real estate securities, mezzanine investment, opportunistic investment, and brownfield redevelopment). In this chart, brownfield redevelopment clearly falls in the upper range of the risk-return spectrum. However, there are successful and experienced brownfield equity investors with long track records that have developed the necessary risk management skills to navigate this otherwise risky business environment. Buyer

track records and reputation are especially important when sellers seek transfer of environmental risk and liability.

For small transactions, the number of brownfield equity investors is still limited, though it has been growing in recent years as regulatory changes have encouraged more redevelopment. For large transactions, the universe of brownfield equity players is even smaller. The main incentives for a seller to transact with equity players with large pools of institutional capital are easy to understand: the wherewithal and credibility, the ability to close without financing contingencies and the experience and track record of the equity investors experienced with large and complex transactions. On the other hand, institutional investors have fairly rigid return expectations and limited investment horizons, which is often hard to satisfy in many transactions.

The cost of investment equity for brownfields is higher than for greenfields due to the additional risk assumed for brownfield redevelopment. Typically, brownfield equity investors underwrite transactions to yield annual internal rates of return (IRRs) of 20 to 30%, while greenfield equity investors assuming development risk often underwrite transactions to yield annual IRRs of 15 to 25%. To achieve a targeted IRR, the longer the time horizon between the date of purchase and the date of sale of the property, the larger the required spread between the purchase and exit price.

Debt

Lenders are increasingly amenable to participating in brownfield projects if there is sufficient equity in the project (the amount of equity depends on the overall risk profile of the project) and the equity partners have the reputation, track record and risk management capabilities necessary to limit the downside risk. Without these conditions, lenders have been reluctant to lend funds on contaminated sites due to the potential liability, the relatively limited income stream in the short and medium term and the lack of marketability. In the construction lending context, where principal repayment takes months or a few years, lenders chiefly worry about the borrower's collateral relative to contingencies in the construction budget for unknown site costs and whether the project has or can readily obtain takeout financing. Permanent lenders primarily worry about the borrower's defaulting, which may require them to assume ownership of a stigmatized asset with questionable value.

There is no clear leader in the brownfield lending arena. Debt cost varies from project to project and is highly dependent on the overall capital market at the time when debt financing is needed. The use of debt in the capital structure reduces the "blended" cost of capital and increases both project risk and the

return on equity. Typically, development teams use debt when the project can generate a certain amount of cash flow (e.g., from existing building lease) to service interest payments.

Government Funding & Incentives

Government incentives can provide the necessary additional funding to make a brownfield redevelopment possible. Local governments usually shy away from direct grants; instead, they tend to favor property tax incentives and Tax Increment Financing (TIF), especially for infrastructure costs like roads and utilities. Under TIF, the increased tax revenues generated by the redevelopment are used to pay off part of the redevelopment expenses. Federal and State Brownfield funds are sometimes available. Occasionally, it may be worth exploring a special State or Federal appropriation to kick-start a remediation project. If the Federal Government is a responsible party for onsite contamination, then such appropriations are more likely.

Risk Transfer and Indemnification

A comprehensive environmental risk management program is key to successful brownfield transactions. Such a program adds value to the transaction in two important ways: it gives comfort to the seller, assuming an indemnification against environmental liability is part of the transaction, and it provides the necessary assurance to investors, which can make an otherwise unacceptable risk palatable.

Selling a site “as is” does not protect the seller from third party claims made directly against the seller. In contrast, the multi-layered structure shown in Figure 1 illustrates a substantive indemnification approach. First, the buyer needs to provide adequate capital or assure that such capital is available for direct remediation costs and the contingencies that accompany environmentally impaired properties. This capital serves as a buffer to absorb variability in the remediation cost and facilitate negotiation of favorable environmental insurance policies. Second, environmental risk transfer relies on specialty environmental insurance policies. Typically, these policies employ a cleanup cost cap (also called a stop-loss policy) to address potential cost overruns associated with actual remediation of the known conditions at sites, and comprehensive pollution legal liability protection to secure potential exposures associated with unknown environmental conditions and third-party claims. In both cases, the buyer’s track record is important in securing and structuring a cost efficient and effective environmental risk management program. Buyers with adequate capitalization and good performance history may not only obtain insurance policies that otherwise may not be available to inexperienced buyers, but they

are also skilled in crafting customized insurance contracts that fit the unique needs of a transaction. Experienced and well capitalized buyers that purchase environmental insurance in volume can also negotiate insurance contract terms that increase the seller's protection level.

Impact of Proposed/Recent Court Ruling and Legislation

Recent U.S. Supreme Court ruling as well as federal and state legislations have helped private and institutional investors become more comfortable with investing capital to redevelop environmentally impaired properties.

In 1998, the U.S. Supreme Court in *United States v. Bestfoods* (528 U.S. 810; 120 S. Ct. 42) clarified the Superfund liability for corporate parents. This case held a corporate parent responsible under CERCLA when (i) the corporate veil is pierced under traditional corporate law doctrines, or (ii) the corporate parent or shareholder directs the workings of, manages or conducts the affairs of a polluting facility. In 2002, the Small Business Liability Relief and Brownfields Revitalization Act increased funding and tax incentives to promote the cleanup and reuse of brownfield and helped clarify and limit the Superfund liability of owners and purchasers under certain conditions. The State of Texas House Bill 3152, enacted on September 1, 2003, has removed substantial economic barriers to brownfield redevelopment by substantially reducing the costs of investigating and remediating contaminated groundwater in areas where there is no risk of using the underlying groundwater as a source of potable water. As a result, investors have become more comfortable with investing capital and working with local communities and businesses to buy and redevelop contaminated property, including brownfields and Superfund sites.

Furthermore, existing federal legislation has sought to utilize the nation's tax structure to provide incentives for the privately funded cleanup of brownfields. For example, Section 198 of the IRS Code, initially passed in 1997, and subsequently amended, provides a framework to encourage the cleanup of qualified contaminated sites by allowing an eligible taxpayer to immediately expense, rather than amortize, the costs of remediation. Other contaminated site tax legislative proposals on the horizon have been actively discussed by Congress and the EPA.

Brownfield Investment Key Criteria

Location and real estate market are critically important. Ideal brownfield sites are in growth corridors within tier 1 or 2 urban markets with good access from a main highway, complemented by good visibility and strong demographics. In addition to the environmental impairment, a primary brownfields site has all the attributes of a good real estate development site. Due to prior use, many brownfield sites have industrial zoning, and the potential to rezone them for mixed-use residential/retail often increases their development value. To analyze whether a real estate transaction has potential for a private brownfield investment group, the starting point is a thorough understanding of the site's real estate fundamentals. The most important analytical element is the site's underlying market value, its value without the contamination. Typical brownfield site screening criteria are as follows:

Capital Commitment: The "ideal" size of capital commitment by private brownfield investors depends on the size of their available capital pool. Brownfield investors would prefer to commit amounts of capital in each transaction that reduces overall overhead. Well capitalized brownfield investors often seek transactions that allow them to employ \$10 million or more, realizing that smaller projects can often require as much overhead as larger projects. The site size (number of acres or square feet) is irrelevant if the location does not dictate sufficient value. Multiple sites with a common owner sold as a portfolio can provide the desired critical mass of dollar value.

Market: Brownfield developers prefer properties in primary urban markets because they represent higher real estate values and because market demands in those areas are more likely to enable prompt redeployment of the asset after cleanup.

Location: Location, location, location (the 3 rules of real estate). Access to highways and infrastructure, visibility and future-use possibilities all combine to increase value of sites.

Environmental Cost, Schedule and Path to Closure: By studying existing environmental documents including soil-boring results and groundwater well test results and by conducting other standard types of environmental and land use due diligence with help of experienced and well qualified technical and legal consultants, the brownfield investor usually can make a well-educated guess as to the extent of the required environmental clean-up. An added challenge is mapping out a remedial closure path that dovetails with future redevelopment plans for the site.

Mini Case Study – The ICI/O’Brien Industrial Park

Background

In 1999, ICI Glidden Paints, a division of the ICI Group (“ICI”), acquired the O’Brien Corporation (“O’Brien”). As part of the acquisition, ICI decided to divest a portfolio of environmentally impaired real estate assets owned by ICI and O’Brien. The real estate portfolio consisted of six sites ranging in size from 8 to 25 acres.

The portfolio of sites was financed wholly with equity from Cherokee, because debt financing was not available due to the presence of site contamination. Cherokee also provided the seller, ICI, with full indemnification supported by a comprehensive environmental risk management program. Cherokee’s ability to invest capital within a short timetable (one month of due diligence) and to provide full indemnification were key to the transaction’s success.

Site Description and Environmental Conditions

Site 1: The property consisted of two industrial buildings on roughly eight acres owned and occupied by ICI in South San Francisco, California. The first building was a three-story concrete, paint manufacturing building containing 76,000 square feet of net rentable area. The second building was a one-story, concrete tilt-up, warehouse building containing 94,700 square feet of net rentable area. The land north of the ICI warehouse building had lead contamination.

Site 2: This property was comprised of 18.6 acres zoned light industrial within the City of South San Francisco. The Fuller-O’Brien Company had used the site as a paint manufacturing and distribution facility from the early 1900’s and had terminated most site operations in the late 1980’s. The site was the largest piece of land in the immediate South San Francisco area, enjoyed bay frontage and was ten minutes from the San Francisco airport.

Federal EPA Administrative Order of Consent (“AOC”) issued in final form on April 18, 1991 applied to the site. At the time of the transaction, O’Brien operated the site remediation as two units, Operational Unit (OU) 1, which dealt with the soil issues, and OU 2 which addressed groundwater issues. One area on the east side of the property bordering the Bay was contaminated with lead and some SVOCs required additional remediation. O’Brien had not fully defined groundwater contamination. The remediation cost was estimated to be several million dollars.

Site 3: This property consisted of a 70,000 square foot building located on 8 acres. O’Brien had used the property in the paint manufacturing process, but

had vacated the property in the late 1980's. The building was in average condition with several hundred thousand dollars needed for deferred facility maintenance to prepare it for tenancy.

BTEX and lead were the main site environmental concerns. Barium and zinc also existed above permissible regulatory levels. Remediation costs were estimated to be several million dollars.

Site 4 and 5: These properties included an approximately 28,000 square foot building on 43,000 square feet of land and five residential lots located within Anchorage, Alaska. The building was a single-story, concrete block retail/warehouse constructed in 1956. These properties were well-located within the city of Anchorage, Alaska, and the building was in good condition. Minor environmental corrective actions were underway.

Site 6: This 25 acre site was on Highway 288, south of Houston. The site was undeveloped and near Houston Hobby Airport. Contamination was insignificant.

Market Analysis

At the time of the transaction, the South San Francisco market had one of the lowest average vacancy rates and the most expensive average lease rates in the area. With little available developable ground, developers had delivered little space to meet the needs of the expanding local economy. Analysts assumed the area would remain a landlord's market for several years.

In Houston, the demand for industrial space was high and industrial vacancy rates were falling. Shortages of such space had stimulated new construction, boding well for this parcel. Most new construction was in Houston's northwest and southwest quadrants. Analysts expected warehouse space absorption to remain strong and lease rates and sales prices to increase.

Investment Risks

Market Value for Improved Land in South San Francisco: Because value in this investment was in the remediation and disposition of the ICI and O'Brien properties, a decrease in undeveloped land values during the project holding period would adversely impact investment return.

Near-by Waste Transfer Facility: During due diligence, Cherokee discovered that an adjacent, 11-acre, vacant waterfront parcel was designated for an

enclosed waste transfer facility. Cherokee had concern that a transfer facility might detrimentally impact the O'Brien site's potential use as an office/R&D site.

Environmental Liability: Investment in ICI and O'Brien's real estate assets included significant environmental liability risk from known and unknown contamination. However, through extensive environmental due diligence, Cherokee gained increasing confidence that the liability was manageable. Cherokee also employed sophisticated risk transfer mechanisms to mitigate potential liability, including insurance policies to address any overage in the estimated total cost of remediation as well as pollution legal liability from unknown contamination discovered during the ensuing five years. On the basis of its financial and environmental due diligence and risk transfer program, Cherokee proceeded with the transaction during the summer of 1999. The parties structured the transaction as a single acquisition with separate purchase agreements among Cherokee, ICI and O'Brien. The sellers received an indemnification backed by the risk management structure presented in Figure 2.

Epilogue

Cherokee completed all environmental remediation by June 2003. Groundwater monitoring is on going at two sites (Figure 3). The six sites received No-Further-Action (NFA) letters from the California Department of Toxic Substances Control (DTSC) and the Regional Water Control Board (RWCB). For one site, the environmental remediation cost exceeded the estimated cost, but the risk management program operated as planned and covered the additional expenses. During 2002 and 2003, Cherokee sold all of the sites. Site 1 and 2 will become biotechnology research and development facilities (Figure 4).

FIGURES

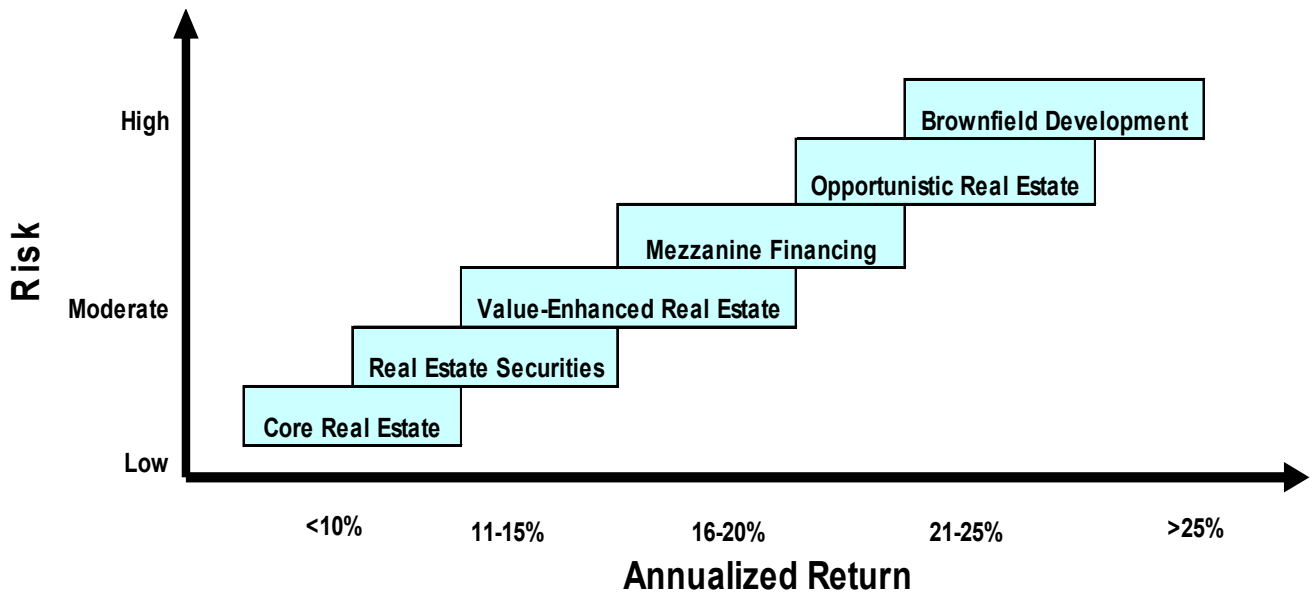


Figure 1: Real Estate Investment Risk/Return Diagram

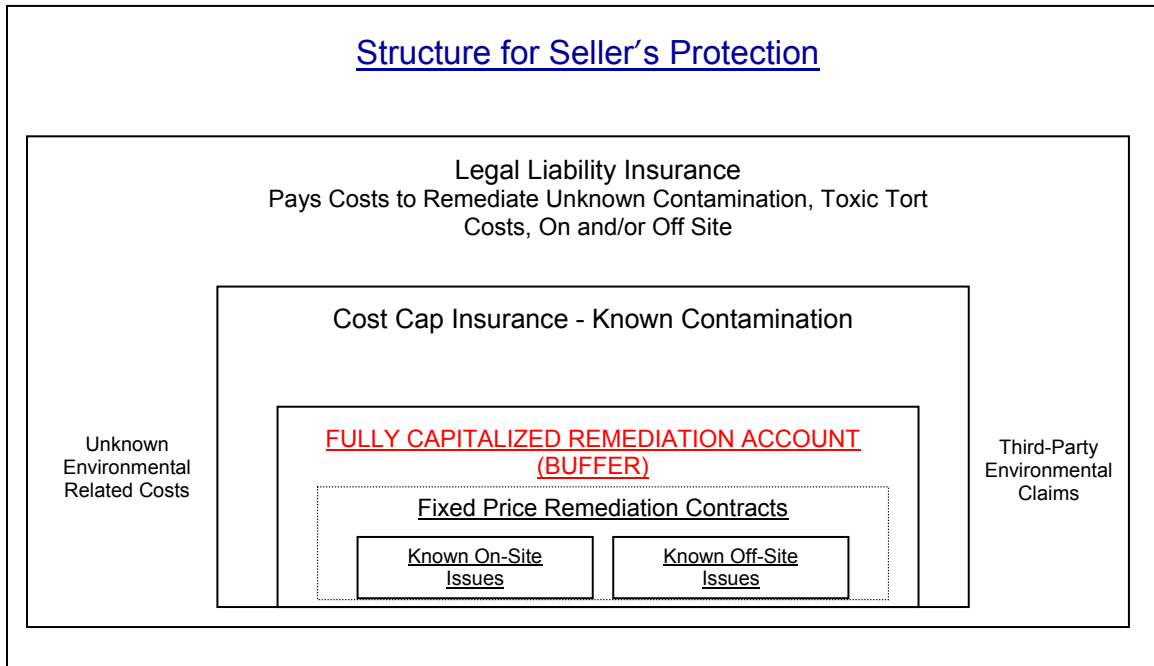


Figure 2: Risk Management and Indemnification Framework



Figure 3: ICI/O'Brien - South San Francisco Site Construction



Figure 4: ICI/O'Brien - South San Francisco Development Conceptual Sketch

EXHIBIT I



Brownfield Redevelopment Private Equity Financing

**Roliff Purrington
Cherokee Investment Partners, LLC**

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1200 Smith Street, 16th Floor
Houston, Texas 77002
(713) 942-8538
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OVERVIEW

- **Introduction to Cherokee**
- **Cherokee Investment Approach**
- **Key Investment Criteria**
- **Risk Management Structure**
- **Representative Transactions**



Introduction to Cherokee

Cherokee Investment Partners III, L.P. closed May 2002

- \$620 million private equity fund that specializes in brownfields
- Target of at least \$10 million of equity invested per transaction

Cherokee has purchased 300+ sites across North America and Europe

- Over \$300 million of equity invested to date
- Aggregate value over \$600 million
- \$130 million spent towards remediation since 1998
- Variety of properties, sellers, contaminants and regulatory agencies



Cherokee Investment Approach

- **Large pool of discretionary capital**
- **No financing contingencies**
- **Effective risk management and indemnification**
- **Long track record and experience with complex transactions involving multiple stakeholders**
- **Major commitment to remediation and sustainability**





Key Investment Criteria

- 1. Size of Capital Commitment**
- 2. Market**
- 3. Location**
- 4. Price and Motivation of Seller**
- 5. Environmental Cost, Schedule, and Closure**
- 6. Capital Sources**
- 7. Partnership Considerations**
- 8. Property Types**



Risk Management Structure

Structure for Seller's Protection

Legal Liability Insurance

Pays Costs to Remediate Unknown Contamination, Toxic Tort

Costs, On and/or Off Site

Cost Cap Insurance - Known Contamination

FULLY CAPITALIZED REMEDIATION ACCOUNT (BUFFER)

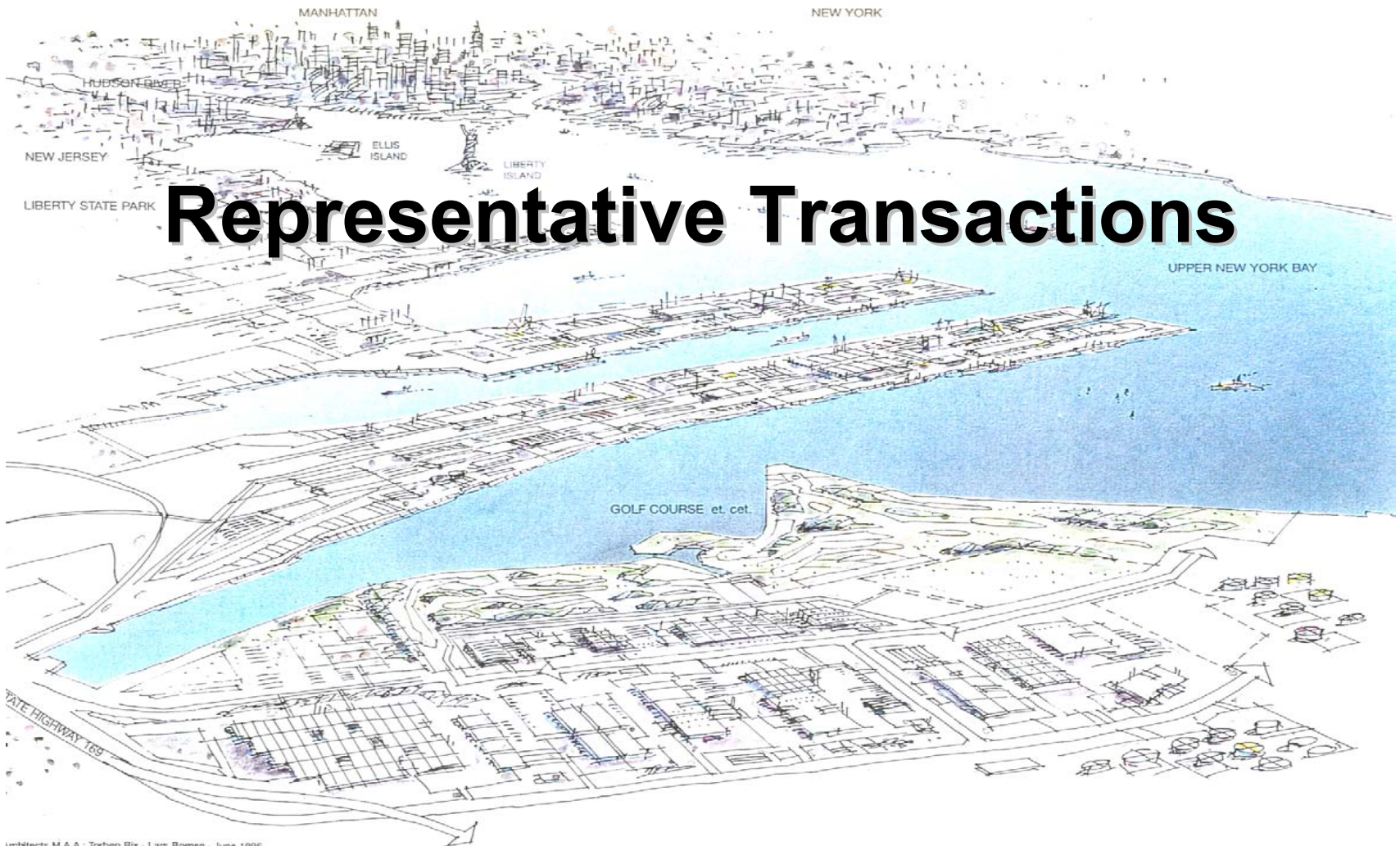
Fixed Price Remediation Contracts

Known On-Site
Issues

Known Off-Site
Issues

Unknown
Environmental
Related Costs

Third-Party
Environmental
Claims





Completed Transactions

Sellers include a wide variety of owners:

- **Multinational corporations**
- **Financial institutions**
- **Private equity funds**
- **Government agencies**
- **Utilities**
- **Private owners**



American Airlines



Tomkins

burlington



HALLIBURTON



United Technologies

stelco

EQUILON
ENTERPRISES LLC



Meadowlands

- **1,200 acres with wetlands and eight former landfills**
- **Contracted for remediation and closure**
- **Total project cost of \$1 billion includes \$130 million remediation contract**





Meadowlands

Cherokee has received entitlements for:

- 750 room hotel/conference centre
- 750,000 square feet of office space
- 100,000 square feet of retail
- 3,500 residential units
- Four eighteen-hole golf courses
- Marina



Artwork - T.W. Schaller





ICI/O'Brien Industrial Park

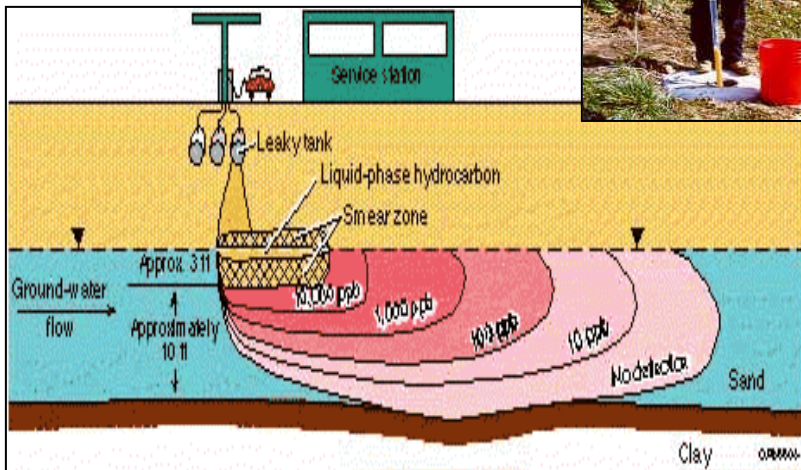
- **Site in South San Francisco, CA**
- **Part of 6 asset portfolio**
- **Heavy metal soil and groundwater contamination**
- **Remediation complete and property sold**





Equilon Portfolio

- Sixty-eight gas station pad sites, purchased from Equilon Enterprises, a former Shell/Texaco joint venture
- Extensive petroleum hydrocarbon contamination
- To date, over thirty-five properties sold





Gates Industrial Complex



- **50 acre industrial site with fourteen buildings in Denver, CO**
- **High profile brownfield property with significant contamination from rubber manufacturing activities**
- **Remediation and redevelopment underway**





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Cherokee Investment Partners, LLC

Cherokee Investment Partners, LLC (Cherokee) is a private equity fund that acquires, remediates and revitalizes environmentally impaired assets and protects sellers from the associated risks and liabilities. Cherokee manages over \$1 billion of assets and has acquired over 300 sites across North America and Western Europe since inception. Cherokee typically acquires an asset or portfolio of assets for cash and indemnifies the seller from environmental liability through the use of insurance policies and other customized risk transfer methods; after acquisition, Cherokee remediates and repositions the assets for reuse, often by partnering with or selling to local developers. Cherokee raised its third fund, a \$620 million equity fund, in 2003; its investors consist primarily of pension plans and endowments. Looking forward, Cherokee's equity commitments, with leverage, provide close to \$1 billion of new capital to deploy over the next three to five years throughout North America and Western Europe. Headquartered in Raleigh, North Carolina, Cherokee has offices in Denver and London, in addition to its presence in the Southwest based in Houston. Additional information can be found on Cherokee's website at www.cherokeefund.com.

Roliff Purrington

Roliff Purrington practiced law as a litigation associate at Hunton and Williams and practiced environmental, land use and administrative law as a partner at Mayor Day, Caldwell and Keeton in Houston and Austin, Texas, before earning his MBA from the University of Chicago Graduate School of Business at its campus in Barcelona, Spain, and commencing work with Cherokee. Mr. Purrington also has a BA with honors from Yale University and a JD degree from the University of Virginia Law School. Mr. Purrington heads Cherokee's presence in the Southwest, Based in Houston. He has extensive experience in the siting, permitting, financing and development of environmentally sensitive land development projects.

**BROWNFIELDS & REVITALIZATION ISSUES –
INITIATIVES, OPTIONS, AND LEGAL IMPLICATIONS**

**Mark Stacell
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**15th Annual Texas Environmental Superconference
August 7, 2003
Four Seasons Hotel
Austin, Texas**

INTRODUCTION

This is a paper about options for managing uncertainty in brownfields transactions; that is, transactions involving real property that is underutilized due to one or more of a variety of “uncertainty factors”, all of which can generally be said to include a fear of suffering unforeseen financial loss. From an environmental perspective, the fears may include becoming responsible to pay cleanup costs, to pay damages for diminution of property value and alleged bodily injury, and the fear of the legal fees associated with all of the aforementioned bogies. In any given brownfield transaction, there will be a range of certainty regarding how well these risks are characterized: some may be well understood, while others simply do not lend themselves to a high degree of certainty. Interestingly, it seems that it is often the uncertainty of the extent and threat of contamination and associated liabilities, more so than the actual contamination itself, which leads to under-utilization of brownfields.

If one can get past the fears and uncertainty factors, or “manage them”, some brownfields provide good opportunities for revitalization, redevelopment and possibly even profit. There are a variety of ways to manage the risk and to get others to share in the risk. One of these is through the use of environmental insurance – a contractual agreement whereby one party exchanges money for another’s agreement to pay loss for specific types of environmental liability including cleanup of unknown contamination, diminution of the property value of third parties, and bodily injury alleged due to exposure from contamination at the site. This paper will provide an overview of three commonly used environmental insurance policies available to assist in brownfields transactions and redevelopment. Selected examples will be used to illustrate the use of the insurance in the brownfield redevelopment context.

TYPES OF COVERAGE

Three policy types that brownfield redevelopers commonly utilize to facilitate their transactions are Pollution Legal Liability, Remediation Cost Cap and Secured Creditor. This section of the paper will examine these policy types, and will also provide an overview of blended finite risk programs, that is, the use of pre-funding for the expenses of certain risks covered by insurance policies. The ultimate objective of each of these options is to use legal and accepted means to shift environmental liabilities to insurance carriers, and therefore manage some of the uncertainty regarding environmental risks associated with a brownfield redevelopment.

Pollution Legal Liability / Environmental Impairment Liability

One potentially troublesome uncertainty in nearly all brownfield transactions is that unknown pollutants may be present on the subject property and will be discovered after closing and thereby cause unforeseen losses. To address that concern, Pollution Legal Liability (“PLL”) insurance is designed to transfer risks associated with cleanup of *unknown* environmental conditions. PLL can also include coverage for tort liabilities

and economic losses associated with environmental conditions. In addition to cleanup coverage for unknown conditions, coverage can be included in PLL for known environmental conditions that are below regulatory action levels. That feature helps manage uncertainty of “regulatory re-openers” in which environmental conditions that previously received regulatory release are later subjected to additional regulatory scrutiny, assessment and cleanup expense.

Coverage triggers for cleanup under the PLL policy can be written on the basis of a third party claim or a discovery of environmental conditions above regulatory action level. PLL coverage is structured as risk transfer above a fixed deductible or self-insured retention. Policy terms are available to 10 years, and typically longer terms are available for finite programs (i.e. pre-funded deductible). Capacity in excess of \$100 million is available. The scope of coverage is highly flexible and can be tailored to specific client strategies or transactions, but generally includes any or all of the following:

- Cleanup of unknown pre-existing contamination on and off-site
- Cleanup of contamination that was below action levels at policy inception, but that later becomes actionable, on and off-site
- Cleanup of new pollutant releases after policy inception, on and off-site
- Third party bodily injury, property damage, business interruption, diminution in value, and natural resource damages, both on and off-site, and for unknown pre-existing or new contamination
- First party business interruption expense may be available as a coverage extension
- Builder’s soft costs during development may be available as a coverage extension
- Contingent liability associated with transportation and disposal of waste
- Can include coverage for claims against insured, its partners or shareholders, their respective affiliates, and all of their respective successors, subsidiaries and affiliates and their respective officers, directors, employees and agents.

Cleanup Cost Cap (“Cost Cap”)

Another common uncertainty in brownfields redevelopment is whether remediation budgets will be exceeded. Cost Cap coverage is designed with this concern in mind: to limit cost overruns in environmental remediation projects. The basic structure of the Cost Cap makes the insured responsible to pay a Self-Insured Retention (“SIR”) plus a “buffer layer”, and the insurer then pays claims for cleanup expenses above that sum. The SIR consists of the anticipated remediation costs in an approved remedial plan, while the buffer layer is a negotiated value typically between 10-20% above the anticipated remediation costs. Coverage attaches above the sum of the SIR and buffer layer at what is termed the “attachment point”. Limits of coverage above the attachment point are typically set at 1-3 times the anticipated costs of cleanup. Cost Cap programs cover overruns for a number of issues including:

- When the amount of known contamination is greater than anticipated in remedial plan both on and off-site

- When unknown contamination is found while executing remedial plan – on or off-site
- When regulatory cleanup standards become more stringent than at the time of the remedial plan

Cost Cap policies can be placed for individual sites or on a portfolio basis. Premiums on Cost Cap Policies are not as competitive as in the past, as insurance companies have suffered significant losses on these programs. As a result, underwriters are now scrutinizing these policies more carefully, and as a general rule, only those remediation projects whose anticipated costs exceed \$2,000,000 are being underwritten in today's environmental insurance market.

Secured Creditor

Environmental uncertainty in brownfield transactions is not limited just to sellers, buyers and redevelopers: lenders must consider the risk of default on real estate loans secured by environmentally impaired collateral. For example, consider a borrower/redeveloper whose construction project compromises the integrity of a remedial system already in place at the construction site. Should that occur, the regulatory agency that approved the remedial plan may re-open the case and impose new cleanup requirements. The unexpected cost of meeting those new requirements could subsequently affect the borrower/redeveloper's ability to repay its loan. At that point, the lender could face several risks including loss of collateral value, borrower's inability to repay and liability for conditions at the site should the lender foreclose.

The Secured Creditor policy addresses brownfield lenders' uncertainties with a dual-triggered policy form that pays loss if (1) the loan is in default, and (2) an actionable environmental condition is present in the impaired collateral. Note that with most policy forms, it not a requirement that the environmental impairment caused the default, rather, the two triggers must merely be in effect simultaneously.

Some insurance carriers offer a choice of secured creditor policy forms: (1) Loan balance only (principal plus interest), or (2) Lesser of loan balance (principal + interest) or clean-up costs. Most forms also provide coverage for third party claims for bodily injury and property damage.

The benefits of the secured creditor policy in the context of brownfields redevelopment are that it ensures the lender will not lose principal if a loan default accompanies pollution condition and also provides 3rd party lender liability protection, therefore encouraging debt financing of brownfields redevelopment projects.

Finite Risk

A finite risk program is an insurance program typically created as a hybridized combination of the PLL and Cost Cap policies in which all premiums, deductibles and anticipated cleanup obligations are pre-funded. In essence, the insured "sells" its cleanup and third party liabilities to an insurance carrier, and the carrier hedges on the time-value

of money, hoping to realize a financial gain via returns on investment prior to the time remediation costs must actually be paid. The insured derives value from setting a cap on cleanup costs at net present value. The insured can also negotiate for a commutation of funds back to itself or another party should funds remain unspent at the end of the policy period.

The finite risk program can help achieve what some have described as a “walk-away” program in which the PRPs pre-fund their existing and future environmental obligations so that they can theoretically “walk away” from the risk. This is highly valued by some insureds such as PRP groups that benefit from having the carrier perform the administrative responsibilities of the insurance program management, similar to an escrow arrangement. It should be stressed that finite risk programs are generally the only means to obtain PLL policies greater than 10 years in length.

EXAMPLES:

ENVIRONMENTAL INSURANCE IN BROWNFIELDS TRANSACTIONS

Example 1 – Strip Center

The first example is a common scenario: a partially-abandoned strip center is located in very good location but has a resident dry cleaner whose PERC plume induced the property owner to enter the site into its state Voluntary Cleanup Program (“VCP”). The site was not fully characterized in the opinion of the state’s VCP, and the owner was having a very difficult time finding a buyer for the property despite its good location and a high likelihood that natural attenuation would be an acceptable remedy for the site. One potential buyer became interested in redeveloping the entire site and constructing a building for a viable business, but both the buyer and the end-user business had concerns about the extent of the PERC contamination. Uncertainty regarding the prospect of assuming further cleanup obligations and possible third party claims was making the redeveloper reluctant to proceed.

The property owner and redeveloper obtained an environmental insurance program that would provide coverage for third-party liability associated with pre-existing pollution at the site, including bodily injury and diminution of property value claims, whether from on-site or off-site exposure. They did not purchase new conditions coverage, which would have covered new releases occurring after policy inception, because they did not anticipate causing new pollution conditions, and that allowed a cost savings on the premium as new conditions coverage is priced in addition to the pre-existing conditions coverage. The coverage excluded claims for cleanup of PERC and PERC-related degradation products until the VCP issued a certificate of closure, but the coverage included cleanup of pre-existing unknown pollutants.

Remediation cost cap insurance was not available for the site because the cleanup remedy had not yet been approved, and the cost for the proposed remedy would not have exceeded the \$2,000,000 lower threshold that carriers now generally impose for Cost Cap policies. Secured creditor coverage would have been appropriate and affordable, but the

lender did not place the coverage nor did they impose that the redeveloper must purchase it for them.

This redevelopment was projected to create 100 jobs and will revitalize a semi-blighted property.

Example 2 - Marine Terminals and Intermodal Supply Center – Oakland

The County and City of Oakland took over ownership and operation of the U.S. Navy's former Fleet Industrial Supply Center (FISCO) in Oakland in July 1999. The transfer of FISCO allowed the County & City to begin construction of new marine terminals and a joint intermodal terminal as part of its Vision 2000 Program. The negotiations, administrative process, closure, and final approval of transfer were completed in six months. This transfer process was completed three years ahead of schedule.

As the new owner, the County & City assumed responsibility and liability for the existing environmental contamination. The contractual assumption of that risk was made possible in part by a customized environmental insurance program. One element of the program included Cleanup Cost Cap coverage protecting the County & City against cost overruns associated with the privatized cleanup project. The second element of the program, PLL coverage, protects the County & City against cleanup costs resulting from discoveries of unknown, pre-existing contamination, as well as third party liability for bodily injury and property damage associated with environmental conditions.

This redevelopment was projected to contribute an estimated 8,000 jobs to the region's economy.

Example 3 – Hypothetical Placement involving a Fixed-price Remediation Contractor

Consider a hypothetical contaminated site. The owner has a potential buyer with commercially viable redevelopment plans and who is willing to perform the site remediation, but the initial remediation cost estimates obtained to accomplish the cleanup and site preparation for the new construction plans seemed too high. Owner and potential buyer are also afraid that the heightened public visibility associated with the new project may cause unwanted attention and possible third-party claims.

The buyer approaches a fixed-priced remediation contractor ("FRC") who makes an offer to complete the new site preparation and accomplish the remediation for a single fixed cost less than the estimates previously obtained. As part of that package, the FRC agrees to indemnify the end-user for all regulatory liability associated with the cleanup in perpetuity. The FRC can make that indemnity in part because it will place a Cost Cap policy with itself as the first named insured and the end user as an additional insured. That ensures a maximum price for the cleanup work and protects against re-opener during the policy period. In addition, the FRC would also place PLL coverage with the

end-user as the first named insured and itself as an additional insured. Owner could be named as well should they agree to somehow share in the premium payment.

The end result will be that the owner can successfully market its property and buyer can redevelop that property for a new use. Buyer also benefits as it will be an additional insured during the term of the cost cap policy, will be the first named insured under the PLL policy and will be indemnified in perpetuity by the FRC for cleanup costs and re-openers. The buyer will receive a guaranteed cost to improve the site, as well as insurance protection against claims it might otherwise have to pay out of pocket should pollution conditions be exacerbated by its contractor on the site. The FRC gets to perform the work with the assurance that remediation cost over-runs will be paid by an insurer, and that liability for third-party claims against it may face will be covered during the policy term as well.

Conclusion

Many of the typical risks and uncertainties associated with brownfield sites can be transferred to insurance carriers via environmental insurance policies. Sellers, redevelopers, buyers and lenders can all benefit from environmental coverage offered. Though insurance can not eliminate all financial risk, it has in many cases provided brownfields stakeholders with adequate comfort to proceed successfully when utilized in concert with other risk control strategies. Careful structuring of insurance programs tailored to dovetail effectively with the identified risks and risk control strategies is advisable.

Mark Stacell
Vice President
Marsh Environmental Practice

**Current
Responsibilities**

Advises clients on environmental risk-transfer and insurance solutions for matters including impaired property transactions, environmental cost containment, third-party liability, lender liability, Superfund and voluntary cleanup programs and contractors' pollution risks associated with hazardous waste management and transportation practices.

Experience

Prior to joining Marsh, Mr. Stacell was an associate with a boutique environmental law firm in Houston (Campbell George & Strong LLP). Prior to that, he was an attorney for the Texas Parks & Wildlife Department's Resource Protection Division in Austin. His previous experience also includes nine years as a Conservation Scientist for the Texas Parks and Wildlife Department.

Education

Juris Doctor from St. Mary's University in San Antonio, Master of Science in Biology from Southwest Texas State University, Bachelor of Science in Wildlife and Fisheries Sciences from Texas A&M University

Affiliations

Member of the State Bar of Texas, the Texas Association of Environmental Professionals, and the City of Houston Land Redevelopment Committee – an Advisory Board to the Mayor's Brownfield Program

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Municipal Setting Designations

The Texas Legislature has passed House Bill 3152, a brownfields bill which becomes effective on September 1, 2003 that should result in an increase in the number of VCP certificates issued in Texas. The legislation authorizes the TCEQ and local governments to create municipal setting designations ("MSDs"). By establishing MSDs, property owners and operators will significantly reduce their costs for site investigation and remediation of groundwater impacts.

Many commercial and industrial properties in urban areas across Texas are underlain with unusable groundwater that has become contaminated by historical on-site or off-site sources. Often these plumes of contamination migrate onto surrounding properties and commingle with other plumes making distinctions of responsibility for assessment and remediation difficult. Before this MSD law was enacted, a landowner or a facility owner/operator was required to define the extent of contamination and to develop a cleanup remedy to correct the problem. State rules describe the concept of "institutional controls," including the use of local land use measures (i.e., zoning) to control groundwater withdrawal. But in practice, cities had been reluctant to move forward with ordinances because of the absence of any clear statutory authority. Moreover, previous laws and regulations had not allowed ordinances or other institutional controls, such as restrictive covenants, to eliminate groundwater response action objectives in locations where the groundwater will not be used as a future drinking water source. As a result, a great deal of money and resources was spent assessing and remediating unusable groundwater in urban areas.

HB 3152 addresses this problem by authorizing the TCEQ and local governments to create MSDs for properties that rely on protected community water systems to supply drinking water. Based on this authority, a city may restrict potable use of designated groundwater for properties where public water is available. Once groundwater use is restricted to non-potable uses, the TCEQ would certify the area as an MSD.

The TCEQ may issue an MSD certificate for a property or properties which are located within a city of at least 20,000 residents, an alternative water supply is available, and the property is subject to a municipal ordinance or city council resolution accompanied by a restrictive covenant which restricts other uses of groundwater from beneath the property. The TCEQ must deny an MSD application if the MSD would negatively impact the current and future regional water resource needs or obligations of the area or surrounding area where the MSD is sought. Those groups who can provide comments which could lead to application denial include the municipality that contains the property for which the designation is sought, registered private water well owners, municipalities within mile of the property, and municipalities and retail public utilities that own or operate a water supply well located within 5 miles of the property.

Since the potable use of groundwater is deemed illegal by the municipality and the TCEQ has issued an MSD certificate, parties responsible for contaminated properties within the MSD would no longer have to consider the risks associated with human consumption of

the contaminated groundwater in completing an affected property assessment or developing a remedy to address the contamination. Consequently, the extent of assessment and remediation required at these properties will be greatly reduced or completely eliminated.

Chuck Epperson

Mr. Epperson's professional experience includes more than 17 years of experience with the TNRCC in both management and technical positions and most recently with the environmental consulting firm, INTERA Inc. While at the TNRCC, Chuck managed the Voluntary Cleanup Program (VCP), served as a Superfund Unit Manager, as a Superfund Project Manager, and as a RCRA field investigator. He was managed numerous assessment and remediation projects in Texas, developed the statutory and regulatory language and technical guidance documents relating to the VCP and Innocent Owner/Operator Program (IOP) programs. He has also provided expert witness testimony on State Superfund cases, assisted in writing technical guidance documents and forms associated with the TRRP rules, and conducted numerous inspections of RCRA and leaking underground storage tank facilities. As a consultant with INTERA, he has served more than 35 clients on matters regarding VCP, IOP, environmental due diligence in real estate and banking transactions, Superfund, Corrective Action, litigation support, and regulatory compliance. He most recently developed language for the Municipal Setting Designation law which becomes effective on September 1, 2003.

HOMELAND SECURITY

MEMORANDUM

SUBJECT: Environmental Protection Agency's National Approach to Response

TO: Regional Administrators
Deputy Regional Administrators
Associate Regional Administrators
Assistant Administrators

Over the past 18 months, the Environmental Protection Agency (EPA) has faced unprecedented challenges in responding to national significant incidents, including the World Trade Center, anthrax contamination and the Columbia Space Shuttle. We have done an excellent job in responding to these incidents due to the expertise and versatility of our longstanding emergency response program. However, all of these events have taxed our system and it has become clear that we need to develop new approaches to address this unfortunate new reality in our country.

The possibility of future terrorist incidents has pointed out the need for a national approach to response. No longer can we afford to plan and prepare for a single event. Our preparedness and response planning efforts must focus on multiple, simultaneous significant incidents that may occur across several regions.

To that end, I have decided to implement a multi-faceted mechanism – the National Approach to Response – to manage EPA's emergency response assets during a nationally significant incident or disaster, in a coordinated manner on a national basis. I believe that effective response to nationally significant incidents will require:

- 1) timely, accurate and concise action in a coordinated manner using the Incident Command System/Unified Command (ICS/UC);
- 2) national support for resource allocation and program consistency; and
- 3) clearly defined roles within the affected Region(s) and Headquarters, allowing EPA to speak and act in unison during these incidents.

This will bring together existing emergency response assets, along with a new management approach, to ensure the efficient and effective utilization of EPA assets.

This approach is consistent with and complements the recently issued Homeland Security Presidential Document-5, "Management of Domestic Incidents," dated February 28, 2003 (attached). I am pleased that EPA played an important role in the development of this directive and we are well-positioned to comply with the requirement for a National Incident Management System and a new National Response Plan. While the details of these systems will be developed over the next several months, we are well on our way to ensuring that EPA will be in the forefront of these efforts.

I have asked Marianne Horinko, Assistant Administrator for Solid Waste and Emergency Response, to lead implementation of our national approach and report to me on the Agency's progress. I believe this new approach will ensure that as we move forward, EPA will continue to meet its homeland security responsibilities effectively and efficiently.

Christine Todd Whitman

Attachment

cc: Linda Fisher
Mary Kruger
Tom Gibson
Susan Mulvaney
Bob Bostock
Joe Martyak

THE EPA NATIONAL APPROACH TO RESPONSE

INTRODUCTION

Over the past 18 months, the Environmental Protection Agency (EPA) has faced unprecedented challenges in responding to nationally significant incidents, including the World Trade Center and Pentagon terrorist attacks, the anthrax contamination and the Columbia Space Shuttle. We have done an excellent job in responding to these incidents due to the expertise and versatility of our longstanding emergency response program. However, all of these events have taxed our system and it has become clear that we need to develop new approaches to address this unfortunate new reality in our country.

The possibility of future terrorist incidents has pointed out the need for a national approach to response. No longer can we afford to plan and prepare for a single event. Our preparedness and response planning efforts must focus on multiple, simultaneous significant incidents that may occur across several regions. An effective response to nationally significant incidents will require:

- A consistent approach Agency-wide, enabling EPA to act and speak in unison during these incidents;
- Timely, accurate and concise action in a coordinated manner using the Incident Command System/Unified Command (ICS/UC);
- 3) Readily available national resources to assist a given Region or Regions; and
- 4) Clearly defined roles for both Regions and Headquarters.

To that end, EPA is implementing a multifaceted mechanism – the National Approach to Response – to manage its emergency response assets during a Nationally Significant Incident (NSI) in a coordinated manner. This approach will bring together existing emergency response assets, along with a new management approach, to ensure the efficient and effective utilization of EPA assets. This approach will provide consistency in addressing key aspects of a response such as organizational elements (ICS/UC, support personnel, and national teams), exercises and training, equipment, laboratory capability/capacity, and contracting. In addition, this approach will ensure that roles and responsibilities are clearly articulated.

This policy has been developed in support of the following overarching principles for EPA's role during an NSI:

- EPA is committed to protecting human health and the environment during an NSI.
- The Agency will deploy people and equipment to emergency responses in a timely manner to fulfill our mission. EPA is committed to providing the support needed by Agency personnel responding to NSIs.
- EPA may play either a leadership or a support role during an NSI.
- EPA will work with the other federal agencies responding to an NSI to develop a cooperative response plan, in the context of the Incident Command System established at

the site and through interagency strategic and policy efforts.

- In collecting, sharing, and analyzing environmental data, EPA will give primacy to data with potential human health consequences.
- EPA will work to ensure that its decision-makers have access to the data and expertise they need to make decisions based on sound science.
- Effective internal and external agency communication will be the key to ensuring that EPA is an efficient partner in emergency response. The Agency will implement any preparedness or response actions needed to ensure effective communications.

The EPA National Approach to Response is consistent with and complements the recently issued Homeland Security Presidential Document-5, "Management of Domestic Incidents," dated February 28, 2003 (attached).

THE NATIONAL RESPONSE SYSTEM

Historically, EPA has played an important role in responding to environmental emergencies. More than 30 years ago, the National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the National Contingency Plan or NCP, was established as the federal government's blueprint for responding to both oil spills and hazardous substance releases. A key component of the NCP is the National Response System, a multilayered response network of individuals and teams from local, state, and federal agencies, and industry. The National Response System includes 1) reporting of incidents to the National Response Center, 2) a cadre of Federal On-Scene Coordinators (OSCs), 3) the National Response Team (NRT), 4) 13 Regional Response Teams (RRTs), and 5) "special teams" that provide specific expertise to assist OSCs.

The NCP and the National Response System provide the foundation of EPA's Emergency Response Program. EPA chairs the NRT and directs its own Emergency Response Program through OSCs located throughout the United States. Every year, EPA OSCs conduct or oversee hundreds of emergency response actions to address oil spills and hazardous substance releases. It is the OSC's job to ensure that the cleanup, whether accomplished by private parties, local, state, or federal officials, is appropriate, timely, and minimizes human and environmental damage. These experiences provide OSCs with the skills necessary to respond to the next terrorist attack or natural disaster.

THE NCP AND OTHER FEDERAL RESPONSE PLANS

The National Response System also supports other federal plans that have been developed for specific types of emergencies. EPA supports the Federal Response Plan (FRP) by serving as chair of Emergency Support Function (ESF) 10, covering hazardous substances and oil spills. We also play a support role in other ESFs, such as health and medical services, food and firefighting. EPA has developed a Radiological Emergency Response Plan (RERP) which represents the Agency's integrated approach to managing radiological releases. This plan establishes a framework for coordination among OSCs and the Radiological Emergency Response Program. Lastly, EPA participates in the Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN), which defines federal roles during responses to terrorist events. Under this plan, OSCs work closely with EPA Criminal Enforcement Division (CID) Special

Agents and the FBI to provide technical personnel and supporting equipment during response to a terrorist incident. Generally, when an emergency response is conducted under these other plans, OSCs derive their authority from and operate under the auspices of the NCP.

NATIONALLY SIGNIFICANT INCIDENTS

Emergency response actions are usually successfully managed within the capacity of regional program offices by one or more OSCs. Upon occasion, incidents may be of such magnitude that they exceed regional emergency response capacities, or transcend regional boundaries. These incidents may be the result of a chemical, biological or radiological emergency, or a natural disaster. Our experiences in responding to NSIs have shown that there can be no pre-determined set of circumstances that can define an NSI. Regardless, we can outline the general characteristics:

It will exceed the response resources of the subject region, requiring the region to request resources and expertise from EPA as a whole and from other agencies on a national basis.

It may involve simultaneous similar events in different regions, giving rise to issues of consistency, and nationally-set priorities.

It may involve unique technical or policy issues, requiring Headquarters to develop support mechanisms for the response as well as precedent-setting policy decisions.

It may be a result of a terrorist act, responding to which is an overriding federal concern, and brings EPA in as a partner in the overall implementation of the National Strategy for Homeland Security.

It may involve such widespread contamination of land, air or water that the incident will create the need for new national policies or programs.

Whether the result of a natural or manmade event, EPA recognizes that the response to an NSI will require senior management attention and extraordinary cooperation internally and between federal, state and local entities. It is the Agency's intention to implement a nationally coordinated approach whenever we respond to an NSI whether EPA has the lead for the response or is required to provide support.

It should be noted that HSPD-5 calls for the development of a new National Response Plan (NRP) and a single, comprehensive National Incident Management System (NIMS). As standards, guidelines and protocols to implement these national systems are developed, EPA will modify the Agency's National Approach to Response, as necessary.

POLICY: THE EPA NATIONAL APPROACH TO RESPONSE

The National Approach to Response will prepare the Agency to respond to an NSI by integrating existing response plans, authorities, and mechanisms; and clearly articulating roles and interrelationships, including communications and interagency support. Perhaps most important, the National Approach to Response establishes a requirement that EPA operate at the tactical level of response under a specific incident command system (ICS) during an NSI. Our approach is based upon the National Interagency Incident Management System (NIIMS) which

has been successfully utilized in large scale responses by EPA, other Federal agencies and large oil and chemical companies. Although not universal, NIIMS is increasingly the standard for interagency operations, and provides a common structure and terminology that facilitates the integration of multiple agencies while still maintaining a coherent chain of command. EPA believes that adopting ICS concepts familiar to many emergency response personnel throughout the federal, state and local government, and private industry will help effectively organize and coordinate response activities.

Incident Command

The NIIMS ICS is a flexible and scalable system driven by the tactical needs of the responders at the scene. NIIMS provides a flexible management structure, common terminology, standardized training, predesignated leadership positions, specific span of control and well understood assigned responsibilities. The system is built around five major response management functional areas: Command, Planning, Operations, Logistics, and Finance. Specifically:

The **Incident Command** has overall responsibility for the incident, determining objectives and establishing priorities based on the nature of the incident, the resources available and agency policy. In addition, Command Staff is responsible for public and internal communications, health and safety activities, and liaison activities within the ICS structure.

The **Planning Section** develops an Incident Action Plan and collects and evaluates tactical information associated with the incident. They conduct long-range planning, including the development of plans for demobilization at the end of an incident.

The **Operations Section** carries out all operations directly applicable to the primary mission of the response.

The **Logistics Section** provides all of the service and support needs of an incident, including obtaining and maintaining essential personnel, equipment, and supplies.

The **Finance Section** monitors costs related to the incident, provides accounting, procurement, time recording, cost analysis, and overall fiscal guidance.

Regional Coordination

It likely that during an NSI numerous individual Incident Commands, typically led by OSCs acting as Incident Commanders, will be required in the field. In order to effectively coordinate and direct multiple Incident Commands, EPA will establish one or more Area Commands with responsibility for overall management of the incident(s) at the regional level. The Area Command will serve as the focal point for consolidating operational information from the field, coordinating the response, and setting priorities between competing objectives and resource needs. The Area Command will be responsible for broad, strategic decisions that are beyond the scope of individual Incident Commands. In addition, the Area Command will ensure that established Agency policies, priorities, constraints, and guidance are known to the Incident Commands. It is important to remember that the Area Command does not replace the ICS field structure or functions. The EPA Incident Commander will continue to act as the on-scene

tactical Incident Commander making operational decisions and managing the daily operations. The EPA Incident Commander will report to the Area Command and will refer back critical resource and technical issues to the Area Command for resolution.

In addition to providing regional oversight of the incident, the Area Command will serve as the official channel for the flow of information between the field and Regional and Headquarters personnel (including the Regional Administrator, the Regional Incident Coordination Team (RICT) and the Headquarters National Coordinator). The Area Command will provide the necessary coordination to ensure that policy and resource issues are resolved or elevated to the appropriate Agency officials. The Area Command will act as the point of contact for the interagency Regional Response Team (RRT), and other inter-agency coordination, as needed. The Regional Response Center will provide the command, control, and communication capability for the Area Command. The Regional Removal Manager or other Regional Designee will be designated as the Area Commander.

The Regional Incident Coordination Team (RICT), is a standing team with representatives from each regional program office which provides multi-program policy and resource coordination, information sharing, technical assistance and issue resolution to OSCs conducting emergency response activities. During an NSI, the RICT will continue to provide this support to OSCs. In addition, the RICT will work with the Area Command and the NICT to ensure resources are made available and that policy issues are resolved.

The Regional Administrator will provide strategic vision for the scope of EPA involvement in the response by setting overall incident objectives and priorities. The Regional Administrator will serve as the designated contact on policy or political issues, will act as the Agency spokesperson, and will coordinate with the Incident and Area Commands and other agencies. The Regional Administrator, with the assistance of the Deputy Regional Administrator, will resolve regional resource, cross-program and policy issues.

National Coordination

During an NSI, the Agency Emergency Coordinator (the Director of the Chemical Emergency Preparedness and Prevention Office) will typically serve as National Coordinator for the incident. Working under the direction of the Assistant Administrator for the Office of Solid Waste and Emergency Response, the National Coordinator will provide overall management of the NSI at the national level by developing priorities and coordinating the allocation of Agency resources based upon these priorities. As Chair of the National Incident Coordination Team (NICT), the National Coordinator will be responsible for coordinating policy and resource needs and facilitating the resolution or elevation of significant issues to EPA senior management, as necessary. The Headquarters Emergency Operations Center (EOC) will serve as the primary contact point for information coming into the Agency and will disseminate information to appropriate parties. The EOC will also serve as the official channel for the flow of information between the Area Command and Headquarters.

The National Incident Coordination Team (NICT) is a standing team of senior representatives from each HQ Office (Deputy Director or above) which functions both in preparedness and emergency response roles. During an NSI, the NICT serves as the focal point for multi-program policy and resource coordination, information sharing and issue resolution. The NICT will keep Agency senior management fully informed, elevate issues, and implement direction accordingly.

During an NSI, the Assistant Administrator for Solid Waste and Emergency Response serves as the key advisor to the Administrator and coordinates with political appointees at other Departments and Agencies on all aspects of the response efforts. If the NSI involves homeland security matters, the Director of EPA's Office of Homeland Security (OHS) will serve as an advisor to the Administrator also and will work with the OSWER AA and other senior administration officials to keep appropriate decisionmakers informed and to resolve policy issues. If the NSI involves radiological contamination, the Assistant Administrator for Air and Radiation also serves as a key advisor. Using the EPA OHS, the Administrator may choose to convene the Homeland Security Policy Coordinating Committee (PCC) to address significant intra-Agency and inter-Agency national policy issues. The Homeland Security PCC (consisting of Assistant Administrators and Regional Administrators) will be facilitated by OHS and is responsible for assessing, analyzing and formulating a coordinated Agency position on questions, situations and incidents related to the NSI as they occur. This forum will also provide for the exchange of information among Agency senior officials regarding the NSI.

Figures 1 and 2 provide graphic displays of the coordination involved in an NSI. In addition, Figure 3, Nationally Significant Incident Information Flow, reflects the flow of information between and among the various levels of coordination during an NSI. For purposes of coordinating the flow of information to the public, EPA will expect to coordinate information flow through a field Joint Information Center (JIC), which will be responsible for the release of information specific to an incident site or response, and through a Headquarters JIC, which will be responsible for the release of national or non-incident-specific information.

Special Circumstances

Radiological Incidents

OSCs are responsible for coordinating and managing the emergency responses conducted under the NCP. EPA's RERP provides the EPA OSCs and response teams with guidance for the integration of the federal response plans into a response directed and coordinated pursuant to the NCP. (see *Environmental Protection Agency Radiological Emergency Response Plan (RERP)*, EPA 402-R-00-003, January 2000). During nationally significant radiological incidents, the Office of Radiation and Indoor Air will play a key role in coordinating the incident and will work closely with OSWER to jointly manage the EPA response.

Terrorist Incidents

For NSIs involving issues of homeland security, EPA's Office of Homeland Security (OHS) will work closely with the Agency Emergency Coordinator to facilitate the resolution of significant policy issues while the Emergency Coordinator manages the response. EPA anticipates that an NSI may also be treated as a crime scene. Consequently, EPA may respond to an NSI with resources that are capable of handling not only the assessment and cleanup aspects of a response, but also the preservation of a potential crime scene. National Counter Terrorism Evidence Response Teams (NCERTs) work closely with the FBI, EPA OSCs, and other responders to assist in the initial response and to conduct investigations of conventional, chemical, biological or radiological terrorist attacks or threats. The NCERT teams are an entity of the Office of Criminal Enforcement, Forensics and Training and are made up of Special Agents from CID and scientific personnel from the National Enforcement Investigation Center.

Support Mechanisms

Each Regional Emergency Response Program has been assigned two “backup” regions. These regions will provide, upon request, additional OSCs, contractors and/or other EPA staff support (e.g., contracting officers, analytical support). Backup regions can provide immediate support to the impacted region during the transition to a nationally managed NSI operation.

The following “Special Teams” are mandated by the NCP and are available to an OSC at anytime: (1) the Coast Guard National Strike Force, (2) the EPA Environmental Response Team, (3) NOAA’s Scientific Support Coordinators, (4) the U.S. Navy Supervisor of Salvage, (5) EPA’s Radiological Emergency Response Teams (RERTs), (6) the USCG District Response Groups, and (7) the USCG National Pollution Funds Center.

The Regional Response Team (RRT) and the National Response Team (NRT) provide a forum for federal agency field offices and state agencies to exchange information about their abilities to respond to OSCs' requests for assistance. RRT and NRT members do not respond directly to releases or spills, but may be called upon to provide technical advice, equipment, or manpower to assist with a response. The OSC may call upon the appropriate RRT and/or the NRT and can request assistance from federal or state authorities to ensure that sufficient resources will be available during an incident. Such resources include equipment, guidance, training, and technical expertise for dealing with releases of hazardous substances, pollutants, contaminants or oil. This coordination assures that resources are used as wisely as possible.

Many programs across the Agency will be required to provide critical support during an NSI. In particular, the Office of Administration and Resource Management (OARM) may be called upon to provide a number of critical services including: contracting, personnel support, health and safety program implementation, and coordination of consultative and site medical services. In addition, through the NICT and RICTs, regional and headquarters staff from a wide variety of EPA programs may be called upon to provide technical advice and assistance to support the response effort. These may include air, water, pesticides, toxic substances, research and development, finance, information management, public affairs, legal, enforcement and international affairs.

IMPLEMENTATION

This concept paper outlines the overall strategy for a National Approach to Response and, when fully implemented, will prepare EPA to respond quickly and comprehensively to major incidents. To ensure implementation, Agency guidance will be developed to fully characterize roles and responsibilities and the processes required to manage an NSI. In addition, a detailed workplan will be put into place to address key implementation requirements, which include (but are not limited to) 1) establishment of a comprehensive roster of EPA employees who can be called upon to assist during an NSI, 2) a training and exercise plan, 3) field equipment and telecommunication needs plan, 4) laboratory capability needs plan, and 5) funding requirements. Lastly, this approach will be adjusted as necessary as the Department of Homeland Security moves forward to develop a new National Response Plan, a National Incident Management System, and the Nuclear Incident Response Team.



U.S. Environmental Protection Agency **Strategic Plan for Homeland Security**



September 2002



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

September, 2002

THE ADMINISTRATOR

The terrorist attacks of September 11, 2001, transformed the Environmental Protection Agency's long-standing mission to protect the environment and safeguard human health in new and important ways. For more than 30 years, the EPA has worked on behalf of the American people to protect our country from the effects of pollution and the threat of environmental degradation. Our goal has always been to make America's air cleaner, its water purer, and its land better protected.

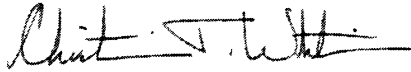
With the United States under threat of attack from international terrorists and others who seek to do our country harm, EPA's traditional mission has expanded to include protecting our country against the environmental and health consequences of acts of terrorism. EPA has the important responsibility of helping to secure the nation's drinking and wastewater infrastructure, of promoting security of our chemical industry and hazardous materials sector, and of responding and recovering from acts of biological, chemical, certain radiological, and other terrorist attacks.

For example, EPA has been responsible for monitoring environmental conditions in and around the World Trade Center site, to help protect both rescue and recovery workers as well as those who live and work in Lower Manhattan. EPA also was responsible for developing and carrying out a plan for decontaminating the Hart Senate Office Building and other Capitol Hill locations. In addition to this work, every part of the Agency has been actively engaged in efforts to protect our country from attack and increase our ability to respond, should another successful attack occur.

In order to ensure that EPA is able to meet both its traditional mission and its homeland security responsibilities, late last year I directed the Agency's Homeland Security Working Group, chaired by Deputy Administrator Linda Fisher, to develop a strategic plan for homeland security. This document is the result of that effort. It reflects the contributions of every program office and regional office in the Agency and reflects EPA's best thinking about this crucial issue.

EPA's *Strategic Plan for Homeland Security* also reflects the responsibilities assigned our Agency in President Bush's *National Strategy for Homeland Security* and in his legislative proposal for the creation of a new Department of Homeland Security. It recognizes that while the missions we are prepared to carry out are indispensable elements of any national effort to secure the homeland, there may, over time, be other federal departments or agencies better suited or able to carry out certain aspects of those missions.

As this *Strategic Plan for Homeland Security* describes, the Environmental Protection Agency has the experience and expertise to make an important contribution to what President Bush has described as the federal government's most important mission: defending America's homeland in the months and years ahead.

A handwritten signature in black ink, appearing to read "Christine Todd Whitman". The signature is fluid and cursive, with a prominent initial "C" and a long horizontal stroke at the end.

Christine Todd Whitman

Executive Summary

The terrorist attacks of September 11 and the threat of further harm to U.S. interests have illustrated the necessity for action by the Federal government to prepare and protect the public against the myriad threats posed by terrorism. As a result, security activities have increased dramatically nationwide, most notably with the President's creation of the Office of Homeland Security (OHS) and proposal to join key federal organizations in a new Department of Homeland Security.

The Environmental Protection Agency's (EPA) mission is clear: to protect human health and safeguard the environment. In pursuing this mission, EPA has developed certain unique scientific and technical expertise and possesses additional capabilities which complement those of other Federal agencies. The events of September 11 and thereafter have led EPA to reassess these capabilities relative to national security to determine whether these capabilities can be enhanced to better protect the American people. As a key agency charged with crisis and consequence management responsibilities under the National Strategy for Homeland Security, EPA must be ready to deploy this expertise and capability to help to detect, prevent, protect against, respond to, and recover from a terrorist attack against the United States.

This document represents the results of strategic planning for homeland security efforts. It reflects the deliberations of the Agency's senior leadership since November 2001 as well as initial discussions with other Federal agencies and organizations, including the Office of Homeland Security. This draft strategic plan for homeland security describes expansion of activities that EPA is already pursuing under existing programs and new initiatives in direct response to potential threats and vulnerabilities. The goals of this strategic plan are organized into four mission-critical areas:

1. Critical Infrastructure Protection
2. Preparedness, Response, and Recovery
3. Communication and Information
4. Protection of EPA Personnel and Infrastructure.

EPA has developed specific tactics to accomplish each goal (see Exhibit 1) and, for many goals, detailed activity lists and time frames for their completion. For almost every tactic, a key initial activity will be coordinated with participation from the new Department of Homeland Security, other Federal agencies, and EPA's partners at the state, local, and tribal levels. In acting cooperatively, all organizations benefit from varying perspectives and expertise, thus ensuring the most efficient use of resources. Each of the four major areas is described briefly below.

Critical Infrastructure Protection

EPA has unique programmatic responsibilities and expertise related to the water and wastewater industries; the use, handling, storage, release, and disposal of chemicals and chemical wastes at industrial facilities; and indoor air quality. In these areas, EPA is committed to assessing and reducing vulnerabilities and strengthening detection and response capabilities for critical

infrastructures. In addition, EPA will contribute to similar efforts led by other Federal agencies addressing food, transportation, and energy industries, and will provide environmental expertise to support Federal law enforcement activities.

Preparedness, Response, and Recovery

Under the National Strategy for Homeland Security and various Federal response plans, EPA has specific response and recovery responsibilities. For example, EPA staff were active in New York City, providing air monitoring at the World Trade Center site shortly after September 11. Other EPA staff had a principal role in carrying out the decontamination of anthrax from the Federal office buildings. These experiences made clear that enhancements in EPA's response and recovery capabilities were necessary. Under this goal, EPA will focus on strengthening and broadening its response capabilities, clarifying its roles and responsibilities to ensure an effective response, and promoting improved response capabilities across government and industry in the areas in which EPA has unique knowledge and expertise. Among the goals in this area are the development, dissemination, and exercising of new and improved tools and techniques for responding to chemical, biological, and radiological incidents.

Communication and Information

Comprehensive, accurate, well-organized, and timely information is critical to sound decision making. EPA possesses unique capabilities to collect, synthesize, interpret, manage, disseminate, and provide understanding to complex information about environmental and human-made contaminants and the condition of the environment. Effectively managing and sharing this information within the Agency and with its partners at all levels of government and industry will contribute to the nation's capability to detect, prepare for, prevent, protect against, respond to, and recover from terrorist incidents.

Protection of EPA Personnel and Infrastructure

The security and protection of its own personnel and infrastructure are critical to ensuring EPA's ability to respond to terrorist incidents as well as continue to fulfill its mission. In recognition of this, EPA will undertake steps to safeguard its staff, ensure the continuity of its operations, and protect the operational capability of its vital infrastructure assets.

Collectively, the activities and initiatives described in this strategic plan represent a significant enhancement of EPA's capabilities to detect, prepare for, prevent, respond to, and recover from terrorist incidents. These efforts will be directed and overseen by the most senior levels of the Agency. EPA is currently exploring a variety of organizational structures that can be used to best manage homeland security efforts. The new structure will be accessed in developing the specific schedule for implementing this strategic plan, establishing performance measures, targets, and accountability mechanisms, facilitating coordination with other Federal agencies and other partners, and ensuring appropriate allocation of resources.

Exhibit 1: EPA's Homeland Security Goals

Critical Infrastructure Protection Goals

1. EPA will work with the states, tribes, drinking water and wastewater utilities (water utilities), and other partners to enhance the security of water and wastewater utilities.
2. EPA will work with the states, tribes, and other partners to enhance security in the chemical and oil industry.
3. EPA will work with other Federal agencies, the building industry, and other partners to help reduce the vulnerability of indoor environments in buildings to chemical, biological, and radiological (CBR) incidents.
4. EPA will help to ensure that critical environmental threat monitoring information and technologies are available to the private sector, Federal counterparts, and state and local government to assist in threat detection.
5. EPA will be an active participant in national security and homeland security efforts pertaining to food, transportation, and energy.
6. EPA will manage its Federal, civil, and criminal enforcement programs to meet our homeland security, counter-terrorism, and anti-terrorism responsibilities under Presidential Decision Directives (PDD) 39, 62, and 63 and environmental civil and criminal statutes.

Preparedness, Response, and Recovery Goals

1. EPA will be prepared to respond to and recover from a major terrorist incident anywhere in the country. To do this, the Agency will maintain trained personnel and effective communications, ensure practiced coordination and decision-making, and provide the best technical tools and technologies to address threats.
2. EPA will communicate to Federal, state, and local agencies the Agency's roles, responsibilities, authorities, capabilities, and inter-dependencies under all applicable emergency plans consistent with the National Strategy for Homeland Security and efforts undertaken by the new Department of Homeland Security. The Agency will also understand the roles, responsibilities, authorities, capabilities, and inter-dependencies of its partners.
3. EPA will support and develop the preparedness of state, local, and tribal governments and private industry to respond to, recover from, and continue operations after a terrorist attack.
4. EPA will advance the state of the knowledge in the areas relevant to homeland security to provide first responders and decision-makers with tools and the scientific and technical understanding they need to manage existing or potential threats to homeland security.

Communication and Information Goals

1. EPA will use reliable environmental information from internal and external sources to ensure informed decision-making and appropriate response.
2. EPA will effectively disseminate timely, quality environmental information to all levels of government, industry, and the public, allowing them to make informed decisions about human health and the environment.
3. EPA will exchange information with the national security community to prevent, detect, and respond to terrorist threats or attacks.
4. EPA will continually and reliably communicate with employees and managers.

Protection of EPA Personnel and Infrastructure Goals

1. EPA will safeguard its employees.
2. EPA will ensure the continuation of the Agency's essential functions and operations.
3. EPA will maintain a secure technology infrastructure capable of supporting lab data transport and analysis functions, 24x7 telecommunications to all EPA locations, and management of critical data and information.
4. EPA will ensure that the Agency's physical structures and assets are secure and operational.

Attachment

For Immediate Release

Office of the Press Secretary

February 28, 2003

Homeland Security Presidential Directive/HSPD-5

Subject: Management of Domestic Incidents

Purpose

(1) To enhance the ability of the United States to manage domestic incidents by establishing a single, comprehensive national incident management system.

Definitions

(2) In this directive:

(a) the term "Secretary" means the Secretary of Homeland Security.

(b) the term "Federal departments and agencies" means those executive departments enumerated in 5 U.S.C. 101, together with the Department of Homeland Security; independent establishments as defined by 5 U.S.C. 104(1); government corporations as defined by 5 U.S.C. 103(1); and the United States Postal Service.

(c) the terms "State," "local," and the "United States" when it is used in a geographical sense, have the same meanings as used in the Homeland Security Act of 2002, Public Law 107-296.

Policy

(3) To prevent, prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies, the United States Government shall establish a single, comprehensive approach to domestic incident management. The objective of the United States Government is to ensure that all levels of government across the Nation have the capability to work efficiently and effectively together, using a national approach to domestic incident management. In these efforts, with regard to domestic incidents, the United States Government treats crisis management and consequence management as a single, integrated function, rather than as two separate functions.

(4) The Secretary of Homeland Security is the principal Federal official for domestic incident management. Pursuant to the Homeland Security Act of 2002, the Secretary is responsible for coordinating Federal operations within the United States to prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies. The Secretary shall coordinate the Federal Government's resources utilized in response to or recovery from terrorist attacks, major disasters, or other emergencies if and when any one of the following four conditions applies: (1) a Federal department or agency acting under its own authority

has requested the assistance of the Secretary; (2) the resources of State and local authorities are overwhelmed and Federal assistance has been requested by the appropriate State and local authorities; (3) more than one Federal department or agency has become substantially involved in responding to the incident; or (4) the Secretary has been directed to assume responsibility for managing the domestic incident by the President.

(5) Nothing in this directive alters, or impedes the ability to carry out, the authorities of Federal departments and agencies to perform their responsibilities under law. All Federal departments and agencies shall cooperate with the Secretary in the Secretary's domestic incident management role.

(6) The Federal Government recognizes the roles and responsibilities of State and local authorities in domestic incident management. Initial responsibility for managing domestic incidents generally falls on State and local authorities. The Federal Government will assist State and local authorities when their resources are overwhelmed, or when Federal interests are involved. The Secretary will coordinate with State and local governments to ensure adequate planning, equipment, training, and exercise activities. The Secretary will also provide assistance to State and local governments to develop all-hazards plans and capabilities, including those of greatest importance to the security of the United States, and will ensure that State, local, and Federal plans are compatible.

(7) The Federal Government recognizes the role that the private and nongovernmental sectors play in preventing, preparing for, responding to, and recovering from terrorist attacks, major disasters, and other emergencies. The Secretary will coordinate with the private and nongovernmental sectors to ensure adequate planning, equipment, training, and exercise activities and to promote partnerships to address incident management capabilities.

(8) The Attorney General has lead responsibility for criminal investigations of terrorist acts or terrorist threats by individuals or groups inside the United States, or directed at United States citizens or institutions abroad, where such acts are within the Federal criminal jurisdiction of the United States, as well as for related intelligence collection activities within the United States, subject to the National Security Act of 1947 and other applicable law, Executive Order 12333, and Attorney General-approved procedures pursuant to that Executive Order. Generally acting through the Federal Bureau of Investigation, the Attorney General, in cooperation with other Federal departments and agencies engaged in activities to protect our national security, shall also coordinate the activities of the other members of the law enforcement community to detect, prevent, preempt, and disrupt terrorist attacks against the United States. Following a terrorist threat or an actual incident that falls within the criminal jurisdiction of the United States, the full capabilities of the United States shall be dedicated, consistent with United States law and with activities of other Federal departments and agencies to protect our national security, to assisting the Attorney General to identify the perpetrators and bring them to justice. The Attorney General and the Secretary shall establish appropriate relationships and mechanisms for cooperation and coordination between their two departments.

(9) Nothing in this directive impairs or otherwise affects the authority of the Secretary of Defense over the Department of Defense, including the chain of command for military forces from the President as Commander in Chief, to the Secretary of Defense, to the commander of military forces, or military command and control procedures. The Secretary of Defense

shall provide military support to civil authorities for domestic incidents as directed by the President or when consistent with military readiness and appropriate under the circumstances and the law. The Secretary of Defense shall retain command of military forces

providing civil support. The Secretary of Defense and the Secretary shall establish appropriate relationships and mechanisms for cooperation and coordination between their two departments.

(10) The Secretary of State has the responsibility, consistent with other United States Government activities to protect our national security, to coordinate international activities related to the prevention, preparation, response, and recovery from a domestic incident, and for the protection of United States citizens and United States interests overseas. The Secretary of State and the Secretary shall establish appropriate relationships and mechanisms for cooperation and coordination between their two departments.

(11) The Assistant to the President for Homeland Security and the Assistant to the President for National Security Affairs shall be responsible for interagency policy coordination on domestic and international incident management, respectively, as directed by the President. The Assistant to the President for Homeland Security and the Assistant to the President for National Security Affairs shall work together to ensure that the United States domestic and international incident management efforts are seamlessly united.

(12) The Secretary shall ensure that, as appropriate, information related to domestic incidents is gathered and provided to the public, the private sector, State and local authorities, Federal departments and agencies, and, generally through the Assistant to the President for Homeland Security, to the President. The Secretary shall provide standardized, quantitative reports to the Assistant to the President for Homeland Security on the readiness and preparedness of the Nation -- at all levels of government -- to prevent, prepare for, respond to, and recover from domestic incidents.

(13) Nothing in this directive shall be construed to grant to any Assistant to the President any authority to issue orders to Federal departments and agencies, their officers, or their employees.

Tasking

(14) The heads of all Federal departments and agencies are directed to provide their full and prompt cooperation, resources, and support, as appropriate and consistent with their own responsibilities for protecting our national security, to the Secretary, the Attorney General, the Secretary of Defense, and the Secretary of State in the exercise of the individual leadership responsibilities and missions assigned in paragraphs (4), (8), (9), and (10), respectively, above.

(15) The Secretary shall develop, submit for review to the Homeland Security Council, and administer a National Incident Management System (NIMS). This system will provide a consistent nationwide approach for Federal, State, and local governments to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among Federal, State, and local capabilities, the NIMS will include a core set of

concepts, principles, terminology, and technologies covering the incident command system; multi-agency coordination systems; unified command; training; identification and management of resources (including systems for classifying types of resources); qualifications and certification; and the collection, tracking, and reporting of incident information and incident resources.

(16) The Secretary shall develop, submit for review to the Homeland Security Council, and administer a National Response Plan (NRP). The Secretary shall consult with appropriate Assistants to the President (including the Assistant to the President for Economic Policy) and the Director of the Office of Science and Technology Policy, and other such Federal officials as may be appropriate, in developing and implementing the NRP. This plan shall integrate Federal Government domestic prevention, preparedness, response, and recovery plans into one all-discipline, all-hazards plan. The NRP shall be unclassified. If certain operational aspects require classification, they shall be included in classified annexes to the NRP.

(a) The NRP, using the NIMS, shall, with regard to response to domestic incidents, provide the structure and mechanisms for national level policy and operational direction for Federal support to State and local incident managers and for exercising direct Federal authorities and responsibilities, as appropriate.

(b) The NRP will include protocols for operating under different threats or threat levels; incorporation of existing Federal emergency and incident management plans (with appropriate modifications and revisions) as either integrated components of the NRP or as supporting operational plans; and additional operational plans or annexes, as appropriate, including public affairs and intergovernmental communications.

(c) The NRP will include a consistent approach to reporting incidents, providing assessments, and making recommendations to the President, the Secretary, and the Homeland Security Council.

(d) The NRP will include rigorous requirements for continuous improvements from testing, exercising, experience with incidents, and new information and technologies.

(17) The Secretary shall:

(a) By April 1, 2003, (1) develop and publish an initial version of the NRP, in consultation with other Federal departments and agencies; and (2) provide the Assistant to the President for Homeland Security with a plan for full development and implementation of the NRP.

(b) By June 1, 2003, (1) in consultation with Federal departments and agencies and with State and local governments, develop a national system of standards, guidelines, and protocols to implement the NIMS; and (2) establish a mechanism for ensuring ongoing management and maintenance of the NIMS, including regular consultation with other Federal departments and agencies and with State and local governments.

(c) By September 1, 2003, in consultation with Federal departments and agencies and the Assistant to the President for Homeland Security, review existing authorities and regulations and prepare recommendations for the President on revisions necessary to implement fully the NRP.

(18) The heads of Federal departments and agencies shall adopt the NIMS within their departments and agencies and shall provide support and assistance to the Secretary in the development and maintenance of the NIMS. All Federal departments and agencies will use the NIMS in their domestic incident management and emergency prevention, preparedness, response, recovery, and mitigation activities, as well as those actions taken in support of State or local entities. The heads of Federal departments and agencies shall participate in the NRP, shall assist and support the Secretary in the development and maintenance of the NRP, and shall participate in and use domestic incident reporting systems and protocols established by the Secretary.

(19) The head of each Federal department and agency shall:

(a) By June 1, 2003, make initial revisions to existing plans in accordance with the initial version of the NRP.

(b) By August 1, 2003, submit a plan to adopt and implement the NIMS to the Secretary and the Assistant to the President for Homeland Security. The Assistant to the President for Homeland Security shall advise the President on whether such plans effectively implement the NIMS.

(20) Beginning in Fiscal Year 2005, Federal departments and agencies shall make adoption of the NIMS a requirement, to the extent permitted by law, for providing Federal preparedness assistance through grants, contracts, or other activities. The Secretary shall develop standards and guidelines for determining whether a State or local entity has adopted the NIMS.

Technical and Conforming Amendments to National Security Presidential Directive-1 (NSPD-1)

(21) NSPD-1 ("Organization of the National Security Council System") is amended by replacing the fifth sentence of the third paragraph on the first page with the following: "The Attorney General, the Secretary of Homeland Security, and the Director of the Office of Management and Budget shall be invited to attend meetings pertaining to their responsibilities."

Technical and Conforming Amendments to National Security Presidential Directive-8 (NSPD-8)

(22) NSPD-8 ("National Director and Deputy National Security Advisor for Combating Terrorism") is amended by striking "and the Office of Homeland Security," on page 4, and inserting "the Department of Homeland Security, and the Homeland Security Council" in lieu thereof.

Technical and Conforming Amendments to Homeland Security Presidential Directive-2 (HSPD-2)

(23) HSPD-2 ("Combating Terrorism Through Immigration Policies") is amended as follows:

(a) striking "the Commissioner of the Immigration and Naturalization Service (INS)" in the second sentence of the second paragraph in section 1, and inserting "the Secretary of

Homeland Security" in lieu thereof ;

(b) striking "the INS," in the third paragraph in section 1, and inserting "the Department of Homeland Security" in lieu thereof;

(c) inserting ", the Secretary of Homeland Security," after "The Attorney General" in the fourth paragraph in section 1;

(d) inserting ", the Secretary of Homeland Security," after "the Attorney General" in the fifth paragraph in section 1;

(e) striking "the INS and the Customs Service" in the first sentence of the first paragraph of section 2, and inserting "the Department of Homeland Security" in lieu thereof;

(f) striking "Customs and INS" in the first sentence of the second paragraph of section 2, and inserting "the Department of Homeland Security" in lieu thereof;

(g) striking "the two agencies" in the second sentence of the second paragraph of section 2, and inserting "the Department of Homeland Security" in lieu thereof;

(h) striking "the Secretary of the Treasury" wherever it appears in section 2, and inserting "the Secretary of Homeland Security" in lieu thereof;

(i) inserting ", the Secretary of Homeland Security," after "The Secretary of State" wherever the latter appears in section 3;

(j) inserting ", the Department of Homeland Security," after "the Department of State," in the second sentence in the third paragraph in section 3;

(k) inserting "the Secretary of Homeland Security," after "the Secretary of State," in the first sentence of the fifth paragraph of section 3;

(l) striking "INS" in the first sentence of the sixth paragraph of section 3, and inserting "Department of Homeland Security" in lieu thereof;

(m) striking "the Treasury" wherever it appears in section 4 and inserting "Homeland Security" in lieu thereof;

(n) inserting ", the Secretary of Homeland Security," after "the Attorney General" in the first sentence in section 5; and

(o) inserting ", Homeland Security" after "State" in the first sentence of section 6.

Technical and Conforming Amendments to Homeland Security Presidential Directive-3 (HSPD-3)

(24) The Homeland Security Act of 2002 assigned the responsibility for administering the Homeland Security Advisory System to the Secretary of Homeland Security. Accordingly, HSPD-3 of March 11, 2002 ("Homeland Security Advisory System") is amended as follows:

(a) replacing the third sentence of the second paragraph entitled "Homeland Security Advisory System" with "Except in exigent circumstances, the Secretary of Homeland Security shall seek the views of the Attorney General, and any other federal agency heads the Secretary deems appropriate, including other members of the Homeland Security Council, on the Threat Condition to be assigned."

(b) inserting "At the request of the Secretary of Homeland Security, the Department of Justice shall permit and facilitate the use of delivery systems administered or managed by the Department of Justice for the purposes of delivering threat information pursuant to the Homeland Security Advisory System." as a new paragraph after the fifth paragraph of the section entitled "Homeland Security Advisory System."

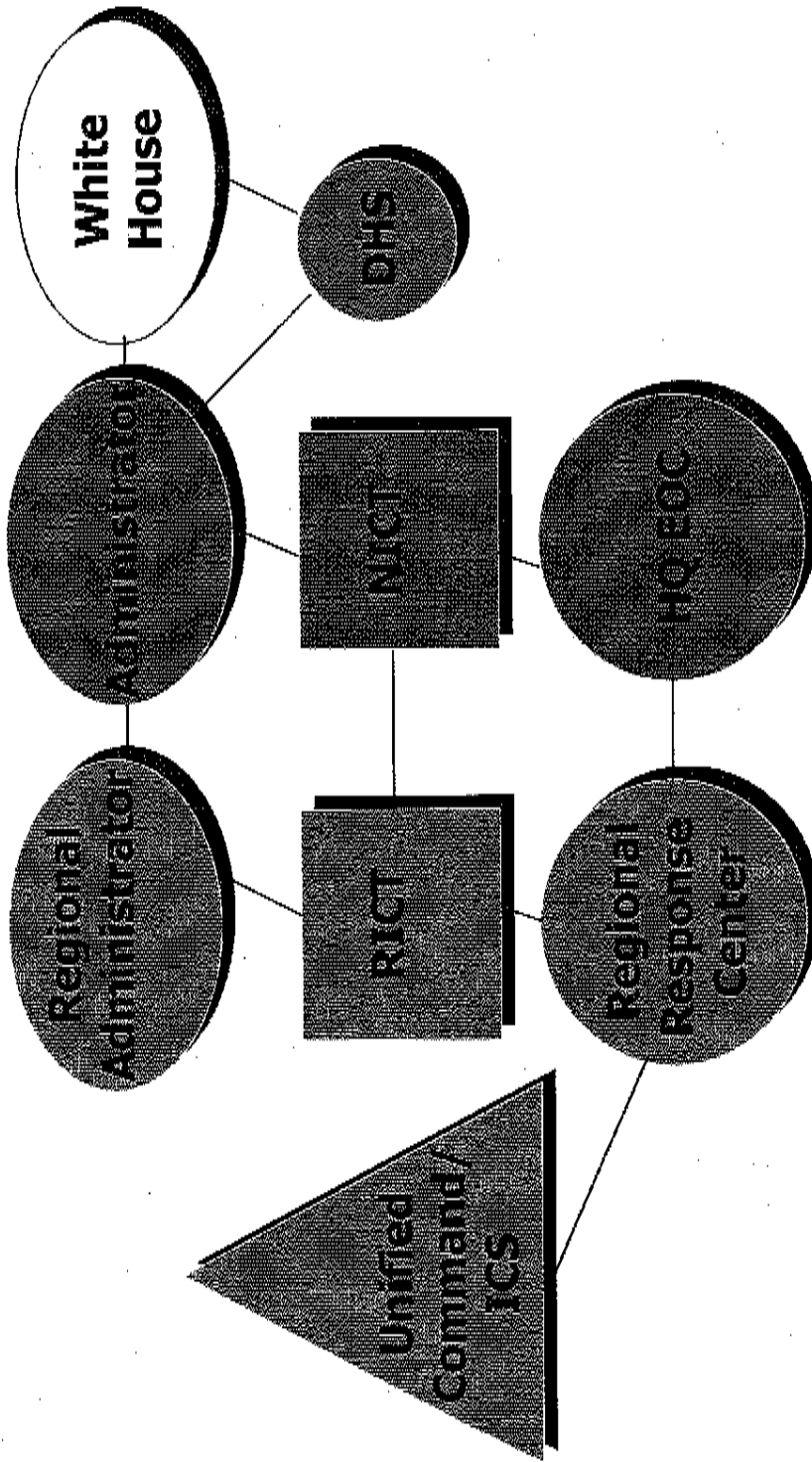
(c) inserting ", the Secretary of Homeland Security" after "The Director of Central Intelligence" in the first sentence of the seventh paragraph of the section entitled "Homeland Security Advisory System".

(d) striking "Attorney General" wherever it appears (except in the sentences referred to in subsections (a) and (c) above), and inserting "the Secretary of Homeland Security" in lieu thereof; and

(e) striking the section entitled "Comment and Review Periods."

GEORGE W. BUSH

Figure 1: Nationally Significant Incident Management



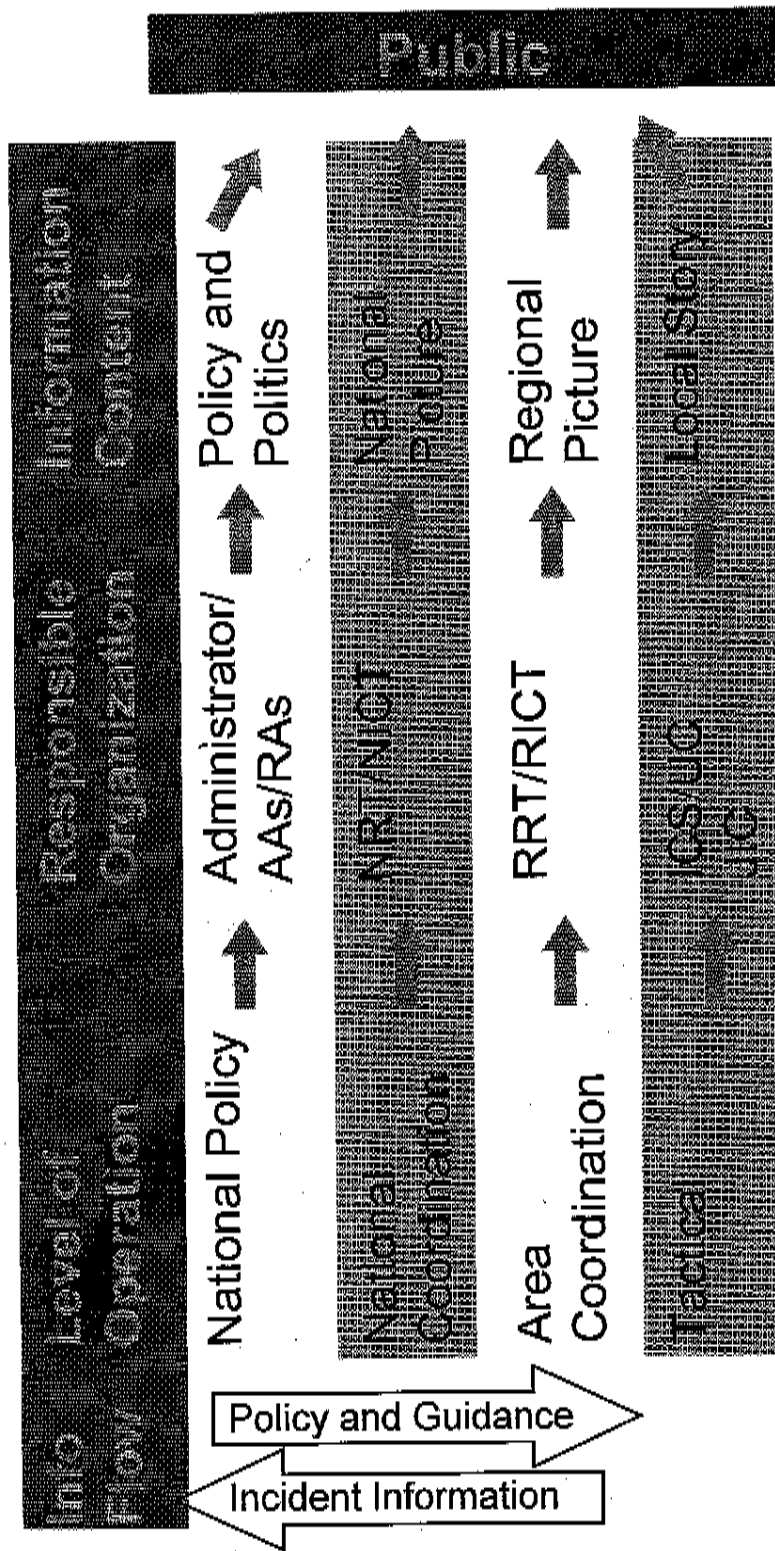


Figure 3: Nationally Significant Incident Information Flow

Thomas P. Dunne

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WATER RESOURCES

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HOT ISSUES

ENVIRONMENTAL FLOW PROTECTION IN TEXAS

Myron J. Hess

TABLE OF CONTENTS

A Brief Overview Of The Environmental Flow Issue	1
Environmental Flows Are Receiving Increased Attention	3
The 2003 Legislative Response	5
Environmental Flows In The Senate Bill 1 Planning Process	8
Some Options For Protecting Environmental Flows	12
Conditions on prospective rights	12
New Water Rights for Environmental Flows	12
Reservation from Appropriation	13
Cancellation of existing rights	13
Voluntary acquisition of existing rights	14
Conservation funding and conversion of saved water to environmental flow purposes	15
Conditions on existing rights	15
A Brief Look Ahead	16

ENVIRONMENTAL FLOW PROTECTION IN TEXAS

Myron J. Hess¹

A BRIEF OVERVIEW OF THE ENVIRONMENTAL FLOW ISSUE

The history of providing for environmental needs in Texas has mostly been a story of neglect. The issue just has not been on the radar screen until fairly recently. It wasn't until 1985 that the Texas Legislature directed that environmental issues should be considered in granting individual water rights permits. The record of the Texas Commission on Environmental Quality (TCEQ) and its predecessor agencies on implementing that charge has been mixed.

With only limited exceptions, surface water rights in Texas are based on the prior appropriation system. Although public ownership of surface water is acknowledged, individual users can obtain permits to use state water for various purposes. Generally, those permits are perpetual and the oldest permit has the first claim on the water. Today, we find ourselves in a situation where many of our rivers are fully appropriated or even over-appropriated. That means, at least during dry times, all of the water in those systems has been spoken for, even without accounting for environmental flow needs. In many parts of the state, the rights to divert the vast majority of normal stream and river flow were granted long before 1985 and long before environmental conditions in permits were even considered. Fortunately, at least for the time being, many of those water rights are not being fully used. However, if they were (a prospect that is becoming more likely with the recent heightened interest in water marketing), streams and rivers could be pumped dry for extended periods of time.

Obviously, that would be bad for fish and other aquatic life. It also would be bad for other wildlife species that depend on healthy aquatic systems. Healthy rivers and bay and estuary systems, and the fish and wildlife they support, are critical to many economic activities. Nature-based tourism is a significant economic activity that is growing rapidly. Commercial and recreational fishing along the coast generates around two billion dollars in economic activity annually. And, let's face it, rivers without water or rivers and bays suffering from serious water quality problems simply are not amenities that will attract tourists or new residents.

Meeting environmental water needs was, of course, the first use of water. However, when the appropriative system of water rights was created, environmental uses really were not factored in. That likely can be attributed, in large part, to a lack of understanding of environmental water needs and to a failure to recognize the extent to which humans would impact our river systems. It may well have seemed more than a little unlikely that seemingly unlimited fish and wildlife resources would, in some instances, be pushed to the brink of extinction in a matter of only about

¹ The author is legal counsel and director of Texas water programs for the Gulf States Natural Resource Center of the National Wildlife Federation. However, the opinions and positions expressed in this paper are the opinions of the author and do not necessarily reflect the opinions or positions of the National Wildlife Federation.

a hundred years. Regardless, we now are faced with the issue of incorporating environmental flow protection into the appropriative system for surface waters and into the system, or lack thereof, for regulating groundwater withdrawals.

Environmental water needs can be thought of as falling into one of two primary categories: instream flows or freshwater inflows. Instream flows in this paper refer to the uses of water that take place in rivers and streams. Instream needs include water for freshwater aquatic organisms, for wildlife species, and for recreational activities such as canoeing, swimming, and wading. It is important to recognize that because the ability of a stream to assimilate pollutants is highly dependent on the amount of flow in the stream, water quality protection also is a component of instream flows.

Freshwater inflows are the flows of freshwater into bays and estuaries that are necessary to support the productivity of those aquatic systems. Freshwater inflows lessen salinity levels and provide important nutrient and sediment inputs into estuarine systems. The amount and timing of freshwater inflows are key factors that dictate the productivity of our bay systems. The vast majority of recreationally and commercial important marine species are dependent, during at least some life stage, on healthy bays and estuaries.

Our general tendency is to think of environmental water needs as a surface water issue only. That is an oversimplification. Of course, that tendency is entirely consistent with the oversimplification of our legal approach to the interaction between surface water availability and groundwater consumption. In Senate Bill 1, enacted in 1997, the Texas Legislature took two steps towards recognizing that groundwater and surface water are inter-related parts of a single resource by adding a provision to Section 11.134 of the Water Code requiring consideration of “the effects of any hydrological connection between surface water and groundwater” and by adding Section 11.151 directing consideration of the “effects, if any, on groundwater or groundwater recharge” when the commission acts on a water right application.² Unfortunately, in Senate Bill 2, enacted in 2001, the Legislature promptly took one step back by amending Section 11.134 to remove the requirement for considering the connection between groundwater and surface water. The state is still a long ways from addressing our surface water and groundwater resources in a comprehensive fashion.

Generally, environmental flow issues related to groundwater are linked to the effect of groundwater depletion on surface water flows. That depletion can occur through loss of discrete spring flows or through the loss of less discrete contributions, such as seeps, to stream or river

² TEX. WATER CODE ANN. §§ 11.134 (b)(3)(D), 11.151.

baseflows. Such groundwater contributions are particularly important for providing baseflow during periods of dry weather. However, at least in some instances, groundwater depletion can cause other environmental impacts. For example, numerous species actually live within the Edwards Aquifer.

ENVIRONMENTAL FLOWS ARE RECEIVING INCREASED ATTENTION

The issue of protection of environmental flows has been receiving greatly increased attention in recent years. The new regionally-based water planning efforts created by Senate Bill 1 (S.B. 1) focused increased attention on future water needs. Senate Bill 1 established an iterative process by which 16 regional planning groups would develop regional plans that would then be combined into the State Water Plan. The plans are to be revisited every five years to ensure that new issues are addressed and that a 50-year planning horizon is always maintained. The first round of regional planning under the S.B. 1 process was loudly criticized for its failure adequately to consider environmental water needs.³ In addition, the Texas Living Waters Project, which is a cooperative project of the National Wildlife Federation, Environmental Defense, and the Lone Star Chapter of the Sierra Club, has been working, along with other organizations, to increase public awareness of the importance of environmental flows and related water issues.⁴

Also, several large applications were filed in the last two years seeking water rights for the sole purpose of protecting environmental flows. Certainly, the most notorious of those is the application filed by the San Marcos River Foundation (SMRF) for a water right permit to maintain flows in the San Marcos River and freshwater inflows into the Guadalupe Estuary.⁵

The overall rationale for the filing of the instream flow applications is fairly straight-forward. If a

³ This was one of the most common criticisms noted in the hundreds of written public comments filed regarding the State Water Plan. It also was one of the key issues raised in detailed comments on each of the 16 regional water plans filed by the National Wildlife Federation. The Texas Parks and Wildlife Department also noted this deficiency in its comments on the draft 2002 State Water Plan.

⁴ For more information on the Texas Living Waters Project, see www.texaswatermatters.org.

⁵ Other similar applications were filed by the Caddo Lake Institute, Inc. (seeking protection for flows in the tributaries of and into Caddo Lake, which has been declared administratively complete and assigned application no. 5787); Matagorda Bay Foundation (seeking protection for inflows into Matagorda Bay from sources other than major rivers); and Galveston Bay Conservation and Preservation Association (seeking protection for inflows into Galveston Bay).

The Lower Colorado River Authority Foundation and the Lavaca-Navidad River Authority also filed applications for instream flow protection. However, those applications might most appropriately be viewed as "better us than them" filings.

The City of Austin also filed an application that included instream use protection as part of its proposal for indirect reuse of wastewater effluent.

permit is issued for a specific amount of flow for environmental flow protection purposes at a particular location, no one with a junior water right can take that water out upstream for other purposes. Thus, it is a way to get protection for environmental uses that is commensurate with the protections given for all other types of uses of water. Of course, in many river systems, the fact that existing, senior water rights already have been issued for almost all of the flow available other than during wet periods, greatly limits the dependability of potential instream flow water rights.⁶ However, such an approach does represent a way to minimize the extent to which the current situation, in terms of protection of environmental flows, is worsened. Generally speaking, an actual environmental flow permit would provide much greater certainty and enforceability than relying on potential conditions on some future permit to divert water for other uses.

The SMRF application elicited spirited responses. TCEQ staff found the application to be consistent with basic regulatory requirements, determined it to be administratively complete, and directed the publication of notice of the application. The protests from the traditional water purveyors were numerous and loud. Numerous requests for contested case hearings were filed along with, in some cases, motions for immediate dismissal of the application. While it certainly is beyond the scope of this paper to address all of the various arguments about the legality of the application, it is worth noting a couple of issues. Questions were raised about whether leaving water in a stream or river could be considered a beneficial use of water. Although instream flow is not expressly listed as a beneficial use in the Texas Water Code, there is a provision specifically authorizing the appropriation of water for "any other beneficial use."⁷ The TCEQ rules governing water rights permitting define "instream use" and note that it is a beneficial use of water.⁸ Other key arguments center on the question of whether or not an appropriation of water

⁶ For example, in the case of the San Marcos River Foundation, the application sought an annual flow amount of 157,469 acre-feet to be measured at a point on the San Marcos River. TCEQ staff recommended reducing that requested amount to 87,106 acre-feet with a specific monthly distribution. TCEQ staff then noted that, based on a modeling analysis assuming a repeat of historical conditions, the full 87,106 acre-feet would not be available during any particular calendar year and would only be available during 26% of the months. Similarly, TCEQ staff recommended reducing the amount requested for inflows to the Guadalupe Estuary from 1.3 million acre-feet to 980,494 per year with a specific monthly distribution and determined that amount would be available in 3.6% of years and 44% of the months. TNRCC (at that time TCEQ was still called the Texas Natural Resource Conservation Commission or TNRCC) Interoffice Memorandum from Kathy Alexander to Iliana Delgado, August 26, 2002. Depending on the specific type of use requested, TCEQ may grant a permit even if the water requested would not be available on a consistent basis. Assuming the amounts chosen as representing environmental flow needs are appropriate (or at least are not too high), that analysis suggests that environmental uses in the San Marcos River and the Guadalupe Estuary would be in serious trouble, even without the authorization of new diversions, if all existing water rights were fully used.

⁷ TEX. WATER CODE ANN. § 11.023 (b).

⁸ 30 TAC § 297.1 (defining "instream use" as "[t]he beneficial use of instream flows for such purposes including, but not limited to, navigation, recreation, hydropower, fisheries, game preserves, stock raising, park purposes, aesthetics, water quality protection, aquatic and riparian wildlife habitat, freshwater inflows for bays and estuaries, and any other instream use recognized by law" and stating "[a]n instream use is a beneficial use of water.").

requires some physical action such as the diversion or impoundment of the water. Anyone interested in the issue will find lengthy discussion in the briefs filed in the TCEQ proceeding.

Finally, after much delay, the matter was set for consideration by the TCEQ Commissioners on March 19, 2003. It is more than a little significant that the Texas Legislature was in session at that time. In addition to its normal process for filing protests and requests for contested case hearing, TCEQ solicited the filing of amicus briefs from interested parties. One of the most interesting filings was a brief on behalf of Lieutenant Governor David Dewhurst⁹. That brief acknowledges the importance of environmental flows, argues that the Water Code does not contemplate granting such a permit, and ultimately recommends that TCEQ delay action to allow the Legislature to address the issue.

However, on March 19, the TCEQ Commissioners considered the matter and voted to deny the application. The brief written order states that, in the judgment of the three commissioners, protective conditions on new permits, use of the Texas Water Trust, and a statutory dedication of 5 percent of the firm yield of certain reservoirs built with state funds are the means by which instream flows are to be protected.¹⁰ The TCEQ decision has been appealed to State District Court in Travis County, where it remains pending.¹¹

THE 2003 LEGISLATIVE RESPONSE

A number of bills addressing the issue were filed in the Texas Legislature during the 2003 Regular Session. It quickly became evident that S.B. 1374, filed by Senator Ken Armbrister, Chairman of the Senate Natural Resources Commission, was going to be the primary vehicle for addressing the instream flow issue. That proposed legislation changed dramatically from its initial version as the

⁹ Amicus Curiae Brief of Lieutenant Governor Dewhurst, TCEQ Docket No. 2003-0027-WR (submitted by Spencer Reid, General Counsel, Office of the Lieutenant Governor).

¹⁰ TCEQ Docket No. 2003-0027-WR, March 20, 20003, Order "denying the application by San Marcos River Foundation for a new water right to appropriate 1.3 million acre-feet of water per annum from the Guadalupe River to maintain streamflows for beneficial nonconsumptive instream use and to maintain beneficial inflows of freshwater to the Guadalupe Estuary, and related hearing requests."

The Texas Water Trust was established in 1997 as part of Senate Bill 1. The Trust exists as part of the Texas Water Bank and is designed to hold water rights dedicated to environmental flow protection. *See* TEX. WATER CODE ANN. § 15.7031.

Two separate provisions of the Water Code provide that when state money is used to build a reservoir located within 200 river miles of the coast, five percent of the firm yield of the reservoir is appropriated to the Texas Parks and Wildlife Department for environmental flow protection purposes. TEX. WATER CODE ANN. §§ 15.3041, 16.1331.

¹¹ There actually are two, virtually identical, cases pending. The first, Cause No. GN3-01251, was filed April 18, 2003. The second, Cause No. GN3-01925, was filed June 2, 2003. The two separate filings result from uncertainty about the date on which the TCEQ order denying the application actually became final.

result of a fairly extensive discussion process prior to any committee hearings. Ultimately, S.B. 1374 itself ran out of time and died in the House of Representatives. However, the substance of the legislation eventually rose from the dead, several times over, and was passed into law as part of S.B. 1639, which, until the very end of the session, was a fairly narrow groundwater bill.

The environmental flow provisions of S.B. 1639 establish a moratorium on the issuance of new permits¹² for instream flow protection until September 1, 2005 and establish a Study Commission on Water for Environmental Flows that is directed to consider the issue prior to the next legislative session. Another provision of the Bill sets out a "policy regarding waters of the state." That policy statement does acknowledge the importance of maintaining the "biological soundness" of rivers, lakes, bays and estuaries.¹³ That "policy" provision also provides that "state water may be appropriated only as expressly authorized by law" and goes on to say that "the legislature has not expressly authorized granting water rights exclusively" for instream flow protection. The legal effect of that language is not clear because it really is an interpretation by the current Legislature of the actions of previous legislatures. However, even though a court likely would not consider such an interpretation to be controlling, it certainly may have a significant effect on state agency actions. If the Legislature does address the issue of instream flow protection in a definitive fashion during the 2005 Session, the language likely will be unimportant. However, if the Legislature does not act decisively prior to the expiration of the explicit two-year moratorium established in Section 11.0237, the language of Section 11.0235 may become more significant. The version of S.B.1374 that was voted out of the Senate Natural Resources Committee included a two-year expiration date for Section 11.0235. However, the expiration date for that provision was removed by Senator Armbrister in a floor amendment.¹⁴

The Study Commission is given a fairly broad charge to hold hearings and study public policy issues related to balancing human water needs and the need to protect river and bay and estuary systems. It is directed to issue a report summarizing any hearings or studies, any legislative recommendations, or other recommendations. The Study Commission will be composed of agency representatives, legislators, and public members. The agency representatives are the chairperson of the TCEQ, the chairperson of the Texas Water Development Board (TWDB), and the chairperson of the Texas Parks and Wildlife Commission or their designees. The Governor

¹² Significantly, the moratorium language is expressly qualified to note that the moratorium does not apply to applications to convert existing water right permits to environmental flow protection. Senate Bill 1639, 78th Leg., Reg. Session, SECTION 2, § 11.0237 (to be codified at TEX. WATER CODE ANN. § 11.0237).

¹³ Senate Bill 1639, 78th Leg., Reg. Session, SECTION 2, § 11.0235 (to be codified at TEX. WATER CODE ANN. § 11.0235).

¹⁴ See, S.J. of TEX., 78th Leg., Reg. Sess. (May 5, 2003 at p. 13) (describing Floor Amendment No. 2 to S.B. 1374).

will appoint two public members and there are no constraints on those appointments. The Lieutenant Governor will appoint three Senators and two public members. Similarly, the Speaker of the House will appoint three House Members and two public members. For both the Lt. Governor and the Speaker, one of the public members appointed must represent "a river authority or municipal water supply authority" and the other "an entity that is distinguished by its efforts in resource protection."¹⁵

The Study Commission is directed to establish a scientific advisory committee to serve as "impartial scientific advisors and reviewers for the study commission." The Commission is authorized to establish additional advisory committees. Finally, the Study Commission is directed to adopt rules to govern its operations. The Study Commission itself goes out of existence on September 1, 2005. Although the Study Commission has the potential to make significant progress on the issue of environmental flow protection, that progress is far from guaranteed. For example, following the 2001 Legislative Session, a Joint Committee on Water Resources was established and charged with, among other things, making recommendations for dealing with environmental flow issues. Ultimately, no substantial recommendations on that issue resulted from the Joint Committee's work.¹⁶ Certainly, the profile of the issue is now higher than it was at that time. However, ultimately, the success or failure of the new Study Commission largely will depend on the appointments made and the priority assigned to the issue by the Governor, Lieutenant Governor, and the Speaker.

The instream flow portion of S.B. 1639 also amends two provisions of Section 11.147 of the Water Code. Those two provisions previously directed TCEQ to "consider the effect, if any, of the issuance" of water rights permits on existing instream uses and water quality and on fish and wildlife habitats, respectively. As amended, the provisions now direct TCEQ to "include in the permit, to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain" existing instream uses and water quality and fish and wildlife habitats.¹⁷ On its face, this language provides stronger direction to TCEQ in

¹⁵ See, Senate Bill 1639, 78th Leg., Reg. Session, SECTION 2, § 11.0236 (to be codified at TEX. WATER CODE ANN. § 11.0236).

¹⁶ See, generally, November, 2002 *Interim Report to the 77th Legislature*, Joint Committee on Water Resources (recommending that the Legislature consider "clarifying" the law regarding water rights for instream uses and bay and estuaries).

¹⁷ Section 11.147 (d) was amended as follows: (d) In its consideration of an application to store, take, or divert water, the commission shall include in the permit, to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain [~~consider the effect, if any, of the issuance of the permit on~~] existing instream uses and water quality of the stream or river to which the application applies.

Section 11.147 (e) was amended as follows: (e) In its consideration of an application to store, take, or divert water, the commission shall include in the permit, to the extent practicable when considering all public

placing protective conditions on new water rights permits for other uses. However, in her testimony before the Senate Natural Resources Committee on April 24, 2003, Margaret Hoffman, the Executive Director of TCEQ, indicated that the new language basically reflects current agency practice.

Protection of environmental flows by TCEQ and its predecessor agencies has been, at best, spotty. Generally, since 1985, new water rights permits have included provisions requiring that some amount of flow be allowed to pass by a newly authorized diversion or be passed through a new impoundment. At best, such provisions are generally developed only on an individual permit basis without a comprehensive evaluation of basin instream needs or of alterations resulting from the use of senior water rights. At worst, especially for major water projects, they may reflect political considerations better than they do biological ones.

ENVIRONMENTAL FLOWS IN THE SENATE BILL 1 PLANNING PROCESS

Historically, environmental water needs have been treated only as an afterthought in the water rights system. Fish and other aquatic resources have gotten the water that is left over after other human demands are met. When other human demands were limited, that approach didn't create too many problems. However, that time is rapidly passing. Now, other human demands have reached high-enough levels that streams and rivers can be completely dewatered during dry periods. It turns out that fish don't do well without water.

Unfortunately, a review of the regional water plans developed in the first round of Senate Bill 1 planning reveals that, with only very limited exceptions, history is repeating itself. Environmental water needs continue to be treated as an afterthought. That is an unfortunate circumstance. It means that the regional plans really aren't comprehensive plans. The majority of Texans simply are not going to find it acceptable to embark on water development approaches that risk the decimation of the fish and wildlife resources that are such an important part of the Texas heritage.¹⁸ Accordingly, plans that fail to ensure that those resources are protected do not represent effective blueprints for future water development. They do not ensure informed decision-making. In addition, that approach will lead to a continuation of a pattern of big fights, and the resulting uncertainty, over the environmental impacts of each individual project. Ultimately, a continuation down that path may force litigation similar to the Mono Lake case in

interests, those conditions considered by the commission necessary to maintain ~~consider the effect, if any, of the issuance of the permit on~~ fish and wildlife habitats.

Added language is shown with underlining. Deleted language is shown with strike-out.

¹⁸ Polling conducted for the National Wildlife Federation confirms that a strong majority of Texans share that sentiment. See footnote 30 below.

California.¹⁹ At any rate, the plans do not achieve anywhere near the amount of certainty they could achieve if a more comprehensive approach were followed.

The limited exceptions to the failure of the regional water plans to meaningfully address environmental water needs merit brief discussion. The Region H plan acknowledged bay and estuary inflows as a water need that must be met and included some information about quantifying that need.²⁰ Unfortunately, although acknowledging the need to provide those flows, the initially prepared Region H plan did not include recommendations about how to do so. In short, the need was acknowledged but the plan did not recommend management strategies to ensure that the need will be met. The Region I Plan acknowledges the importance of freshwater inflows into Sabine Lake, but puts substantive discussion of how to meet those needs off to a future day. Similarly, the Region K Plan includes "environmental water demands."²¹ The Region K discussion basically parrots the discussion in the *Water Management Plan for the Lower Colorado River Basin* regarding the extent of those needs and how the needs would be met, at least in the short-term.²²

The Water Code, as amended by S.B. 1, directs that the regional plans submitted to TWDB are to include consideration of "appropriate provision for environmental water needs and for the effect of upstream development on the bays, estuaries, and arms of the Gulf of Mexico and the effect of plans on navigation."²³ Although not the clearest of statements, it does provide a directive to address environmental water needs in the regional plans.

That same section of the Water Code also directs that regional plans are to ensure that sufficient water will be available to, among other things, "protect the agricultural and natural resources of

¹⁹ In *National Audubon Society v. Superior Court*, 658 P.2d 709, *cert. denied*, 464 U.S. 977 (1983), the California court recognized that existing water rights are subject to limitation pursuant to the public trust doctrine. That ruling resulted in a major restriction on diversions pursuant to existing water rights from the source waters of Mono Lake.

²⁰ See Region H Water Management Plan, Task 2, Appendix B (footnote to Table 2, Table 2A), Task 3 at pp. 14-15, Table 2A.

²¹ Region "K" Water Supply Plan for the Lower Colorado Regional Water Planning Group, Vol. 1, pp. 2-19 through 2-21.

²² The *Water Management Plan for the Lower Colorado River Basin* was developed by the Lower Colorado River Authority (LCRA) in response to a requirement that arose out of the settlement of adjudication process disputes regarding water rights in the lower Colorado River basin. Although acknowledgement of environmental water needs is a positive step, the Water Management Plan really only looks at a 10-year horizon and for meeting environmental flow needs relies primarily on "interruptible water" that may not be available in future years.

²³ TEX. WATER CODE ANN. § 16.053 (e)(4)(F).

that particular region.”²⁴ Since the completion of the first round of regional planning, the Legislature has strengthened that directive. For the regional plans currently under development, the Legislature has directed that the TWDB may not approve a plan unless the Board specifically determines that "the plan is consistent with long-term protection of the state's water resources, agricultural resources, and natural resources as embodied" in the Board's guidance principles.²⁵ One might certainly argue that a regional plan which fails to specifically consider the issue of whether adequate water will be available to support natural resources, such as aquatic species, has not been shown to be consistent with protection of those resources.

There likely are several reasons for the inadequate treatment of environmental flow issues in the regional plans. One of the major ones is the historical bias against thinking of the environment as a true user of water. Although the provisions of S.B. 1 and the TWDB guidelines acknowledge the importance of planning to meet environmental water needs, apparently that language was not specific enough to overcome that historical bias. In addition, the initial round of planning was done in a short period of time, especially given the need for planning group members to get “up to speed” on very complex issues. Finally, it has been difficult to quantify environmental flow requirements with precision.

Information from the bay and estuary inflow studies undertaken by TWDB and the Texas Parks and Wildlife Department (TPWD) is now available for all of the major bay systems. Even with that information about inflow amounts, however, major decisions remain to be made about the percentage of years that a particular flow amount should be ensured. The results of the studies result in inflow amounts, distributed by month, predicted to correspond with particular productivity levels in the relevant estuary. Returning to the Region H example and presenting a simplistic overview, the studies indicated that, with the correct monthly distribution, an annual inflow of 5.2 million acre-feet of freshwater would, within the modeling constraints, produce the maximum harvest of certain aquatic life. Even if we accept that figure as accurate, and there is disagreement about that, there is another very important unanswered question about what percentage of years the bay needs to have that amount of inflow. According to the information presented in the Region H plan, during the fairly recent historical period, Galveston Bay has received at least that amount of inflow in 66% of years. The plan established a target frequency of providing at least that amount of inflow in 50% of the years in the future. The basis for choosing that particular target frequency is not explained. The issue of target frequency is a critical issue, especially for annual inflows that represent the lower end of the acceptable spectrum, which is not addressed in the state's modeling effort.

²⁴ *Id.* at § 16.053 (a).

²⁵ *Id.* at § 16.053 (h)(7)(C).

Only a few site-specific studies have been undertaken in Texas to help quantify instream flow needs.²⁶ With the short time-frame available, it is quite understandable that regional planning groups did not develop site-specific information about required environmental flows during the first round of planning. However, even without site-specific information on environmental flow needs, there is information available that could serve as a starting point for assessing the status of environmental flows.²⁷

Additional efforts are underway to provide further information about environmental flow needs for regional planning groups to use in the current round of planning. In 2001, as part of Senate Bill 2, the Texas Legislature directed TPWD, TWDB, and TCEQ to establish a program to determine instream flow requirements for major rivers and streams across the state.²⁸ The agencies are continuing to work on developing a specific proposed methodology and have prepared a schedule for completing “priority studies.” The agencies are pursuing a review of the proposed methodology by the National Academy of Sciences. In addition, TPWD and TWDB are working on “desk-top” evaluation methods that take advantage of the State’s new water availability models²⁹ in assessing instream flow needs. Similarly, the National Wildlife Federation is working on a comparable assessment of freshwater inflow needs for coastal systems.

As a result, the regional planning groups should have better information to allow them to address environmental flow issues if they decide to take advantage of it. In addition, the TWDB and the regional groups have a new legislative directive to ensure that they have prepared water plans

²⁶ Examples of such studies include the instream flow incremental methodology (“IFIM”) study undertaken by TPWD and the Lower Colorado River Authority in developing the water management plan for the lower Colorado River, an IFIM study on a portion of the N. Bosque River in association with the water rights application for the Bosque Reservoir, IFIM studies on the San Marcos and Comal Rivers, and an ongoing study on the lower Guadalupe River.

²⁷ In August, 2000, the Gulf States Natural Resource Center of the National Wildlife Federation (“NWF”) provided each planning group member a copy of a NWF document entitled “Principles for an Environmentally Sound Regional Water Plan.” In that document, NWF suggested an approach for making a rough assessment of instream flow needs. Copies can be obtained from the author.

²⁸ TEX. WATER CODE ANN. § 16.059.

²⁹ In 1997, Senate Bill 1 also directed the development of updated computer modeling that would allow more accurate assessment of the amount of water available for appropriation after accounting for all existing water rights. The ability of TCEQ and predecessor agencies accurately to assess the availability of unappropriated water has been greatly limited by the absence of updated computer models. With the completion of those new models, it is now possible to get a reasonable assessment of how much flow would be left in streams and rivers if all existing rights were fully exercised.

that are consistent with the long-term protection of the natural resources of Texas. Polling done for the National Wildlife Federation indicates that the vast majority of Texans recognize the importance of providing water for fish and wildlife and want water plans and water policy that ensure it.³⁰

SOME OPTIONS FOR PROTECTING ENVIRONMENTAL FLOWS

Conditions on prospective rights

Even in the recent past, discussions of providing water for the environment generally have only considered conditions on new water rights authorizing the use of water for other purposes. Although a relatively recent development in terms of water rights permitting, the inclusion of environmental conditions is now a well-established practice in Texas water law. TCEQ is directed by statute to assess the effects of the issuance of a permit on freshwater inflows to the bays and estuaries and, for water rights issued within 200 river miles of the coast, is specifically directed, to the extent practicable, to include permit conditions adequate to maintain beneficial inflows.³¹ With the enactment of S.B. 1639, TCEQ also is now directed to include permit conditions to protect instream uses.³²

Putting conditions on new rights does not address flow problems created by existing rights. In other words, although placing conditions on new rights can help to minimize the environmental damage caused by the exercise of the new rights, it does not address situations in “over-committed” basins. As used here, the term “over-committed,” refers to a stream or river in which the water supply is not adequate to meet both environmental flow needs and existing paper water rights. Accordingly, it is broader than the traditional “overappropriation” terminology, which refers only to the ability to meet existing water rights. For “over-committed” streams, conditions on new rights³³ can, at best, only serve to minimize the degree to which the permit worsens an

³⁰ For example, in one question, respondents were asked to choose options regarding the acceptability of drying up rivers to meet water needs. Seventy-four percent chose “we need to find a way for people to use less water so we can keep our rivers and streams from going dry” while only twenty percent said people need the water and drying up rivers and streams was “sometimes...a necessary price of growth.” The Tarrance Group conducted two polls for the National Wildlife Federation, one in 2002 and another in 2003. Each poll included approximately 800 Texas voters. Summaries of the results of the polls are available at www.texaswatermatters.org.

³¹ TEX. WATER CODE ANN. § 11.147 (b).

³² See footnote 17 and accompanying discussion above.

³³ Of course, at least using the traditional definition of overappropriated streams or rivers, there

already unacceptable situation.

New Water Rights for Environmental Flows

This option has already been discussed above in the context of the application by the San Marcos River Foundation. A fundamental limitation on the value of this approach for providing environmental water is that it results in permits junior to all existing water rights. As a result, this approach has limited value for watersheds that already are heavily appropriated or even overappropriated. However, it may be possible to use this option in combination with other approaches to patch together a comprehensive flow protection strategy. For example, one could identify categories of environmental flow needs based on the percentage of time the flows must be available. One category would provide a baseline amount sufficient to allow fish and wildlife species to survive and minimum levels of water quality to be maintained during drought periods. For that category, junior water rights that could not be dependably met all of the time would be inadequate. However, additional categories of environmental flows could be identified that would support strong populations of fish and wildlife resources, robust levels of recreational activities, and the like. For those categories, less dependable junior water rights might be sufficient. Obviously, difficult questions about the requisite dependability of those rights would have to be addressed.

Reservation from Appropriation

Another approach to protection of environmental flows would be for TCEQ simply to reserve water from appropriation.³⁴ In a reservation process, no water right for environmental uses would be granted. Instead, the agency simply would “reserve” unappropriated water from permitting. Like granting permits for environmental needs, this approach is contingent on the existence of an adequate amount of unappropriated water and, thus, suffers from the same limitations. In addition, this approach provides significantly less certainty for meeting environmental water needs than issuing an environmental flow permit. It is likely that any reservation would be subject to agency reconsideration. In addition, because there would be no specific water right, it is not clear that any entity, other than perhaps TCEQ, would have the right to enforce the reservation.

Although no explicit structure exists in Texas for a reservation of water for environmental

should not be new water rights issued because, among other things, no unappropriated water is available. That same practice also should apply to rivers or streams that are “over-committed.”

³⁴ For examples of statutory provisions expressly establishing programs for reservations, see KAN. STAT. ANN. § 82a-703a; MONT. CODE ANN. § 85-2-316; and UTAH CODE ANN. § 73-6-1.

purposes, the Water Code does acknowledge the availability of this approach.³⁵ In addition, the definition of “instream use” in TNRCC’s rules states that “[w]ater necessary to protect instream uses for water quality, aquatic and riparian wildlife habitat, recreation, navigation, bays and estuaries, and other public purposes may be reserved from appropriation by the commission.”³⁶

Cancellation of existing rights

Even though the concept of making rights subject to cancellation for non-use is a basic tenet of our water rights system, that basic tenet seems increasingly to be ignored. Rights to use publicly-owned water traditionally were granted without charge on the premise that authorizing use of the water was necessary in order to encourage economic growth. In effect, this was an early form of public subsidy. Because the subsidy was intended to drive economic activity, if the water wasn’t being put to use, the right was to be cancelled so that it might be put to use in some other fashion.³⁷ Accordingly, water rights are described as being usufructory rights rather than ordinary property rights. However, significant cancellations of water rights have been a very rare event in Texas. Recent legislative changes have further limited the potential for cancellation of unused water rights.³⁸

Even if a right were cancelled, the environment doesn’t benefit if the newly available water simply forms the basis for the issuance of a new consumptive water right. Accordingly, in order

³⁵ TEX. WATER CODE ANN. § 11.046 (c)(c) Except as specifically provided otherwise in the water right, water appropriated under a permit, certified filing, or certificate of adjudication may, prior to its release into a watercourse or stream, be beneficially used and reused by the holder of a permit, certified filing, or certificate of adjudication for the purposes and locations of use provided in the permit, certified filing, or certificate of adjudication. Once water has been diverted under a permit, certified filing, or certificate of adjudication and then returned to a watercourse or stream, however, it is considered surplus water and therefore **subject to reservation for instream uses or beneficial inflows** or to appropriation by others unless provided otherwise in the permit, certified filing, or certificate of adjudication.”(emphasis added).

³⁶ 30 TAC § 297.1 (definition of “instream use”).

³⁷ The Water Code recognizes this basic concept in three separate ways. First, a water right is subject to being canceled if the holder of the right does not timely commence and pursue construction of any required diversion or impoundment infrastructure. TEX. WATER CODE ANN. § 11.146. Second, the Water Code provides for cancellation of a water right after ten consecutive years of unjustified nonuse. *Id.* at § 11.177. The Legislature has adopted significant limitations and exceptions to the cancellation process. *See, id.* at § 11.177 (b), 11.183, 11.184, and 11.186. Finally, the Water Code also provides for forfeiture of a water right for willful abandonment for three consecutive years. *Id.* at § 11.030.

³⁸ Both Senate Bill 1 (1997) and Senate Bill 2 (2001) included new limitations on the cancellation of water rights. *See*, TEX. WATER CODE ANN. § 11.173 (b).

to substantially benefit environmental flows, cancellation would have to be linked with a reservation or the issuance of a new right for environmental purposes. Cancellation that results in the issuance of a new right would produce a right that is junior to priority to all existing rights. As a result, it would be of limited value in a heavily appropriated basin unless a large amount of water rights were canceled. It might be possible to cancel an existing right and create a reservation of the water for environmental purposes while retaining the original priority date. Reservations commonly are given a priority date generally corresponding to the date when the reservation is made.³⁹ However, it is not clear that any water right holder would be prejudiced by a cancellation process that resulted in the conversion of, for example, a consumptive right to an environmental flow right which retained the original priority date

Voluntary acquisition of existing rights

Another option that has been considered in other states, and that has seen some limited success, is the actual voluntary acquisition of existing water rights from willing sellers and the conversion of those rights to environmental uses. Although there are issues regarding quantifying and measuring such rights, by far the biggest impediment to this approach is the lack of funding to support acquisition. There also is a basic equity question about asking the public to provide funds to purchase rights to use publicly-owned water from private entities that were awarded those rights at no charge.

Water rights also could be donated to a governmental entity, such as the Texas Parks and Wildlife Department, for environmental purposes. Similarly, the holders of water rights for various consumptive purposes could convert them to instream or freshwater inflow use. However, it is not clear that adequate incentives exist to encourage large amounts of such donations or conversions. In 1997, Senate Bill 1 established the Texas Water Trust within the state water bank to hold rights dedicated to environmental needs.⁴⁰ However, no water rights have yet been placed into the Water Trust. The San Marcos River Foundation did indicate in its application for an environmental flows permit that any water right obtained would be donated for placement in the Texas Water Trust.

Conservation funding and conversion of saved water to environmental flow purposes

Another potential option would be to provide assistance to water right holders to achieve more

³⁹ See, e.g., MONT. CODE ANN. § 85-2-316 (9).

⁴⁰ TEX. WATER CODE ANN. § 15.7031. That provision provides, in part, as follows: “The Texas Water Trust is established within the water bank to hold water rights dedicated to environmental needs, including instream flows, water quality, fish and wildlife habitat, or bay and estuary inflows.” *Id.* at § 15.7031 (a).

efficient use of existing supplies. In order to ensure benefit to environmental flows, that assistance would have to be conditioned upon the conversion of all, or a portion, of the saved water to environmental flow purposes. The concept is attractive because it would help to achieve increased water efficiency, maintain existing uses of water, and help protect the state's fish and wildlife resources. However, the approach certainly would be expensive and quantification of the amount of water saved could be difficult.

Conditions on existing rights

A particularly controversial option that could come into play is the imposition of conditions on existing rights. As alluded to above,⁴¹ the Public Trust Doctrine is a potential mechanism that could support this type of approach. This Doctrine recognizes the usufructory nature of water rights and the unique status of the water itself as a publicly-owned resource. It does not appear that the Doctrine ever has been applied to condition water rights in Texas.

The federal Endangered Species Act⁴² (ESA) also may play a significant role in ensuring that water is available for environmental needs, at least in some instances. The potential implications of the ESA for water rights issues have been illustrated in Texas through the examples of the multiple species associated with the San Antonio portion of the Edwards Aquifer and of the Concho River water snake. One obvious limitation is that the ESA comes into play only when a species listed as threatened or endangered under that Act is likely to be affected. The ESA can affect existing diversions if the diversions adversely affect a listed species. It also is important to recognize that Section 9 of the ESA applies to all types of actions that may adversely affect listed animal species, regardless of whether there is any government involvement. Section 9 prohibits actions, including habitat modification, that "harm" listed animal species.⁴³ Although the ESA is most likely to be significant when federally listed aquatic species are at issue, water development projects also can adversely affect terrestrial species by, for example, reducing downstream out-of-bank flows required to maintain wetland habitats.⁴⁴

⁴¹ See footnote 19 above.

⁴² 16 U.S.C. Section 1531 *et seq.*

⁴³ Section 9 specific prohibits the "taking" of an endangered species of animal. 16 U.S.C. §1538 (a)(1). The term "take" is defined to mean "harass, harm, pursue, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." *Id.* at § 1532 (19). Threatened species receive only those protections established through administrative regulations. *See id.* at § 1533 (d). The current regulations do provide the same level of protection for threatened species as for endangered species unless a specific regulation is adopted affording a lower level of protection for an individual species. *See* 50 C.F.R. § 17.31 (a). Listed plant species receive a much lower level of protection under Section 9. *See* 16 U.S.C. § 1538 (a)(2).

⁴⁴ For additional discussion of the potential role of the ESA in water development issues, see Rasband, *Augmenting Streamflows: How Useful are Sections 9 and 7 of the Endangered Species Act?*, 7 RIVERS No. 1, at p. 49 (S.E.L. & Associates, 1999).

A BRIEF LOOK AHEAD

The next couple of years could be quite significant for environmental flow issues in Texas. The Study Commission on Water for Environmental Flows will meet and may make recommendations for significant changes in the way that those issues are handled. The court cases regarding the San Marcos River Foundation application will continue to move forward. However, any near-term resolution seems unlikely because any ruling by the District Court will almost certainly be promptly appealed. The next round of regional water plans is due in 2005. It will be interesting to see if the regional groups choose to address environmental flow protection in a comprehensive fashion, and, if so, how.

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REUSING RETURN FLOWS: CONSENSUS OVER THE VALUE, DEBATE OVER THE METHODS

I. INTRODUCTION

There is consensus in the water resource community that reusing water supplies—if done correctly—is an excellent way to safeguard Texas' water supplies into the future: using water twice conserves raw supplies and could save money for ratepayers and citizens. And there is a growing trend toward reuse projects. As of the Spring of 2003, at least thirteen reuse permit applications were pending at the Texas Commission on Environmental Quality ("TCEQ"), five by municipalities, four by water districts, three by river authorities, and one by a private company. (Robin Smith, What Is Going On At The TCEQ? How Will It Affect My Clients? Attachment A). Debate rages, however, over the methods used to achieve the objective, the essential disagreement resting on the difference between direct versus indirect reuse. This debate constitutes one of the important developing issues in Texas water law, and its resolution has potentially far-reaching implications for the future of water resources.

II. DIRECT VERSUS INDIRECT REUSE

Return flows are defined to be that portion of state water diverted from a water supply and beneficially used which is not consumed as a consequence of that use and returns to a watercourse. Return flow includes sewage effluent. 30 TAC § 297.1(44). If the water to be reused is conveyed via pipeline directly to the place of use, TCEQ considers the project to constitute direct reuse. If, on the other hand, the water is discharged into a watercourse and conveyed to the place of use via the bed and banks, TCEQ considers it to be indirect reuse. The heart of the debate revolves primarily around that distinction. Curiously, then, there is no disagreement about whether return flows can be legally reused, only on the method used to accomplish the reuse.

Direct reuse projects do not require a water rights permit from TCEQ. The exception to that rule is where the underlying water right requires the permittee to return flows back to the watercourse from whence it came, although most water rights authorizations do not contain such a requirement. Direct reuse projects must comply with 30 TAC Chapter 210, but those regulations are intended to protect water quality concerns, not water rights concerns. A good example of direct reuse is where the effluent from a sewage treatment facility is piped directly to a power plant for industrial use in cooling towers.

Indirect reuse, on the other hand, requires explicit TCEQ authorization because of Texas Water Code § 11.046(c), which says that diverted water that is then returned to the watercourse resumes its original legal identity as state water, invoking the need to acquire a water rights permit before reuse. The bed and banks permit—authority for which is clearly delineated in the Texas Water Code—is the typical way in which indirect reuse projects acquire legal authorization.

III. BED AND BANKS PERMITS

Authority to convey water via the bed and banks of a watercourse is found in Texas Water Code § 11.042. The obvious policy behind the concept is to spare the expense and invasiveness of a pipeline for projects where the water could be easily conveyed in a river, stream or other watercourse. For example, one Texas municipality recently acquired a bed and banks permit to convey stored water hundreds of miles downstream for use at a new industrial facility. In addition to the traditional protections against carriage losses, bed and banks permits are subject to special conditions necessary to protect: (1) downstream water rights granted on reliance of the flows remaining in the watercourse; (2) instream flows; and (3) freshwater inflows to bays and estuaries. A 2001 TNRCC memorandum alerted water right holders that at least some of the Agency's prior water availability models assumed a return flow factor for municipal water rights, meaning that some downstream water rights were authorized or established based on the existence of upstream return flows. Adjudication of the San Antonio River, for example, relied on historical discharges to that basin. In evaluating reuse projects, then, TCEQ must consider the potential impact on downstream water rights. (Return and Surplus Water, January 10, 2001 (Attachment B)). The key permitting question in bed and banks applications often turns on how much water must be discharged upstream in order to allow diversion at the downstream place of use, while also protecting the concerns listed above.

One of the theories supporting the use of bed and banks authority for indirect reuse projects is that the watercourse is tantamount to a pipeline. The same policy considerations that make bed and banks permits an integral part of water resource planning—it obviates expensive and environmentally invasive pipelines—apply equally as well to indirect reuse as to conveying stored water. Indeed, some argue that requiring the construction of pumps and pipelines (one rule of thumb holds that pipelines cost approximately \$1 million per mile) could serve to make beneficial reuse projects prohibitively expensive, thereby defeating legitimate water reuse goals and unnecessarily promoting the increased use of limited raw water supplies.

IV. CHAPTER 210 REGULATIONS

The regulatory requirements that govern reclaimed water projects are found at 30 TAC Chapter 210. These regulations apply to any project using reclaimed water, which is defined to mean "domestic or municipal wastewater which has been treated to a quality suitable for a beneficial use." (30 TAC § 210.3(24).) The regulatory responsibilities are divided among three parties: the producer, provider and user of the reclaimed water. The regulations define all three of those terms at 30 TAC § 210.3. The Chapter 210 regulations are separate and apart from the requirements on treatment and disposal of wastewater from a sewage treatment plant, which, of course, are governed by the TPDES program. The regulations require explicit written approval from TCEQ before reclaimed water can be used. (30 TAC § 210.4.) The Agency may require a permit, but usually does not. The regulations also specify the quality standards the reclaimed water must meet, depending on the type of use (30 TAC § 210.33), and establishes a strict sampling and analysis regime (30 TAC § 210.34). Careful adherence to the Chapter 210 regulations is indispensable to a successful reuse project.

V. THE HEART OF THE CONTROVERSY

As discussed above, the heart of the reuse controversy is whether historically discharged return flows can be retrieved from the basin via a bed and banks permit. Opponents assert that such projects:

- 1) Reduce the reliability of existing water rights;
- 2) Reduce instream flows and freshwater inflows to bays and estuaries; and
- 3) Endanger the ability of downstream water right holders to divert their appropriated share of water.

Supporters counter by pointing out that TCEQ can and must protect these interests in evaluating any permit application. For example, existing water rights are protected under Water Code § 11.134, which authorizes TCEQ to grant a water right only when the proposed appropriation "does not impair existing water rights or vested riparian rights." (§ 11.134(b)(3)(B)). Environmental concerns—instream flows and freshwater inflows to bays and estuaries—are also protected by Water Code sections 11.147 and 11.152. These statutory provisions require the Commission to consider the effect of any water right permit application on water quality, instream uses, habitat, and bays and estuaries.

It is noteworthy, by the way, that the concerns discussed above are only evaluated when the Agency considers indirect reuse projects because—as the law makes abundantly clear—direct reuse projects usually do not require any water rights authorizations.

VI. CONCLUSION

As TCEQ evaluates the many pending reuse permit applications, the future of reuse in Texas—especially indirect reuse—will come into sharper relief. The debate described in this paper is vigorous, and there is sharp disagreement among various parties. Generally speaking, municipalities are on the leading edge of promoting indirect reuse—five of the thirteen pending permit applications were filed by cities—perhaps because they see an opportunity for more resourceful use of limited raw water supplies at a time when many Texas cities continue to grow. Applicable law requires TCEQ to strike a delicate balance between promoting valuable reuse goals while also protecting existing water rights and vital environmental concerns. In any case, the outcome will represent a critical development in how Texas manages limited water resources in the future.

RETURN AND SURPLUS WATER

January 10, 2001

Since the passage of Senate Bill 1 during the 75th Legislative session, the TNRCC has received several water right applications requesting authority to divert return flows discharged into streams by water right holders. This document addresses how the Executive Director proposes to evaluate these applications under the existing statutes and agency rules.

The Texas Water Code addresses this issue in Sections 11.042 and 11.046. Section 11.042 states in subsection (b) and (c):

(b) A person who wishes to discharge and then subsequently divert and reuse the person's existing return flows derived from privately owned groundwater must obtain prior authorization from the commission for the diversion and the reuse of these return flows. The authorization may allow for the diversion and reuse by the discharger of existing return flows, less carriage losses, and shall be subject to special conditions if necessary to protect an existing water right that was granted based on the use or availability of these return flows. Special conditions may also be provided to help maintain instream uses and freshwater inflows to bays and estuaries. A person wishing to divert and reuse future increases of return flows derived from privately owned groundwater must obtain authorization to reuse increases in return flows before the increase.

This section provides that an entity who wishes to discharge privately owned groundwater must receive Commission approval to divert and reuse those return flows. The entity diverting the return flows must be the same entity that discharged the flows. Carriage losses are the responsibility of the entity. Also, downstream water rights and the environment must also be protected.

(c) Except as provided in Subsection (a) of this section, a person who wishes to convey and subsequently divert water in a water course or stream must obtain the prior approval of the commission through a bed and banks authorization. The authorization shall allow to be diverted only the amount of water put into a watercourse or stream, less carriage losses and subject to any special conditions that may address the impact of the discharge, conveyance, and diversion on existing permits, certified filings, or certificates of adjudication, instream uses, and freshwater inflows to bays and estuaries. Water discharged into a watercourse or stream under this chapter shall not cause a degradation of water quality to the extent that the stream segment's classification would be lowered. Authorizations under this section and water quality authorizations may be approved in a consolidated permit proceeding.

This section provides that an entity may receive Commission approval to convey in and subsequently divert water from a watercourse. The entity will be responsible for all carriage losses, impacts on downstream water rights, and impacts on instream flows to the bays and estuaries.

Section 11.046 in subsection (c) states:

Except as specifically provided otherwise in the water right, water appropriated under a permit, certified filing, or certificate of adjudication may, prior to its release into a watercourse or stream, be beneficially used and reused by the holder of a permit, certified filing, or certificate of adjudication for the purposes and locations of use provided in the permit, certified filing, or certificate of adjudication. Once water has been diverted under a permit, certified filing, or certificate of adjudication and then returned to a watercourse or stream, however, it is considered surplus water and therefore subject to reservation for instream uses or beneficial inflows or to appropriation by others unless expressly provided otherwise in the permit, certified filing, or certificate of adjudication.

This section provides that a water right holder may totally consume all water diverted under the water right unless expressly provided otherwise in the right. If the water is ever returned to a stream or watercourse, it is surplus water and available for use by other water right holders, appropriation to others, or environmental flows.

The TNRCC rules also address this issue in Chapter 297. Section 297.1 defines return water or return flow as:

That portion of state water diverted from a water supply and beneficially used which is not consumed as a consequence of that use and returns to a watercourse. Return flow includes sewage effluent.

Reuse is defined as:

The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state owned water.

Section 297.49(a) states:

A right to take and use water is limited to the extent and purposes authorized in the water right. Except as specifically provided otherwise in the water right, state water appropriated under a water right may be beneficially used and reused by the water right holder in accordance with the water right prior to its release into a watercourse or stream. Once water has been diverted under a water right and then returned to a watercourse or stream, however, it is considered surplus water and, therefore, subject to maintaining instream uses, beneficial inflows to bays and estuaries, or appropriation by others unless expressly provided otherwise in the water right.

Several proposed projects would divert waters that have either historically been discharged as return flows or water that will in the future be discharged as return flows. At least some of the Texas Water Commission's prior water availability models assumed a return flow factor for municipal water rights. The adjudication for the San Antonio River basin relied on historical discharges to that basin. Thus, these assumed return flows were available to be appropriated to

other water right applicants. Also, it is likely that Section 11.303 claims of water rights used these return flows during the critical period to establish their claim. Thus, it is likely that some downstream water rights were authorized or established based on the existence of upstream return flows and these water rights have grown to rely on these return flows.

To evaluate these applications for return flows, the Texas Water Code and TNRCC rules require that downstream water rights be protected and environmental issues be addressed. The TNRCC evaluation will provide that:

- 1) The applicant will be responsible for all carriage losses associated with the discharged water from the point of discharge to the point of diversion.
- 2) A "no injury" analysis will be completed for downstream water rights. Any reduction in reliability will be considered an "injury" for purposes of these reuse applications. Those downstream water rights which may have relied on these return flows will be protected. This will be accomplished by allowing these water rights to "call" on this water if needed to meet their needs. Since the water requested by the applicant is already permitted or originated as groundwater, it is not necessary to find additional water available for appropriation. The right to continue to divert this water will be contingent upon the entity continuing to discharge this water into the watercourse.
- 3) An environmental analysis will be completed to determine if any special conditions will need to be imposed to protect instream uses and the bays and estuaries.

Thus, it is recommended that an entity be permitted to divert its return flows minus any carriage losses, with provisions for protection of downstream water rights, and protection of instream uses and bays and estuaries.

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SPEECHES/ARTICLES

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UPDATE ON WATER DEVELOPMENTS, AGC Conference, August 1998

THE CURRENT STATUS OF ENVIRONMENTAL EQUITY:

WHY THE FUTURE IS STILL UNCERTAIN, Environmental Law Journal, Winter 1996



GROUNDWATER REGULATION IN TEXAS

Presented at the
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"ON THE ROAD AGAIN: BLUE EYES CRYING IN THE RAIN"

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What this Paper Covers

There have been recent significant changes in the way Texas manages its groundwater resources. The impact of such regulation is most apparent in the rural areas of the State, although it increasingly affects the urban centers as well.

While the paper focuses on water *resource* issues, it also discusses the limited local regulation of groundwater *quality*. Secondly, the paper discusses the burgeoning area of groundwater marketing, or “water ranching.”

This paper does not discuss surface water or the differences between State law regulating surface water and groundwater.¹

Rule of Capture: The Law of the Biggest Pump

The use of groundwater in Texas is primarily regulated (in reality, not regulated) under the rule of capture,² which some consider to be the law of the biggest pump. In a nutshell, this common law principle means that a well owner may pump as much groundwater as desired, regardless of the effect the pumping has on neighboring groundwater.

There are several limitations. The well owner may not waste the water³ and may not cause subsidence because of the withdrawals.⁴ The viability of the rule of capture was affirmed in *Sipriano v. Great Spring Waters of America, Inc.*, 1 S.W.3d 75 (Tex. 1999).⁵

¹ For a discussion of those difference, see Michael J. Booth and Carolyn Ahrens (updated in part by Mary K. Sahs), *Texas Water Rights* (presented at NBI’s FUNDAMENTALS OF WATER LAW IN TEXAS), July 10, 2001.

² The rule of capture was established by *Houston & T. C. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904).

³ *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 276 S.W.2d 798, 801 (1955).

⁴ *Friendswood Dev. Co. v. Smith-Southwest Indus.*, 576 S.W.2d 21, 29 - 30 (Tex. 1978).

⁵ For a short history of groundwater law in Texas, see Timothy L. Brown, *A Review of the Development of Texas Water Law* (presented at CLE International’s A REVIEW OF THE DEVELOPMENT OF TEXAS WATER LAW), Oct. 15, 2001.

As long as groundwater was plentiful, everyone seemed content with this scheme. As the population of the State has increased, however, the stress on local aquifers has been felt Statewide.⁶ Questions about the efficacy of the rule of capture are being raised more frequently.

Local Regulation of Groundwater: Groundwater Conservation Districts

The closest an urban resident may come to this issue in their daily life is when they turn on the tap and use the water. The many water supply entities and municipalities who provide that water, however, are very familiar with the concepts addressed in this paper. In many rural and small communities across the State the issue often gets up close and personal. Increasingly, groundwater resources are being regulated at the local level. Some local regulations also address groundwater quality.

Creating a Groundwater Conservation District (GCD)

In 1949, in response to concerns over excessive withdrawal of water from the Ogallala Aquifer, the State first authorized the creation of groundwater conservation districts and the designation of underground reservoirs for the purpose of groundwater management.⁷ State law regulating these issues has been amended repeatedly since that time.⁸

Current law confirms that groundwater conservation districts are the preferred method of regulating groundwater in Texas.⁹ Such districts are one way for local communities to influence the future of groundwater resources in

⁶ For a discussion of the State's dwindling water supplies, including declining groundwater availability, see Suzanne Staton, *Water Woes* (published in the Texas Comptroller of Public Accounts' FISCAL NOTES), Sept. 2001. See also Texas Water Development Board, *Water for Texas-2002* (Jan. 2002).

⁷ Acts of June 2, 1949, 51st Leg., R.S., ch. 306, 1949 Tex. Gen. Laws 559, (codified at TEX. REV. CIV. STAT. ANN. art. 7880-3c), repealed by Act of April 12, 1971, 62nd Leg., R.S., ch. 58, § 2, 1971 Tex. Gen. Laws 658.

⁸ For an excellent summary of the history of groundwater districts and management areas, see *Texas Commission on Environmental Quality: Priority Groundwater Management Areas and Groundwater Conservation Districts; Report to the 78th Legislature* (Jan. 2003) ("Commission Groundwater Report: 2003") at 8-12 (available free of charge from the Texas Commission on Environmental Quality).

⁹ TEX. WATER CODE ANN. § 36.0015 (Vernon 2000).

their areas. Some district boundaries are drawn to cover specific aquifers, while others follow the boundaries of existing political subdivisions, usually counties.¹⁰

Groundwater conservation districts may be *created* several ways. Once created, GCDs generally must be *confirmed* through an election by the voters within the proposed district.¹¹

Chapter 36 of the Texas Water Code has long authorized creation of GCDs through a petition process at the Texas Commission on Environmental Quality (Commission).¹² Before amendments to Chapter 36 in 2001, the process was lengthy and potentially expensive.¹³ As a result, it was rarely used.¹⁴

Under certain limited circumstances, GCDs may also be created by the Commission on its own initiative.¹⁵ To date, this has never been done.

Most GCDs are created through special legislation.¹⁶ Nearly every groundwater conservation district has its own individual enabling legislation.¹⁷ These bills control each district's powers and duties; confirmation election; selection, qualifications, and compensation of board members; fiscal responsibilities; funding authority; tax rate and/or limitation on taxation; effective and/or expiration dates; and regional cooperation requirements, if any. The legislation for the individual districts is by no means uniform; therefore, in order to

¹⁰ See Gregory M. Ellis and Jace A. Houston, *Senate Bill 2: 'Step Two' Towards Effective Water Resource Management and Development for Texas*, 32 ST. B. TEX. ENVTL. L.J. 53, 60 (2002). See also, discussion *infra*.

¹¹ TEX. WATER CODE ANN. § 36.017 (Vernon Supp. 2002). But see §§ 36.0151 and 36.0171, which apply to districts the Commission is required to create in a Priority Groundwater Management Area. Under these provisions, no confirmation election is required, although there must be an election for the directors and to approve any ad valorem tax.

¹² The Texas Natural Resource Conservation Commission became the Texas Commission on Environmental Quality on September 1, 2002.

¹³ TEX. WATER CODE ANN. Subchap. B, § 36.011 *et seq.* (Vernon 2000).

¹⁴ A recent exception is the creation of the Blanco-Pedernales Groundwater Conservation District by Commission Order dated October 11, 2000. The author represented the Citizens for Groundwater Conservation, a non-profit organization of Blanco County landowners, the petitioners in that case.

¹⁵ TEX. WATER CODE ANN. § 35.012(b) (Vernon Supp. 2002).

¹⁶ Ellis and Houston, *supra*, at 56.

¹⁷ Those created by the 77th Legislature are found in Senate Bill 2, Article 3, Act of May 27, 2001, 77th Leg., R.S., ch. 966, Tex. Gen. Laws 1880 ("Senate Bill 2"); House Bill 1258, Act of June 16, 2001, 77th Leg., R.S., ch. 1299, Tex. Gen. Laws 3011 ("House Bill 1258"); Act of May 28, 2001, 77th Leg., R.S. ch. 1307, §§ 3.01, 4.01, H.B. 1784, 2001 Tex. Gen. Laws 3032, 3036, 3038; Act of May 23, 2001, 77th Leg., R.S., ch. 1387, § 1, S.B. 1821, 2001 Tex. Gen. Laws 3385; and eighteen additional stand alone bills. See footnote 24 for bills creating GCDs passed during the Regular Session of the 78th Legislature.

understand the authority of a district, one must review its specific enabling legislation¹⁸ (or in limited cases, its Commission Order).

Recent GCD Creations and Confirmations

The last three legislative sessions have seen an explosion in GCD creations. In 1999, during the 76th Legislature, numerous special bills were introduced to create groundwater districts. These were opposed by legislators who wanted to wait and see the results of the water planning devised by Senate Bill 1,¹⁹ the omnibus water legislation from the previous session. A compromise was reached whereby thirteen temporary districts with limited powers were authorized in SB 1911.²⁰ These districts were allowed to begin some basic groundwater management tasks, but had no authority to hold confirmation elections, had no taxing authority, and could not issue bonds, exercise eminent domain, or prepare groundwater management plans. The districts would automatically dissolve unless they were confirmed by legislation within two years.²¹

The 77th Legislature (2001) ratified most of the Senate Bill 1911 groundwater conservation districts and created many new ones.²² Meanwhile, the Commission created two GCDs through the petition process.²³ At the time of publication of this paper, the 78th Legislature (2003) has created four new GCDs, recreated one,²⁴ and has dissolved Comal County's Southeast Trinity GCD (after two unsuccessful confirmation elections).²⁵

¹⁸ For example, the author represents the Hays Trinity Groundwater Conservation District, which was created by S.B. 1911, Act of May 26, 1999, 76th Leg., R.S., ch. 1331, § 1, 1999 Tex. Gen. Laws 4536 ("Senate Bill 1911") and ratified by S.B. 2. This district was limited to one attempt to be confirmed through an election. It is not authorized to levy ad valorem taxes; instead it is financed through construction fees of \$300.00 per new permit and \$300 per new water service connection to certain water utilities. Senate Bill 2 at § 3.0312. This is one of the most restrictive GCD enabling bills enacted in the 77th Session.

¹⁹ Tex. S.B. 1, 75th Leg., R.S. (1995).

²⁰ Act of May 26, 1999, 76th Leg., R.S., ch. 1331, § 1, 1999 Tex. Gen. Laws 4536.

²¹ Id.

²² Id. Senate Bill 2, Article 3 ratified twelve of the temporary GCDs. House Bill 1258 ratified the final one. See also Commission Groundwater Report: 2003.

²³ Blanco-Pedernales GCD covering Blanco County and Lake Country GCD covering Wood County.

²⁴ Rusk County GCD was created by H.B. 3569; Southeast Texas GCD in Jasper and Newton Counties was created by S.B. 1888; Upshur County GCD was created by H.B. 3635; and Kenedy County GCD was created with different boundaries and different directors in two separate bills, H.B. 3374 and S.B. 25. H.B. 3374 includes in the district designated property in Kleberg, Nueces, Jim Wells, and Brooks Counties. H.B. 3602 re-created Brazoria County GCD. All of these citations are to the 78th Leg., R.S. (2003).

²⁵ Tex. H.B. 2348, 78th Leg., R.S. (2003).

Nearly without exception, the newly created GCDs are subject to confirmation elections. Most of those created through 2001 have held successful elections. Currently there are 80 created and confirmed groundwater conservation districts. There are 7 unconfirmed because no election has yet been held. There are 2 that are unconfirmed whose initial confirmation elections failed but who are authorized to try again. Finally, there are 13 whose elections have failed or they have otherwise been abolished.²⁶ Map A, shown on the next page, is generated by the Texas Water Development Board (TWDB). It shows confirmed and newly created groundwater conservation districts as of February 2003.²⁷

There is a continuing debate as to the “best” configuration of GCDs. Some argue that they should be “regional,” drawn to reflect the configurations of the aquifers they are designed to regulate. Others argue that the politics of district creation make it virtually impossible to create districts that cover more than one county. The distribution of GCDs across counties in Central Texas is an example of the variety of distribution of these local regulatory bodies throughout Texas. Table A shows that some Central Texas GCDs have boundaries coterminous with county lines. Some counties contain several different GCDs. Other counties have no GCDs. Still others are partly regulated and partly not regulated. This is fairly typical throughout Texas, although the Panhandle Region of the State contains several multi-county or regional districts. Map A illustrates this further.

²⁶ This information was provided by Kelly Mills, Texas Commission on Environmental Quality, July 2003.

²⁷ “Confirmed and Pending Confirmation Groundwater Conservation Districts,” prepared by the TWDB and updated in February 2003. This map is updated periodically by the Texas Water Development Board and can be found at <http://www.twdb.state.tx.us/mapping/index.htm>. Click on “Groundwater Conservation Districts.”

TABLE A
GROUNDWATER CONSERVATION DISTRICTS
IN CENTRAL TEXAS COUNTIES

County	Groundwater Conservation District
Bastrop County	Lost Pines GCD
Bell County	Clearwater Underground Water Conservation District (UWCD)
Blanco County	Blanco-Pedernales GCD
Burnet County	No GCD
Caldwell County	Barton Springs/Edwards Aquifer Conservation District, Edwards Aquifer Authority, Plum Creek Conservation District, and no GCD ²⁸
Coryell County	Middle Trinity GCD
Falls County	No GCD
Fayette County	Fayette County GCD
Gillespie County	Hill Country UWCD
Hays County	Hays Trinity GCD, Edwards Aquifer Authority, and Barton Springs/Edwards Aquifer Conservation District. ²⁹
Lampasas County	Saratoga UWCD
Llano County	No GCD
McLennan County	No GCD
Travis County	Barton Springs/Edwards Aquifer Conservation District and no GCD
Williamson County	No GCD

²⁸ Caldwell County contains three GCDs. A portion of the County is not in a GCD. See Map A.

²⁹ The TWDB map (see Map A) seems to show that part of Hays County is in the Plum Creek GCD. The Hays Trinity GCD enabling legislation, however, states that its boundaries include all of Hays County except areas covered by the Edwards Aquifer Authority or the Barton Springs-Edwards Aquifer Conservation District. Act of May 26, 1999, 76th Leg., R.S., ch. 1331, § 2(b), 1999 Tex. Gen. Laws 4536.

Groundwater Planning and Management

In addition to specifically ratifying or creating numerous new districts,³⁰ Senate Bill 2 virtually ensured the creation of additional groundwater districts. First, it required the Texas Water Development Board, with help from the Commission, to designate groundwater management areas (GMAs) covering all of Texas' aquifers by September 1, 2003.³¹ Designation of a GMA has traditionally been the first step in creating a groundwater conservation district through the petition process.³² A GMA is not a political subdivision and has no power; it is a planning area based on scientific or hydrological data. In reality, politics often plays a role in such designations. Map B, developed by the TWDB, shows the GMAs designated by the Board in November 2002.³³

Second, by September 1, 2005, the Commission must identify which of these areas should be classified as priority groundwater management areas (PGMAs). These are not political subdivisions and have no power. They are planning areas based on hydrological data. By considering information from the regional planning groups, groundwater conservation districts, and the GMAs, the Commission must determine which areas are in most immediate danger of groundwater shortages, contamination, or land subsidence. The agency will then propose designation of PGMAs in those areas.³⁴

Third, once designated, a PGMA must either be added to an existing groundwater conservation district or a new district must be created to contain it.³⁵ Map C, on page 11, shows an overlay of the State's GMAs, PGMAs, and GCDs.³⁶

³⁰ For a detailed discussion of special groundwater district legislation through the 77th Legislative Session, see Ellis and Houston, *supra*, at 58 – 61.

³¹ Senate Bill 2 at § 2.22(a), codified at TEX. WATER CODE ANN. § 35.004 (Vernon Supp. 2002). In November 2002 the Texas Water Development Board adopted a statewide GMA map and rules. Some believe that this process could be the first step toward establishing regional GCDs to replace existing single-county Districts.

³² TEX. WATER CODE ANN. § 36.012(c) (Vernon 2000).

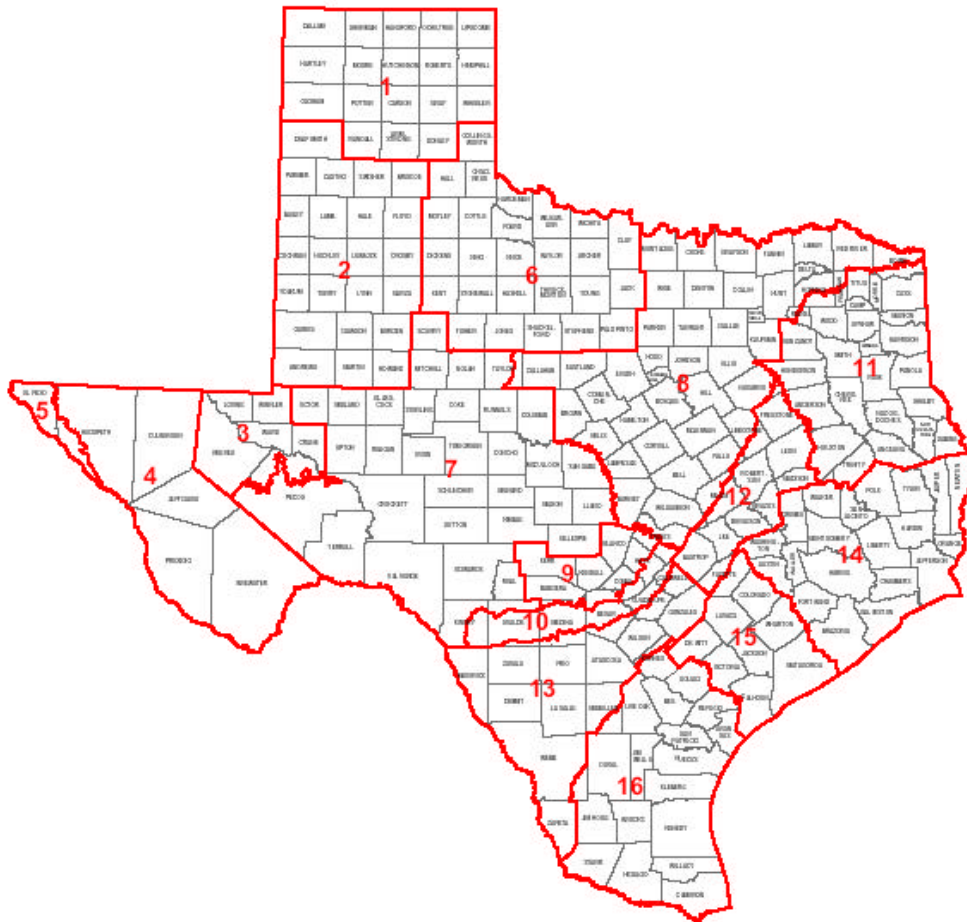
³³ Map B is the November 14, 2002 "Groundwater Management Areas" Map. The map can be viewed at <http://www.twdb.state.tx.us/mapping/index.htm>. Click on "Groundwater Management Areas."

³⁴ Senate Bill 2 at § 2.23, codified at TEX. WATER CODE ANN. § 35.007(a) (Vernon Supp. 2002).

³⁵ Senate Bill 2 at § 2.26, codified at TEX. WATER CODE ANN. § 35.012 (Vernon Supp. 2002).

³⁶ Map C is the February 19, 2003 "Groundwater Conservation Districts with Groundwater Management Areas and Priority Groundwater Management Areas" Map. The map can be viewed at <http://www.twdb.state.tx.us/mapping/index.htm>. Click on "GCDs GMAs, and PGMAs."

Groundwater Management Areas

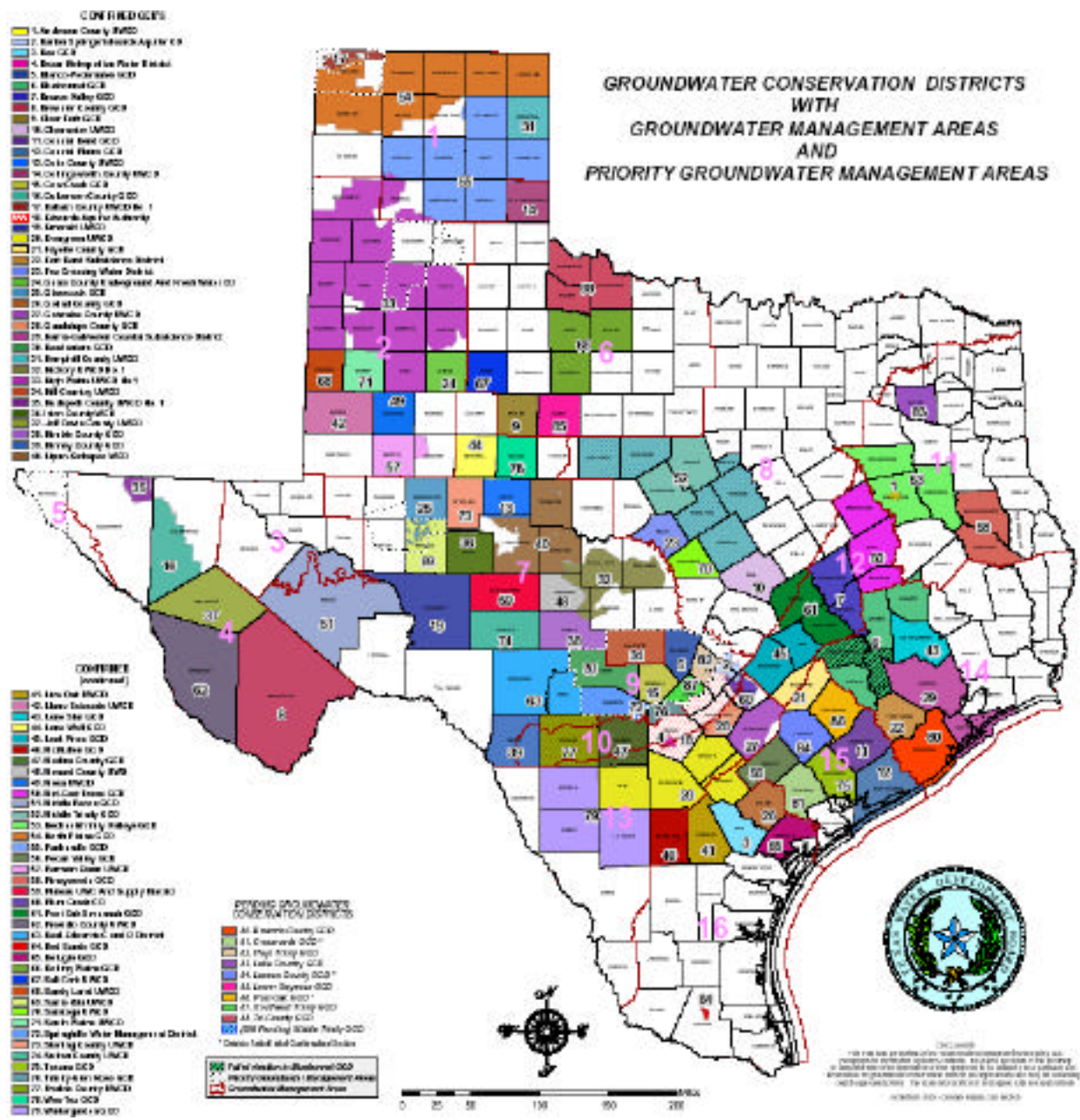


Map Legend
 Groundwater Management Area
 County Boundary

60 30 0 60 Miles
 November 14, 2002
 For illustrative purposes only.
 A digital file of these lines in a
 format compatible with
 geographic information
 systems is on file at the
 Secretary of State's Office.
 Texas Centric Projection Albers



MAP B



MAP C

Simplifying the GCD Creation Process

Senate Bill 2 also simplified the district creation petition process. Prior to Senate Bill 2, if a petition to the Commission for a district was protested, the petitioners were required to go through a contested case hearing.³⁷ The new process allows for public notice and an opportunity for comments, but no evidentiary hearing is required or allowed.³⁸

The standards by which the Commission determines whether to create a district have also changed. Under the old law, in order to create a district the Commission was required to find that the district was “feasible and practicable, that it would be a benefit to the land in the district, and that it would be a public benefit or utility.”³⁹ Under the amended § 36.015, the Commission cannot create a district if it finds that the district “cannot be adequately funded to carry out its purposes” and that the “boundaries of the district do not provide for the effective management of the groundwater resources.”⁴⁰

These changes are expected to increase the number of petitions filed with the agency.⁴¹ The Commission amended its implementing rules to reflect this new procedure. The new rules became effective August 29, 2002.⁴²

GCDs Have the Power to Limit the Rule of Capture

Not only did the 77th Legislature nearly double the number of authorized groundwater conservation districts, it also amended Chapter 36 of the Texas Water Code relating to the regulatory powers of such districts. These amendments were made largely in response to the opinion in *South Plains LaMesa Railroad, Ltd. v. High Plains Underground Water Conservation Dist. No. 1*, 52 S.W.3d 770 (Tex. App.—Amarillo 2001, no pet.). The *South Plains* court struck down a groundwater conservation district’s rules and opined that such districts do not have the power to override the rule of capture.

³⁷ TEX. WATER CODE ANN. § 36.014 (Vernon 2000).

³⁸ TEX. WATER CODE ANN. Subchapter B § 36.011 *et seq.* (Vernon Supp. 2002).

³⁹ TEX. WATER CODE ANN. § 36.015(a) (Vernon 2000).

⁴⁰ TEX. WATER CODE ANN. § 35.015(b) (Vernon Supp. 2002).

⁴¹ The author represented Save Our Springs of North East Texas, a non-profit corporation that petitioned the Commission to create Lake Country Groundwater Conservation District under the amended Chapter 36. The Order creating the District was issued on September 25, 2002. Its February 2003 confirmation election failed.

⁴² The rulemaking amended 30 TEX. ADMIN. CODE Chapter 293, Subchapter C.

Some commenters say that these recent amendments to Chapter 36 merely clarified regulatory powers groundwater districts already had,⁴³ while others consider these changes to be quite radical.⁴⁴ Regardless of how the amendments are characterized, all agree that they are significant.⁴⁵

To begin with, § 36.002 was amended to specifically state that while the ownership of groundwater and the rights held by the owners of the land are recognized, such “rights may be limited or altered by rules promulgated by a district.”⁴⁶

Significantly, for the first time Chapter 36 specifically grants districts the authority to regulate the withdrawal of groundwater based on surface acreage.⁴⁷ Other notable amendments address protecting historic uses⁴⁸ and prohibiting discrimination between in-district use of water and export of groundwater for use outside the district.⁴⁹ Coupled with the increasing areas of the State covered by groundwater conservation districts,⁵⁰ these amendments have changed the regulation of groundwater resources across the State. The changes also affected the burgeoning market in groundwater, as discussed below.

Recent GCD Legislation In Summary

In brief, the 77th Legislature nearly doubled the number of existing groundwater conservation districts, established an ongoing process that ensures creation of additional districts in currently unregulated areas of the State, and strengthened the authority of districts to regulate groundwater withdrawal and limit the rule of capture. The 78th Legislature added a small number of GCDs, dissolved the Southeast Trinity, and basically left the districts’ powers intact.

⁴³ Mary Sanger, *Hill Country Broadside* (a publication of the HILL COUNTRY ROUNDTABLE) July 2001.

⁴⁴ Booth, Ahrens, and Sahs, *supra*, at p. 22.

⁴⁵ There were few changes made to these regulatory powers during the regular session of the 78th Legislature. Tex. H.B. 1534 addresses the power of GCDs to acquire property, purchase, sell, and transport water, and prohibits a GCD from using its power of eminent domain to acquire water or water rights; Section 18.006 of H.B. 3507 cleans up Texas Water Code § 36.116 because two inconsistent bills had amended that provision during the last session; H.B. 1065 addresses Directors and the doctrine of incompatibility; S.B. 1639 allows GCDs to consider geographic differences when regulating wells; S.B. 899 addresses Director’s compensation. All citations are to the 78th Leg., R.S. (2003).

⁴⁶ TEX. WATER CODE ANN. § 36.002 (Vernon Supp. 2002).

⁴⁷ TEX. WATER CODE ANN. § 36.116 (Vernon Supp. 2002), as amended by Tex. S.B. 1639 and H.B. 3507 § 18.006, 78th Leg., R.S. (2003).

⁴⁸ TEX. WATER CODE ANN. § 36.113 (Vernon Supp. 2002).

⁴⁹ TEX. WATER CODE ANN. § 36.122 (Vernon Supp. 2002).

⁵⁰ Ellis and Houston, *supra*, at 59 – 61. See also Map A and Commission Groundwater Report: 2003.

Limits on the Rule of Capture Include Well Permits and Spacing and Production Restrictions

District rules are written by the district in a public process requiring public notice and an opportunity for comment.⁵¹ The Water Code establishes which wells *must be* exempted from obtaining a permit,⁵² and gives broad guidelines for what a district may or may not do, such as deciding whether additional wells will be exempt from regulation, or whether or not they will establish a spacing formula for wells.⁵³

Districts have new regulatory powers for meeting their statutory purposes. Districts may now limit groundwater production based on tract size or well spacing.⁵⁴ Districts may relate these restrictions and limitation to the historic use of the groundwater.⁵⁵

District rules of most interest to a potential landowner are those that require a permit to drill a new well and that regulate where a well may be drilled and how much water may be produced from that well.⁵⁶ A district must require permits for drilling, equipping, or completing wells or for “substantially altering the size of wells or well pumps.”⁵⁷ Each district determines the term of such a permit, after which time the permit must be renewed. Obtaining or renewing a permit is generally a fairly simple administrative process, although districts by rule may provide a notice and comment or hearing process for more controversial permits. A fee is required, which differs from district to district. While Texas Water Code § 36.113 controls the basic concepts of permit issuance, one should look first to the district’s permitting rules.⁵⁸

⁵¹ TEX. WATER CODE ANN. § 36.101(b) (Vernon 2000).

⁵² TEX. WATER CODE ANN. § 36.117 (Vernon Supp. 2002).

⁵³ TEX. WATER CODE ANN. § 36.101 (Vernon Supp. 2002).

⁵⁴ TEX. WATER CODE ANN. § 36.101(a) (Vernon Supp. 2002).

⁵⁵ TEX. WATER CODE ANN. § 36.116 (Vernon Supp. 2002), as amended by Tex. S.B. 1639 and H.B. 3507 § 18.006, 78th Leg., R.S. (2003).

⁵⁶ In 1999, as part of a GCD Operations Manual, the Texas Alliance of Groundwater Districts, the Texas Water Development Board, and the Texas Natural Resource Conservation Commission jointly developed a set of Model Rules for groundwater conservation districts. The author is participating on an advisory committee that is updating the Manual and Model Rules to reflect recent amendments to Chapter 36.

⁵⁷ TEX. WATER CODE ANN. § 36.113 (Vernon Supp. 2002).

⁵⁸ Many GCDs maintain websites with access to their permit rules. Rules may also be obtained from the districts’ offices.

Decrease in the Types Of Wells that are Exempt from Permits

Senate Bill 2 decreased the types of wells that are exempt from permitting. Currently, wells that are capable of producing 25,000 or fewer gallons per day, when located on a tract of land larger than 10 acres and used solely for domestic use or for providing water for livestock or poultry, are exempt from obtaining a permit.⁵⁹

This is an important change in the law. Previous to 2001, all wells producing 25,000 or fewer gallons per day were exempt from permitting.⁶⁰ Responding to concerns about the draw-down of aquifers by domestic wells on numerous small ranchettes, the legislature revised the exemption. While the exemption for domestic/livestock wells of 25,000 gallons or less on 10 acres or more is mandatory,⁶¹ Districts have the authority to exempt other wells.⁶² To the extent authorized under the new law, some districts may opt to continue the same exemptions that were previously required under Chapter 36, while others will change their rules to allow only the mandatory exemptions. As a result, one must review a specific district's rules to determine which wells require a permit.

Well Spacing Regulations are Used As a Tool to Manage Groundwater Resources

Well spacing is one of the tools a district may use to manage its groundwater resources. Well spacing rules often require that wells be a certain distance from other wells or from property lines. Not all districts have well spacing rules, and those that do use a wide variety of distances. Some District well spacing rules allow the neighboring landowner to waive the distance requirements from the property line.⁶³ Under the latest amendments to Chapter 36, one may expect that GCDs will expand the methods of limiting production and expand the use of well spacing restrictions to prevent interference between

⁵⁹ TEX. WATER CODE ANN. § 36.117(b) (Vernon Supp. 2002). Other exemptions, primarily related to oil and gas operations, are found in § 36.117 but are not addressed here.

⁶⁰ TEX. WATER CODE ANN. § 36.117 (Vernon 2000).

⁶¹ TEX. WATER CODE ANN. § 36.117(b) (Vernon Supp. 2002).

⁶² TEX. WATER CODE ANN. § 36.117(a) (Vernon Supp. 2002).

⁶³ HILL COUNTRY UNDERGROUND WATER CONSERVATION DISTRICT RULES (Nov. 9, 1999, as amended Sept. 10, 2002) ("HILL COUNTRY RULES"), at § 5.6(B)(3) and BLANCO-PEDERNALES GROUNDWATER CONSERVATION DISTRICT RULES (Feb. 11, 2002) ("BLANCO-PEDERNALES RULES"), at § 4.2(A).

wells and degradation of water quality.⁶⁴ Table B shows some examples of well spacing rules.

**TABLE B
WELL SPACING REGULATIONS**

COUNTY and GCD	SPACING REQUIREMENT
Model Rules	50 feet from the property line of any adjoining landowner, but no restrictions on distance from other wells. ⁶⁵
Gillespie County, Hill Country UWCD	Minimum of 75 feet to the property line. Sliding distance requirements between wells and the property line depending on production levels. ⁶⁶
Hays County, Hays Trinity GCD	No spacing requirements. ⁶⁷
Blanco County, Blanco-Pedernales GCD	Sliding distance requirements between wells and from the property line. ⁶⁸

**Production Limits Are Used
to Manage Groundwater Resources**

A groundwater district has the authority to limit how much water a well can pump or produce. Some districts correlate the maximum amount of groundwater withdrawal with the surface acreage. This is known as correlative rights. For example, the Panhandle Groundwater Conservation District authorizes what it calls “high impact production permits” that allow a permittee to withdraw one acre-foot of water per acre per year.⁶⁹

⁶⁴ See TEX. WATER CODE ANN. § 36.116 (Vernon Supp. 2002), as amended by Tex. S.B. 1639 and H.B. 3507 § 18.006, 78th Leg., R.S. (2003).

⁶⁵ TEXAS WATER DEVELOPMENT BOARD, THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, AND THE TEXAS ALLIANCE OF GROUNDWATER DISTRICTS, *MODEL RULES* § 5 (1999).

⁶⁶ HILL COUNTRY RULES at § 5.6.

⁶⁷ HAYS TRINITY GROUNDWATER CONSERVATION DISTRICT RULES (Aug. 9, 2001). The District is in the process of amending its rules and is considering instituting spacing requirements.

⁶⁸ BLANCO-PEDERNALES RULES at § 4.2.

⁶⁹ PANHANDLE GROUNDWATER CONSERVATION DISTRICT RULES § 4.5 (Mar. 18, 1998). These rules are in the process of being amended.

Sometimes a district has an overriding district-wide limit on production that is superimposed on the permitted amounts. Once again, using the Panhandle GCD as an example, under District Rule 15.1 and the District's approved management plan, the District set the goal of maintaining the Ogallala Aquifer so that in 2050 it still has at least 50 percent of the water it had in 1998.⁷⁰ In the District, this is commonly referred to as the "50/50 Standard."

The District's Rules provide detailed standards for regulating and permitting groundwater wells and withdrawals, designed to ensure that the District meets the 50/50 Standard. In the case of existing users, the rule is implemented through the following process. The Board designates a "Depletion Study Area" (DSA) in an area where the Board believes that the groundwater level is declining at a greater than acceptable rate. It then determines whether an acceptable decline rate is being exceeded, and if so, it establishes a "Strategic Conservation Depletion Area" (SCDA). The Board may impose additional regulations on existing users within the SCDA. While a permit may be issued authorizing the full one-acre foot per acre per year, if in any given year the use of that amount of water will breach the 50/50 Standard, the production will be curtailed.⁷¹

GCD Authority Over Groundwater Quality Is Evolving

Despite the extensive amendments to Chapter 36 during the 77th Legislative Session, the powers of GCDs are primarily restricted to water resource issues. While these political subdivisions have the general power to regulate or protect the quality of groundwater, questions are being raised about the extent of that authority. The GCDs authority over water quality is based on the provisions of Chapter 36 summarized below.

Under Texas Water Code § 36.101, GCDs have the authority to make and enforce rules to "prevent waste of groundwater." "Waste" has many definitions in the statute, two of which give GCDs power over groundwater quality:

- "withdrawal of groundwater from a groundwater reservoir at a rate and in an amount that causes or threatens to cause intrusion into the reservoir of water unsuitable for agricultural, gardening, domestic, or stock raising purposes;"⁷² and

⁷⁰ PANHANDLE GROUNDWATER CONSERVATION DISTRICT, MANAGEMENT PLAN (July 8, 1998). The Management Plan is in the process of being amended.

⁷¹ PANHANDLE GROUNDWATER CONSERVATION DISTRICT RULES § 15 (Mar. 18, 1998).

⁷² TEX. WATER CODE ANN. § 36.001(8)(A)(Vernon Supp. 2002).

- “pollution or harmful alteration of groundwater in a groundwater reservoir by saltwater or by other deleterious matter admitted from another stratum or from the surface of the ground.”⁷³

Thus Chapter 36’s definition of “waste” provides GCDs with general authority under their rulemaking power for protecting water quality.

To make this authority clear, § 36.101⁷⁴ was amended in 2001 to specifically grant rulemaking power to “prevent degradation of water quality.” Likewise, § 36.116, which authorizes a GCD to regulate spacing and production through its rulemaking powers, was amended to authorize such regulation “to prevent degradation of water quality.”⁷⁵ The extent of Districts’ power to protect water quality could be the subject of litigation as the newly formed GCDs begin enacting and enforcing their rules, particularly rules that seek to regulate land use as a means to protect groundwater quality.

Generally Accepted Rules Used by GCDs to Protect Groundwater Quality

- Groundwater Conservation Districts almost uniformly impose well construction standards designed to protect water quality.
- They also generally regulate abandoned wells and require them to be properly plugged.
- Districts have established a wide variety of water quality monitoring programs. They may maintain a lab to test a limited number of chemical constituents, as well as, coliforms bacteria. These may be performed at no cost to well owners.⁷⁶
- District spacing regulations often include required spacing from septic systems or other potential sources of pollution.

⁷³ TEX. WATER CODE ANN. § 36.001(8)(D)(Vernon Supp. 2002).

⁷⁴ See TEX. WATER CODE ANN. § 36.101(a)(Vernon Supp. 2002).

⁷⁵ See TEX. WATER CODE ANN. § 36.116(a)(Vernon Supp. 2002), as amended by Tex. S.B. 1639 and H.B. 3507 § 18.006, 78th Leg., R.S. (2003).

⁷⁶ See, for example, TEXAS ALLIANCE OF GROUNDWATER DISTRICTS (TAGD), *Membership Directory & District Activities*, Jan. 2001 at p. 40 (Hill Country Underground Water Conservation District). This information is also available on the TAGD website at <http://www.texasgroundwater.org/index.htm>. Scroll vertically and click on “Members.”

Does Authority Over Groundwater Quality Allow Regulation of Surface Land Use?

How much authority GCDs have to be proactive in protecting groundwater quality within their districts is unknown. Some GCDs focus on protecting water quality in aquifer recharge zones, which they have the power to do under Chapter 36. For example, the Barton Springs/Edwards Aquifer Conservation District “works with federal, state and local regulatory agencies on projects impacting the recharge zone.” They also have a staff of groundwater scientists collecting and interpreting data such as dye trace studies, creek flow loss measurements, and water quality trend analysis. These and other scientific investigations are being used to develop strategies for managing the District’s groundwater resources.⁷⁷

More controversial are rules such as those of the Edwards Aquifer Authority (EAA), which bar new underground fuel storage tanks and require upgrade of existing tanks over the recharge zone to protect water quality in the aquifer.⁷⁸ Also proposed was limiting impervious cover; additional water quality buffer zones to cope with stormwater runoff; limiting the use of hazardous substances in the recharge zone; banning dry cleaners, photo processors, automotive repair and service shops, metal plating and other activities with a high potential for contamination. The EAA believes that its enabling legislation clearly authorizes this type of regulation.⁷⁹ During the 78th regular Session, attempts were made by Senator Armbrister to curtail the EAA’s water quality protection power.⁸⁰

Another example of a GCD that has restricted certain activities within the District on the basis of protecting water quality is Hemphill County Underground Water Conservation District. Their rules prohibit the import into or transport within the District, for purposes of disposal, radioactive waste, toxic substances, and PCBs. They also prohibit waste disposal wells and storage facilities for these substances.⁸¹

⁷⁷ Id. at p.2 (Barton Springs/Edwards Aquifer Conservation District).

⁷⁸ See “October 2002: EAA bans new fuel tanks in recharge zone,” on the Edwards Aquifer Authority website: <http://edwardsaquifer.net/news.html> (downloaded 7/15/03).

⁷⁹ BRUCE DAVIDSON, San-Antonio Express-News Business Dept.; web posted 12/29/02.

⁸⁰ See “May 2003: Legislature debates EAA powers; end result is little change,” at <http://edwardsaquifer.net/news.html> (downloaded 7/15/03).

⁸¹ HEMPHILL COUNTY UNDERGROUND WATER CONSERVATION DISTRICT RULES (Nov. 16, 1999).

The enabling legislation of most groundwater conservation districts does not expressly provide such authority, so similar rules in those districts would be based on the Chapter 36 language summarized above. Just how broad a GCD's power to protect water quality is, may be the subject of litigation as the newly formed GCDs begin enacting and enforcing their rules.⁸²

Other Political Subdivisions Have Authority Over Water Availability and Water Quality

Over the past five years, municipalities and counties have been given the authority to require developers to certify that water is available to serve their proposed projects. This has been in response to unscrupulous practices that resulted in housing areas being built and sold without access to drinking water.

Counties in PGMAs Have Enhanced Power Over Water Resources

Under Texas Water Code § 35.019, counties located within a Priority Groundwater Management Area (PGMA) may adopt water availability requirements in an area where platting is required. The county must determine that the requirements are necessary to prevent current or projected water use in the county from exceeding the safe, sustainable yield of the county's water supply.⁸³ The counties that are currently totally or partially in designated PGMAs

⁸² For an in-depth discussion of this issue, see José A. Berlanda, *Can a Groundwater Conservation District Regulate or Impose Water Quality Standards?* (presented at State Bar of Texas' THE CHANGING FACE OF WATER RIGHTS IN TEXAS), February 13 – 14, 2003.

⁸³ § 35.019. Water Availability

(a) The commissioners court of a county in a priority groundwater management area may adopt water availability requirements in an area where platting is required if the court determines that the requirements are necessary to prevent current or projected water use in the county from exceeding the safe sustainable yield of the county's water supply.

(b) The commissioners court of a county in a priority groundwater management area may:

(1) require a person seeking approval of a plat required by Subchapter A, Chapter 232, Local Government Code, to show:

(A) compliance with the water availability requirements adopted by the court under this section; and

(B) that an adequate supply of water of sufficient quantity and quality is available to supply the number of lots proposed for the platted area;

(2) adopt standards or formulas to determine whether an adequate water supply exists for the platted area; and

(3) adopt procedures for submitting the information necessary to determine whether an adequate water supply exists for the platted area.

are shown on Table C. The authority granted counties under § 35.019 is broader than that under more recent legislation amending the Local Government Code, discussed below.

TABLE C
Counties in Designated PGMA⁸⁴

Bandera	El Paso	Midland
Bexar	Gillespie	Reagan
Blanco	Hale	Swisher
Briscoe	Hays	Travis
Comal	Kendall	Upton
Dallam	Kerr	

**Cities and Counties May Require
Water Availability Certification for
Subdivisions Relying on Groundwater**

In 1999, the Legislature added Local Government Code §§ 212.0101 and 232.0031, which authorize municipalities and counties to require a water availability certification for plat applications for subdivision of land when the source of water supply is groundwater located under that land.⁸⁵

The Commission was required to establish the content and format of the certification,⁸⁶ which it did in 30 Texas Administrative Code, Chapter 230.⁸⁷

(c) The water availability requirements established by a commissioners court under this section may require that:

- (1) a person seeking approval of a plat or attempting to sell a lot in a subdivision:
 - (A) notify a purchaser of a lot in the subdivision if an approved water supply for the subdivision does not exist; or
 - (B) if the person attempts to build a water supply system to serve one or more lots within the subdivision:
 - (i) comply with federal, state, and local law; and
 - (ii) establish an entity to construct and operate the system; or
- (2) a planned or operating water supply system serving one or more lots within a subdivision be built and operated in compliance with federal, state, and local laws and rules related to public drinking water.

Added by Acts 1997, 75th Leg., ch. 1010, § 4.19, eff. Sept. 1, 1997. TEX. WATER CODE ANN. § 35.019 (Vernon 2000).

⁸⁴ The list includes counties that are either totally or partially inside a designated PGMA. See Commission Groundwater Report: 2003 at 20.

⁸⁵ TEX. LOCAL GOV'T CODE ANN. §§ 212.0101 and 212.0031 (Vernon 2000).

⁸⁶ Id.

Thus, if a municipality or county decides to impose a water availability certification requirement under the Local Government Code, they must look to the Commission rules for the details of the certification itself.

Under these regulations, § 230.10 requires groundwater availability determinations to be based on aquifer parameters derived from site-specific aquifer testing and water quality sampling, an annual groundwater demand estimate, and the anticipated method of water delivery.⁸⁸ Section 230.9 requires specific water quality analyses. These must be compared to primary and secondary public drinking water standards and the findings must be documented as part of the water availability certification.⁸⁹

Rule 230.10 requires that water samples be collected from each aquifer being considered for water supply for the proposed subdivision.

- For proposed subdivisions where the anticipated method of water delivery is from an **expansion of an existing public water supply system or a new public water supply system**, the samples must be submitted for bacterial and chemical analysis as required by 30 Texas Administrative Code Chapter 290, Subchapter F (relating to Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements For Public Water Supply Systems).
- For proposed subdivisions where the anticipated method of water delivery is from **individual water supply wells on individual lots**, samples must be analyzed for chloride, conductivity, fluoride, iron, nitrate (as nitrogen), manganese, pH, sulfate, total hardness, total dissolved solids, and the presence/absence of total coliform bacteria.⁹⁰

Not all counties and municipalities have taken advantage of these new powers. Frequently, GCDs will actively encourage the county government and cities within their jurisdiction to adopt these regulations because the GCDs see these tools as helpful to their task of protecting the groundwater resources within their boundaries.

⁸⁷ 30 TEX. ADMIN. CODE, Chapter 230 (West 2003), as amended by 28 Tex. Reg. 1206 (Feb. 13, 2003).

⁸⁸ 30 TEX. ADMIN. CODE § 230.10 (West 2003).

⁸⁹ 30 TEX. ADMIN. CODE § 230.10(e) (West 2003).

⁹⁰ 30 TEX. ADMIN. CODE § 230.9 (West 2003).

Water Ranching

The Texas Center for Policy Studies describes “water ranching” as follows:

The term “water ranching” has evolved to describe the practice of landowners selling the right to pump the groundwater that lies beneath their land to another entity, or the situation where an outside interest purchases land with the sole intent of “mining” the groundwater beneath it for use elsewhere. Water ranching usually occurs in rural areas of the state where groundwater supplies are still relatively untapped, and most often “ranches” have multiple wells that are complemented by large pumps. What makes water ranching different from more traditional uses of groundwater is that the volumes of water being withdrawn are much greater than historical withdrawals- much more than the landowner would have ever used to irrigate his/her crops, or to support his livestock or family. For this reason, issues like aquifer sustainability, fairness and equity in withdrawal and legal rights to capture water, are coming into question.

TEXAS CENTER FOR POLICY STUDIES, *Water Ranching in the Lone Star State* (published in the TEXAS WATER POLICY UPDATE), Dec. 2001.

In Texas, because of the prevailing Texas rule of capture, a surface landowner generally may claim all of the groundwater that he captures. *E.g.*, *Houston & T. C. Ry. Co. v. East*, 98 Tex. 146, 81 S.W. 279 (1904). Currently, no governmental agency must approve a transfer or sale of groundwater rights.⁹¹ The only caveat is that if the groundwater is produced within a groundwater conservation district, it may require a permit. Additionally, if the water will be transported outside the district for use, it may require a specific export or transporter permit from the district and may be assessed export fees.

⁹¹ But see Tex. H.B. 423 (relating to restrictions on the transfer of groundwater from a rural county to another county); H.B. 1618 (relating to allowing GCDs to limit the export of water); H.B. 2417 (relating to regulation of the transfer of groundwater out of a GCD); and S.B. 326 (relating to the regulation of certain sales of water to be transported by pipeline). All cites are to the 78th Leg., R.S. (2003). None of this legislation passed during the regular session.

GCDs Power to Protect the Resource is Increasingly Challenged by Groundwater Marketing

Because of this lack of governmental regulation or oversight, many policy makers believe that as water ranching becomes more common, there must be some way of protecting rural communities, agriculture and ranching operations, and environmental water needs from the increased withdrawals. Others argue that an individual landowner's right to use the groundwater is a private property right and is inviolate.

Those who advocate protection of the resource, support modifying the rule of capture "to take into account the rights of the neighbor- correlative rights- or limiting water withdrawals to a reasonable amount for the land from which it is produced – doctrine of reasonable use."⁹² These principles for groundwater are used by many other states.⁹³ As mentioned above, the Legislature recently amended Chapter 36 to clarify that GCDs have the authority to limit production based on tract size and reasonable use, whether or not that violates the rule of capture.⁹⁴ On this highly controversial topic, some believe this is not protection enough.

On the other hand, districts do not have the authority to adopt rules prohibiting the export of groundwater.⁹⁵ A district may require an export permit and if they do, they must follow the requirements of § 36.122 in determining whether to grant or deny it. Section 36.122 also allows imposition of a reasonable export fee, limited to 2-1/2 cents per thousand gallons of water (in a tax-based district) or the district's standard production fee plus a 50% surcharge.⁹⁶

A district may not impose more restrictive permit terms on exporters than it imposes on in-district permittees, except to the extent they are authorized by §36.113(e) relating to consideration of historic uses. The application processing fee may not be higher than the fee for in-district applicants and the application must be combined with the user's applications for in-district use, and processed

⁹² TEXAS CENTER FOR POLICY STUDIES, *Water Ranching in the Lone Star State* (published in the TEXAS WATER POLICY UPDATE), Dec. 2001.

⁹³ Id.

⁹⁴ See TEX. WATER CODE ANN. §§ 36.002 (Vernon Supp. 2002) and 36.116 (Vernon Supp. 2002), as amended by Tex. S.B. 1639 and H.B. 3507 § 18.006, 78th Leg., R.S. (2003).

⁹⁵ TEX. WATER CODE ANN. §§ 36.122(o) (Vernon Supp. 2002). Several of the districts created by special legislation during the 77th Session, however, are authorized to prohibit the export of groundwater. Ellis and Houston, *supra*, at 61.

⁹⁶ TEX. WATER CODE ANN. §§ 36.122 (Vernon Supp. 2002).

like all other in-district applications.⁹⁷ An export permit must be for no less than 30 years, as long as construction has begun, or will begin, within five years.⁹⁸

This issue has come to a head in Kinney County. Water marketing in the Kinney County Groundwater District has led to efforts to restrict the powers of the District. Senator Madla introduced S.B. 1886, which would have directed the District to recognize historic use in permitting, prohibited a Board member from acting as General Manager, and directed groundwater export fees to be used for economic development and education.⁹⁹ The Texas Alliance of Groundwater Districts believes that such legislation would “ruin the concept of local control. . . and set an immediate precedent for those who don’t like the methods of a local district.”¹⁰⁰

The water ranching issue can be characterized as a rural vs. urban issue. This is reflected in the Texas Farm Bureau 2003 Policy adopted at its annual meeting. The Bureau recommended that groundwater conservation districts be allowed to set unrestricted fees on water leaving their districts. They also support allowing districts to set mitigation fees on high impact municipal or industrial users and suggest that the revenue from such fees be used to mitigate or offset damage to landowners from high impact users.¹⁰¹

The New Liquid Gold

Groundwater marketing has captured the imagination of entrepreneurs throughout the State. Consideration of water marketing was one of the interim charges made to the Texas Joint Committee on Water Resources prior to the 78th Legislative Session. In its Report to the 78th Legislature, the Joint Committee discussed water marketing, both surface and groundwater. It recommended developing mechanisms to benefit local communities from which groundwater is exported, such as using revenues from exports for local needs including counties and school districts.¹⁰²

Such interest is also reflected in the increase in the frequency of water law seminars and attendance at those events. For example, the May 2003 “Buying,

⁹⁷ TEX. WATER CODE ANN. §§ 36.113(d) (Vernon Supp. 2002).

⁹⁸ TEX. WATER CODE ANN. §§ 36.113(h) and (j) (Vernon Supp. 2002).

⁹⁹ Tex. S.B. 1886, 78th Leg., R.S. (2003).

¹⁰⁰ Mary Sanger, *Hill Country Broadside* (a publication of the HILL COUNTRY ROUNDTABLE) April 2003, quoting Harvey Everheart, President of the Alliance.

¹⁰¹ See article found at www.txfb.org. Click on “Delegates address water, energy issues.” Updated January 7, 2003.

¹⁰² The Texas Joint Committee on Water Resources, *Interim Report to the 78th Legislature* (Nov. 2002), at p. 72.

Selling and Exporting Groundwater: Implications for Groundwater Conservation Districts” conference sponsored by Texas A&M University was highly successful and its list of attendees highlights the variety of individuals interested in this important topic. In addition to the familiar faces of water marketers, water lawyers, consultants, and water district representatives, there were individual rural landowners in surprising numbers, coming to hear about the valuable resource beneath their land.

This interest is being driven by increasing population growth: a Statewide population of 20 million today and an expected 40 million by 2050. Limited surface water supplies fuel the trend: 12 of the 15 major rivers are fully appropriated; there are fewer reservoirs being built; and junior rights and interbasin transfer regulations restrict surface water transfers. Cities throughout the State are facing shortages during drought. Finally, selling groundwater is a new source of income for landowners and agriculture.¹⁰³

The following is a brief summary of some of the water marketing deals that have received extended media coverage.

Groundwater Marketing is Making the News in Far West Texas

Several major cities are seeking a solution to dwindling water supplies through importing groundwater from surrounding areas. Despite aggressive conservation and reuse strategies, the City of El Paso expects depletion of its available freshwater supply by the year 2050. Its sister city, Ciudad Juarez, expects its portion of the Hueco Bolson to be gone in the next five years. Recommendations of the Far West Texas Regional Water Planning Group include importing groundwater from surrounding areas.¹⁰⁴

The El Paso Water Utilities has purchased two water ranches: the Antelope Valley Ranch near Valentine (25,000 acres) and the Wild Horse Ranch near Van Horn (22,000 acres). They are considering another purchase near Dell Valley. All of these properties are located in groundwater conservation districts; therefore, the Utilities would have to obtain a permit from those districts prior to producing and exporting the water.¹⁰⁵

¹⁰³ Ronald Kaiser, *Texas Groundwater Marketing and Exporting* (presented at Texas Water Resources Education’s BUYING, SELLING AND EXPORTING GROUNDWATER: IMPLICATIONS FOR GROUNDWATER CONSERVATION DISTRICTS), May 28, 2003.

¹⁰⁴ Suzanne Staton, *Water Woes* (published in the Texas Comptroller of Public Accounts’ FISCAL NOTES), Sept. 2001, at 6.

¹⁰⁵ TEXAS CENTER FOR POLICY STUDIES, *Water Ranching in the Lone Star State* (published in the TEXAS WATER POLICY UPDATE), Dec. 2001.

San Antonio is Looking Far and Wide for Groundwater

Likewise the South Central Texas Regional Water Planning Group is calling for importing groundwater to supplement the City of San Antonio's dwindling water supply. San Antonio currently obtains most of its water from the Edwards Aquifer. Pumping from the aquifer is restricted by the Edwards Aquifer Authority.¹⁰⁶

The San Antonio Water Systems (SAWS) has purchased groundwater rights in northern Bexar County over the Trinity Aquifer. SAWS is the first to tap the Trinity Aquifer to serve a large public water system. The anticipated withdrawal will be 6,200 acre-feet per year. SAWS' studies indicate that such pumping will not affect nearby groundwater users. Nonetheless, questions remain about the sustainability of the Trinity Aquifer under these conditions. Additionally, concerns have been raised about the possible effect on the recharge of the Edwards Aquifer, because water from the Trinity Aquifer accounts for about 10% of the Edwards' recharge.¹⁰⁷ On February 25, 2002 SAWS customers in northern San Antonio began receiving water from the Trinity Aquifer.¹⁰⁸

The properties are within the newly confirmed Trinity Glen Rose Groundwater Conservation District.¹⁰⁹ The legislation creating the District¹¹⁰ provides for an exemption from regulation for certain public water supply wells. If the public water supply well was in existence on September 1, 2001 and was drilled in compliance with technical requirements in effect at that time, the District cannot regulate them. The bill also exempts from District regulation all public water supply wells whose plans and specifications were approved by the Commission prior to September 1, 2001 and the well was completed prior to September 1, 2002.¹¹¹ An amendment to the Trinity Glen Rose Legislation

¹⁰⁶ Staton, *supra*, at 6 – 7.

¹⁰⁷ TEXAS CENTER FOR POLICY STUDIES, *Water Ranching in the Lone Star State* (published in the TEXAS WATER POLICY UPDATE), Dec. 2001.

¹⁰⁸ See article at http://www.saws.org/latest_news/NewsDrill.cfm?news_id=18 (downloaded 7/15/03).

¹⁰⁹ TEXAS CENTER FOR POLICY STUDIES, *Water Ranching in the Lone Star State* (published in the TEXAS WATER POLICY UPDATE), Dec. 2001.

¹¹⁰ House Bill 2005, Act of May 27, 2001, 77th Leg., R.S., ch. 1312, §16, 2001 Tex. Gen. Laws 3222, 3226.

¹¹¹ WECO applied for about 132 such wells and their plans were approved prior to September 1, 2001. They recently asked the staff of the Commission to waive or except certain requirements for completion of 60 of those wells. According to Joe Strauss, at the Commission, the request was refused. Mr. Strauss estimates that about 20 or so public water supply wells

clarifies which wells are exempt and that the GCD cannot prohibit the sale, purchase, lease, or trade of groundwater by a private well owner under this amendment.¹¹²

SAWS is reportedly looking further a field for groundwater resources. The Gonzales County Carrizo Aquifer Project is expected to provide the City with between 20,000 and 30,000 acre-feet of water annually from Gonzales County.¹¹³ On January 14, 2003 SAWS signed a letter of intent to develop a sustainable supply of groundwater from the Gulf Coast Aquifer from property owned by the Welder family in Refugio County. Groundwater from the property could potentially produce 20,000 acre-feet per year, subject to the permits issued by the Refugio County Groundwater Conservation District.¹¹⁴ See also discussion below regarding Kinney County.

Boone Pickens and Roberts County

Boone Pickens' Mesa Group has been buying up groundwater rights in Roberts County in the far northern portion of the Panhandle. He has amassed water rights for 150,000 acres of land. He hopes to market the water to customers such as the cities of Fort Worth, Dallas, and San Antonio. An initial step was to obtain a high impact production permit from the Panhandle Groundwater Conservation District. Mesa Group and aligned entities applied for such permits in September 2000. They sought to withdraw one acre-foot per acre per year.

The applications were protested by the Canadian River Municipal Water Authority (CRMWA), which holds a high impact production permit from the District and does not want the new project to interfere with its ability to utilize its permit to its full extent.

The only other protestant parties were Walter and Marie Killebrew.¹¹⁵ Mr. Killebrew's family has ranched their property for over a hundred years and they were concerned that withdrawal of the quantity of water proposed in the applications would end their way of life. The Killebrews own approximately 7,500 acres in a beautiful caprock setting northwest of Canadian, Texas, riparian to the Canadian River. They have several spring fed ponds and two extensive hay meadows that are sub-irrigated in the winter months. They also rely on

will be completed by the deadline and thus will be exempt from District regulation. Not all of these wells will supply water to San Antonio.

¹¹² S.B. 1570, 78th Leg., R.S. (2003).

¹¹³ *The Victoria Advocate*, Dec. 20, 2002.

¹¹⁴ Canyon Lake Times Guardian, Jan. 19, 2003.

¹¹⁵ The author represented Marie and Walter Killebrew in this matter.

numerous shallow windmills for their domestic and livestock use. One of the applicants, Courson Family Land Partnership, Ltd., sought permits for wells to be located on property adjacent to the Killebrews' property to the west.

While the Killebrews were forced to withdraw because of the escalating costs of such a hotly contested case, the remaining parties ultimately reached an agreement, which the District Board modified. The final order provided as follows:

- The permits were issued on a temporary basis.
- The permit holders must identify the destination user, which must be a municipal user within the State, and they must accomplish this within 5 years or the permit expires without further action of the District Board.
- After the destination user is identified, the permit holders must begin construction within 2 years and complete construction within 5 years, or the permit is terminated.

One critical issue to the protestants was whether the various applicants would be allowed to aggregate their rights. For example, under ordinary circumstances, if each applicant had 1,000 acres and applied for 1,000 acre-feet per year, then each applicant could withdraw 1,000 acre-feet per year from wells on her property. If several applicants could aggregate their permit rights, however, then conceivably the several thousand acre-feet per year could be withdrawn from wells located in a single area that would have potentially a much greater adverse impact on the draw down of the neighbors' wells in that area. The District staff took the position that there can be no aggregation of wells on non-contiguous tracts, even if those tracts have the same owner. With regard to contiguous tracts, the issue of aggregation has been the subject of negotiation with the result that it will be allowed for the Mesa Group applicants, but may not be allowed without an additional hearing for other applicants.

Another issue vital to the Killebrews was requiring their neighbor's wells to have a greater setback from the property line than the one-half mile required by the District rules. The Killebrews determined that this was the most effective way of protecting their domestic and livestock use of the groundwater. The Killebrews were unable to convince the District to protect those rights. The District staff took the position that it has no authority under its current rules to require increased setbacks to protect shallow wells or windmills. The District included in the permits, however, a provision allowing the District to use a portion of the

production fees to pay for mitigation for neighbors whose wells are adversely affected by pumping from the project.¹¹⁶

Mesa Water Inc. and Boone Pickens have filed a petition to create a freshwater district in northwest Roberts County. The petition is filed with the County Commissioners. If approved, landowners within the district may sell bonds, collect taxes and annex other property, as well as exercise the power of eminent domain clearing the way for building a pipeline for the water. The freshwater district represents about 46,000 of 150,000 acres of water rights Mr. Pickens holds. The Roberts County Commissioners Court tabled a vote on Mesa Water Inc.'s petition for a freshwater supply district on March 10, 2003.¹¹⁷

The Boone Pickens/Mesa Group water ranching deal is not the only water ranching occurring in Roberts County. Although much of the Ogallala Aquifer is overused, the reserves in Roberts County remain largely untapped because the topography of the County is not conducive to irrigated agriculture. Consequently, over the last ten years, two other water ranching efforts have begun in Roberts County. The Canadian River Municipal Water Authority has a high impact production permit from the District to produce between 40,000 and 50,000 acre-feet per year. The water is piped to Lake Meredith and then distributed to CRMWA's customers, including Lubbock and Amarillo. The City of Amarillo also has a high impact production permit from the District, which will be implemented in 2025.

In other groundwater news in Roberts County, 130 landowners with 145,000 contiguous acres, are considering putting together a group to market water similar to that of Mesa Water Inc. They have applied to the Panhandle GWD for high impact production permits for 90,000 acres.¹¹⁸

High Stakes in Kinney County

Grass Valley Water, a newly formed limited partnership, has purchased water rights from a 10,000-acre ranch in Kinney County. Their efforts to interest the San Antonio Water System in purchasing this water were the subject of much press coverage last fall. Also investing in and marketing Kinney County

¹¹⁶ For an interesting commentary on the permitting process written by Mesa's attorney see Michael V. Powell, *Implementing Water Code Chapter 36: What Did the Mesa Water Case Reveal About the State of the Law?* (presented at 3RD ANNUAL TRWA/TWCA WATER LAW CONFERENCE) Jan. 24, 2003.

¹¹⁷ Rick Storm, *Roberts County Tables Petition for Freshwater District*, Amarillo Globe-News, March 11, 2003.

¹¹⁸ Rick Storm, *Group Wants to Sell*, Amarillo Globe-News, May 14, 2003.

groundwater is Native Valley Alliance, whose chairman is Buster Brown. Speaker of the House Craddick reportedly owns a small percentage of the company. This consortium claims the right to export 20,000 acre-feet of water from Kinney County.¹¹⁹

Groundwater Marketing and the Rio Grande Watermaster

Two pieces of legislation that passed during the 78th Legislature, Regular Session, appear to lay the groundwork for further marketing of southwest Texas groundwater. Under S.B.1902 (Lucio) and H.B. 2250 (Flores), groundwater may be pumped into the Rio Grande and transported via bed and banks to be stored in a reservoir for future delivery of the water to purchasers. It gives the Commission authority to promulgate rules for issuing permits to convey this water down the beds and banks of the river. The Rio Grande Watermaster would administer the program. The bills define a new water law concept, “water in transit,” which is “privately owned water, not including state water, that a person has pumped from an underground reservoir and that is in transit between the point of discharge into the river and the place of use or the point of diversion by a person who has contracted with the owner of the water to purchase the water.”¹²⁰

Groundwater Transactions

Although a discussion of the specifics of groundwater transactions is beyond the scope of this paper, many excellent resources are available on this topic. A few from 2003 are listed below:

Jimmy Alan Hall and Randall B. Wilburn, *The Groundwater District: What is it, What are its powers, How does it help my client?* (presented at State Bar of Texas’ THE CHANGING FACE OF WATER RIGHTS IN TEXAS), February 13 – 14, 2003. Hall and Wilburn present a practical guide to obtain, preserve, and protect the client’s groundwater rights.

Russell S. Johnson, *Water Market Valuation* (presented at State Bar of Texas’ THE CHANGING FACE OF WATER RIGHTS IN TEXAS), February 13 – 14, 2003. Johnson addresses the factors influencing value including quantity, reliability/sustainability, delivery costs, quality, and regulatory framework. See also Russell S. Johnson, *Groundwater Transactions: Buyer’s Perspective* (presented at Texas Water Resources Education’s BUYING, SELLING AND

¹¹⁹ *San Antonio Express-News*, Nov. 10, 2002. See also, discussion of legislation introduced to restrict Kinney County Groundwater District powers, *supra*.

¹²⁰ Tex. S.B. 1902 and H.B. 2250, 78th Leg., R.S. (2003).

EXPORTING GROUNDWATER: IMPLICATIONS FOR GROUNDWATER CONSERVATION DISTRICTS) May 28, 2003.

Robin A. Melvin, *Transferring Water Rights in Texas* (presented at State Bar of Texas' THE CHANGING FACE OF WATER RIGHTS IN TEXAS), February 13 – 14, 2003. Melvin discusses severance of groundwater rights and groundwater leases. The paper includes sample groundwater leases.

Frank Z. Ruttenberg and Elizabeth C. Breazeale, *Transferring Groundwater Rights* (presented at State Bar of Texas' THE CHANGING FACE OF WATER RIGHTS IN TEXAS), February 13 – 14, 2003. Ruttenberg and Breazeale include forms: purchase agreement for groundwater rights; groundwater warranty deed and bill of sale; groundwater lease.

Lynn Sherman, *Presentation to the Texas Water Resources Education Groundwater Conservation District Seminar Series 2003* (presented at Texas Water Resources Education's BUYING, SELLING AND EXPORTING GROUNDWATER: IMPLICATIONS FOR GROUNDWATER CONSERVATION DISTRICTS) May 28, 2003. Sherman discusses the need for groundwater transfers and the role played by private enterprise.

Texas Farm Bureau, *Model Lease of Groundwater Rights* (presented at State Bar of Texas' RURAL LAW SEMINAR and at Texas Water Resources Education's BUYING, SELLING AND EXPORTING GROUNDWATER: IMPLICATIONS FOR GROUNDWATER CONSERVATION DISTRICTS) May 9 and 28, 2003, respectively. The Bureau refers to its Model Lease as the "Farmers and Ranchers 88." The lease was developed as a service to Bureau members and is copyrighted. It takes the same approach as used in the oil and gas business.

Groundwater Regulation Is Here to Stay

The population of the State of Texas is growing rapidly, with the population expected almost double by 2050. Most of that growth is expected to occur in urban centers.¹²¹ With that growth comes increasing need for development of groundwater sources. This trend frequently pits rural interests against those of urban areas that are seeking inexpensive and reliable sources of drinking water for their residents. Likewise, in rural areas it often pits one neighbor against another.

Groundwater conservation districts are deciding whether aquifers should be managed on a sustainable basis or on the basis of eventual depletion. This

¹²¹ Texas Water Development Board, *Water for Texas – 2002* (January 2002) at p. 3.

decision relies heavily on the hydrologic characteristics of the aquifer itself. Some recharge quickly, while others take hundreds of years for any significant recharge.

Groundwater conservation districts are considering their roles in restricting or encouraging marketing of groundwater for export out of the district. Likewise they are exploring whether they have legal authority to require conservation, recharge enhancements, rainwater harvesting, brush control, and more controversial land use requirements such as restricting impervious cover and certain hazardous activities in recharge zones.

Texas has traditionally had a plentiful groundwater supply. The State has made a commitment to local control of this valuable resource, but there are many unanswered issues to be addressed. Increasing population and changing demographics highlight the need for resource sharing and raise the specter of rising competition between rural and urban areas for water.

ABOUT THE AUTHOR:

Mary K. Sahs is currently practicing law as a sole practitioner under the firm name Sahs & Associates, P.C. For nearly twenty years, she has focused her practice on the areas of environmental and water law. She currently serves as general counsel for the Blanco-Pedernales and the Hays Trinity Groundwater Conservation Districts and the Bandera County River Authority and Groundwater District. She has done legal work for a number of other groundwater districts, including Hill Country and Coastal Plains. She also successfully represented SOSONET, a non-profit organization on its petition for creation of the Lake Country Groundwater Conservation District in Wood County.

Ms. Sahs participated in the Mesa Group permit application hearing before the Panhandle Groundwater Conservation District, representing the interests of adjacent landowners opposing the permit. In addition, she represented in a preliminary hearing before the State Office of Administrative Hearings a group of landowners in McCulloch County who petitioned the Texas Natural Resource Conservation Commission for a watermaster on the San Saba River. Ms. Sahs currently serves as Special Counsel to Good Company Associates, a business-development consulting firm that provides strategic planning and marketing support, policy analysis, and government and public relations services.

Ms. Sahs previously served as a Hearings Examiner and as the Public Interest Counsel at the Texas Water Commission. Later she was an associate with Gardere & Wynne, L.L.P. and from there started her own firm in 1995. Ms. Sahs has written and spoken extensively on environmental and water issues. She is co-editor of West's Texas Practice Series, Environmental Law, a treatise on Texas environmental law.

She served as the program chair for the Central Texas Chapter of the Air & Waste Management Association for several years. She was also an EnviroMentor Advisory Committee Member with the Small Business and Local Government Assistance Office of the TNRCC for a number of years.

Ms. Sahs grew up in El Paso, where her only thoughts about water were whether the water coming out of the tap was hot enough for a shower. Introduced to the concepts of water law by Professor Corwin Johnson at the University of Texas School of Law, nearly 20 years ago, she began her long interest in and passion about water law.

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PROFESSIONAL EXPERIENCE

Licenses

Admitted to the State Bar of Texas - November 1985.

Admitted to practice in the United States District Court for the Western District of Texas - April 1987.

Admitted to practice in the United States District Court for the Northern District of Texas - April 1997.

Registered Texas Lobbyist - 1993 to 1999.

Special Counsel, Good Company Associates, Austin, Texas, November 2002 to Present.
Provide expertise and legal support on water law issues to this business-development consulting firm.

President, Sahs & Associates, P.C., Austin, Texas, September 1998 to Present.
Administrative, environmental, and water law.

Principal, Law Offices of Mary K. Sahs, Austin, Texas, November 1995 to September 1998.
Civil litigation, administrative, environmental, water law, and legislative practice.

Associate, Gardere & Wynne, L.L.P., Austin, Texas, September 1992 to November 1995.
Environmental and legislative practice.

Public Interest Counsel, Texas Water Commission, Austin, Texas, January to September 1992.
Environmental public advocate.

Hearings Examiner, Texas Water Commission, Austin, Texas, August 1988 - January 1992.
Water quality, water and sewer retail and wholesale rates, utility certificates of convenience and necessity, water rights, hazardous and industrial waste including air components, enforcement.

Regulatory Consultant, Texas Department of Agriculture, Austin, Texas, 1987 to 1988.
Drafting Farmworker Right-to-Know regulations.

Legal Writing Lecturer, University of Texas School of Law, Austin, Texas, 1987 to 1988.

Associate, Scanlan, Buckle & Fleckman, Austin, Texas, 1985 to 1987.
Environmental law and general civil practice.

Assistant City Attorney, West Lake Hills, Jonestown, Village of Lakeway, City of Sunset Valley, Texas, 1985 to 1987.
Municipal law and city prosecutor.

EDUCATION

University of Texas School of Law, Austin Texas, Doctor of Jurisprudence with Honors, May 1985.
University of Texas at El Paso, Bachelor of Arts in History with High Honors, May 1974.

PROFESSIONAL MEMBERSHIPS

Travis County Women Lawyer's Association, Board of Directors, 2001 – 2002 and present.

Member of the College of the Star Bar of Texas, 2001 – present.

Air & Waste Management Association, Central Texas Chapter, Southwest Section, 1996 - present.
Program Chair, 1999 to 2002. Membership Chair, 1996 – 1999.

Travis County Bar Association, Solo/Small Firm Section, 1998 - present. Served as a member of the Board of Directors for several years, including as Chair Elect 2001 – 2002. Program Chair, 1999 and 2001.

Travis County Bar Association, Administrative Law Section, 1999 - present.

EnviroMentor Advisory Committee Member – Small Business and Local Government Assistance Office of the Texas Natural Resource Conservation Commission, 1998 to 2002.

Governor's Task Force 21 – Data Management Work Group, 1994 to 1995. Review Texas Natural Resource Conservation Commission information management system ("IMS"). Short term focus on review of agency compliance with federal Clean Air Act IMS requirements.

Governor's Task Force 21 – Permit Hearings Process Task Force, 1993. Chair of the Discovery/Sanctions Subcommittee. Hearing rules based on the Subcommittee's proposal were adopted by the Texas Natural Resource Conservation Commission.

Environmental and Natural Resources Law Section, State Bar of Texas: 1986 - present.

EXECUTIVE COMMITTEE MEMBER/OFFICER: Served as Section Officer for six terms. Served two additional terms on Executive Committee.

LAW SCHOOL COMMITTEE: Chair 1986 - 1990. The Committee develops seminars for Texas law students and solicits student articles for the Environmental Law Journal, published by the State Bar of Texas.

ENVIRONMENTAL LAW JOURNAL: Co-editor 1986 - 1988 of "Recent Developments - Natural Resources."

PUBLICATIONS AND SEMINAR PARTICIPATION

West's Texas Practice Series, Environmental Law, Co-editor of treatise on Texas environmental law authored by members of the Environmental and Natural Resources Law Section, State Bar of Texas, published 1997 and updated annually.

Planning Committee Member for various environmental law seminars including:

STATE BAR OF TEXAS: Advanced Environmental Law Course, 1994; Business Law Section's "What Every Business Lawyer Needs to Know About Environmental Law," 1993.

NATIONAL ASSOCIATION OF ENVIRONMENTAL LAW SOCIETIES: "Alternative Dispute Resolution in Water Law" panel at the 1992 national convention.

ENVIRONMENTAL AND NATURAL RESOURCES LAW SECTION: "Texas Environmental Superconference," 1990, 1994, 2000, 2001, 2002, and 2003.

TEXAS AGRICULTURAL AND NATURAL RESOURCES SUMMIT INITIATIVE OF THE TEXAS A & M SYSTEMS: "Texas Water Summit: Focusing on Water for Agriculture and Natural Resources," 2003.

Speaker, Author, and Moderator for various seminars including:

"Sustainability of Texas Ground Water – Science and Policy," co-author for the October 2003 Annual meeting of the American Institute of Hydrology.

"Environmental and Water Law Go Local," invited speaker and author for the May 2003 Litigation Section of the Travis County Bar Association's seminar: "Representing Clients in the Multi-Jurisdictional Setting."

"Roundtable on Groundwater District Powers: Enough, Not Enough, Just Right?" panelist for the March 2003 Environmental Defense seminar: "Texas Groundwater: Yours? Mine? Ours?"

"Open Government Requirements for Texas Groundwater Conservation Districts," speaker and author for the January 2003 Texas Water Resources Institute of Texas A & M University seminar: "Groundwater Conservation District Seminar Series: Being an Effective Board Member."

"Groundwater Regulation in Texas," author for a legislative briefing paper provided to Texas legislators by the Texas Alliance of Groundwater Districts in January 2003.

"Groundwater Regulation in Texas," speaker and author for the January 2003 meeting of the Industry Council on the Environment; the February 2003 meeting of the Austin Industry Environmental Counsel; and invited speaker and author for the 2003 Environmental Superconference.

"Groundwater in Rural Texas," speaker and author for the May 2002 meeting of the Real Estate Section of the Travis County Bar Association; the September 2002 meeting of the Central Texas Section of the Water Environment Association of Texas meeting; and the November 2002 meeting of the San Antonio Bar Association, Environmental Law Section.

"H.B. 801," speaker and author for the 2001 CLE International Water Law Conference, Austin, Texas.

"Sustainable Development," speaker and author for the 2001 Environmental Superconference sponsored by the Environmental and Natural Resources Section of the State Bar of Texas.

"Texas Water Rights" speaker at the 2000 and 2001 NBI Texas Water Law Conference, Austin, Texas.

“Groundwater Conservation Districts 101” panelist at the 2001 Texas Groundwater Legal Defense & Education Fund seminar.

"Agency Mediation at the Texas Natural Resource Conservation Commission" presented at the 1994 Texas Environmental Superconference.

"Citizen Participation Panel" presented at the 1994 State Bar of Texas Advanced Environmental Law Course.

"Current Issues in Citizen Participation" presented at the 1993 University of Texas School of Law Hazardous & Solid Waste Management Institute.

"The Use of Alternative Dispute Resolution in Federal and State Environmental Agency Proceedings" presented at the 1993 Business Law Section, State Bar of Texas PDP Course.

"The Use of Negotiations in Resolving Facility Siting Issues before the Texas Water Commission" presented at the 1992 From Conflict to Cooperation seminar at the University of Houston-Clear Lake.

"Expediting Complex Hearings" presented at the 1992 Texas Environmental Superconference.

COMMUNITY ORGANIZATION MEMBERSHIPS

The Austin Kiwanis Club - 1998 to Present. Board member, 2000 - 2001. Membership Chair, 2000 - 2001. President -Elect and Programs Coordinator, 2001 – 2002. Currently Club President.

July 2003

WATER QUALITY

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HOT ISSUES

Navigable Waters – Waters of the U.S.

Lynn Bortka – BP America, Inc.
August 2003

- **Expansive View**
- **SWANCC** ¹
 - **Migratory Bird holding** ^{2,3}
 - **Dicta** ^{5,11,12}
- **Voluminous Citations and Law Review Articles**

1

SWANCC Majority

“We cannot agree that Congress’ separate definitional use of the phrase ‘waters of the United States’ constitutes a basis for reading the term ‘navigable waters’ out of the statute.”

“... it is one thing to give a word (navigable) limited effect and quite another to give it no effect whatsoever”

“Significant nexus”

2

Further Complications

- **Navigable v. Navigable “in fact”**
- **Significant Nexus?**
- **Tributaries and Intermittent Streams**
- **Adjacency**

3

Impact of Definition

- **Penalties for spills to Navigable Waters**
- **Agreed to disagree**
- **SPCC plans**
- **Storm water**
- **NPDES permits**

4

Navigable (by what?)

- **Navigable v. Navigable in Fact** ^{1, 4, 5}
- **Boats & Ships in Commerce** ^{6, 7, 8}
- **Study to determine navigability** ⁴
- **Redefined by CWA** ^{9, 10}
- **Concessions**

5

What is a Significant Nexus?

Tributaries

- **1st v. 10th** ¹¹
- **Distance** ^{5, 9}
- **Intermittent** ³
- **Impact requirement** ^{9, 10, 12}

Adjacent Wetlands

- *Riverside Homes* ¹⁷
- **Adjacent to what?**

6

Tributaries

- **Unbroken line not required** ^{3, 20}
- **Direct to Navigable Waters** ^{11, 13}
- **Only some hydrological connection required** ¹⁴
- **Minimal connection no longer enough** ¹²
- **Distance from Navigable Waters** ^{4, 5, 13, 15}
- **Man-made** ^{13, 16}

7

Adjacency

- **To an open body of Navigable Waters** ^{11, 18}
- **To a tributary** ^{11, 18}
- **Hydrological connection** ¹⁶

8

Interstate Commerce

- **Congress' Power to Regulate**
 - **Power plants**
 - **Fish camps**
 - **Municipal water supplies**

- **CWA deals with Navigable Waters**

- **Advance Notice of Proposed Rule Making**

CASE CITATIONS

1. ***Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers***; 531 U.S. 159; U.S. Supreme Court (March 29, 2001)
2. ***Headwaters, Inc. v. Talent Irrigation District***; 243 F. 3d 526; 9th Circuit Court of Appeals (March 12, 2001)
3. ***United States v. Lamplight Equestrian Center Inc.***; 2002 U.S. Dist. LEXIS 3694; U.S.D.C. for Northern District of Illinois, Eastern Division (March 8, 2002)
4. ***United States v. Buday***; 138 F. Supp. 2d 1282; U.S.D.C. for Montana, Butte Division (April 11, 2001)
5. ***Rapanos v. United States***; 190 F. Supp. 2d 1011; U.S.D.C. for Eastern District of Michigan, Southern Division (February 21, 2002)
6. ***The Daniel Ball***; 77 U.S. 557, U.S. Supreme Court (1870)
7. ***The Montello***; 78 U.S. 411; U.S. Supreme Court (1871)
8. ***Aiello v. Town of Brookhaven***; 136 F. Supp. 2d 81; U.S.D.C. for Eastern District of New York (March 15, 2001)
9. ***United States v. Deaton***, 332 F.3d 698 (4th Cir. Md. 2003)
10. **SWANCC**; Dissent by Justice Stevens
11. ***Rice v. Harken Exploration Co.***, 250 F.3d 264 (5th Cir. Tex. 2001)
12. ***FD&P Enterprises v. United States Army Corps of Engineers***; 239 F. Supp. 2d 509, U.S.D.C. for New Jersey (January 15, 2003)

13. ***United States v. John Paul Jones Jr.***; 2003 U.S. Dist. LEXIS 10640; U.S.D.C. for Middle District of Georgia, Macon Division (June 4, 2003)
14. ***Idaho Rural Council v. Bosma***, 143 F. Supp. 2d 1169; U.S.D.C. for Idaho (June 4, 2001)
15. ***Harris v. Oil Reclaiming Company***; 94 F. Supp. 2d 1210; U.S.D.C. for Kansas (April 11, 2000)
16. ***San Francisco Baykeeper v. Cargill Salt Division***; 263 F. 3d 963; 9th Circuit Court of Appeals (July 9, 2001)
17. ***United States v. Riverside Bayview Homes***; 474 U.S. 121 (1985)
18. ***United States v. RGM Corporation***; 222 F. Supp. 2d 780; U.S.D.C. for Eastern District of Virginia (July 25, 2002)
19. ***United States v. Newdunn Associates***; 195 F. Supp. 2d 751; U.S.D.C. for Eastern District of Virginia, Norfolk Division (April 3, 2002)
20. ***California Sportfishing Protection Alliance v. Diablo Grande Inc.***; 209 F. Supp. 2d 1059; U.S.D.C. for Eastern District of California (March 20, 2002)

Lynn Alan Bortka

Mr. Bortka received a masters degree in Environmental Engineering and worked for Amoco Production Company as a petroleum engineer for 13 years with responsibilities in the U.S., Latin America, and Europe. Amoco funded his legal studies and moved him into the corporate law department in 1990 after he received his law degree. Mr. Bortka has practiced environmental law since that time and has been responsible for Amoco's, and its successor, bp's, environmental practice for company operations in the lower 48 and the Gulf of Mexico.

Mr. Bortka has served on the Texas Bar Association's Environmental and Natural Resource Law Committee's Executive Committee and currently chairs Texas Oil and Gas Association's Environmental Committee.

Storm Water Permitting
Texas Pollutant Discharge Elimination System
Stephen M. Ligon
Texas Commission on Environmental Quality

I. INTRODUCTION

Amendments to the Federal Water Pollution Control Act (Clean Water Act, 402(p)) in 1987 made clear that storm water discharges were point source discharges and therefore subject to the National Pollutant Discharge Elimination System (NPDES) permit program. The U.S. Environmental Protection Agency (EPA) identified two classes of storm water runoff as being potentially significant contributors of pollution, storm water associated with industrial activities and storm water discharges from publicly owned separate storm sewer systems (referred to as municipal separate storm sewer systems or MS4s). Dischargers subject to permitting were delineated in 40 CFR Part 122.26. The implementation of the regulations for storm water discharges associated with construction sites has been considered separately from the other types of industrial activities, so that in practice there are three types of storm water discharges subject to regulation: 1) storm water associated with industrial activities; 2) storm water associated with construction activities; and 3) municipal separate storm sewer systems.

II. Phase I and Phase II NPDES Regulations

The development of regulations for such a large and diverse universe of dischargers was a formidable task, and therefore EPA decided to develop the permit program in two phases. Phase I NPDES storm water regulations were finalized in 1990 and addressed the dischargers determined to be the more significant potential sources of pollutants. Phase I required authorization for discharges from large construction activities (those disturbing five or more acres of land), MS4s operated by medium and large sized cities (cities with a population of greater than or equal to 100,000 persons), and industrial activities defined by standard industrial activity code in 40 CFR Part 122.26. Operators of Phase I MS4s were issued individual NPDES permits, with varying effective dates. General NPDES permits were finalized for construction and industrial activities on September 9, 1992 (*Federal Register*, Vol. 57, No. 175, September 9, 1992).

Phase II storm water regulations were finalized on December 8, 1999 (*Federal Register*, Vol. 64, No. 235) and addressed discharges from MS4s operated within U.S. Bureau of Census defined “urbanized areas” and small construction sites disturbing less than five acres but at least one acre of land. Authorization for these discharges was required by March 10, 2003.

III. Texas Pollutant Discharge Elimination System (TPDES)

The Texas Commission on Environmental Quality (TCEQ) is the permitting authority for the NPDES storm water program in Texas. TPDES permits are issued under authority of Chapter 26 of the Texas Water Code with requirements and provisions for compliance with the Clean Water

Act. The TCEQ became the permitting authority on September ??, 1998. Through a memorandum of agreement with EPA, the TCEQ assumed implementation of the TPDES storm water program through a phased approach. The EPA remained the administrator of all effective permits until the date that they expired, when the TCEQ would reissue the permits. For all new storm water permits, including development of Phase II permits, the TCEQ would be the administrating authority.

Phase I TPDES Permits

Twenty-two Phase I MS4 NPDES permits were issued by EPA to MS4 operators in Texas. Each permit was issued for a five-year term, and each has a specific issuance and expiration date. The TCEQ is currently developing and reissuing these permits as TPDES permits as they reach the expiration dates.

TPDES general permit TXR050000 was issued on August 05, 2001, authorizing discharges of storm water associated with industrial activities. There are approximately 8,000 facilities currently authorized under this permit.

Phase II TPDES Permits

There are no separate Phase II permit requirements for storm water discharges associated with industrial activities.

TPDES general permit TXR150000 was issued on March 5, 2003 to authorizing discharges of storm water associated with construction activities. This permit includes provisions for both Phase I (large) and Phase II (small) construction activities. Only operators of Phase I construction activities are required to provide notice to the TCEQ to obtain authorization. More than 1,500 Phase I construction activities are authorized per month under this permit.

The TCEQ has not yet issued a TPDES Phase II general permit for small MS4s. The permit is expected to be final in September 2003. Operators of small MS4s located in urbanized areas will have a ninety-day time frame from the effective date to prepare a storm water management plan and to provide notice to the TCEQ to obtain authorization.

Stephen M. Ligon

Wastewater Permitting Section Texas Commission on Environmental Quality

Stephen Ligon received his Bachelor of Science in Biology from Southwest Texas State University. He began his professional career in 1981 with the U.S. Fish and Wildlife Service in Galveston, Texas, evaluating U.S. Army Corp of Engineer permits for impact on wetland areas. Mr. Ligon then worked for seven years with the Texas Parks and Wildlife Department - Inland Fisheries Management Division in Tyler, Texas, conducting fisheries work on public reservoirs. In 1988 he began a 3-year position with the City of Tyler as the city's Storm Water Drainage Maintenance Supervisor, responsible for construction of new storm water structures and the maintenance and repair of existing structures.

In 1992 Mr. Ligon began work for the Texas Water Commission (predecessor to the Texas Natural Resource Conservation Commission and to TCEQ). His work has included a study for the implementation of state water quality standards for discharges of storm water runoff, drafting industrial wastewater discharge permits as a member of the Industrial Permits Team, and development of regulations for discharges from aquaculture facilities. He is currently the Team Leader of the Storm Water & General Permits Team. This team is responsible for the development of TPDES storm water discharge permits and for the development of other TPDES general permits that authorize discharges of wastewater.

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Water Quality Hot Issues – SPCC and TMDL
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I. Spill Prevention Control and Countermeasure Plans – Amendment to Rule

On April 17, 2003, the U.S. Environmental Protection Agency (“EPA”) extended, by eighteen months, the date for a facility to amend and implement an Spill Prevention Control and Countermeasure (“SPCC”) Plan. This extension was a result of feedback received from EPA regarding its August 16, 2002 rule revising the Oil Pollution Prevention Regulations. 67 Fed. Reg. 47041 (July 17, 2002). This section of the paper, discusses the major rule revisions of the August 16, 2002 final rule, and incorporates the changes to the implementation schedule under the April 17, 2003 Rule.

The Oil Pollution Prevention Regulations were promulgated under the federal Clean Water Act and contain provisions relating to prevention of oil spills, which require preparation and implementation of SPCC Plans, and provisions relating to response to oil spills, which require preparation in and implementation of Facility Response Plans (“FRPs”). Revisions to the rules affect requirements applicable to both SPCC Plans and FRPs. The revised rule, among other things, revises the applicability of the regulation and requirements for completing SPCC Plans.

Major Rule Revisions

General Applicability of the Rule. New Section 112.1(a)(1) of the revised rule extends the geographic scope of the regulation to conform with earlier amendments to CWA to include discharges not only navigable waters of the U.S. and adjoining shorelines, but also to waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or that may affect natural resources. New Section 112.1(b) of the revised rule adds users of oil to those subject to the rule and changes the phrase, “harmful quantities” to “quantities that may be harmful.”

Completely Buried Tanks Not Included in Threshold. New Section 112.1(d)(2)(i) provides that completely buried tanks, which are subject to the technical requirements of 40 C.F.R. Parts 280 and 281, do not count in the calculation of the 42,000 gallon threshold for regulation of buried tanks. It also clarifies that permanently closed tanks do not count in the calculation of the threshold.

Threshold for Aboveground Storage Capacity. New Section 112.1(d)(2)(ii) eliminates the requirement to prepare and implement an SPCC Plan if any single container has a capacity greater than 660 gallons, and maintains the threshold of 1,320 gallons total stored in all containers. Only containers with a capacity of 55 gallons or more are counted in the calculation of aboveground storage capacity. The rule also clarifies that permanently closed containers do not count in the calculation of aboveground storage capacity.

Completely Buried Storage Tanks. New Section 112.1(d)(4) provides that completely buried storage tanks, which are subject to the technical requirements of 40 C.F.R. Parts 280 and 281, are

no longer required to comply with SPCC provisions. EPA believes that, under this new provision, most gasoline service stations will drop out of the SPCC program.

Minimum Size Container for Regulatory Threshold. New Section 112.1(d)(5) exempts containers with a storage capacity of less than 55 gallons of oil from all SPCC requirements.

Wastewater Treatment Facility Exemption. New Section 112.1(d)(6) provides that a facility or part of a facility used exclusively for wastewater treatment will no longer be subject to SPCC requirements unless it is used to meet any other requirements Part 112.

Case-by-case Authority to Require Plan. New Section 112.1(f) allows for EPA to require an SPCC Plan for a facility exempted from SPCC requirements, if it becomes necessary to achieve purposes of CWA.

Definition of Facility. New Section 112.2 clarifies that a facility may be as small as a piece of equipment (*e.g.*, a tank) or as big as a building or entire installation.

Schedule for Implementation. New Section 112.3. On April 17, 2003, the U.S. Environmental Protection Agency (“EPA”) extended, by eighteen months, the date for a facility to amend and implement an SPCC Plan. Therefore, if a facility were in operation on or before August 16, 2002, it must maintain its SPCC Plan, but must amend it, if necessary, on or before August 17, 2004, and must implement the plan as soon as possible but not later than February 18, 2005. 68 Fed. Reg. 18890 (April 17, 2003). If the facility becomes operational after August 16, 2002 through February 18, 2005 (and could reasonably be expected to have a discharge as described in 40 C.F.R. § 112.1(b)), it must prepare a plan before February 18, 2005, and fully implement it as soon as possible but no later than February 18, 2005. If the facility becomes operational after February 18, 2005 (and could reasonably be expected to have a discharge as described in 40 C.F.R. § 112.1(b)), it must prepare and implement a plan before it begins operations.

Certification by Professional Engineer. New Section 112.3(d) requires that the PE consider applicable industry standards and certify that the Plan is prepared in accordance with the requirements of Part 112. [This requirement is more specific than the previous version of the rule, which required only that the PE attest that the Plan has been prepared in accordance with good engineering practice.] The revised rule also allows an agent of the PE to visit and examine the facility in place of the PE, but the PE must review the agent’s work and certify the Plan. New Section 112.5(c) clarifies that a PE must certify only technical amendments (as opposed to non-technical amendments, such as phone numbers and names).

Maintain Plan at Facility. New Section 112.3(e) requires that a copy of the Plan is maintained at the facility if it is attended at least 4 hours a day. [The previous version of the rule required that a copy of the Plan be maintained at the facility if it were attended at least 8 hours a day.]

Submittal of Information for Discharges. New Section 112.4(a) requires that whenever a facility with an SPCC plan has (1) discharged more than 1,000 U.S. gallons of oil in a single discharge (as described in Section 112.1(b)), or (2) discharged more than 42 U.S. gallons of oil

(as described in Section 112.1(b)) in each of 2 discharges within any 12-month period, the owner or operator must submit to EPA 8 items of information within 60 days.

Deviations from Substantive Requirements. New Section 112.7(a)(2) allows for a deviation from most of the rule's substantive requirements (except for secondary containment requirements). To obtain deviations, the owner or operator must provide an explanation of the reasons for nonconformance and provide alternative measures for equivalent environmental protection.

Review of Plan. New Section 112.5(b) requires that the Plan be reviewed at least every 5 years from the date a facility becomes subject to the SPCC regulations or for an existing facility, 5 years from the date the last review was required. The Plan must be amended within 6 months of the review to include more effective prevention and control technology and implemented within 6 months of amendment. The owner or operator must document completion of the review and evaluation and must sign a statement as to whether the Plan will be amended.

Integrity Testing. New Section 112.7(d) requires that, if it is not practicable to install secondary containment, the owner or operator must provide an explanation of why the containment is not practicable and provide a strong oil spill response plan. The revised rule adds new requirements for periodic integrity testing of containers and periodic integrity and leak testing of the valves and piping. New Section 112.8(c)(6) requires that aboveground containers be tested for integrity on a regular schedule and when material repairs are done. The owner or operator must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultra sonic testing, acoustic emissions testing, or other system of non-destructive shell testing.

Training Requirements. New Section 112.7(f) requires that owner or operator, at a minimum, train oil-handling personnel in the operation and maintenance of equipment to prevent the discharge of oil. Discharge prevention briefings must be conducted at least once a year. [The previous version of the rule did not limit training to just oil-handling personnel and required briefings at "intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility."]

Corrosion Protection. New Section 112.8(d)(1) requires that all buried piping installed or replaced on or after August 16, 2002 must have protective wrapping and coating and cathodic protection, or otherwise satisfy the corrosion protection provisions for piping in 40 C.F.R. Part 280 or 281, for all soil conditions.

II. Total Maximum Daily Load – Withdrawal of 2000 Rule

On March 13, 2003, EPA withdrew the controversial 2000 final Total Maximum Daily Load (“TMDL”) rule that would have revised EPA’s program to clean up impaired waters. This section of the paper briefly discusses the background of the TMDL program, the current TMDL regulations, and the withdrawal of the 2000 final TMDL Rule.

Generally, a TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources, nonpoint sources and natural background that a waterbody can receive and still meet water quality standards. *See generally* 40 C.F.R. §130.2. Water quality standards are generally set by each state and identify uses for a waterbody and criteria necessary to protect those uses. *See* 40 C.F.R. §130.3 and Tex. Water Code § 26.023.

Section 303(d) of the federal Clean Water Act requires states¹ to identify waters that do not meet state water quality standards. 33 U.S.C. § 1313(d)(1)(A). The states are required to establish a priority ranking for these waters that takes into account the severity of the pollution and the uses to be made of such waters. *Id.* The states also are required to establish, for each of the waters identified in the priority ranking, the TMDLs for each pollutant. *Id.* at §1313(d)(1)(C). States are required to submit the waters identified and the loads established for the waters, for EPA’s approval. *Id.* at §1313(d)(2). If EPA disapproves the identification and load submitted by the state, EPA will identify such waters in the state and establish loads for those waters as EPA determines are necessary to implement the applicable water quality standards. *Id.*

Current Program

The program is currently operating under regulations adopted in 1985, which were amended in 1992. *See* 40 C.F.R. Part 130. These regulations, among other things, set the scope of lists of impaired waters, require that states submit their list of waters on a two year cycle, and discuss the methodology used to develop lists and components of a TMDL.

States must list waters that are impaired and threatened by pollutants and that require a TMDL to achieve applicable water quality standards. *See* 40 C.F.R. § 130.7(b). This list is to include a priority ranking of the water segments that takes into account the severity of the pollution, the uses to be made of the waterbodies (*e.g.*, fishing, swimming, drinking water), and the pollutants that are causing the violations of the water quality standards. *Id.* at § 130.7(b)(4). States must consider “all existing and readily available water quality-related” information to develop the lists. *Id.* at § 130.7(b)(5). This list of waters, the pollutants causing impairment, and the priority ranking that includes waters targeted for TMDL development, must be submitted to EPA on a two-year cycle, on April 1 of each even-numbered year. 40 C.F.R. § 130.7(d).

Along with the submittal of the list, states must provide documentation to EPA to support the determination to list (or not list) its waters, which includes a description of: (1) the methodology used to develop the list; (2) the information used to identify the waters; and (3) the rationale for any decision to not use any existing and readily available data for any of the waters. 40 C.F.R. §

¹ Territories and tribes are other governmental entities subject to TMDL regulations. Generally, in this paper, when states are discussed, territories and tribes are also subject to the discussion.

130.7(b)(5)(iv). EPA has 30 days from the date of submission to approve or disapprove a state's list and the TMDLs. 40 C.F.R. § 130.7(d)(2). If EPA approves the list and TMDLs, the state then incorporates them into a water quality management plan. *Id.* If EPA disapproves the list or TMDL, EPA has 30 days to establish the list and TMDL (and EPA must seek public comment on the list or TMDL it establishes). *Id.*

Withdrawn Program

EPA developed a rule to revise the TMDL program, which was published on July 13, 2000. 65 Fed. Reg. 43585 (July 13, 2000). However, EPA withdrew the rule, on May 13, 2003, after receiving extensive comments and court challenges² and after Congress prevented implementation of the rule through appropriations bills that prohibited EPA from spending money on it. 68 Fed. Reg. 13608 (May 13, 2003). This 2000 rule, among other things, provided that:

- states provide a more comprehensive list of impaired waters;
- lists would be submitted every four years;
- impaired waters would remain on the list until water quality standards are achieved;
- TMDLs would include 10 elements, including an implementation plan;
- the public would be notified and have opportunity to comment on the methodology, lists, priority rankings, schedules and TMDLs before submission to EPA;
- limitations could be imposed on NPDES permits to be consistent with TMDL;
- EPA could object to state-issued NPDES permits that were expired, but administratively continued.

65 Fed. Reg. 43585 (July 13, 2000).

A-151741.2

² See generally *Pronsolino v. Nastri*, 291 F.3d 1123 (9th Cir. 2002) (upholding EPA-promulgated TMDLs for waters polluted only by nonpoint sources), *cert. denied* (U.S. June 16, 2003) (No. 02-1186).

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PUBLICATIONS

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Markets

Author/Speaker, "Environmental Issues Facing
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CLE

Co-Author, "Water Quality Enforcement," CLE
International

Author, Agriculture Chapter Supplement of West
Publishing's *Texas Practice Series*,
Environmental Law

Co-Author, "Owning and Selling Contaminated
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Author, "The Effect of House Bill 2473 on EPA
Delegation" *Texas Environmental Law Journal*

P. Bane Phillippi

Mr. Phillippi concentrates his practice in the areas of environmental issues associated with real estate transactions and agriculture, environmental litigation, and general issues of regulatory compliance.

Phillippi clerked with the Texas State Office of Administrative Hearings, the U.S. Environmental Protection Agency, and the Office of the Governor of Texas.

His experience includes:

- Work on environmental issues associated with acquisitions of agricultural companies, including those related to water quality, petroleum storage tanks, and remediation of contaminated property.
- Dealing with rules and regulations affecting Concentrated Animal Feeding Operations.
- Analyzing legal issues associated with agricultural irrigation plans utilizing treated wastewater.
- Representation of the State of Texas in enforcement litigation in federal district courts in Houston and Tulsa, brought by the Department of Justice against a major oil company for violations of the Clean Water Act, which resulted in record-breaking settlement.
- Representation of a major car manufacturer in a RCRA enforcement action brought by EPA Region 6 and TCEQ.
- Representation of real estate developers regarding issuance of individual and general Clean Water Act permits.
- Representation of applicants in water rights adjudications with Edwards Aquifer Authority.

EPA POLICY DIRECTIONS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

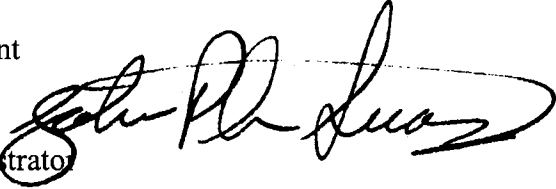
WASHINGTON, D.C. 20460

APR 15 2003

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Smart Enforcement

FROM: John Peter Suarez 
Assistant Administrator

TO: All OECA Staff
All Regional Enforcement Staff
Regional Administrators
Deputy Regional Administrators

The purpose of this memorandum is to set forth the framework for enhancing and strengthening our enforcement and compliance assurance program. EPA's enforcement and compliance assurance program is fortunate to have a cadre of dedicated and talented staff who are committed to ensuring that the air we breathe is cleaner, the water is purer, and the land is better protected. We are challenged each and every day with making decisions that enable us to produce results that will further benefit the public.

Governor Whitman has stressed the need for this Agency to use sound science, common sense, and our collective experiences to enhance the environment and to protect public health. In the context of the enforcement and compliance assurance program, these principles mean that we must be "smart" in the work that we do. As a result, the enforcement and compliance assurance program will embrace the notion of "smart enforcement" in all aspects of the enforcement and compliance assurance program.

"Smart enforcement", in many respects, is the culmination of the work and experience within the enforcement and compliance assurance program over the past several years. The program has strategically focused efforts on some of the largest emitters of air and water pollution. Under the banner of "Enforcement First," the Superfund enforcement program aggressively seeks response and restitution from responsible parties. Regions have creatively integrated all of the program's enforcement and compliance tools to target regional environmental problems, including those in environmental justice communities, and to address widespread noncompliance in a host of sectors. However, these collective experiences have also demonstrated a need to more sharply focus the resources of the program on issues and problems that matter. Thus, "smart enforcement" embodies a common sense approach to problem solving and decision making.

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Simply put, **“smart enforcement” is the use of the most appropriate enforcement or compliance tools to address the most significant problems to achieve the best outcomes.**

For the enforcement and compliance assurance program, “smart enforcement” entails five keys area of focus:

- (1) Addressing **significant** environmental, public health, and compliance problems;
- (2) Using data to make strategic decisions for better utilization of resources;
- (3) Using the most appropriate tool to achieve the best outcome;
- (4) Assessing the effectiveness of program activities to ensure continuous program improvement and desired program performance; and
- (5) Effectively communicating the environmental, public health and compliance outcomes of our activities to enhance program effectiveness.

“Smart enforcement” crystalizes lessons learned in the enforcement and compliance assurance program, into a series of specific action items that will be undertaken in the next eighteen months to improve program performance. It is my desire that the implementation of these activities will be led by specific OECA program offices or specific OECA senior managers. The implementation of these activities will be further enhanced by collaboration with regional offices, program media offices, and states. Accordingly, the significant action items to be implemented in furtherance of “smart enforcement” are attached.

Many of the action items described above are well underway. Nevertheless, the list of action items represents a significant commitment to this effort, and will require close cooperation among all of us. I believe that if we are successful in implementing these action items, then there will be little doubt that EPA’s enforcement and compliance efforts will be the model against which all others are compared. As we move forward in the enforcement and compliance assurance program, we will continue to meet and exceed our expectations by focusing our resources on the most significant problems to achieve the best outcomes. I am very proud of the work that we do and I am confident that “smart enforcement” will enhance our efforts to achieve cleaner air, purer water and better protected lands.

cc: Christine Todd Whitman
Linda Fisher
Tom Gibson

Attachment

Attachment

SIGNIFICANT ACTION ITEMS TO BE IMPLEMENTED IN FURTHERANCE OF “SMART ENFORCEMENT”

- **Activities to Address Significant Environmental, Public Health, and Compliance Problems**
 - Development of Case Selection and Forum Criteria Supporting Smart Enforcement
 - Enhances ability to address significant environmental, public health, and compliance problems.
 - Office of Regulatory Enforcement (ORE)
 - July 2003
 - Refinement of Parallel Proceedings Protocol to Support Civil and Criminal Program Collaboration
 - Ensures selection of proper forum for enforcement.
 - ORE/Office of Criminal Enforcement, Forensics and Training (OCEFT)
 - September 30, 2003
 - Workforce Deployment Analysis
 - Addresses program’s ability to deploy resources to address significant environmental, public health, and compliance problems
 - Deputy Assistant Administrator (DAA)
 - August 2003
 - Refine Key Priority Areas for 2004
 - Ensures that short term priorities address significant environmental, public health, and compliance problems
 - Office of Compliance (OC)/ORE/OCEFT
 - August 2003
 - Development and Implementation of Environmental Justice Enforcement and Compliance Initiative
 - Enhances program’s ability to address environmental, public health, and compliance issues in low income and minority communities
 - DAA/ORE/OC/OCEFT/Office of Planning, Policy Analysis and Communication (OPPAC)/Federal Facilities Enforcement Office (FFEO)/Office of Site Remediation Enforcement (OSRE)
 - July 2003

- **Activities to Support Using Data to Make Strategic Decisions and Better Utilization of Resources**

- Establishment of OECA Planning Council (OPC)
 - Enhances program ability to collaboratively make strategic decisions concerning program priorities in FY2005 with States, Regions, and Program Media Offices
 - OC
 - April 2003
- Identify and develop expertise in data analysis
 - Strengthens the ability of HQs and Regions to make strategic decisions that are supported by data
 - OC
 - July 2003
- Complete Inventory of Federal, EPA, and private data sources
 - Enhances program's ability to make strategic decisions from a broad spectrum of sources
 - OC
 - September 2003
- Apply compliance rate methodology to selected regional initiatives
 - Strengthens credibility of statically valid compliance rates
 - OC/OPC
 - December 2004
- Refine "Watch List" methodology
 - Increases program's ability to address issues related to significant noncompliance
 - OC
 - May 2003
- Development of QA/QC Protocol for Data Quality
 - OC
 - June 2003

- **Activities to Support Appropriate Tool Selection**

- Develop Guide for Tool Selection
 - Provides framework for program staff to make decisions regarding appropriate enforcement and compliance tools
 - OC/OPPAC/ORE
 - June 2003
- Develop Criteria for Identifying Program Areas Appropriate for Expedited Settlements and Methodology for

Implementation

- Ensures that the expedited settlement tool is effectively utilized
 - ORE
 - June 2003
- Promote Early and Comprehensive Potentially Responsible Party (PRP) Searches and Maximize Enforcement Opportunities throughout Superfund Cleanup Process
 - Revise Potentially Responsible Party Search Manual
 - OSRE
 - September 2003
- Develop Strategy for Assessing Enforcement Response Policies to Support Smart Enforcement Principles
 - Provides foundation for reviewing selected enforcement response policies to enhance program's ability to address significant environmental, public health, and compliance issues
 - OC/ORE/OPPAC
 - July 2003

● **Activities to Support Assessment of Program Effectiveness**

- Formation of cross regional, state, HQs workgroup to establish model state program review protocol
 - Addresses issues of state performance in delegated enforcement and compliance programs
 - OPPAC/OC
 - January 2004
- Completion of Pilot Program Performance Assessment for NPDES
 - Provides framework for assessing program performance
 - OC
 - January 2004
- Pilot Assessment of Program Performance in Key Program Area by a Third Party
 - Strengthens program credibility by partnering with a third party to evaluate selected program areas
 - OPPAC
 - October 2004
- Distribution of Monthly ICIS Reports
 - Enhances management's ability to manage for results with "in-time" program data.
 - OC
 - April 2003

- **Activities to Support Effective Communication and Improved Outcome Measurement**
 - Development of Model Communication Tools
 - Strengthens program's ability to communicate program success
 - OPPAC
 - October 2003
 - Assessment and Recommendations for Improvement of OECA Website
 - Ensures effective utilization of internet as a communications tool
 - OPPAC
 - October 2003
 - Improved Outcome Measurement in Preventive Programs
 - Captures outcomes from preventive program and increases ability to communicate significant outcomes in preventive programs
 - OC
 - June 2003
 - Improved Outcome Measurement in Compliance Assistance Program
 - Captures outcomes from compliance assistance program and increases ability to communicate significant outcomes through the use of compliance assistance
 - OC
 - June 2003
 - Increased Use of Case Conclusion Data Sheets in All Media Areas
 - Institutionalizes the use of case conclusion data sheets to capture all program outcomes
 - OC/Regions
 - April 2003
 - Development of National Enforcement and Compliance Assurance National Conference
 - Strengthens communications within program at all management levels
 - OPPAC/Office of Administration and Resource Management Support (ARMS)
 - May 2004



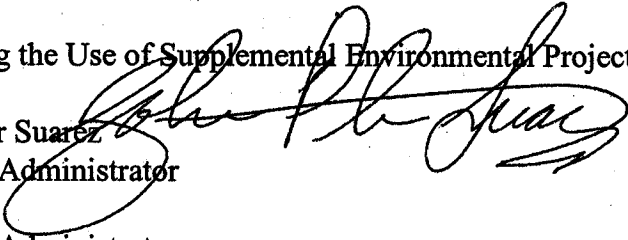
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 11 2003

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Expanding the Use of Supplemental Environmental Projects

FROM: John Peter Suarez 
Assistant Administrator

TO: Assistant Administrators
Regional Administrators
Deputy Assistant Administrators
Deputy Regional Administrators
All OECA Staff
All Regional Enforcement Staff

As a follow up to my February 21, 2003 memorandum, Steve Shimberg, Associate Assistant Administrator and staff from the Office of Regulatory Enforcement (ORE) have discussed a variety of Supplemental Environmental Projects (SEP) Policy issues and ideas for new SEPs with Headquarters program offices and Regions. We have found the discussions to be extremely helpful in gaining insight into ways to simplify the SEP Policy, and useful in educating senior Agency staff about SEPs. These discussions reinforced our belief that certain SEP Policy revisions and clarifications are necessary. The purpose of this memorandum, therefore, is to summarize the foundation underlying our SEP Policy and to announce the actions we are taking to encourage and expand the use of SEPs in the settlement of enforcement actions.

During FY2002, 10% of our civil judicial and administrative penalty settlements included SEPs valued at a total of \$56.5 million dollars. While we should be proud of these figures, I believe that we have a tremendous opportunity to achieve greater benefits for the environment and communities affected by violations. Through settlements containing SEPs, we have the opportunity to not only bring regulated entities into compliance, but to secure public health and environmental benefits in addition to those achieved by compliance with applicable laws. As such, all enforcement staff should consider every opportunity to increase our use of SEPs and include more environmentally significant SEPs wherever possible.

In order to facilitate such efforts, we have begun to implement some activities to assist in maximizing the opportunity to include SEPs in settlements. For example, this week we are

issuing an Interim Final Guidance on Community Involvement in SEPs, and a guidance on when it is appropriate to give penalty mitigation for entities who undertake environmental management systems as SEPs. In addition, as discussed in further detail below, we are launching an effort to simplify the SEP Policy, and are piloting a SEP library which will serve as a clearinghouse for possible SEPs.

SEP Basics

SEPs are environmentally beneficial projects that a violator is not otherwise legally required to perform but agrees to undertake in settlement of an enforcement action. While the Agency has secured significant environmental benefits through SEPs, we must remain mindful of the legal guidelines that limit the Agency's ability to consider and approve some SEPs. These guidelines flow from the U.S. Constitution and Miscellaneous Receipts Act¹ (MRA) and preserve congressional prerogatives to appropriate funds as provided for in the U.S. Constitution. As such, these guidelines define the foundation on which the SEP Policy is premised. Within these legal boundaries, the Agency has broad discretion to settle environmental enforcement cases, including the discretion to include SEPs as an appropriate part of the settlement.

To ensure the Agency's enforcement discretion is used appropriately and in compliance with the U.S. Constitution and the MRA, all SEPs must satisfy several key elements. To be approved as a SEP, a project must:

- Be related to or have a "nexus" to the underlying violation;
- Provide significant environmental and public health benefits;
- Benefit the community affected by the violation; and
- Secure public health and/or environmental improvements beyond what can be achieved under applicable environmental laws.

Moreover, in light of the legal boundaries set by the U.S. Constitution and the MRA, there are several types of commonly proposed projects that are not acceptable as SEPs, and other limitations on SEPs, including:

- Donations to third parties;
- EPA management of funds obtained through a SEP;
- Augmentation of appropriations (absent express congressional authorization); and
- Projects for which a violator is already receiving federal financial assistance, i.e, a federal loan, contract or grant.

These concepts and legal guidelines are fundamental to the success and appropriateness of

¹ The Miscellaneous Receipts Act, 31 U.S.C. § 3302, requires that penalties due and owing the United States must be placed into the U.S. Treasury.

any project and are more fully defined in the SEP Policy. While they do limit the Agency's discretion in agreeing to some SEPs, we believe that the enforcement program's track record has established that they do not limit our ability to develop and approve creative and important SEPs. With these concepts in mind, we have begun taking steps to review and, where appropriate, revise certain aspects of the SEP Policy and how it is implemented. We believe that these changes, outlined in the list of action items attached, will help promote the use of SEPs in enforcement settlements by simplifying some provisions in the SEP Policy and by providing additional incentives to violators to agree to conduct SEPs.

Next Steps

Attached is a list of action items that represents a significant commitment to promoting the use of SEPs. Included in this list are projects designed to provide greater information on SEPs to Agency enforcement staff, violators and the public.

SEP Policy Simplification

During the discussions to date, several Regional and Headquarters offices raised questions about the complexity of the existing SEP Policy. Specifically, we heard a number of questions concerning how to define an appropriate nexus in certain situations, and whether or not nexus can be waived in a particular circumstance. As discussed above, nexus is important to ensure compliance with the MRA, and as such cannot be waived. Given this, however, we believe that there may be ways to simplify nexus, and still ensure that there remains a connection between the underlying violation and the SEP.

In addition to nexus, some offices raised questions about the appropriate minimum penalty that must be collected as part of a settlement that includes a SEP. Specifically, the issue raised is whether or not going below economic benefit would be appropriate in some cases. The current SEP Policy is based upon the premise that collection of at least economic benefit ensures that violators are not allowed to obtain an economic advantage over their competitors who complied with the law.

We recognize that there are a number of strongly held opinions about how to proceed with any proposed changes to such basic premises and, as such, no decisions have been made on whether to change these two critical parts of the existing SEP Policy. Therefore, we will initiate a dialogue on these important issues to more fully understand the implications of change and, if necessary, to clarify various aspects of the SEP Policy.

In addition to the dialogue, we understand that it may be helpful to shorten and simplify the current SEP Policy. We have begun work on several such changes, e.g., clarification on the role of EPA staff in community involvement, and will have a draft revised SEP Policy to the Regions for comment in November 2003.

Information on SEPs

We have also included in the action item list, two projects designed to provide greater access to information on both SEPs that are part of concluded settlements, and ideas for new SEPs. Specifically, an EPA intranet link, which includes information on SEPs that are part of concluded settlements, will be available in August 2003 through the Integrated Compliance Information System (ICIS). OECA plans to make this SEP link available on the internet in the near future. With respect to ideas for new SEPs, OECA will create a SEP Library Pilot, whereby staff from ORE will work with Headquarters Program Offices and Regions to solicit and develop project ideas generated from within the Agency and will include these ideas in a repository of potential SEPs. During the pilot, the list of project ideas will be available to Agency staff only via the Intranet.

Conclusion

We sincerely appreciate the time and effort that the Regions and Headquarters offices put into providing us with information on specific program ideas, and on ways to clarify/simplify the SEP Policy. Your efforts to include SEPs and ensuring their implementation shows your sincere commitment to finding creative ways to better the environment for the communities and environment affected by violations. We look forward to continuing to work with you on finding ways to encourage SEPs, and welcome your participation in our efforts to do so.

Attachment

cc: Christine Todd Whitman
Linda Fisher
Tom Gibson
Tom Sansonetti, US DOJ
John Cruden US DOJ
Bruce Gelber US DOJ

ATTACHMENT

SIGNIFICANT ACTION ITEMS TO BE IMPLEMENTED IN FURTHERANCE OF “SUPPLEMENTAL ENVIRONMENTAL PROJECTS”

Efforts to Provide Information on SEPs to the Public and EPA staff

- **Community Involvement in SEPs**

- Provide education and guidance to EPA, violators and communities on SEPs
 - Allows for better understanding of SEPs;
 - Provides additional incentives to violators who reach-out to affected communities
 - Emphasis on environmental justice
 - Office of Regulatory Enforcement (ORE)
 - Interim Guidance signed May 21, 2003

- **Guidance on the Use of Environmental Management Systems (EMSs) in Enforcement Settlements as Injunctive Relief and SEPs**

- Provides that EMSs by State and local governments and small businesses that meet the criteria in the SEP Policy will be eligible for SEP penalty mitigation credit as “other types of projects” without advance Headquarters approval
 - Office of Planning, Policy Analysis and Communication (OPPAC) and ORE
 - Guidance to be issued in June 2003

- **Promoting Appropriate SEPs**

- Development of SEP link to the ICIS Database via Intranet and Internet
 - Enhances ability to review SEPs that are part of a concluded settlement, from FY 1998 to present
 - ORE
 - Intranet ready, August 2003
 - Internet ready, First Quarter, FY 2004
- Implement a SEP Library Pilot, whereby Regions and Program offices can propose possible SEPs
 - Provides vehicle for proposing potential projects that are important to a particular office mission
 - Pilot library will include project ideas generated by Agency-staff only; available to Agency personnel only via Intranet, during pilot timeframe

- Pilot library for one year; review success, then revise if necessary and evaluate ability to make internet available
 - ORE
 - Memorandum soliciting project ideas sent to Regions, Sept. 2003
 - Intranet ready, FY 2004
 - Review/revise, August 2004
- Institute periodic memorandum from OECA AA advising enforcement staff (Regions and HQ and DOJ), of priority SEPs to support program priorities
 - Provides an opportunity for program offices to promote office priorities
 - ORE
 - First memorandum issued September 2003
- Encourage the use of SEPs in state settlements
 - Begin dialogue with states regarding the benefits of including SEPs in state settlements
 - Use existing discussions, i.e., MOA discussions, meetings with ECOS and NAAG to encourage SEPs
 - ORE, Regions

Efforts to Simplify and Provide Additional Guidance on SEP Policy

● **Simplify SEP Policy**

- Review various sections of the SEP Policy to simplify and shorten 1998 Policy;
 - Allows for better understanding and easier application of SEP Policy
 - ORE
 - Draft for Regional, Headquarters and Department of Justice (DOJ) review, November 2003
- Begin dialogue on nexus and minimum cash penalty provision with Regional and HQ SEP Coordinators
 - ORE
 - August 2003

● **Guidance on Use of Third Parties** (will be combined with Guidance on Aggregating SEPs and SEP Dollars, as issues are closely related)

- Provides information to EPA on proper use of third parties by defendants/respondents to implement SEPs, i.e, a contractor
 - Includes recommended approach for including language into settlements to allow for use of third parties
 - ORE

- Guidance to be issued June 2003

- **Guidance on Aggregating SEPs and SEP dollars**

- Provides information and guidance to EPA on legal impediments to aggregating or “pooling” SEP dollars
- Provides guidance on possibility of aggregating several SEPs, i.e., where several different defendants undertake discrete pieces of a SEP
 - Recommends contacting ORE for assistance when considering aggregating SEPs
 - ORE
 - Guidance to be issued June 2003

- **Guidance Permitting Profitable Projects as SEPs**

- Provides guidance for determining the value of profitable projects for mitigation purposes and parameters for determining whether to accept a profitable project as a SEP
 - ORE
 - Guidance to be issued August 2003




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

JUN 12 2003

SUBJECT: Guidance on the Use of Environmental Management Systems in Enforcement Settlements as injunctive Relief and Supplemental Environmental Projects

FROM: John Peter Suarez, Assistant Administrator 

TO: Regional Administrators (I-X)
Regional Counsel (I-X)

Through this Guidance, the Office of Enforcement and Compliance Assurance (OECA) is reiterating our support for the use of Environmental Management Systems (EMSs) by all sizes and types of organizations, whether they are in compliance or determined to be in violation. We will promote EMSs as a potentially valuable tool for maintaining compliance, achieving beyond-compliance results, and minimizing environmental impacts in non-regulated areas.

OECA will continue to encourage incorporating compliance-focused EMSs as injunctive relief in enforcement settlements when necessary to address the root causes of the violations. When EMS settlement terms are necessary as injunctive relief, enforcement staff should consult the OECA-National Enforcement Investigations Center's (NEIC) *Compliance-Focused Environmental Management System (CFEMS) - Enforcement Agreement Guidance* (revised August 2002).

Currently, the Supplemental Environmental Project (SEP) Policy provides that "Other Types of Projects" may be accepted with advance OECA approval. This Guidance provides that EMSs by State and local governments and small businesses that meet the criteria in the SEP Policy are now eligible for SEP penalty mitigation credit as "Other Types of Projects" without advance Headquarters approval. Each Region must consult with the Office of Planning, Policy Analysis and Communications (OPPAC) and the Office of Regulatory Enforcement (ORE)-Multimedia Enforcement Division (MED) prior to extending SEP credit to the first EMS for either a State or local government or small business under this Guidance. Regions are encouraged to consult with OPPAC and ORE-MED on subsequent State and local government and small business EMS SEPs.

EMSs by medium-size or large companies may be proposed for SEP credit as “Other Types of Projects.” These SEPs will continue to require approval from the ORE-MED Director.

Finally, we are clarifying that EMSs that are not formally incorporated into settlement agreements as injunctive relief or SEPs may be considered for penalty adjustments in the context of settlement penalty calculations. This discretion may be exercised to the extent permitted under EPA’s Audit Policy and media-specific penalty policies.

This Guidance is intended to apply to settlement negotiations, only. It is effective immediately. The attachment includes a list of OECA contacts for questions concerning EMSs and SEPs. OECA will continue to also support compliance audits as SEPs, as described in my January 10, 2003 memorandum, “Clarification and Expansion of Environmental Compliance Audits Under the SEP Policy.”

Attachment

cc: Phyllis P. Harris, Principal Deputy Assistant Administrator
Steven J. Shimberg, Associate Assistant Administrator
John Cruden, Deputy Assistant Attorney General, DOJ-ENRD-EES
Media Enforcement Division Directors (I-X)
Regional Enforcement Coordinators, Regions I-X
OECA Office Directors
ORE Division Directors
OECA & Regional EMS and SEP Contacts
Steve Sisk, OCEFT-NEIC

Guidance on the Use of Environmental Management Systems in Enforcement Settlements as Injunctive Relief and Supplemental Environmental Projects

EPA has determined that properly designed and implemented Environmental Management Systems (EMSs) can help promote positive environmental outcomes. OECA supports the Agency's EMS policy as expressed in the *USEPA EMS Position Statement*. Together with Regional compliance and enforcement programs, we have and will continue to play a leading role within the Agency in actively promoting EMSs.¹ OECA supports and will promote EMSs for industry, state and local governments, and federal facilities of all types and sizes, whether in compliance or determined to be in violation.

EMSs as Injunctive Relief in Enforcement Settlements

EPA's approach in *all* enforcement actions is to seek appropriate injunctive relief to return violators to compliance and minimize or eliminate the potential for repeat violations by addressing the root causes of noncompliance. Where EPA determines, taking into account a violator's size, characteristics, and overall compliance obligations, that the root cause of a defendant's or respondent's violations is the absence of a systematic approach to identifying, understanding, and managing the regulated entity's compliance with applicable environmental requirements, the appropriate injunctive relief should include an EMS with a compliance focus. In addition, where specific elements or requirements common to EMSs are independently required by law or regulation, such elements/requirements should be sought as injunctive relief whether or not a compliance-focused EMS, per se, is sought. Since 1993, OECA and the Regions have concluded cases requiring the defendants to develop and implement compliance-focused EMSs at 258 facilities nationwide.²

¹ The *USEPA Position Statement on EMSs* at <<http://www.epa.gov/ems/policy/position.htm>> (EMS Position Statement; May 15, '02) articulates the Agency's policy that EMSs can help improve environmental performance when they are implemented diligently, supported with adequate resources, and continually improved. The *EMS Position Statement* encourages the widespread use of EMSs across a range of organizations and settings, with particular emphasis on adoption of EMSs to achieve improved environmental performance and compliance, pollution prevention through source reduction, and continual improvement.

² The enforcement cases with EMS injunctive components concluded to date address a range of facilities sharing the common characteristic of compliance issues requiring EMS-type solutions to address the violations' root causes. Examples of multi-facility settlements with EMSs as injunctive relief include the December 19, 2000 settlement in *U.S. v. Nucor Corporation, Inc. (Nucor)* and the January 16, 2003 settlement in *U.S. v. Koppers Industries, Inc. (Koppers)* addressing thousands of Clean Water Act (CWA) violations, in addition to some Clean Air Act (CAA), and Resource Conservation and Recovery Act (RCRA) violations. EMSs have also been obtained as injunctive relief in actions involving universities, e.g., *U.S. v. Massachusetts Institute of Technology* (April 18, 2001), single media cases with root cause management issues, e.g., *U.S. v. National Railroad Passenger Corp. [AMTRAK]* (September 19, 2001), and an action addressing a federal facility, *Department of Energy, Brookhaven National*

OECA practice is to seek, as injunctive relief in settlements, EMSs that are developed pursuant to the OECA-National Enforcement Investigations Center's (NEIC) *Compliance-Focused Environmental Management System (CFEMS) - Enforcement Agreement Guidance* (revised August 2002). *CFEMS* describes an EMS with policies and procedures addressing twelve key elements designed by NEIC, based on extensive, practical field experience, to assist in preventing and addressing noncompliance caused by management problems. The *CFEMS Guidance* includes model consent decree language to assist in settlement negotiation, and may be consulted on a case-by-case basis in litigated matters where the Agency is seeking a CFEMS or features of a CFEMS as injunctive relief.

The *CFEMS Guidance* is intended to supplement, not replace, EMS standards such as ISO 14001 developed by voluntary consensus standards bodies. The *CFEMS* 12 elements support the broad, multimedia, beyond-compliance approaches that are the hallmarks of an effective, functioning EMS. They supplement existing EMS voluntary consensus standards by filling potential compliance-related gaps and actively promoting compliance-focused approaches and results.³ An EMS that has been enhanced by the *CFEMS* elements is thus tailored to address the specific, additional compliance-focused needs of violators with systematic management issues.⁴

It is possible to use the *CFEMS* 12 elements as a starting point for development of a new EMS based on the "plan-do-check-act" management cycle. In practice, violators subject to enforcement actions may have EMSs – or a variety of discrete management elements such as policies, training programs, corrective action procedures, etc., that are common precursor elements to formal EMSs – already in place prior to the discovery of the violations by EPA. From a performance-based perspective, when violations whose root causes are management-based occur despite the prior existence of EMSs or precursor management elements, those EMSs or management elements have not achieved their goals. EPA can add significant value, when negotiating injunctive relief in appropriate settlement agreements, by requiring the violators to enhance their existing EMSs to achieve and maintain actual compliance (as opposed to merely

Laboratory Memorandum of Agreement (March 23, 1998). An EMS was required in a criminal action against a municipality, U.S. v. City of Roanoke, Virginia (January 10, 2000), as a condition of probation.

³ For example, while ISO 14001 requires organizations to express a "commitment to comply" and to identify and periodically evaluate compliance with legal obligations, the standard does not expressly require actual compliance, operational controls for assuring compliance, or that an organization establish compliance objectives and targets.

⁴ CFEMSs include: an environmental policy with an *express statement of management's intent to provide adequate EMS personnel and resources*; processes and monitoring to *ensure sustained compliance*; written targets, objectives, and action plans, for each organizational subunit, *to achieve and maintain compliance with all environmental requirements*; a *mandatory pollution prevention program*; a *program for ongoing community education and involvement* in the environmental aspects of the defendants' operations; procedures for *investigating and promptly correcting violations* and their root causes; and ongoing evaluation of facility compliance, including *periodic compliance audits by independent 3rd party auditors*.

committing to compliance as an internal policy goal).⁵

While OECA strongly encourages all organizations interested in focusing their EMSs on compliance to reference the CFEMS model as a potentially useful tool for supplementing existing EMS standards, it is not OECA's position that EMSs associated with voluntary EPA programs, e.g., National Environmental Performance Track (NEPT) and the Public Entity Environmental Management System Resource (PEER) Center/Local Government Program⁶, need to incorporate the *CFEMS* 12 elements. NEIC developed the *CFEMS* model for application in enforcement actions as injunctive relief for defendants with violations caused by management failures. In our view, such organizations warrant the compliance focus embodied in the *CFEMS* approach. Different considerations may exist in addressing top performers who are pre-screened for compliance (e.g., "green track" programs) or other facilities not demonstrated to be currently in noncompliance (e.g., compliance assistance programs).

EMSs as Supplemental Environmental Projects (SEPs) for Small Businesses and State and Local Governments:

OECA is clarifying the eligibility of EMSs, under the SEP Policy (May 1, 1998)⁷ for penalty mitigation credit and encouraging their inclusion in settlements as SEPs when they meet the SEP Policy's terms and are not appropriate to require as injunctive relief. In the past, under the SEP Policy, OECA has allowed enforcement personnel to propose penalty mitigation credit for EMSs as "Other Types of Projects," but has required prior approval by the Director of the Multimedia Enforcement Division (MED) within the Office of Regulatory Enforcement (ORE).⁸

⁵ To ensure the most effective process possible for both parties, EPA staff should endeavor to the maximum extent possible to merge the CFEMS elements into the violators' preexisting EMSs or management elements. This includes utilizing a company's preexisting nomenclature, if it differs from the language employed in the CFEMS Guidance, as long as the requisite substantive enhancements are achieved.

⁶ The PEER Center is supported by a cooperative agreement between EPA's Office of Water and the Global Environment and Technology Foundation. OECA has supported and provided funding for this program. The PEER Center has developed a national clearinghouse of EMS information with a focus on municipalities. In July 2002, EPA also designated eight Local Resource Centers around the country to provide assistance to local governments interested in adopting EMSs. The PEER Center website may be accessed at <<http://www.peercenter.net/>>.

⁷ EPA Supplemental Environmental Projects Policy (May 1, 1998). The SEP Policy is posted at <<http://www.epa.gov/compliance/resources/policies/civil/seps/sepfinal2.pdf>>.

⁸ For example, Region 3 recently proposed, and OECA approved, SEP credit for an EMS in settlement of In the Matter of: State of Maryland, Department of Public Safety and Correctional Services.

OECA is now waiving the prior ORE-MED approval requirement for EMSs by state and local governments and small businesses⁹ that otherwise meet the criteria in the SEP Policy and this Guidance, i.e., EMSs by State and local governments and small businesses that meet the SEP Policy criteria are eligible for penalty mitigation credit as “Other Types of Projects” without advance ORE-MED approval. Each Region must consult with the Office of Planning, Policy Analysis and Communications (OPPAC) and ORE-MED prior to extending SEP credit to the first EMS for either a State or local government or small business under this Guidance. Regions are encouraged to consult OPPAC and ORE-MED on subsequent State and local government and small business EMS SEPs. EMSs by medium-size or large companies may be proposed for SEP credit where not appropriate as injunctive relief but will continue to require prior ORE-MED approval.

OECA recognizes that defendants and respondents often come to the settlement table with multiple SEP proposals. In such cases, the most environmentally beneficial candidate project(s) for SEP credit may be an EMS alone, an EMS in conjunction with one or more other projects, or the alternative projects. Consistent with smart enforcement principles, in choosing between multiple SEP candidates when violator funds and/or penalty mitigation opportunities are limited, EPA case teams should include in the settlements those projects which promise the greatest overall environmental benefits.

The decision as to whether to accept a proposed EMS for SEP credit under the SEP Policy remains within the discretion of EPA and the case team. The Settlement Justification Memoranda in all cases should explain how the EMS meets the SEP Policy’s conditions, including a nexus to the violations¹⁰ and documentation of key underlying facts and expenditures. The remainder of this section provides additional guidance on when and under what circumstances EMSs are appropriate for consideration as SEPs.

Guidance on When EMSs Are “Supplemental” Projects: The SEP Policy, and federal law,

Division of Correction, EPA Docket No. RCRA-3-2001-0404/CWA-3-2001-0403 (Consent Agreement and Final Order; May 6, 2003).

⁹ Under the SEP Policy, a small business is one that is owned by a person or another entity that employs 100 or fewer individuals. Small businesses can be individuals, privately held corporations, farmers, landowners, partnerships and others. Experience suggests that some small businesses are unlikely to implement EMSs as a normal course of business due to resource constraints. State and local governments face similar limitations that often lead to EMS design and implementation activities not receiving support during budget development. Providing penalty mitigation under the SEP Policy to these organizations is thus likely to produce positive environmental outcomes of benefit to the public which would not otherwise be realized.

¹⁰ The SEP Policy defines “nexus” as the relationship between the violation and the proposed project. This relationship exists where the project is designed to reduce the likelihood that similar violations will occur in the future, reduces the adverse impact to public health or the environment to which the violation at issue contributes, or reduces the overall risk to public health or the environment potentially affected by the violation at issue. *SEP Policy* at 4.

require SEPs to be “supplemental” projects that the violators are “not otherwise legally required to perform.” Under this requirement, the SEP Policy disallows projects that “the defendant/respondent is likely to be required to perform as injunctive relief.” Actions already required of violators by permit, order, or other similar enforceable mechanism are also not “supplemental.” Therefore, enforcement personnel should consider first whether the nature of the violations in any given case, given their root causes, warrants seeking an EMS as injunctive relief. The decision as to whether to accept a proposed EMS for SEP credit under the SEP Policy, versus requiring an EMS as injunctive relief and/or accepting other types of SEPs, is a matter of Agency discretion to be exercised based on case-specific facts.

Federal Facilities: Executive Order (E.O.) 13148 requires appropriate federal facilities to develop and implement EMSs by December 31, 2005. Federal facilities subject to E.O. 13148 remain ineligible to receive SEP credit for EMSs because they are already required to develop and implement EMSs pursuant to the E.O. Any exception to this policy for federal facilities will require the advance approval of the Assistant Administrator for OECA.

CERCLA Remediation Actions: OECA has not, at this time, identified a sufficient nexus between EMSs and CERCLA remediation actions to satisfy the SEP Policy’s nexus criterion. Therefore, EMSs should not be accepted as SEPs in these actions without prior ORE-MED approval, even for small businesses and State or local governments.

Guidance on When EMSs Are “Environmentally Beneficial Projects” Providing “Public Benefits”: An EMS is a systematic process of understanding and managing a facility’s environmental risks and hazards (aspects and impacts). Adopting an EMS does not ensure compliance with legal requirements. Nevertheless, as stated in the *EPA EMS Position Statement*, EMSs can help promote positive environmental outcomes and are encouraged by EPA. OECA has determined that the SEP Policy’s “environmentally beneficial projects” and “public benefits” SEP criteria can generally be satisfied when the terms of settlement require the violators to implement their EMSs for at least one full EMS cycle¹¹, identify and report performance results on two or more EMS targets and objectives promoting beyond-compliance results with public benefits¹², ensure that issues and priorities of concern to the communities in which the facilities

¹¹ A full cycle of EMS implementation means that the EMS is developed, put into practice, and a full “Plan-Do-Check-Act” cycle is completed, including auditing of conformance against the EMS standard, management review of the EMS (including the results of the audit), and any necessary adjustments to the EMS for continual improvement.

¹² The intent of this requirement is to encourage the adoption of targets and objectives that can produce real and quantifiable beyond-compliance environmental benefits. Examples of such benefits, with corresponding metrics, can be found in the Environmental Performance Table at pages 24-27 of the National Environmental Achievement Track (NEAT) Application Package (EPA240-B-00-003; December 2000). The Environmental Performance Table was developed by the Office of Policy, Economics, and Innovation (OPEI), based on the Global Reporting Initiative (GRI) and in the context of the NEPT program, to address essentially the same beyond-compliance/quantification/reporting issues of concern in the SEP context. The Table is posted at <<http://www.epa.gov/performance-track/apps/table.pdf>>.

are located are identified and considered, and submit to EPA SEP Completion Reports describing what the violators have done to develop, implement, and act on their EMSs. Settlement agreements should provide for copies of the parties' EMS Manuals, with trade secrets and other confidential business information redacted, to be made available to EPA upon request.

Guidance on EMS Costs Eligible for SEP Credit: SEP credit should be extended only to EMS expenditures that produce significant benefits accruing primarily to the public. EPA compliance and enforcement personnel may choose to limit the costs that are eligible for credit to developmental, as opposed to implementation/operational costs (though costs associated with implementing targets or objectives promoting beyond compliance results may be eligible for SEP credit) and/or require an appropriate expenditures/penalty adjustment ratio, to reflect an apportionment of the EMS benefits between the violator and the public or distinguish between efforts necessary to get EMSs up and running versus maintaining them once they are in place. Providing SEP credits for EMS developmental costs may be a particularly effective way to promote facilities to implement them, thereby realizing the public and private benefits that EMSs can provide. Where SEP credit consists primarily of (or is limited to) developmental costs, as discussed above, the settlement agreement should nevertheless specify EPA's expectations concerning EMS implementation and performance measurement.

Guidance on SEP Mitigation Credit: The exact percent of mitigation credit that can be given for any SEP is within the enforcement personnel's discretion. In general, for an EMS SEP, the Regions can offer up to 80% mitigation credit depending upon the level of performance in terms of anticipated public and environmental benefits. While the SEP Policy allows up to 100% mitigation credit for State and local entities and small businesses, the mitigation percentage for an EMS SEP should not exceed 80% unless the defendant/respondent can demonstrate that the EMS is of outstanding quality. An EMS satisfying all 12 CFEMS key elements that also provides environmentally beneficial, beyond compliance public benefits as described above under *Guidance on When EMSs Are "Environmentally Beneficial Projects" Providing "Public Benefits,"* may be considered to be of outstanding quality for this purpose.

Other SEP Policy Requirements: The EMS projects described in this guidance, like all SEPs, must be consistent with the SEP Policy to qualify for penalty mitigation. These include the "in settlement of" and "nexus" criteria. The SEP Policy provides a full discussion of these factors.

Other Penalty Adjustments for EMSs That Are Not Incorporated Into Settlement Agreements as Injunctive Relief or SEPs:

EPA's Audit Policy creates additional incentives for regulated entities to develop and implement EMSs as a means of achieving and maintaining compliance. A violator who discovers, corrects, promptly discloses, and prevents a recurrence of a violation through the implementation of an EMS will generally meet the Audit Policy's "due diligence" criterion. The Audit Policy provides for 100% of the gravity-based penalty to be waived in such circumstances

if all other conditions of the Audit Policy are met.¹³ A municipality with an EMS developed pursuant to the Agency-supported PEER program (*see* f.n. 6, above), for example, that uses its EMS to discover, correct, and disclose its violations under the Audit Policy would be expected to satisfy the “due diligence” criterion.

Pursuant to the Agency’s statute-specific penalty policies, EPA personnel have the discretion to calculate a settlement penalty that reflects relevant actions by violators. With respect to EMSs, the range of possible scenarios where a violator’s actions may be considered in adjusting a penalty downward from the preliminary penalty amount include where a company discovers a violation through an existing EMS and corrects the violation prior to EPA’s discovery or the company lacks a preexisting EMS but puts one into place before concluding settlement negotiations. For example, where EPA discovers that a company has identified and corrected violations through the implementation of an EMS, EPA may consider the implementation of that EMS, along with other case-specific facts, as an example of the defendant’s/respondent’s good faith efforts to comply, particularly where the violator institutes changes in its EMS to prevent recurrence of the violation. This proactive use of an EMS by a company is the type of responsible behavior we want to encourage through the penalty calculation formula.

It may also be appropriate to consider whether and to what extent a violator has implemented an EMS in assessing the degree of willfulness and/or negligence. For example, the RCRA Civil Penalty Policy provides that EPA should consider whether the violator took “reasonable precautions against the events constituting the violation,” in assessing the degree of the violator’s willfulness and/or negligence. Applying the RCRA Civil Penalty Policy to a particular set of facts which include a preexisting EMS, EPA may determine that it is appropriate to adjust the penalty downwards. An example might be where, as part of its EMS, a company has a good system for identifying, labeling, storing, and inspecting its on-site hazardous waste containers but committed isolated violations. On the other hand, where an EMS was in place but violations occurred nonetheless as a result of a lack of management commitment to the process, an upward penalty adjustment to reflect the willfulness or negligence of the violation may be appropriate.

Disclaimer

This Guidance is intended to apply to settlement negotiations, only. The procedures set out in this document are intended solely to guide government personnel. They are not intended to, and cannot be relied upon to create, rights, substantive or procedural, enforceable in any party in litigation with the United States. EPA reserves the right to act at variance to this Guidance or to change it at any time without public notice.

Contacts

¹³ “*Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations*,” 65 FR 19,618 (April 11, 2000) (Audit Policy). The Policy is posted at <<http://www.epa.gov/compliance/resources/policies/incentives/auditing/finalpolstate.pdf>>.

If you have questions concerning EMSs, generally, please contact Jon Silberman of the Office of Planning and Policy Analysis (OPPAC) at (202) 564-2429. For questions on *CFEMS*, please contact Steve Sisk of the National Enforcement Investigation Center (NEIC) at (303) 236-6683. For questions concerning SEPs, generally, please contact Melissa Raack (202-564-7039) or Beth Cavalier (202-564-3271) of the Office of Regulatory Enforcement (ORE)-Multimedia Enforcement Division (MED). For questions concerning SEPs at Federal facilities, please contact Melanie Garvey of the Federal Facilities Enforcement Office (FFEO) at (202) 564-2579. For questions concerning SEPs and site remediation, please contact Mike Northridge of the Office of Site Remediation Enforcement (OSRE) at (202) 564-4263.

Biographical Sketch
For
Phyllis P. Harris

Phyllis P. Harris is Principal Deputy Assistant Administrator for the United States Environmental Protection Agency's Office of Enforcement and Compliance Assurance ("OECA") in Washington, D.C. In this capacity, Ms. Harris serves as the senior career official for EPA's enforcement and compliance assurance program. Prior to coming to OECA, Ms. Harris was Regional Counsel and Director of the Environmental Accountability Division, for Region 4, Atlanta, Georgia. In this capacity Ms. Harris served as chief legal counsel to the Regional Administrator and senior program managers. In addition, Ms. Harris was responsible for the implementation of the Region's enforcement and compliance assurance programs; NEPA, tribal, and environmental justice programs. Prior to coming to EPA, Ms. Harris worked as a staff attorney for the Department of Health and Human Services.

Ms. Harris received her B.A. in 1982 from Converse College in Spartanburg, SC and her J.D. from the University of Florida College of Law in 1985. Ms. Harris is a member of the State Bar of Georgia.

AIR QUALITY

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HOT ISSUES

CARL E. EDLUND, P.E.
Director, Multi-media Planning and Permitting Division

Carl Edlund directs the EPA air pollution, hazardous waste, and toxic programs in Texas, Louisiana, Arkansas, Oklahoma, and New Mexico. These programs include: development of air quality improvement plans, issuance and oversight of air and waste permits, clean up of pollution from underground storage tanks, oversight of pesticide use, development of U.S.-Mexico border environmental initiatives, and a variety of toxic contaminant strategies targeted to sensitive groups of people. Before this assignment, Mr. Edlund managed a variety of programs in the EPA Regional Office including the Superfund, Air Enforcement, and Resources Management Offices. He has also chaired national task forces to abate air pollution at iron and steel mills and other problem industries. Mr. Edlund is a charter member of the EPA, a member of the federal Senior Executive Service and an adjunct professor at the Southern Methodist University. He received his BS in Mechanical Engineering from the University of Maryland, and is a registered Professional Engineer.

How Do You Win the Battle for Clean Air When You Keep Shooting Yourself in the Foot

Past Choices and a Path Forward

The challenge for Texas to come into compliance with Federal Air Quality Standards is becoming more difficult – in large part by self-inflicted wounds by the Texas Commission on Environmental Quality. Texas also has a habit of promoting federal initiatives that further imperil the State's ability to achieve attainment rather than influencing federal programs to make the challenge easier.

This paper provides examples where actions taken by the TCEQ or the Legislature result in even more difficulty in cleaning up the air that Texas citizens breathe. The paper then offers two opportunities for Texas to improve its situation by commenting appropriately on pending federal rulemakings.

Eight-hour Ozone – Proposed Designations

The most recent example of the TCEQ choosing the path of the least possible action is the proposed designations under the eight-hour ozone standard. Governor Perry, following the recommendation of the TCEQ, has proposed the designation of Travis County as nonattainment in the Austin MSA while the surrounding counties in the MSA (Hays, Williamson, Bastrop, Caldwell) would be designated as attainment. Similarly, in the San Antonio MSA, Bexar County would be designated nonattainment while the surrounding counties in the MSA (Comal, Guadalupe, Wilson) would be designated as attainment. Finally, in the Northeast Texas region, Gregg County would be designated nonattainment while the surrounding counties (Harrison, Rusk, Smith, Upshur) would be designated as attainment.

Under this proposal, the TCEQ has indicated its presumption that air quality problems are primarily the result of activities in the urban core and that activities in surrounding counties play a minor role, if any, in contributing to poor air quality. This approach ignores the pervasive nature of ozone and the transport of ozone and its precursors, coupled with the effects of population density, traffic and commuting patterns, commercial and industrial development and area growth. It is also inconsistent with long-standing clean air law and policy.

Environmental Defense believes that this approach contravenes the fundamental philosophy behind the Early Action Compact that Texas has actively promoted. The Early Action Compact is based upon the concept of accelerated efforts to achieve the public health standard for air quality on a scale that encompasses the full metropolitan areas implicated by unhealthy ozone levels. The potential flexibility Texas has sought under the Early Action Compact approach has been characterized by Texas as an incentive for the accelerated regional pollution abatement efforts.

We believe it is inconsistent for the TCEQ to on one hand purport to embrace a process that encourages adoption of additional and accelerated clean air measures on a regional

basis and on the other hand propose minimal designations that 1) misinform citizens with respect to their local air quality conditions, 2) deny the regional nature of ozone formation and the contribution of neighboring counties, and 3) remove any obligation of contributing counties to implement clean air measures.

Many local officials have echoed this view, speaking clearly that the TCEQ's designations undermine their efforts to develop regional approaches to clean up the air. The San Antonio Express News quoted several officials who commented along these lines:

Bexar County Judge Nelson Wolff, who disparaged the commission's recommendation as "illogical," said elected leaders in Comal, Guadalupe and Wilson counties will be reluctant to approve any effective emissions controls that also are unpopular. "The problem that you're going to have with this is that in the other three counties, politically it's going to be very difficult," Wolff said. "They'll be able to say, 'This is a Bexar County problem. It's not our problem.'"

"There is no doubt in my mind it makes it much more difficult," said Jay Millikin, a Comal County commissioner who also serves as chairman of an Alamo Area Council of Governments committee.

"Particularly when it comes to vehicles, which are a huge part of the air quality picture, we've got to look to those counties which have a large number of vehicles that come into Bexar County," said David Newman, San Antonio's environmental services manager.

New Source Review

TCEQ has also filed comments supporting Administration proposals to weaken New Source Review regulations. Weakening New Source Review regulations has the effect of removing one more tool from the Texas air quality toolbox. The new source review program requires power plants and other industrial facilities to modernize pollution controls when they make a change at their facility that significantly increases air pollution. Polluters may take any number of actions that never trigger review, so long as there is no significant increase in pollution. Without this important program, millions of tons of additional air pollution would have been emitted over the past two decades.

For proof that existing laws such as new source review work, we need look no further than Alcoa's Rockdale smelter. A citizens group sued Alcoa for violating the new source review policy, and as a result of the suit, Alcoa agreed to reduce emissions by 90 percent by 2007 (52,000 tons SO_x and 15,000 tons NO_x). Without new source review, the pollution would continue.

Unfortunately, the Environmental Protection Agency has proposed numerous changes to the program that would effectively gut it. For example, a new investment-based test would allow industrial sources to invest millions of dollars to revamp their facilities and never be subject to review. If investments fall under an arbitrary cost threshold, a facility may increase pollution levels an unlimited amount. Americans want clean air. The

government should enforce existing pollution laws, not create new loopholes that make it easier to pollute. And Texas should not be a co-conspirator in this act.

Texas Emission Reduction Program

The State Legislature shares some blame with the TCEQ in taking a minimal approach to improving air quality in the Texas Emission Reduction Program amended in the 2003 session. But I believe that they are often poorly counseled because of the TCEQ's unwillingness to "tell truth to power" and tell the Legislature things that they might not want to hear.

One example of this is the funding level for the TERP. The TCEQ has underestimated the funding required to achieve the emissions reductions attributed to the TERP by basing their total cost estimates on a small set of disproportionately low cost measures. In other words, they based the cost estimates on the lowest hanging fruit but unfortunately there is not that much low hanging fruit available.

Other areas of the TERP where the Legislature bears full responsibility is the cutting of the energy efficiency programs and the light duty vehicle program. Chairman Bonnen, praising his bill for its lack of ambition said, "Does it come close? You bet it comes close, because the people of Texas demand that we do simply what is required of us -- not any less, not any more." His statement would be understandable if in fact the State had ever done "what is required of us," but Texas has yet to submit a SIP that identifies the complete list of measures necessary to bring Houston to attainment.

Houston SIP Rollback

Instead, Texas is pulling emission reduction measures out of the SIP. Remember, even under the TCEQ's own accounting, the Houston SIP is at least 42 tons short of achieving attainment – and this is assuming every proposed measure works perfectly. So when recent modeling suggested that some reductions in VOC emissions might improve air quality in Houston, what do you think happened? Knowing that Houston was at least 42 tons short under the one-hour ozone standard, and who knows how many tons short under the new eight-hour standard, did the TCEQ take the approach that any benefits from a VOC strategy could be used to close the gap? No. They adopted the VOC strategy – and then took previously adopted emission reduction strategies and threw them away. This action also sent a message to companies such as BP that had agreed to make the earlier, more aggressive NOx emission reductions that no good deed goes unpunished.

Cumulative Impact of TCEQ Decisions

This pattern of behavior by the TCEQ makes the task of achieving the air quality standard much harder. It does so by relinquishing the tools that can help us and undermining those public officials and companies willing to step up to the plate to seek improvement. "Everything is bigger in Texas" is a phrase we are all familiar with. It's

hard to believe that when it comes to air quality our slogan is all too often “as little as possible.”

Opportunity for Improvement

Luckily there are opportunities for Texas to improve its situation. Texas needs to participate in federal rulemakings and legislation with one goal – how does this help us protect public health of Texas citizens. And any time there is a tool on the table that allows the Feds to do some of the work or bear some of the political pain, Texas should take advantage of it rather than throwing it away.

Two examples of current rulemakings where Texas should comment are the EPA rulemaking on nonroad diesel engines and the rulemaking to implement the eight-hour ozone standard.

Nonroad Diesel Engines

One of the oft-repeated statements in committee hearings at the Texas Legislature is “the Feds give us these clean air requirements but don’t carry their own load on areas under federal jurisdiction.” Well, on April 14th, the EPA announced a new proposal to cut 90 percent of harmful emissions from nonroad diesel engines used in construction, industrial, and agricultural equipment by 2014. The EPA estimates that nonroad diesel engines affected by the proposal currently account for about 44 percent of total mobile source diesel PM emissions and about 12 percent of total NOx emissions from mobile sources nationwide. In this case the Feds have clearly stepped up to the plate and Texas should strongly support EPA’s proposal.

While Environmental Defense supports the proposal, there are areas that if improved can provide even greater benefits for Texas. First, all sizes of nonroad diesel engines should be covered. The EPA should not build in exemptions for the smallest and largest engines. The EPA already allows phase-ins of standards over several years therefore all nonroad engines covered by this rule should meet the same rigorous trap-based emissions standards.

Second, the proposal does not set engine standards for locomotives and ships. Railroads and railway maintenance equipment are responsible for about 27% of the nonroad diesel inventory for NOx and 10% of the nonroad diesel inventory for PM 2.5. Marine vessels account for 22% of nonroad diesel inventory for NOx and 18% of that inventory for PM 2.5. Texas should recommend that engine standards for commercial marine and locomotives be comparable to those for onroad heavy-duty diesels and the ones that have been proposed for nonroads. In addition, EPA should require 15ppm diesel fuel for locomotives and commercial marine engines.

Finally, the rule can be implemented on a faster time frame. The EPA should adopt the proposed alternative that requires 15ppm fuel in 2008 and all engine standards completely phased in by 2012.

8-hour Implementation

In the current rulemaking, EPA proposes to exempt vast numbers of 8-hour ozone nonattainment areas nationally from the statutory requirement to carry out proven, cost-effective ozone control measures. Since the advent of the modern Clean Air Act in 1970, EPA has had some striking successes in lowering harmful airborne contaminants. But as Congress recognized during the 1990 Clean Air Act Amendments, one glaring failure of the Act was that ozone levels had not decreased as expected. Prior to 1990 Congress treated all ozone nonattainment areas alike with little success, and by 1990 Congress conceded “in the case of ozone we had no ‘magic’ solutions.”¹ Congress recognized that no single solution would work and enacted instead the multiple classification scheme of subpart 2 of part D of the Act, which established different attainment dates and specified control strategies for nonattainment areas depending on the extent of the area’s ozone pollution concentrations. Subpart 2 thereby contains a graduated ozone control program codifying proven ozone-reducing technologies and cost-effective solutions to reverse the past failures in lowering harmful ozone levels.

But EPA proposes to classify 8-hour ozone nonattainment areas under Subpart 2 only if the area’s 1-hour ozone level was also in nonattainment. Otherwise, the remaining 8-hour ozone nonattainment areas would be subject to the very general planning framework under Subpart 1. This option violates the Supreme Court’s opinion in *American Trucking* and nullifies the congressionally-crafted rigors of Subpart 2. EPA estimates that its proposal would render Subpart 2 inapplicable to more than half of the 8-hour ozone nonattainment areas. But Justice Scalia admonished in *American Trucking* that Subpart 2 “unquestionable does” apply to the revised ozone standards. EPA’s proposal also has the irrational and perverse result of treating two areas with the same 8-hour ozone concentrations differently depending on the status of the areas 1-hour ozone levels.

If the Texas Early Action Compacts are successful, this proposal will have less meaning for Texas, but in the event the EACs fail, retention of the Subpart 2 requirements will bring about automatic air quality improvements and provide tools that ensure that as communities grow their air quality is maintained.

Conclusion

Texas has been struggling to achieve the public health standard for air quality for more than thirty years. But the State too often seems to be fighting the standards themselves rather than fighting to achieve them. Federal standards for fuel and engine performance can help, and Texas should support them. But as long as officials send Texas citizens and industry the signal that “as little as possible” is the operating principle, clean air is still far, far away.

¹ Legislative History of the Clean Air Act Amendments of 1990 at 3170-71.

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**A REVIEW OF EPA'S NSR ENFORCEMENT INITIATIVE:
WHAT DOES THE FUTURE HOLD?**

**By Christopher C. Thiele
Vinson & Elkins L.L.P.**

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TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	WHAT IS NSR AND WHY HAS THERE BEEN ENFORCEMENT?	1
	A. PSD and NNSR Permitting	1
	B. Modification.....	2
	1. Physical or Operational Change.....	3
	2. Causation.....	4
	3. Emissions Increases	4
	a. Baseline Emissions	5
	b. Post-Change Emissions.....	5
III.	HISTORY OF NSR ENFORCEMENT	7
	A. EPA’s Wood-Products Enforcement Initiative	7
	B. EPA’s Petroleum Refinery Initiative	7
IV.	EPA’S COAL-FIRED ELECTRIC UTILITY INITIATIVE	8
	A. Lawsuits Filed Against Nine Electric Utilities	8
	B. Settlements	8
	C. Status of Litigation.....	10
V.	WHAT DOES THE FUTURE HOLD?	11
	A. EPA’s Response to TVA Decision	11
	B. EPA and DOJ Enforcement Priorities.....	11
	C. DOJ’s Analysis of NSR Enforcement Actions	12
	D. NSR Reform.....	13
	E. Clear Skies Legislation	14
VI.	CONCLUSION.....	15

A REVIEW OF EPA'S NSR ENFORCEMENT INITIATIVE:

WHAT DOES THE FUTURE HOLD?

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I. INTRODUCTION

The Environmental Protection Agency's ("EPA") new source review ("NSR") enforcement initiative began in the late 1980s and has increased in intensity over time. Most recently, in the fall of 1999, EPA filed NSR lawsuits against seven electric utilities operating coal-fired power plants. At the same time, EPA issued an administrative compliance order ("ACO") against the Tennessee Valley Authority ("TVA") for alleged NSR violations involving its coal-fired power plants.

Many of the utility enforcement actions are not yet resolved, and while EPA appears committed to pursuing those lawsuits that have already been filed, the signals coming from DOJ and EPA regarding the future of NSR enforcement are mixed. Recent statements from the Department of Justice ("DOJ") that leveling the corporate playing field is among its top enforcement priorities lead one to believe that EPA is not finished with NSR enforcement. On the other hand, there are also signs that EPA has changed its focus. For example, EPA recently adopted long-awaited revisions to the NSR program. Also, Clear Skies legislation has been proposed by the Bush Administration. If passed, this legislation could significantly reduce emissions from electric utilities without the need for further NSR enforcement thus making the fate of this legislation key to the future of EPA's coal-fired electric utility enforcement initiative. Given these mixed signals, the best indicator of EPA's willingness to pursue future NSR enforcement actions may be the upcoming rulings in two electric utility lawsuits where trials have recently concluded.

This paper will provide an overview of EPA's NSR program and the key disputes between EPA and industry regarding the applicability of NSR requirements. It will then provide a history of EPA's NSR enforcement initiative followed by a summary of EPA's ongoing coal-fired electric utility initiative, including a summary of recent settlements and the status of active cases. Finally, the paper will address recent programs and other developments that are relevant to EPA's NSR enforcement initiative in an attempt to provide some insight into what the future may hold with respect to EPA's enforcement initiative.

II. WHAT IS NSR AND WHY HAS THERE BEEN ENFORCEMENT?

A. PSD and NNSR Permitting

The Clean Air Act ("CAA") requires EPA to adopt and periodically revise national ambient air quality standards ("NAAQS") for pollutant ("criteria" pollutants) that may reasonably be anticipated to endanger public health and welfare.¹ To date, NAAQS have been

¹ 42 U.S.C. §§ 7408-7409 (2002).

established for six criteria pollutants: sulfur dioxide (“SO₂”), nitrogen oxides (“NO_x”), carbon monoxide, particulate matter, lead, and ozone.² Following the establishment of NAAQS, all regions of the country are classified as attainment or nonattainment based on whether they meet or exceed the NAAQS for each criteria pollutant.³ The goal of the CAA is to bring nonattainment areas into attainment and to maintain the NAAQS in attainment areas. Among the various means for accomplishing this goal are the NSR provisions of the CAA.

As described in more detail below, NSR refers to the preconstruction permitting programs that apply to the construction of new major sources and major modifications to existing sources. Because of the two distinct goals of the CAA with respect to attainment and nonattainment areas (ensuring that air quality is not significantly degraded in attainment areas and that air quality improves in nonattainment areas), there are two separate NSR programs – prevention of significant deterioration (“PSD”) and nonattainment NSR (“NNSR”). These NSR programs are run either by EPA or, if a state has obtained EPA approval, by the applicable state or local agency.

The PSD permitting program applies to sources emitting pollutants for which an area meets the applicable NAAQS. Sources that trigger PSD are required to demonstrate that the project will not cause a NAAQS violation or significant degradation of air quality and install best available control technology (“BACT”). NNSR applies to sources emitting pollutants for which the area is classified as nonattainment. Sources that trigger NNSR are required to meet strict lowest achievable emission rate (“LAER”) technology requirements and offset emissions increases associated with the project. Because the NAAQS are established on a pollutant specific basis and air quality is assessed with respect to each criteria pollutant, it is possible that a source may be subject to both PSD and NNSR permitting requirements if it is located in an area that is classified as attainment with respect to certain criteria pollutants and nonattainment with respect to others.

B. Modification

While the major source thresholds for NNSR are lower than those that trigger PSD, both programs apply to the construction of new “major stationary sources” and to “major modifications” of existing sources.⁴ Although not always the case, EPA’s NSR enforcement initiative has been based primarily on allegations that major modifications were made to existing sources, many of which were built before NSR requirements were in place.⁵ This is especially true with respect to EPA’s recent coal-fired electric utility initiative. As a result, central to these enforcement cases is the definition of “modification.”

A “modification” is defined in the CAA as “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously

² 40 C.F.R. §§ 50.4–50.12 (2002).

³ 42 U.S.C. § 7407(d) (2002).

⁴ 40 C.F.R. §§ 51.165(a)(2), 52.21(i).

⁵ EPA has initiated enforcement actions against companies for failing to obtain NSR permits prior to constructing new major stationary sources. *See, e.g., U.S. v. Louisiana-Pacific Corp.*, 682 F. Supp. 1141 (D. Colo. 1988).

emitted.”⁶ Thus, there are three elements to a modification: (1) a physical or operational change (2) that causes (3) an increase in or new emissions. A “major modification” is essentially defined as a modification to a “major stationary source” that results in “a significant net emissions increase.”⁷

1. Physical or Operational Change

While the first element of the definition of “modification” and “major modification” might appear straightforward, it is actually this element that is at the heart of much of the NSR controversy. Although EPA’s NSR regulations do not define what a physical or operational change is, they do list several types of changes that do not constitute “[a] physical change or change in the method of operation” for the purpose of defining “major modification.”⁸ Among the excluded changes are “routine maintenance, repair and replacement.”⁹

The phrase “routine maintenance, repair and replacement” (hereinafter “routine maintenance”) is not defined in EPA’s NSR regulations. This, coupled with a lack of clear guidance as to what constitutes routine maintenance, has resulted in the dispute that lies at the center of EPA’s ongoing enforcement initiative involving coal-fired electric utilities.

In its enforcement action against Tennessee Valley Authority (“TVA”) (see Sections IV.A. and IV.C. herein), EPA argued before the Environmental Appeals Board (“EAB”) that to ascertain whether the routine maintenance exception applies requires a case-by-case analysis weighing the nature, extent, purpose, frequency, and cost of the work, as well as other relevant factors.¹⁰ However, as the EAB explained, EPA’s four (actually five) part test is not itself the heavily disputed issue.¹¹

Instead, the real issue revolves around how the four factor test is applied. TVA argued that when applying the four factor test, primary consideration should be given to whether the activity is “‘common within a relevant source category.’”¹² In support of its view, TVA cited the following preamble language from EPA’s 1992 amendments to its NSR regulation: “whether the repair or replacement of a particular item of equipment is ‘routine’ under the NSR regulations, while made on a case-by-case basis, must be based on the evaluation of whether that type of equipment has been repaired or replaced *by sources within the relevant industry category.*”¹³ According to TVA, when determining whether a project qualifies as routine maintenance, one should look to industry practice to determine whether the same or similar projects are routinely undertaken elsewhere; if they are, they should be regarded as routine.¹⁴ Needless to say, TVA felt that the projects it had undertaken were common in the industry.

⁶ 42 U.S.C. § 7411(a)(4) (2002).

⁷ 40 C.F.R. §§ 51.165(a)(1)(v)(A), 52.21(b)(2) (2002).

⁸ 40 C.F.R. §§ 51.165(a)(1)(v)(C), 52.21(b)(2)(iii).

⁹ 40 C.F.R. §§ 51.165(a)(1)(v)(C)(1), 52.21(b)(2)(iii)(a).

¹⁰ *In re Tennessee Valley Authority*, 9 E.A.D. 357, 393 (E.A.B. 2000).

¹¹ *Id.*

¹² *Id.* (quoting TVA’s Reply Brief at 23).

¹³ 57 Fed. Reg. 32314, 32326 (1992) (emphasis added).

¹⁴ *In re Tennessee Valley Authority*, 9 E.A.D. at 394.

On the other hand, EPA argued that the fact that a number of facilities within an industry may have undertaken a project does not render such a project “routine.”¹⁵ Instead, according to EPA, whether a project is “routine” should be determined by “the significance of the project in the life of the unit in question.”¹⁶ In other words, according to EPA, an activity is “routine” only if it is not unusual in the life of a given unit.¹⁷

The EAB sided with EPA, stating that TVA’s view would allow it to rebuild an entire facility without triggering NSR so long as it did so via multiple projects performed elsewhere in the industry – thus allowing the routine maintenance exception to swallow the NSR requirement that modifications be permitted.¹⁸ According to the EAB, such an outcome cannot be reconciled with the objectives of the CAA and the NSR program to increase the use of air pollution control technology over time.¹⁹

Prior to reaching a settlement with EPA in its NSR enforcement case (see Sections IV.A. and IV.B. herein), Southern Indiana Gas & Electric Company (“SIGECO”) also took issue with EPA’s application of its four factor routine maintenance test. In a motion for summary judgment, SIGECO argued that EPA’s view that the routine maintenance exemption applies only to activities that are routine for a generating unit rather than the industry as a whole constituted a new interpretation of routine maintenance and that it did not have “fair notice” of EPA’s new interpretation.²⁰ The court concluded that EPA’s interpretation of routine maintenance was reasonable and persuasive and that SIGECO did have “fair notice” of EPA’s interpretation.²¹

2. Causation

According to EPA’s NSR regulations, “[a]n increase in the hours of operation or in the production rate . . . ” does not constitute a “physical change or change in the method of operation” and, therefore, cannot trigger a “major modification.”²² Therefore, a frequently disputed issue regarding the causation element of a “modification” is whether the emissions increase was caused by an increase in hours of operation or production rate.

3. Emissions Increases

The third element of a “modification” – an emissions increase – is also the subject of disagreement between EPA and industry. As stated previously, a “major modification” is essentially defined as a modification to a “major stationary source” that results in “a significant net emissions increase.”²³ Pursuant to EPA’s NSR rules, calculating the “net emissions increase” that results from a physical or operational change requires consideration of, among

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.* at 394-95.

¹⁹ *Id.* at 391, 395.

²⁰ *United States v. Southern Indiana Gas and Electric Co.*, 245 F. Supp. 2d 994, 1009 (S.D. Ind. 2003). The fair notice doctrine is a due process doctrine under which a person (or company) may not be held liable for violating a law unless the law (or its implementing regulations) makes clear the conduct it prohibits or requires. *Id.* at 1010.

²¹ *Id.* at 1009, 1024.

²² 40 C.F.R. §§ 51.165(a)(1)(v)(C)(6), 52.21(b)(2)(iii)(f) (2002).

²³ 40 C.F.R. §§ 51.165(a)(1)(v)(A), 52.21(b)(2) (2002).

other things, any resulting “increase in actual emissions.”²⁴ Calculating the “increase in actual emissions” requires a comparison of actual emissions prior to the physical or operational change, or the source’s baseline emissions, to the projected emissions after the change.²⁵ Not surprisingly, in the TVA case, EPA and TVA did not agree on the method of calculating either baseline or projected emissions.

a. Baseline Emissions

According to EPA’s NSR regulations, baseline emissions are “the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which . . . is representative of normal source operations.”²⁶ In the TVA case, EPA argued that baseline emissions must be based on the two-year period immediately prior to the physical change, unless there is evidence that an alternative period is more representative.²⁷ According to TVA, the twenty four month period having the highest annual emissions rate during the five years preceding the project should be used to establish baseline emissions in its case in order to account for fluctuations in unit utilization due to weather and availability of other units in the system.²⁸ The EAB found that TVA had introduced evidence that a period other than the immediately preceding two-year period was more representative and that EPA had not sufficiently rebutted TVA’s evidence.²⁹ Therefore, the EAB ruled that baseline emissions should be based on the highest two years out of the preceding five year period as TVA had argued.³⁰

b. Post-Change Emissions

Key to determining the projected post-change emissions is the fact that EPA’s NSR regulations provide that, except with respect to certain electric steam generating units, for any unit “which has not begun normal operations . . . actual emissions shall equal the potential to emit of the unit.”³¹ Thus, EPA’s method of calculating a project’s resulting emissions increase is often referred to as the “actual-to-potential” test. This test is based on the theory that prior to a physical or operational change, a unit has not begun normal post-change operations and its post-change actual emissions are, therefore, not yet known.

In 1990, EPA’s “actual-to-potential” test was addressed by the Seventh Circuit Court of Appeals in *Wisconsin Electric Power Co. v. Reilly* (“WEPCO”).³² This case resulted from WEPCO’s challenge of EPA’s determination that WEPCO’s “life extension” project triggered PSD permitting requirements. WEPCO’s “life extension” project involved five of its coal-fired steam generating units that were placed in operation between 1935 and 1950.³³ The purpose of the project was to renovate the units so that they could operate beyond their planned retirement

²⁴ 40 C.F.R. §§ 51.165(a)(1)(vi)(A)(i), 52.21(b)(3)(i)(a) (2002).

²⁵ See 40 C.F.R. §§ 51.165(a)(1)(xii), 52.21(b)(21) (2002).

²⁶ 40 C.F.R. §§ 51.165(a)(1)(xii)(B), 52.21(b)(21)(ii) (2002).

²⁷ *In re Tennessee Valley Authority*, 9 E.A.D. at 430.

²⁸ *Id.* at 431.

²⁹ *Id.* at 432.

³⁰ *Id.*

³¹ 40 C.F.R. §§ 51.165(a)(1)(xii)(D), 52.21(b)(21)(iv).

³² *Wisconsin Electric Power Co. v. Reilly*, 893 F.2d 901 (7th Cir. 1990).

³³ *Id.* at 905.

dates and to render the units capable of generating at their design capacity.³⁴ To accomplish this, WEPCO planned to repair or replace turbine generators, boilers, steam drums, air heaters, mechanical and electrical auxiliaries, and common plant support facilities.³⁵

The Seventh Circuit ruled that EPA's use of the plant's post-renovation potential emissions, which assumed continuous operation, to calculate the emissions increase from the project was improper given that the WEPCO units had never operated continuously in the past.³⁶ In response to the Seventh Circuit's decision, EPA subsequently adopted the WEPCO rule - the "actual-to-projected actual" method of calculating emissions increases, but only with respect to electric utilities.³⁷

Despite the WEPCO rule, EPA argued in the TVA case that the "actual-to-potential" test should be used to calculate emissions increases from the projects at issue.³⁸ The EAB found that EPA's position was inconsistent with the ACO issued by EPA which provided that because the units involved were electric utility units, pursuant to the WEPCO ruling baseline emissions should be compared to "projected actual emissions after the modification."³⁹ TVA found this "actual-to-projected actual" method of calculating post-change emissions also unacceptable. TVA argued that there was no need to project post change actual emissions because post-change emissions could be determined from available post-change data.⁴⁰ According to TVA, an "actual-to-confirmed actual" test should be used.⁴¹

The EAB rejected TVA's argument that the "actual-to-confirmed actual" test should be used.⁴² According to the EAB, because the CAA and EPA's NSR regulations contemplate pre-construction review and permitting, actual post change data was not appropriate for consideration.⁴³ This ruling is consistent with the federal district court's ruling in the SIGECO case. In that case, SIGECO filed a motion for summary judgment based on its claim that there was no evidence that, following completion of the projects at issue, there was an actual emissions increase.⁴⁴ The court in the SIGECO case also concluded that whether NSR was triggered must be determined by reviewing evidence of projected, not actual post-project emissions.⁴⁵

³⁴ *Id.* at 906, 911.

³⁵ *Id.* at 906.

³⁶ *Id.* at 918.

³⁷ See 40 C.F.R. §§ 51.165(a)(1)(xii)(E), 52.21(b)(21)(v) (2002).

³⁸ *In re Tennessee Valley Authority*, 9 E.A.D. at 434.

³⁹ *Id.* at 434-35.

⁴⁰ *Id.* at 436.

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.* at 437.

⁴⁴ *United States v. Southern Indiana Gas and Elec. Co.*, No. IP99-1692-C-M/F, 2002 WL 1629817 (S.D. Ind. July 18, 2002).

⁴⁵ *Id.* at *3.

III. HISTORY OF NSR ENFORCEMENT

A. EPA's Wood-Products Enforcement Initiative

EPA's first industry-wide effort to enforce the NSR requirements of the CAA began in the late 1980s, with EPA's wood-products initiative. This industry-wide enforcement initiative followed EPA's enforcement against Louisiana-Pacific Corporation for failing to obtain PSD permits for two of its waferwood plants in Colorado.⁴⁶ In 1993, EPA reached an NSR settlement agreement involving Louisiana-Pacific plants nationwide. To date, EPA's wood-products initiative has resulted in settlements with four additional wood-products manufacturers including Weyerhaeuser in 1995, Georgia-Pacific in 1996, Willamette Industries in 2000, and Boise Cascade as recent as 2002. When the settlement with Boise Cascade was announced last year, EPA indicated that it would "continue to investigate CAA compliance at smaller [wood-products] facilities and to work with the states to quickly resolve any uncovered violations."⁴⁷

B. EPA's Petroleum Refinery Initiative

In the mid to late 1990s, EPA began investigating possible NSR violations within several other industrial sectors, including refineries, pulp and paper manufacturers, and coal-fired electric utilities. EPA's petroleum refinery initiative resulted in multi-issue (including NSR) and multi-facility settlement negotiations between EPA and several major petroleum refining companies, and civil judicial actions against two other refiners. As a result of these "global" settlement negotiations and judicial actions, petroleum refining companies that combined represent over thirty percent of the nation's petroleum refining capacity have entered into "global" settlements with EPA.⁴⁸ As for EPA's future plans with respect to its petroleum refinery initiative, EPA has indicated that it plans to turn the enforcement program over to the states. More specifically, EPA has indicated that it will "(1) conclude all company-wide settlement negotiations; (2) complete Agency investigations; and (3) develop state capacity to begin investigations of companies/refineries that choose not to enter into (or back out of) settlement negotiations, especially in states with a large number of refineries (e.g. Texas and Louisiana)."⁴⁹

⁴⁶ See *United States v. Louisiana-Pacific Corp.*, 682 F. Supp. 1141 (D. Colo. 1988).

⁴⁷ Press Release, United States Department of Justice and United States Environmental Protection Agency, U.S. and Boise Cascade Reach Clean Air Act Settlement; Wood Products Industry New Source Review Case Settled (Mar. 13, 2002).

⁴⁸ Refineries that have entered into global consent decrees with EPA include Navajo Refining Company, Montana Refining Company, Conoco, Murphy Oil Refining Company, BP Exploration and Oil, Motiva Enterprises, Equilon Enterprises, Deer Park Refining, Koch Petroleum, Marathon Ashland Petroleum, Premcor Refining Group, and Lion Oil Company.

⁴⁹ United States Environmental Protection Agency, Office of Enforcement and Compliance Assurance, FY 2002/2003 OECA Memorandum of Agreement Guidance, June 2001 Final Guidance 15 (2001).

IV. EPA'S COAL-FIRED ELECTRIC UTILITY INITIATIVE

A. Lawsuits Filed Against Nine Electric Utilities

According to EPA, electric utility plants collectively account for 70 percent of all SO₂ emissions and 30 percent of all NO_x emissions in the United States.⁵⁰ Therefore, it is not surprising that electric utilities have become a target of EPA's NSR enforcement initiative. EPA initiated its investigation of the coal-fired electric utility industry in 1996 by sending CAA § 114 information requests to several utilities.⁵¹ Following what then EPA Administrator Carol Browner referred to as "one of the largest investigations in the history of EPA," in the fall of 1999 the DOJ, on behalf of EPA, filed lawsuits against the following seven electric utility companies operating coal-fired power plants in the Midwest and South - American Electric Power Company ("AEP"), Cinergy Corporation, Ohio Edison Company, Illinois Power Company, SIGECO, Southern Company, and Tampa Electric Company ("TECO").⁵² In each of these cases, EPA has alleged that these electric utilities made "major modifications" to their coal-fired power plants without obtaining necessary PSD permits, thereby avoiding the requirement to install BACT.⁵³ Examples of targeted projects include boiler tube assembly replacements, cyclone replacements, turbine repair and replacement, and pulverizer replacements.

In a separate but related action, EPA at the same time issued an administrative order against the federal agency TVA.⁵⁴ The DOJ also filed a lawsuit against Duke Energy Corporation in December 2000, bringing the total number of electric utilities having been sued to nine, including TVA.⁵⁵ In all, 44 power plants have been targeted by EPA through these actions.

B. Settlements

Since the initiation of its electric utility NSR enforcement initiative, EPA has reached settlements with three of the nine electric utility companies discussed above.

- TECO – On February 29, 2000, DOJ and EPA announced the first settlement to be reached under EPA's coal-fired electric utility

⁵⁰ Press Release, United States Department of Justice and United States Environmental Protection Agency, U.S. Sues Electric Utilities in Unprecedented Action to Enforce Clean Air Act (Nov. 3, 1999) (hereafter "November 3, 1999 DOJ/EPA Press Release").

⁵¹ CAA § 114 information requests are commonly used by EPA to investigate potential violations of the CAA and its implementing regulations. 42 U.S.C. § 7414 (2002).

⁵² November 3, 1999 DOJ/EPA Press Release. In March 2000, EPA expanded the lawsuits against AEP, Cinergy Corporation, and Southern Company. Press Release, United States Department of Justice and United States Environmental Protection Agency, U.S. Expands Clean Air Act Lawsuits Against Electric Utilities (Mar. 1, 2000). Also, Alabama Power Company was dismissed on jurisdiction grounds from the case brought against Southern Company thus requiring EPA to file a separate lawsuit against Alabama Power in January 2001.

⁵³ November 3, 1999 EPA Press Release. EPA also claims that the utilities violated the New Source Performance Standards of the CAA.

⁵⁴ November 3, 1999 EPA Press Release.

⁵⁵ Press Release, Department of Justice, U.S. Files Clean Air Lawsuit Against Duke Energy (Dec. 22, 2000).

enforcement initiative.⁵⁶ The settlement agreement involved TECO's Gannon and Big Bend electric generating stations located near Tampa, Florida.⁵⁷ Pursuant to the settlement agreement, TECO is required to undertake various actions at Big Bend and Gannon to reduce emissions including installing new pollution control equipment, and to pay a civil penalty of \$3.5 million.⁵⁸

- Cinergy Corporation – On December 22, 2000, DOJ and EPA announced that they had reached an agreement in principle with Cinergy.⁵⁹ According to the announcement, the settlement agreement which involved ten of the company's coal-fired power plants (even though the enforcement action against Cinergy only targeted six of its plants), was valued at \$1.4 billion.⁶⁰ EPA Administrator Carol Browner referred to the settlement as the “largest settlement agreement ever reached by [EPA] under the Clean Air Act.”⁶¹ Notably, however, despite the announcement of an agreement in principle approximately two and a half years ago, a final consent decree has yet to be entered.
- SIGECO – On June 6, 2003, DOJ and EPA announced the most recent settlement with an electric utility, this one with SIGECO.⁶² The settlement agreement involves SIGECO's F.B. Culley Station plant in Newburgh, Indiana and calls for SIGECO to pay a civil penalty of \$600,000, carry out an environmental mitigation project valued at \$2.5 million, and install and upgrade pollution control devices at the Culley plant.⁶³

In addition to the nine lawsuits filed by EPA, other NSR enforcement actions involving coal-fired power plants have recently resulted in settlement agreements.

- PSEG Fossil LLC – In January 2002, DOJ, EPA, and the State of New Jersey announced that they had reached an NSR settlement with PSEG involving two coal-fired power plants located in Jersey City and Hamilton, New Jersey.⁶⁴

⁵⁶ Press Release, Department of Justice, U.S. Settles Landmark Clean Air Act Case Against Electric Utility (Feb. 29, 2000).

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ Press Release, Department of Justice and Environmental Protection Agency, U.S. Announces Clean Air Act Settlement With Cenergy (Dec. 22, 2000).

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² Press Release, Department of Justice and Environmental Protection Agency, U.S. Reaches Settlement With Southern Indiana Gas & Electric Co. On Clean Air Act Power Plants Initiative (June 6, 2003).

⁶³ *Id.*

⁶⁴ Press Release, Department of Justice and Environmental Protection Agency, United States and New Jersey Announce Clean Air Act Coal-Fired Power Plant Settlement with PSEG Fossil LLC (Jan. 24, 2002).

- Alcoa, Inc. – On April 9, 2003, DOJ and EPA announced a CAA settlement with Alcoa.⁶⁵ The settlement was the result of a suit filed by various citizen groups alleging NSR violations involving the power plant at Alcoa’s aluminum production facility in Rockdale, Texas.⁶⁶
- Virginia Electric Power Company (“VEPCO”) - On April 21, 2003, DOJ and EPA announced that they and VEPCO had reached the largest electric utility CAA settlement to date involving eight of the company’s coal-fired power plants in Virginia and West Virginia.⁶⁷ According to the announcement, as part of the settlement agreement VEPCO agreed to spend \$1.2 billion by 2013 to reduce sulfur dioxide and nitrogen oxide emissions from the eight plants.⁶⁸
- WEPCO – On April 29, 2003, DOJ and EPA announced a CAA settlement with WEPCO involving five of its coal-fired electric utility generating plants, four in Wisconsin and one in Michigan.⁶⁹

C. Status of Litigation

As for the six remaining coal-fired electric utility lawsuits, trials in the cases involving Ohio Edison and Illinois Power concluded in late February and late June of this year, respectively. The only other of the nine utility enforcement cases that has reached any sort of resolution to date is the case involving TVA.

As previously mentioned, EPA issued an ACO against TVA in November 1999 alleging NSR and other CAA violations involving fourteen coal-fired electric generating units at nine of TVA’s plants located in Kentucky, Tennessee, and Alabama. After negotiations between TVA and EPA and multiple revisions to the ACO failed to result in a settlement, in May 2000 EPA notified TVA that the EAB would “reconsider” the ACO by “adjudicating” the issue of whether TVA had violated the CAA by making “major modifications” without first obtaining a PSD permit.⁷⁰ Following a rushed reconsideration process that provided for limited discovery and testimony, on September 15, 2000 the EAB affirmed most of the amended ACO.⁷¹ On November 13, 2000, TVA petitioned the Eleventh Circuit for review of the EAB Order affirming the ACO.⁷² When the Eleventh Circuit issued its opinion in the TVA case on June 24, 2003, it

⁶⁵ Press Release, Department of Justice, United States Announces Clean Air Act Coal-Fired Power Plant Settlement with Alcoa (Apr. 9, 2003).

⁶⁶ *Id.*

⁶⁷ Press Release, Department of Justice and Environmental Protection Agency, U.S. Announces Largest Clean Air Act Settlement with Utility – VEPCO Agrees to Spend \$1.2 Billion to Clean Up Power Plants (Apr. 21, 2003).

⁶⁸ *Id.*

⁶⁹ Press Release, Department of Justice and Environmental Protection Agency, U.S. Announces Major Clean Air Act Settlement with Wisconsin Electric Power Co. – Company Agrees to Reduce More Than 105,000 Tons of Pollutants Annually (Apr. 29, 2003).

⁷⁰ *Tennessee Valley Auth. v. Whitman*, Nos. 00-15936, 00-16234, 00-16235 and 00-16236, 2003 WL 21452521 at *5 (7th Cir. June 24, 2003); *In re Tennessee Valley Auth.*, 9 E.A.D. 357, 357 (E.A.B. 2000).

⁷¹ *In re Tennessee Valley Authority*, 9 E.A.D. 357 (E.A.B. 2000).

⁷² *Tennessee Valley Auth. v. Whitman*, Nos. 00-15936, 00-16234, 00-16235 and 00-16236, 2003 WL 21452521 at *7 (7th Cir. June 24, 2003).

avoided the substantive CAA issues by ruling that it lacked jurisdiction to review the ACO issued by EPA because it did not constitute “final” agency action.⁷³ According to the Eleventh Circuit, the EPA must prove that TVA violated the NSR provisions of the CAA in federal district court.⁷⁴

V. WHAT DOES THE FUTURE HOLD?

The claims made by EPA against refineries and electric utilities as part of its NSR enforcement initiative are such that there exists an almost unlimited universe of companies that EPA could pursue for similar NSR violations. This raises the question of whether EPA will bring lawsuits against other companies in the future. While EPA does appear to be serious about continuing to pursue the existing coal-fired electric utility cases, the extent to which additional coal-fired utilities or other industries will be targeted, is uncertain. The following, however, may provide some indication of where EPA is headed.

A. EPA’s Response to TVA Decision

A decision in the TVA case had been long awaited and much anticipated by the other electric utilities involved in NSR enforcement cases, and a ruling in EPA’s favor may have spurred additional settlements. Others interested in the outcome of the TVA case were those hoping for some indication as to whether EPA might file lawsuits against additional utilities or even expand its NSR enforcement investigations to non-electric utility companies, a proposition that seemed at least somewhat more likely had EPA prevailed on substantive grounds against TVA. However, given the Eleventh Circuit’s recent ruling in the TVA case, electric utilities and others must now wait for decisions from the district courts in the Ohio Edison and Illinois Power cases for a ruling on the substantive issues related to EPA’s NSR enforcement claims.

The TVA decision may, however, provide some insight into the future of NSR enforcement. According to the Eleventh Circuit, EPA must prove that TVA violated the NSR provisions of the CAA in federal district court.⁷⁵ Therefore, if EPA desires to continue to pursue enforcement against TVA, it must either appeal the decision of the Eleventh Circuit to the Supreme Court or file suit against TVA in federal district court. EPA’s willingness to take either action may indicate that EPA is in fact still serious about pursuing existing and possibly future NSR enforcement lawsuits, rather than instead focusing on NSR reform and the Clear Skies Initiative.

B. EPA and DOJ Enforcement Priorities

Recent statements from Attorney General John Ashcroft regarding DOJ’s enforcement priorities indicate that DOJ may be planning to file additional NSR lawsuits in the future. On March 11, 2003, DOJ announced the top three enforcement priorities for its Environmental and

⁷³ *Id.* at *19.

⁷⁴ *Id.*

⁷⁵ *Id.*

Natural Resource Division (“ENRD”).⁷⁶ According to DOJ, ENRD’s first priority will be to “level the corporate playing field” by ensuring “that violators pay a premium for failing to abide by federal laws.”⁷⁷ Cited as a recent example of this priority by DOJ are the complaints filed by ENRD against several large oil refiners and settlements reached with oil refiners under the CAA.⁷⁸ This example, however, appears to be somewhat misleading given that only about a third of the oil refiners have reached global CAA settlements, unless DOJ and EPA found violations at only a third of the oil refineries. Given the nature of EPA’s allegations, however, this latter scenario seems unlikely.

C. DOJ’s Analysis of NSR Enforcement Actions

In May 2001, the National Energy Policy Development Group (“NEPDG”) directed the DOJ to review existing NSR enforcement actions to ensure that they are consistent with the CAA and EPA’s NSR regulations.⁷⁹ In January 2002, DOJ issued the results of its analysis.⁸⁰ Based on its review, DOJ concluded “that EPA may reasonably argue that the [NSR] enforcement actions are consistent with the Clean Air Act and its regulations, as well as the Administrative Procedure Act.”⁸¹

As part of its review, DOJ focused on two questions: (1) do the NSR enforcement actions against coal-fired power plants constitute a substantive change in EPA’s interpretation of the CAA and its regulations that would require notice and comment rulemaking under the Administrative Procedures Act, and (2) is EPA’s interpretation of the routine maintenance exception reasonable.⁸² With respect to the first question, DOJ concluded that EPA has a reasonable basis for its position that its NSR enforcement actions do not rely on an interpretive change that required notice and comment rulemaking.⁸³ As for the second question, DOJ pointed out that EPA’s interpretation of the routine maintenance exception is entitled to deference and found that EPA has a reasonable basis for concluding that its interpretation of “modification” is consistent with the CAA and NSR regulations.⁸⁴

Notably, DOJ indicated that the level of scrutiny it applied to EPA’s views was “a modest one” and that it did not consider whether different policy judgments by EPA would be

⁷⁶ Fact Sheet, Department of Justice, Civil Environmental Enforcement Priorities (Mar. 11, 2003); Prepared Remarks of Attorney General Ashcroft, Department of Justice, Meet and Greet With Environmental Press (Mar. 11, 2003).

⁷⁷ *Id.*

⁷⁸ Fact Sheet, Civil Environmental Enforcement Priorities, March 11, 2003.

⁷⁹ Letter from John Ashcroft, Attorney General, Office of the Attorney General (Jan. 15, 2002).

⁸⁰ *Id.*; United States Department of Justice Office of Legal Policy, New Source Review: An Analysis of the Consistency of Enforcement Actions With the Clean Air Act and Implementing Regulations (Jan. 2002) (hereafter “DOJ New Source Review Analysis”).

⁸¹ DOJ New Source Review Analysis at 39.

⁸² *Id.* at 24.

⁸³ *Id.* at 33. In the SIGECO case, SIGECO filed a motion for summary judgment in which it contended that EPA’s “new” interpretation of routine maintenance is a new rule or policy that should have been reported to Congress under the Congressional Review of Agency Rule Making Act. *United States v. Southern Indiana Gas and Electric Co.*, IP99-1692-C-M/S, 2002 WL 31427523 (S.D. Ind. Oct. 24, 2002). The court held that SIGECO failed to demonstrate that EPA has changed its interpretation of routine maintenance. *Id.* at *10.

⁸⁴ DOJ New Source Review Analysis at 39.

reasonably supported in fact and law.⁸⁵ Also, DOJ did not consider whether EPA's interpretation of the CAA and NSR regulations or EPA's NSR enforcement strategy were wise as a matter of policy.⁸⁶ Nevertheless, DOJ indicated that in light of its conclusions, the ENRD will continue to prosecute vigorously EPA's civil actions to enforce NSR laws.⁸⁷

D. NSR Reform

The NEPDG also recommended in May 2001 that EPA, in consultation with the Department of Energy and other relevant agencies, determine the impact of NSR regulations on investment in new power plant and refinery capacity, energy efficiency, and environmental protection.⁸⁸ On June 13, 2002, EPA submitted its report on NSR to President Bush.⁸⁹ EPA's report concluded that while the NSR program has not significantly impeded investment in new power plants or refineries, the program "has impeded or resulted in the cancellation of projects that would maintain and improve reliability, efficiency, and safety" of existing power plants and refineries.⁹⁰

Along with its report on NSR, EPA issued recommendations for the improvement and streamlining of the NSR program.⁹¹ These recommendations included the finalization of reforms proposed in 1996.⁹² Following these recommendations, on December 31, 2002 EPA announced final action on several of the recommended reforms.⁹³ While EPA's rules became effective on March 3, 2003, states like Texas with SIP-approved NSR programs are given until January 2, 2006 to adopt and submit SIP revisions which implement these changes.⁹⁴ Briefly, the reforms include:

- **Baseline Actual Emissions Determination** – Allows existing electric utility units to calculate baseline emissions using any two-year period out of the five years immediately preceding the modification.⁹⁵ Other sources may choose any consecutive 24-month period within the preceding ten years.⁹⁶
- **Actual-to-Projected Actual Test** – Revises the method for calculating post-change emissions for purposes of calculating emissions increase associated with a modification.⁹⁷

⁸⁵ *Id.* at iv.

⁸⁶ *Id.* at iv, 2.

⁸⁷ *Id.* at vi.

⁸⁸ Environmental Protection Agency, *New Source Review: Report to the President* (June 2002).

⁸⁹ Letter from Christine Todd Whitman, Administrator, United States Environmental Protection Agency, to George W. Bush, President, United States of America (June 13, 2002).

⁹⁰ *Id.*

⁹¹ Environmental Protection Agency, *New Source Review: Recommendations* (June 2002).

⁹² *Id.*

⁹³ 67 Fed. Reg. 80185 (Dec. 31, 2002).

⁹⁴ *Id.* at 80240.

⁹⁵ *Id.* at 80198.

⁹⁶ *Id.* at 80915.

⁹⁷ *Id.* at 80196.

- Plantwide Applicability Limits (“PALs”) – PALs allow for the establishment of annual emissions limits for an entire plant and create the flexibility to make changes without triggering NSR provided the changes do not increase emissions above the PAL.⁹⁸
- Clean Unit Exemption – Sources that install state-of-the-art emissions controls (Clean Units) are allowed to make changes without triggering NSR.⁹⁹
- Pollution Control Projects – Exempts modifications that result in a net environmental benefit from NSR.¹⁰⁰

On December 31, 2002, EPA also proposed rules creating two categories of activities that would be considered routine maintenance.¹⁰¹ Briefly, these are:

- Annual Maintenance, Repair, and Replacement Allowance – Would allow certain activities undertaken to “promote the safe, reliable and efficient operation of a facility” to be excluded from NSR provided the aggregate annual cost of such activities does not exceed an “annual maintenance, repair and replacement allowance.”¹⁰² The annual allowance would be established on an individual stationary source basis and would be equal to the product of the replacement cost of the source and a specific maintenance, repair, and replacement percentage to be established on an industry-specific basis.¹⁰³
- Equipment Replacement Provision – Would allow equipment to be replaced under the routine maintenance exclusion if the replacement component is functionally equivalent to the replaced component and does not change the basic design parameters of the unit, and the replacement cost does not exceed a designated percentage of the total replacement cost of the process unit.¹⁰⁴

E. Clear Skies Legislation

The Clear Skies Initiative, aimed at reducing pollution from power plants, was originally proposed by President Bush in February 2002. The program was submitted as proposed legislation (Clean Skies Act of 2002) to both Houses of the United States Congress in 2002, but the 2001-2002 session of Congress did not pass the legislation. The program was reintroduced to Congress in February 2003 as the Clear Skies Act of 2003.

⁹⁸ *Id.* at 80208.

⁹⁹ *Id.* at 80222.

¹⁰⁰ *Id.* at 80232.

¹⁰¹ 67 Fed. Reg. 80290 (Dec. 31, 2002).

¹⁰² *Id.* at 80294.

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 80295.

The proposed legislation would amend Title IV of the CAA to create a national “cap-and-trade” program for SO₂, NO_x, and mercury in an effort to reduce power plant emissions of these pollutants by approximately seventy percent from current levels.¹⁰⁵ The Clear Skies Act would continue the existing cap-and-trade program for SO₂ and would reduce SO₂ emissions from 11.2 million tons in 2000 to 3 million tons in 2018.¹⁰⁶ NO_x emissions would be reduced from 5 million tons in 2000 to 1.7 million tons in 2018.¹⁰⁷ Because of regional differences, the Clear Skies Act would establish two trading zones for NO_x with a more stringent cap on NO_x emissions applying in the Eastern United States.¹⁰⁸ Clear Skies would establish the first-ever national cap on mercury emissions from coal-fired power plants. The mercury cap would be aimed at reducing mercury emissions from 48 tons in 2000 to 15 tons in 2018.¹⁰⁹

The Clear Skies Act would significantly modify the NSR program for power plants. Existing power plants would not be required to go through NSR for modifications.¹¹⁰ Additionally, new power plants would no longer be subject to the entire NSR process, although they would have to demonstrate that they will not cause or contribute to a violation of the NAAQS.¹¹¹ Instead, new sources would be required to meet new source performance standards (“NSPS”) for NO_x, SO₂, mercury, and particulate matter set by the statute at levels significantly more stringent than existing NSPS.¹¹²

VI. CONCLUSION

As the DOJ has indicated, prosecuting EPA’s NSR enforcement cases is very resource intensive.¹¹³ While pursuing NSR enforcement cases against coal-fired electric utilities that account for 70 percent of all SO₂ and 30 percent of all NO_x emissions in the United States may be worth the effort, the Clear Skies Initiative would provide a much more efficient means of reducing emissions from the electric utility sector. Therefore, the passage of the Clear Skies Act of 2003 may be the key to the future of EPA’s coal-fired electric utility enforcement initiative. In fact, although her statements were made in the context of NSR reform rather than enforcement, EPA Administrator Christine Todd Whitman stated in her letter to President Bush that “EPA . . . believes . . . that for the power generating sector the benefits currently attributed to NSR can be achieved much more efficiently and at a much lower cost through the implementation of a multi-emission national cap and trade program, such as [the] Clear Skies proposal for the power plant industry.”¹¹⁴ Should the Clear Skies Act of 2003 pass, DOJ’s only incentive for continuing its coal-fired electric utility enforcement initiative would be to exact penalties from the electric utilities in an effort to further level the playing field.

¹⁰⁵ Environmental Protection Agency, Summary of Clear Skies Act of 2003 1 (Feb. 27, 2003) (hereafter “Summary of Clear Skies Act of 2003”); Environmental Protection Agency, Clear Skies Act of 2003 Fact Sheet 1 (Feb. 27, 2003) (hereafter “Clear Skies Act of 2003 Fact Sheet”).

¹⁰⁶ Clear Skies Act of 2003 Fact Sheet at 1.

¹⁰⁷ *Id.*

¹⁰⁸ Summary of Clear Skies Act of 2003 at 3.

¹⁰⁹ Clear Skies Act of 2003 Fact Sheet at 1.

¹¹⁰ Summary of Clear Skies Act of 2003 at 4-5.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ Fact Sheet, Department of Justice, Civil Environmental Enforcement Priorities (Mar. 11, 2003).

¹¹⁴ Letter from Christine Todd Whitman, Administrator, United States Environmental Protection Agency, to George W. Bush, President, United States of America (June 13, 2002).

As for other industries, EPA's willingness to pursue additional NSR enforcement may very well depend on EPA's success in the current electric utility cases. Although the Eleventh Circuit did not provide any indication as to EPA's likelihood of success on its substantive NSR claims in its recent ruling in the TVA case, the district courts in the Ohio Edison and Illinois Power cases will hopefully do so in the near future.

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**ROLE AND
OBLIGATION
OF THE PRESS**

Paper not submitted

Patrick Crimmins is the principal in MultiMedia Communications. MultiMedia is the only communications practice in Texas with expertise in two critical areas: how do news organizations cover environmental issues; and, how do the regulatory agencies respond to news coverage of environmental issues?

Earlier this year, Mr. Crimmins left the Texas Commission on Environmental Quality (TCEQ) as the agency's key communications adviser and coordinator of news media relations. With the assent of agency leadership, he managed hundreds of high-profile communications issues for the TCEQ and its predecessor agencies, the Texas Natural Resource Conservation Commission (TNRCC) and Texas Water Commission (TWC).

Prior to more than 10 years of state service, Mr. Crimmins reported for the San Antonio Light, where he established that city's first full-time water "beat," covering the area's dependence on the Edwards Aquifer.

At the Midland Reporter-Telegram, Mr. Crimmins covered police, courts, and everything else, including that baby trapped in the well in 1987. He began his newspaper career in 1983 at the Huntsville Morning News, and covered the state prison system during its most tumultuous period, with three directors, unprecedented inmate violence and the resumption of executions delayed by years of court challenges.

During his newspaper career, Mr. Crimmins won awards from the Associated Press Managing Editors and Hearst Newspapers.

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**CORPORATE &
ATTORNEY LIABILITY
UNDER SARBANES
OXLEY**

Environmental Lawyers' Responsibilities Under the Sarbanes-Oxley Act of 2002 and the SEC's New Professional Conduct Rules

**Elizabeth Bourbon¹
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In the aftermath of Enron, some share of the blame was laid at the feet of both in-house lawyers and outside counsel, based on the general perception that all the lawyers knew that the company was committing securities fraud and other heinous acts, and yet nobody did or said anything. Section 307 of the Sarbanes-Oxley Act of 2002 (the "Act") gave the SEC marching orders to write rules designed to force lawyers to stop hiding behind the attorney/client privilege and compel them to fulfill their responsibilities to shareholders and as officers of the court. Predictably, commenters reacted strongly to some of the more problematic features of the SEC's proposed draft rule, and as a consequence the infamous "noisy withdrawal" proposal has disappeared—at least temporarily—from the final rule, as have some of the controversial requirements for documenting suspected noncompliance. However, the final SEC rules on professional conduct for attorneys, effective August 5, 2003,² still have some far-reaching and potentially problematic implications for lawyers who work with issuer companies. This paper attempts to give a basic overview of the new rules and to address the unique impact of the new rules on the practice of environmental lawyers.

1. Overview

In essence, the new SEC professional conduct rules require lawyers to report certain kinds of suspected malfeasance "up the ladder" and to take responsibility for making sure that the matter is resolved. The gist of lawyers' responsibilities under the Act is found in Section 205.3 of the new SEC rules on "Implementation of Standards of Conduct for Professional Attorneys," codified in the new 17 C.F.R. Part 205:

Duty to report evidence of a material violation. (1) If an attorney, appearing and practicing before the Commission in the representation of an issuer, becomes aware of evidence of a material violation by the issuer or by any officer, director, employee, or agent of the issuer, the attorney shall report such evidence to the issuer's chief legal officer (or the equivalent thereof) or to both the issuer's chief legal officer and its chief executive officer (or the equivalents thereof) forthwith....³

The rule goes on to say that whoever receives the initial report of malfeasance—the chief legal officer (CLO), the CEO, or the "Qualified Legal Compliance Committee" (QLCC),

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² 68 Fed. Reg. 6296 (February 6, 2003), codified at 17 C.F.R. Part 205.

³ 17 C.F.R. § 203.5(b).

if the company has created one—must investigate to determine whether the suspicions are founded, and unless the company has adopted the QLCC approach, the results of the investigation must be reported back to the lawyer who initially raised the concern. If the lawyer is not satisfied that the concern has been addressed appropriately and timely, or that it was never founded in the first place, the onus is back on the lawyer who raised the issue in the first place to keep going up the ladder—e.g. to the audit committee or another committee of the board. The draft rule would have required to the lawyer to next go out the door, in the controversial “noisy withdrawal” provision that was not adopted in the final rule. In light of the outcry from commenters, the SEC has extended comment on the noisy withdrawal proposal and has proposed several alternative scenarios for comment. Ultimately, however, the SEC is expected to adopt some variation on the noisy withdrawal theme as a mandatory last resort for reluctant attorney-whistleblowers.⁴

2. When are environmental lawyers subject to professional conduct standards under the SEC’s regulations under the Act?

The new SEC professional conduct regulations apply to lawyers “appearing and practicing” before the Commission on behalf of an issuer of securities. The SEC has defined “appearing and practicing” broadly to include not only those attorneys who interact directly with the SEC, but also non-securities lawyers who give legal advice about documents that they know will be filed with the SEC—including those who advise clients that it is not necessary to include particular items in SEC filings.⁵ In so doing, the SEC specifically rejected comments by the American Bar Association to the effect that non-securities lawyers who merely advise about limited excerpts of securities filings should not be subject to the rule.⁶ Thus, lawyers who advise corporate clients about passages addressing environmental matters in the company’s 10K or 10Q reports may fall within the scope of the new professional conduct rules. An argument could be made that the definition of “appearing and practicing” is specifically limited to giving advice “in respect of U.S. securities laws” and SEC rules, and therefore a lawyer who drafts or gives primarily editorial advice about an environmental item but does not give advice about disclosure requirements under the securities laws might not be subject to the reporting requirements. Nevertheless, since lawyers are typically paid to be more than proofreaders, it is probably safe to assume that if you work on a company’s 10K, 10Q or other SEC filings in any capacity, you are probably within the scope of the new rules.

Note that the rules apply both to in-house lawyers and to outside counsel. However, they apply only where an attorney/client relationship exists; they do not apply to individuals who are licensed as attorneys but who are not providing legal advice to the issuer company.⁷ For instance, the rules would not apply to lawyers on the staff

⁴ Young and Hatter, *SEC Adopts Final Ethical Rules Applicable to Lawyers and Proposes Alternative Rules Regarding Noisy Withdrawal*, 22 CORP. COUNS. REV. 97, 102 (2003).

⁵ 17 C.F.R. § 205.2(a).

⁶ 68 Fed. Reg. 6296, 6297.

⁷ See 68 Fed. Reg. 6296, 6302.

of consulting firms who provide services such as environmental compliance audits. The rules also do not apply to “non-appearing foreign attorneys.”

The final rule was revised to clarify the definition of “issuer” to include any person controlled by an issuer—for example, joint ventures or privately held subsidiaries—provided that the legal services are provided “on behalf of, or at the behest, or for the benefit of the issuer.”⁸ This means that in most instances, lawyers who are asked to advise a joint venture or subsidiary on behalf of the parent will be required to report suspected violations up the ladder of the parent company.⁹

3. When is “up-the-ladder” reporting required for environmental matters?

The new professional conduct rules require up-the-ladder reporting when there is “evidence of a material violation by the issuer or by any officer, director, employee, or agent of the issuer.”¹⁰ “Evidence” means “credible evidence,” which the SEC attempted to define objectively (at the price of clarity and good grammar) as evidence “based upon which it would be unreasonable, under the circumstances, for a prudent and competent attorney not to conclude that it is reasonably likely that a material violation has occurred, is ongoing, or is about to occur.”¹¹ The threshold was designed to prompt reporting based on criteria somewhat higher than water-cooler gossip but before the level of absolute knowledge or certainty. “Material” has the same meaning as it does in other SEC rules.¹²

From an environmental practitioner’s perspective, however, the crucial question is: you have to report a material violation of what? The rule applies to a material violation of federal or state securities laws; a breach of fiduciary duty under federal or state law; or “a *similar* material violation of *any* United States federal or state law” (emphasis added).¹³ In contrast, the proposed rule said merely that reporting requirements were triggered by “a material violation of the securities laws, a material breach of fiduciary duty, or a similar material violation”¹⁴ --which appeared to limit the focus more narrowly to securities issues. To the extent that this language expands the scope of the up-the-ladder reporting requirement to encompass virtually any noncompliance with federal or state law that might be relevant to an investor, this

⁸ 17 C.F.C. § 205.2(h).

⁹ 68 Fed. Reg. 6296, 6303.

¹⁰ 17 C.F.R. § 205.3(b)(1).

¹¹ 17 C.F.R. § 205.2(e); 68 Fed. Reg. 6296, 6301.

¹² The preamble cites the tests for materiality articulated in *Basic, Inc. v. Levinson*, 485 U.S. 224 (1988) and *TCS Indus. v. Northway, Inc.*, 426 U.S. 438 (1976) (“...there must be a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.”). In addition, Rule 12b-2 states that “the term ‘material’ ...limits the information required to those matters to which there is a substantial likelihood that a reasonable investor would attach importance in determining whether to buy or sell the securities registered.” 17 C.F.R. § 240.12b-2. See also discussion in Egan, *Congress Takes Action: The Sarbanes-Oxley Act*, 22 CORP. COUNS. REV. 1, 48.

¹³ 17 C.F.R. § 205.2(i).

¹⁴ Release 33-8150 (Nov. 21, 2002), 67 Fed. Reg. 71669 (Dec. 2, 2002).

expansion could be challenged based on lack of notice and an opportunity to comment.¹⁵ On the other hand, the preamble to the final rule suggests that the SEC's purpose in adding the reference to violation of federal or state law was simply to clarify that the reporting requirements are not triggered by violations of foreign laws.¹⁶ Further, it may be argued that by limiting the scope to violations *similar* to securities fraud or breach of fiduciary duty, the SEC intended only to address the most egregious, investor-repelling kinds of lawlessness.

Note that the duty to report may be triggered by material violations on the part of agents of the issuer.¹⁷ Thus, a lawyer's awareness of activity on the part of the company's contractors may trigger up-the-ladder reporting.

4. What is an environmental lawyer required to do if it is necessary to report up the ladder?

If a lawyer otherwise subject to the rule becomes aware of evidence of a material violation, the lawyer must report what he or she knows to either the CLO or to both the CLO and the CEO.¹⁸ The report may be made in person or by telephone, as well as by email or other written communication.¹⁹ Although the proposed rule would have required the lawyer to document the report formally, the SEC withdrew the documentation requirement from the final rule based on comments pointing out the folly and the vulnerability of forcing lawyers to create documentation likely to be used against their clients.²⁰

After receiving a report of evidence of material violation, the CLO must "cause such inquiry into the evidence of a material violation as he or she reasonably believes is appropriate to determine whether the material violation described in the report has occurred, is ongoing, or is about to occur."²¹ If the CLO concludes there is no material violation—past, present or future—the CLO must report this conclusion back to the lawyer who originated the report and must include the basis for the conclusion.²² However, the presumption in the rule is that "unless [the CLO] reasonably believes" that there is no material violation, the CLO must "take all steps to cause the issuer to adopt an appropriate response," and must also advise the reporting attorney of that response.²³ At

¹⁵ Or maybe not. In its invitation for additional comment on the noisy withdrawal and alternative proposals, the SEC also solicited further comment on the final rule in general (though arguably the SEC was referring to changes that would be needed throughout the rule to correspond with the withdrawal provisions). 68 Fed. Reg. 6324, 6332. It is possible the SEC could take the position that publication of the final rule with an extended comment period represents sufficient notice and opportunity for comment under Administrative Procedure Act rulemaking provisions.

¹⁶ See discussion in preamble to final rule, 68 Fed. Reg. 6296, 6303.

¹⁷ 17 C.F.R. § 205.3(b).

¹⁸ *Id.*

¹⁹ 17 C.F.R. § 205.2(n).

²⁰ 68 Fed. Reg. 6296, 6305.

²¹ 17 C.F.R. § 205.3(b)(2).

²² *Id.*

²³ *Id.*

that point—or earlier, if an unreasonable length of time has passed after the attorney initially made the report—the burden shifts back to the reporting attorney to decide whether the response from the CLO or CEO was appropriate and made within a reasonable time.²⁴ If not, the attorney is required to keep going “up the ladder” to report the evidence of material violation to the audit committee of the board; or, if the board does not have an audit committee, then to another board committee consisting of directors who are not employed by the company; or if there is no such uninterested board committee, then to the board itself.²⁵ If the attorney reasonably believes that it would be futile to report initially to the CLO and CEO, then the attorney may skip them and make the initial report directly at the board level.²⁶

What if you are hired by the CLO to investigate or defend an alleged material violation? The final rule clarifies that lawyers conducting investigations of alleged material violations are considered to be “appearing and practicing” before the SEC, and thus are potentially subject to the rules requiring them to monitor the appropriateness of the company’s response.²⁷ However, a lawyer hired to investigate evidence of a material violation is not required to report up the ladder if the lawyer reports the results of the investigation to the CLO, and either the lawyer and CLO agree that there is no material violation, or else the lawyer knows that the results of the investigation are reported up the ladder to an appropriate board committee or a QLCC.²⁸ Lawyers hired to “assert a colorable defense” on behalf of the company in any investigation or administrative or judicial proceeding are also relieved of the obligation to report up the ladder, provided that the CLO is reporting regularly on the matter to the board, an appropriate board committee, or a QLCC.²⁹

The rules offer an alternative reporting procedure that allows companies to establish a QLCC to respond to potential reports of material violations. The main advantage of adopting a QLCC is to remove the burden on the reporting attorney to check up and pass judgment on the timeliness and appropriateness of the response to the material violation report. The up-the-ladder process differs in companies with a QLCC in that once an attorney has reported evidence of material violation, the reporting attorney has then satisfied his or her obligations.³⁰ The QLCC then takes on the burden of investigating and resolving the matter, and may turn the company in to the SEC if the company fails to implement the committee’s recommendations.³¹ A QLCC must be adopted before a matter arises; it cannot be formed on an ad hoc basis.³² A company’s existing audit committee may comprise the QLCC; alternatively, the QLCC must include at least one member of the board’s audit committee or its equivalent and two or members of the board who are not employed by the company or otherwise “interested persons” under the

²⁴ 17 C.F.R. § 205.3(b)(3).

²⁵ *Id.*

²⁶ 17 C.F.R. § 205.3(b)(4).

²⁷ 17 C.F.R. § 205.3(b)(5); 68 Fed. Reg. 6296, 6308.

²⁸ 17 C.F.R. § 205.3(b)(6).

²⁹ 17 C.F.R. § 205.3(b)(7).

³⁰ 17 C.F.R. § 205.3(c)(1).

³¹ 17 C.F.R. § 205.2(k).

³² 17 C.F.R. § 205.3(c)(1); 68 Fed. Reg. 6296, 6309.

Investment Company Act of 1940.³³ The QLCC must adopt written procedures for how it will receive, retain, and consider reports of evidence of material violation; it must have the authority to report to the CLO and CEO as well as the audit committee or the full board; and it must be empowered to initiate an investigation by the CLO or by outside lawyers, and to hire its own experts if necessary.³⁴ At the conclusion of any investigation, the QLCC must decide by majority vote to recommend that the company implement an “appropriate response,” and the QLCC must have the authority and the responsibility to decide by majority vote to report the company to the SEC if the company’s response is inadequate.³⁵

Of all the controversial features of the proposed rule, the most discussion centered around what the SEC proposed as the reporting lawyer’s last resort if the company’s response at the board level was inadequate. The infamous “noisy withdrawal” provision would require an attorney to withdraw from representation of a company that failed to make an appropriate response to evidence of a material violation and to notify the SEC directly of the circumstances.³⁶ Under deadline to adopt final rules implementing Section 107 of the Act, the SEC extended the comment period on the noisy withdrawal proposal and solicited additional comments this scenario, as well as on an alternative proposal that would still require lawyers to withdraw from representation but would shift the obligation to the company to report the lawyer’s withdrawal “for professional considerations” to the SEC.³⁷

Perhaps the second most controversial aspect of the new rules is what constitutes an “appropriate response” to evidence of a material violation. As defined in the final rule, an “appropriate response” is a report that results in the attorney’s reasonable belief that that there was, is, and will be no material violation; that the company has adopted appropriate remedial measures; or that the company has hired a lawyer to investigate and has either implemented the remedial recommendations from the investigation or has been advised that the company has a colorable defense. Throughout the rule, the “reasonable” behavior expected of lawyers and CLOs is defined in terms of “conduct that would not be unreasonable for a prudent and competent attorney,”³⁸ while “reasonable belief” means that “an attorney believes the matter in question and that the circumstances are such that the belief is not unreasonable.”³⁹ In adopting this definition of an appropriate response, the SEC rejected suggestions to base the lawyer’s obligation on his actual (as opposed to reasonable) belief, to clarify the lawyer’s obligation when the results of the investigation are inconclusive, and to allow the lawyer to rely unconditionally on assurances from the CLO, explaining that both the reporting lawyer and the Commission should be free to weigh all relevant facts and circumstances surrounding the company’s response.⁴⁰

³³ *Id.*; 68 Fed. Reg. 6296, 6304.

³⁴ 17 C.F.R. § 205.2(k).

³⁵ *Id.*

³⁶ 68 Fed. Reg. 6296, 6296.

³⁷ *Id.*; 68 Fed. Reg. 6324 (February 6, 2003). Note that the deadline for comment was April 7, 2003.

³⁸ 17 C.F.R. § 205.2(l).

³⁹ 17 C.F.R. § 205.2(m).

⁴⁰ 68 Fed. Reg. 6296, 6308.

Yet another difficult issue under the new rules has to do with the discoverability of the incriminating documentation likely to be created under the rule. The proposed rule would have affirmatively required the lawyer reporting evidence of material violations to document the report contemporaneously and maintain that documentation for some period of time. Bowing to vigorous protests that this requirement would create a conflict between lawyer and client and would result in creation of a “treasure trove of selectively incriminating documents,” the SEC dropped the affirmative requirement to document up-the-ladder reporting from the final rule.⁴¹ Nevertheless, the SEC also suggested that whether or not documentation is required, it will behoove a lawyer whose own compliance with the rule might be questioned to create a contemporaneous record to support the reasonableness of his or her own conduct. Moreover, the final rule includes a provision which allows a lawyer to use such a report in his or her own defense if the lawyer’s compliance with the Act’s requirements is at issue.⁴² Further, notwithstanding any state ethical rules to the contrary, the final rules allow (but do not compel) lawyers to reveal the company’s confidential information to the SEC without the company’s consent in order to prevent a material violation that is likely to cause “substantial injury to the financial interest or property of the issuer or investors,” or to prevent the company from perjuring itself or otherwise defrauding the SEC, or even to rectify the consequences of a previous material violation that has or may cause substantial injury to investors.⁴³ Meanwhile, the SEC also dropped from the final rule a provision that asserted the SEC’s position that information provided to the SEC under a confidentiality agreement does not result in waiver of the attorney/client privilege.⁴⁴

5. What does all this mean for environmental lawyers?

Almost all lawyers who represent companies subject to SEC regulation are concerned about the impact of the new professional conduct rules on their relationship with their corporate clients and on their practice in general. Environmental lawyers in particular will have to struggle with issues such as the following:

- *When does potential noncompliance with environmental regulations rise to the level of a material violation that would trigger up-the-ladder reporting?* Based on the apparently expansive definition in the final rule of what constitutes a “material violation,” an environmental practitioner may face difficult judgment calls in deciding whether potential violations of environmental laws would be material to investors and are within the scope of the new rules. The complexity of environmental laws does not lend itself to a “know it when you see it” approach to deciding whether conduct rises to the level of fraudulent behavior that the Act was intended to address. For example, should we assume that reasonable investors would be concerned about all potential criminal allegations? What

⁴¹ 68 Fed. Reg. 6296, 6305.

⁴² 17 C.F.R. § 205.3(d)(1). This and other provisions of Part 205 supersede any conflicting state ethical rules. 17 C.F.R. § 205.1.

⁴³ 17 C.F.R. § 205.3(d)(2).

⁴⁴ 67 Fed. Reg. 71670, 71693.

about those that are based on thin evidence, or on a lesser level of intent, or are arguably “paperwork” crimes even though they carry criminal penalties, or those which typically carry civil penalties but may also be pursued criminally? Since a lawyer who violates the new rules may face penalties for securities law violations as well as disciplinary proceedings by the SEC, while a lawyer who complies in good faith is shielded from discipline by a state or federal jurisdiction, many lawyers may take a conservative approach to reporting to protect themselves, even if it is not necessarily required and not necessarily in the company’s best interest.⁴⁵

- *Unique impacts resulting from recent expansions in environmental criminal liability.* To the extent that the SEC rules encourage attorneys to document their clients’ noncompliance, the Department of Justice’s insistence on waiver of attorney/client privilege as a condition of leniency under the Federal Sentencing Act Guidelines will likely result in exposing documents created during an up-the-ladder report of potential material environmental violations to scrutiny in criminal investigations of environmental noncompliance. Further, given that environmental compliance lawyers generally are spooked by the recent expansion of criminal investigations and prosecutions based on lower levels of intent (some of which have specifically targeted environmental lawyers), some lawyers’ decisionmaking may be skewed by hyperawareness of potential criminal liability. Some may unnecessarily initiate up-the-ladder reports and generate damning documents, possibly at the expense of their corporate clients, in an effort to shield themselves from potential criminal liability under environmental laws as well as under the Act. On the other hand, other lawyers may construct artificial justifications for why they did not believe there was credible evidence of a material violation in order to avoid creating admissions that may come back to haunt them in a criminal context.
- *Uncertainty regarding the role of internal environmental compliance investigations.* It is not uncommon for environmental lawyers who learn of potential noncompliance to initiate an internal investigation--often under the attorney-client privilege, sometimes though not always under environmental audit privilege guidelines. These internal compliance investigations often result in disclosures of violations and/or the company’s voluntary adoption of corrective or preventive measures. Thus, the investigation, recommendations, and corrective measures that the SEC’s up-the-ladder reporting mechanism are designed to accomplish are already occurring with some regularity in the environmental arena, though usually at a lower level of the company than the up-the-ladder rules seem to contemplate. If an environmental lawyer becomes aware of a potential material violation, he or she will have to decide whether it is necessary to invoke the Act’s formal up-the-ladder reporting requirement, or whether the lawyer can provide his or her own “appropriate response” by proceeding as usual to conduct the investigation and working with the company to implement recommendations and to disclose noncompliance if necessary.

⁴⁵ 17 C.F.R. § 205.6.

- *Unfamiliarity with SEC reporting requirements.* Many environmental lawyers occasionally draft discussions of contingent liabilities for the company's quarterly and annual reports, or give legal advice to their clients when they are establishing accruals for remediation or other environmental obligations, without being terribly knowledgeable about the underlying SEC requirements pertaining to those disclosures. The Act's application of a "reasonable belief" standard arguably will drive us all to learn at least the basics of SEC disclosure rules applicable to our clients.

6. Conclusions and Recommendations

It is easy to grow anxious about lawyers' new obligations under the Act. There is very little that any of us can do to avoid the possibility that we will someday encounter a situation that will require us to confront the up-the-ladder reporting requirements. However, there are a few things we can do to prepare:

- Become familiar with the SEC reporting standards for environmental liabilities, contingent liabilities, and other reporting standards that apply to matters you are dealing with, so that you will recognize when you are advising "in respect of securities laws" and will stand a chance of recognizing potential noncompliance.
- Check with your clients to verify how the matters you are involved with are accrued and reported in public disclosures.
- Know how your company intends to respond to the Act's requirements. For example, find out whether, in your company, reports of material violations are to go to the CLO or to a QLCC. Spend some time thinking about what you would do, who you would approach and how, if you were to become aware of a evidence of a material violation.
- If you are a supervisory attorney, be sure your subordinate attorneys understand their responsibilities under the Act. You will be responsible for helping your subordinates raise issues up the ladder, so you should take a look at the rules.
- Be aware that any documentation you create in the context of reporting evidence of a material violation may come back to haunt you or the company in a criminal or other proceeding.

Elizabeth Bourbon

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Sarbanes-Oxley and Environmental Issues

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The recent Sarbanes-Oxley legislation has significantly influenced the reporting mechanisms and internal controls that are required for certification and attestation of a company's financial statements, and their financial and non-financial disclosures. As a brief refresher, the following are the requirements for Section 302 and Section 404 of the Sarbanes-Oxley Act of 2002:

Section 302—Requires quarterly certification by the CEO/CFO of all companies filing period reports under Section 13 (a) or 15 (d) of the Securities Exchange Act of 1934 regarding the completeness and accuracy of such reports as well as the nature and effectiveness of internal controls supporting the quality of information included in such reports, including non-financial information.

Section 404—Requires an annual report by management regarding internal controls and procedures for financial reporting, and an attestation as to the accuracy of that report by the company's auditors.

Overall, there have been numerous discussions concerning the internal controls and reporting structures around the basic financial processes and cycles, such as cash, treasury, and accounts payable. The Sarbanes-Oxley Act also requires that companies address the internal controls related to certain estimates on which financial statements and disclosures are based. One area where companies may be reporting such estimates, as well as related non-financial information, is environmental matters.

This paper will examine the influence of the Sarbanes-Oxley Act upon environmental reporting, disclosures, and internal controls. This discussion will be presented in three sections:

- General areas of applicability
- Specific examples, with risks and solutions identified
- A case study of the results of a Sarbanes-Oxley readiness assessment, specifically in the area of environmental compliance and controls

GENERAL AREAS OF APPLICABILITY

The Sarbanes-Oxley legislation can impact multiple areas of an organization's internal control structure around environmental reporting and compliance disclosure. These areas can be placed into four business areas/functions:

Sarbanes-Oxley and Environmental Issues

- Environmental considerations in financial statements
- Environmental considerations in financial disclosures
- Internally managed and reported environmental, health, and safety (EH&S) financial and non-financial risks
- Externally reported environmental, health and safety financial and non-financial risks.

As noted in these business areas/functions, the processes affected by Sarbanes-Oxley not only are concerned with external reporting of issues that affect financial information, but also the internal reporting structure of environmental issues that are used to feed information to those reporting externally to the capital markets.

Each of these business areas/functions is examined in greater detail in the following sections, along with some final comments concerning controls structure of an organization.

Environmental Considerations in Financial Statements

Reporting of current and potential environmental considerations in financial statements rely upon a strong reporting mechanism between the accounting/financial functions and the operations/environmental functions. This reporting chain ensures that not only are current and potential environmental considerations are accurately reflected on the financial statements, but that ALL appropriate conditions have been identified and properly reported in a timely manner. Aspects that apply and should be reviewed include:

- Reserves for environmental remediation liabilities (RCRA Corrective Actions, Superfund, etc.) in accordance with FAS 5, SOP 96-1
- Reserves for other environmental liabilities (fines/penalties, legislation, consent decrees)
- Potential recoveries (insurance claims, agency filings, other Potentially Responsible Parties)
- Asset retirement obligations/FAS 143 (e.g., ash ponds, asbestos abatement, facility/operation decommissioning)
- Purchase accounting

Environmental remediation liabilities can be derived from several programs, including the Resource Conservation and Recovery Act (RCRA) corrective action program, Superfund hazardous waste sites, and state-related hazardous waste programs, including voluntary action programs and those designed to ensure that hazardous waste obligations are met when property/operations change hands (e.g., NJ Industrial Site Recovery Act).

Environmental obligations and liabilities can also be derived from other sources. Levying of fines/penalties, individually or as part of an agency action taken against a company in the form of a consent/order or decree can have significant financial obligations. In addition, the passage of environmental legislation can result in significant

Sarbanes-Oxley and Environmental Issues

financial obligations, to the extent it mandates implementation of more stringent environmental constraints on operating facilities, thus requiring additional and more costly environmental controls.

Many of these obligations require quantification, reporting and disclosure under existing accounting rules (e.g., FAS 5, FAS 143). In addition, purchase accounting considerations can affect the manner in which these obligations and liabilities must be handled from a financial accounting standpoint.

Environmental Considerations in Financial Disclosures

As noted in the following section, identification of current and potential environmental issues is paramount for the timely and accurate reporting of these issues in financial disclosures to the capital markets. Areas of consideration that should be reviewed include:

- Environmental accounting policy note
- Management's Discussion and Analysis
- Description of business
- Legal proceeding
- Uncertainties, including:
 - Reasonably possible additional losses
 - Probable but not reasonably estimable losses
 - Unasserted claims
- Compliance costs, including:
 - Capital expenditures
 - Remediation expenses
 - Operating expenses

The manner and extent to which these disclosures are made can vary widely between companies. Each of the items in the financial disclosures related to environmental considerations should accurately reflect the accounting policies established for valuing any current or potential expenditures associated with environmental issues.

Internally Managed and Reported Non-Financial Disclosures

Individually, the areas noted for internal managing and reporting may not directly influence the presentation of information in financial statements, or in financial disclosures. However, without the proper management, reporting, and influence of these issues, these areas could result in reportable conditions that could lead to a materially significant impact on the financial statements, the performance of a given company or the reputation of a company with its stakeholders. Areas for review can include:

- Inventory of, and compliance with, applicable laws and regulations, including:
 - Permits (air, water, waste)
 - Licenses

Sarbanes-Oxley and Environmental Issues

- Written plans (spill control, contingency, storm water)
- Consent decrees
- Emerging issues (greenhouse gas, natural resources, storm water)
- Contingency planning and crisis response
- Health and safety
- Appropriate management for non-U.S. operations

Each of these areas requires effective processes and internal controls to ensure that they are effectively managed. For example, ineffective management applied to obligations associated with a consent decree could result in additional fines and penalties, and ultimately project or facility closure if compliance obligations are not met. Ineffective processes and internal controls associated with contingency planning and crisis response may only manifest themselves in the event of a major occurrence, at which time the ramifications may be significant. These internally managed and reported aspects can be related to and may lead to external disclosures.

Externally Reported Non-Financial Disclosures

Again, individually, each of the items noted below may not directly influence the presentation of financial statements. However, neglect in any of these areas could result in actions that could significantly affect operating performance, which could include significant fines or penalties for non-compliance with laws or regulations or a “poor reputation” as a corporate citizen among the local population. Areas for review include:

- Regulatory and permit requirements (air emissions, Toxic Release Inventory, hazardous waste disposal)
- Environmental (and Sustainability) corporate reports
- Stakeholder inquiries (investment groups, industry associations, customers, environmental groups, other stakeholders)
- Insurance policy applications and claims
- Disclosures to parties in transactions (buyers/sellers), and post-closing reporting
- Reporting requirements for non-U.S. operations

While each of these areas can be discussed in detail, perhaps one of the most critical areas where non-financial environmental disclosures can be consolidated and reported are through environmental and sustainability reports. Companies are using this venue on a more frequent basis to report their performance to their shareholders and other stakeholders, which can include both quantitative and qualitative information. As this constitutes a very public statement of facts and performance, these disclosures are accessible to anyone and thus must be developed in a manner that assures their accuracy and completeness. This can be even more important because more companies that report their performance in this manner are having these data independently verified, in much the same manner as they have their financial statements and disclosures audited.

Sarbanes-Oxley and Environmental Issues

Final Comments

Internal controls for identifying and reporting environmental considerations will vary from company to company. Along with specific controls within a company, the type of organization should be examined to determine the depth of internal controls and reporting structure that would be required to adequately value and identify environmental considerations. The factors that should be reviewed include:

- Scope of operations, including geography, business units, and company size
- Operating style—centralized/decentralized
- Type of operations—industry/business/products/services
- Relative maturity of internal controls
- Level of documentation of internal control procedures
- The risk profile and appetite of the company

SPECIFIC EXAMPLES OF ENVIRONMENTAL RISKS AND CONTROLS

Potential EH&S risks associated with Sarbanes-Oxley can be categorized into four areas, consistent with the established COSO framework, as follows:

- Identification – process by which a company learns of potential issues
- Recognition – process of assessing when issues should be quantified and/or reported/disclosed
- Measurement – process of determining exposures and/or amounts that should be reported/disclosed
- Disclosure – process of determining required disclosures

Examples of potential environmental risks in each of these areas are explored further in the following tables, with the type of issue/risk involved, a common deficiency for this issue/risk, and a typical control to minimize the impact of the issue/risk. The majority of these examples focus on financially related remediation liabilities, with coverage of other non-financial considerations selectively provided.

Sarbanes-Oxley and Environmental Issues

Identification

Issue/Risk	Common Deficiency	Typical Control
Environmental remediation reserve is not complete or accurate.	Company staff does not understand the implications of complete and accurate remediation cost estimates.	Control environment— Company establishes a clear philosophy, policy, attitude, awareness and leadership relative to ensuring remediation cost estimates are accurate and complete.
Environmental remediation reserve is not complete or accurate.	Operating site staff are not aware that a hazardous material spill is potentially a remediation and financial reporting issue.	Information and Communication—Company has strong training and awareness programs to ensure proper actions.
Environmental remediation reserve is not complete.	Company lacks documented, process and procedures to ensure consistent identification.	Control Activity— Company has documented procedures to ensure consistent identification.
Environmental remediation reserve is not complete or accurate.	Company’s internal and compliance audit teams do not communicate findings that represent financial reporting issues to staff involved in the financial accounting process.	Monitoring—Company uses information from various internal monitoring programs.
A reportable hazardous material/chemical release to the environment is not properly identified or reported.	Operating site staff is not aware of all conditions that trigger identification for reporting purposes at the federal, state and/or local levels.	Information and Communication—Company has strong training and awareness programs to ensure proper actions.
Environmental release inventory data is not complete or accurate.	Company fails to fully identify its compliance requirements for reporting toxic releases.	Control Activity – Clearly defined procedures are in place for identifying compliance requirements.

Sarbanes-Oxley and Environmental Issues

Recognition

<u>Issue/Risk</u>	<u>Common Deficiency</u>	<u>Typical Control</u>
Environmental remediation reserve is incomplete.	Remediation reserve estimate does not include potential costs for some new sites because the legal department failed to advise other departments of additional Superfund site notifications.	Information and Communication - The Company holds quarterly meetings between environmental, accounting operating and legal staff for updates in this area.
Environmental remediation reserve is incomplete	Environmental remediation reserves are incomplete because company staff does not fully understand the definition of "probable" for financial accounting purposes.	Control Activities - Procedure for developing remediation estimates has clear definition of when an exposure becomes "probable" under FAS 5 and SOP 96-1.
Environmental remediation reserve is misstated due to inaccurate estimates Information and Communication -	Company's acquisition due diligence teams do not share all environmental information necessary to form accurate exposure assessments with the accounting function.	Company fully reviews and understands information collected in acquisition due diligence.
Environmental remediation reserve is incomplete	Operating site staff incurs expenses for a non-reserved remediation project without the knowledge of business unit or accounting departments.	Control Activities - Controls are in place to prevent "unofficial" spending on remediation obligations.
Air emissions from a significant non-routine safety occurrence are not quantified in reported facility emissions.	Air emissions estimates are not complete because non-routine operational events are not captured by the company's air emissions management system.	Control Activity – Procedure for developing and compiling facility air emissions formally addresses the significance and inclusion of non-normal operational events.
Company receives negative media attention and reputational / brand damage due to reporting failure.	Company fails to potential address potential worker safety issues in its Asian supply chain.	Risk Assessment – Company has a method to analyse risks related to external sources.

Sarbanes-Oxley and Environmental Issues

Measurement

<u>Issue/Risk</u>	<u>Common Deficiency</u>	<u>Typical Control</u>
Environmental remediation reserve is incomplete	Responsibility for initiation of remediation cost estimates is vague and unclear, and not all remediation obligations have been estimated	Control Activity – Procedure for estimate development specifies departments and positions responsible for generating remedial plans and cost estimates
Environmental remediation reserve is misstated due to inaccurate estimates	Reserve estimates are not revised to reflect new requirements, e.g., agency demand for remedial system expansion and additional sampling	Monitoring – Company has a rigorous annual review process to ensure that all recent developments have been reflected in the cost estimates
Environmental remediation reserve is misstated due to inaccurate estimates	Company does not consistently require supporting documentation for remediation cost estimates such that not all estimates can be re-performed or errors detected	Control Activity – Company requires sufficient documentation of remediation estimates to ensure that errors or fraud can be detected
Environmental remediation reserve is misstated due to inaccurate estimates	Project manager significantly reduces a cost estimate on the assumption that an agency will approve a remedial proposal that has only been verbally discussed	Control Activity – Controls ensure that cost estimates are based on currently known obligations and circumstances and not speculative presumptions
Environmental remediation reserve is misstated due to inaccurate estimates	The Company's remediation cost estimates do not consistently and accurately reflect the time periods of its remediation obligation	Control Activity – Company has clear guidance on how project managers should exercise judgment on the time period used in cost estimates for long-term remediation projects
Environmental remediation reserve is misstated due to inaccurate estimates	The Company's remediation cost estimates do not consistently and accurately reflect the time periods of its remediation obligation	Control Activity – Company has clear guidance on how project managers should exercise judgment on the time period used in cost estimates for long-term remediation

Sarbanes-Oxley and Environmental Issues

		projects
Environmental remediation reserve is misstated due to inaccurate estimates	Company policy is not sufficiently specific to ensure that all cost estimators consistently apply the “costs to be included” specified in AICPA SOP 96-1	Control Activity – The Company’s accounting policy for environmental remediation cost estimates is clear with respect to what costs should be included
Environmental remediation reserve is misstated due to inaccurate estimates	Remediation estimates lack proper management oversight and review	Control Activity – Company has a formal process for validating remediation cost estimates on a regular basis though peer reviews or QA/QC procedures.
Environmental remediation reserve is misstated due to inaccurate estimates	A project manager adjusts site reserve estimates for anticipated recoveries based on speculative assumption	Control Activity – Company policy prohibits adjustment of site reserve estimates for anticipated recoveries from other PRPs or insurance providers without approval
Air emissions inventory is misstated due to inaccurate measurements and/or estimates.	Emissions inventory is developed without independent peer review of the data before it is reported.	Control Activity – Company has an established and documented procedure for assuring peer and management review of all data

Disclosure

<u>Issue/Risk</u>	<u>Common Deficiency</u>	<u>Typical Control</u>
Disclosure will not be accurate	The range of reasonably possible additional losses is incorrect	Control Activity – Company has clear procedures for determining reasonably possible additional losses.
Disclosure will not be complete	Company omits disclosure of an emerging issue, e.g., climate change, with a potentially material effect on the business	Risk Assessment – Company has an objective process for identifying and assessing issues that may significantly impact the business
Disclosure will not be accurate	Historical costs disclosed for environmental compliance are misstated	Control Activity – Company has an effective process for capturing

Sarbanes-Oxley and Environmental Issues

		historical environmental expenditures
Disclosure will not be accurate	Forecast of capital expenditures to comply with proposed regulations are low	Risk Assessment – Company involves the proper expertise for projecting capital spending for proposed regulations
Disclosure will not be accurate	Details related to a pending regulatory enforcement action and penalty are understated	Control Activity – Company uses a process that considers objective and accurate information to ensure accurate disclosures
Disclosure of hazardous material/chemical releases will not be complete and accurate.	Required hazardous material/chemical release(s) are not reported as required by regulation.	Control Activity – Company has an established and documented process for determining whether and to whom hazardous chemical releases are reportable.
Corporate sustainability report contains incorrect disclosure statements.	Company has not implemented quality assurance procedures for its sustainability report.	Control Activity – Company has designed and implemented sufficient controls to ensure validity of reporting / disclosures.

It is interesting to note that many of the issues noted above are directly related to several core controls:

- Established and documented policies and procedures
- Objective processes for identifying and assessing potential risks
- Peer review and QA/QC procedures
- Proper training and awareness of company staff
- Adequate communication between various functions
- Management control and accountability

The complexity of environmental considerations requires that these controls be established consistently, often within the framework of a formal environmental management system. It is also important to recognize that there are numerous linkages between environmental and other business areas (e.g., operational, legal, financial, procurement, etc.) that must be recognized and addressed.

CASE STUDY

Many corporations have been systematically reviewing their readiness for addressing the certification requirements under Sarbanes-Oxley Sections 302 and 404 by commissioning independent readiness assessments. This assessment provides for a review of the effectiveness of disclosure controls and procedures over the broad spectrum of business

Sarbanes-Oxley and Environmental Issues

processes, and one basis upon which to implement improvements in advance of certification deadlines.

One such assessment was performed for a services and technology company that has operations in several territories throughout the globe and in the U.S. Both financial and functional processes were reviewed in accordance with the COSO framework for internal controls and risk management. A high-level review of corporate level functions was conducted, with controls sampled at a variety of operations through several distinct business units. Environmental was one key element of scope.

The following table provides a summary of some of the higher priority findings from the study.

Issue/Risk	Common Deficiency	Typical Control
<i>Identification</i>		
Current and emerging regulatory requirements are not identified on a timely basis, exposing company to risk of non-compliance	Lack of coordinated process to identify current and emerging regulatory requirements and communicate requirements within the company.	Information and Communication - Company has an effective process for tracking and communicating changes in regulatory/legislative requirements at the country, state/region, and local levels. Coordination between environmental and legal functions essential.
Environmental remediation reserve is not complete.	Company lacks documented, process and procedures to ensure consistent identification.	Control Activity - Company has systematic and documented procedures to ensure consistent identification.
<i>Recognition</i>		
Company employees requiring environmental-related job training may not have proper training.	No formalized or central employee training and education system is in place to flag employees requiring training.	Control Activity – Company has formal and documented procedures to determine whether and when training is required and to track performance.
Environmental remediation reserve is incomplete	Environmental remediation reserves are incomplete because company staff does not fully understand the definition of “probable” for financial accounting purposes.	Control Activity - Procedure for developing remediation estimates has clear definition of when an exposure becomes “probable” under FAS 5 and SOP 96-1.

Sarbanes-Oxley and Environmental Issues

<i>Measurement</i>		
The potential for inaccurate projection of environmental capital and operating expenditures and cost tracking	Lack of a formal process and system for budgeting tracking environmental capital and operating costs.	Control Activity – Environmental is ‘hard wired’ into the company’s overall capital and project appropriation system.
Environmental remediation reserve is misstated due to inaccurate estimates	Remediation estimates lack proper management oversight and review	Control Activity – Company has a formal process for validating remediation cost estimates on a regular basis though peer reviews or QA/QC procedures.
<i>Disclosure</i>		
Disclosure of inaccurate non-financial environmental operations and performance information	Lack of formal disclosure systems and controls for non-financial issues and risks, including lack of appropriate management review and verification	Company has an effective process for identifying, reviewing and disclosing non-financial environmental performance information (e.g., third party assurance of a published environmental report).
External communications and reporting of environmental performance is limited to only that required by law	Lack of formal mechanism to report environmental performance to internal and external stakeholders	Company has an effective mechanism to define, track and report performance against established metrics and goals that are aligned with business objectives.

It is interesting to note that several of the previously identified risks were uncovered through this readiness assessment. In many cases, these risks often relate to the lack of a systematic and documented process, and management controls to ensure that the process is in fact implemented as intended.

**CORPORATE AND ATTORNEY LIABILITY
UNDER THE SARBANES-OXLEY ACT OF 2002**
Ain't Nobody's Business...

*Fifteenth Annual Texas Environmental Superconference
State Bar of Texas
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CORPORATE AND ATTORNEY LIABILITY UNDER THE SARBANES-OXLEY ACT OF 2002

Ain't Nobody's Business...

Robert T. Stewart*
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Table of Contents

I.	Introduction	1
II.	Existing SEC Rules on Environmental Disclosure	1
	A. Regulation S-K Item 101	2
	B. Regulation S-K Item 103	2
	C. Regulation S-K Item 303	2
III.	Identifying Environmental Liabilities	2
	A. ASTM E2137	2
	B. ASTM E2173	3
IV.	Enforcement Enhancements in Sarbanes-Oxley	4
V.	Federal Enforcement Initiatives	5
VI.	Responding to Investigations.....	5
VII.	Conclusion	6

* Opinions expressed herein are those of the author, and not those of Baker Botts L.L.P. or any of its partners or employees.

CORPORATE AND ATTORNEY LIABILITY UNDER THE SARBANES-OXLEY ACT OF 2002

*Ain't Nobody's Business...
(or is it?)*

I. Introduction.

The Sarbanes-Oxley Act of 2002¹ (the "Act") was signed into law by President Bush on July 30, 2002—just over one year ago. In a relatively short time, the U.S. Securities and Exchange Commission ("SEC") has initiated and promulgated several rules mandated by the Act, which has been no easy task since it contains such a wide array of substantive amendments to federal securities laws that substantially impact all U.S. public companies, including the directors and executive officers of those companies. As a result, companies are reevaluating their procedures for disclosing potential environmental liabilities—procedures that increasingly have been criticized by both regulators and environmental groups as inadequately reflecting a company's environmental liabilities in SEC filings. This paper is one of three segments of a discussion on corporate and attorney liability under the Sarbanes-Oxley Act of 2002, which Congress passed in part to make corporate disclosures of environmental liabilities *everybody's business*.

* * *

*If I should take a notion
to jump into the ocean
Ain't nobody's business if I do.*

* * *

II. Existing SEC Rules on Environmental Disclosure.

The SEC is the federal regulatory agency with jurisdiction to promulgate regulations that are mandated by the Securities Act of 1933² and the Securities Exchange Act of 1934³, which require regulated companies to register their securities prior to a public offering and to file periodic reports disclosing information that would be considered material to someone making an investment decision. To integrate the requirements of each of these laws, the SEC promulgated Regulation S-K, which provides disclosure guidelines for annual reports, quarterly reports, and episodic reports. Environmental reporting requirements are contained in Item 101, Item 103, and Item 303 of Regulation S-K.

¹ Sarbanes-Oxley Act of 2002, Pub.L. 107-204, July 30, 2002, 116 Stat. 745.

² 15 U.S.C. 77a *et seq.*

³ 15 U.S.C. 78a *et seq.*

A. Regulation S-K Item 101.⁴ This regulation requires disclosure of material effects on a company resulting from its compliance with environmental laws. Specifically, Item 101, *Description of Business*, requires disclosure of material effects on a company's (and its subsidiaries') capital expenditures, earnings, and competitive position resulting from compliance with federal, state, and any local laws, rules, and regulations that regulate the discharge of materials into the environment.

B. Regulation S-K Item 103.⁵ S-K Item 103, *Legal Proceedings*, requires that a company disclose "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." Disclosure is also required of any state or federal enforcement proceedings that may be expected to result in sanctions or penalties of \$100,000 or more, regardless of materiality. Disclosure must also be made concerning any such proceedings being contemplated by governmental authorities of which the company is aware.

C. Regulation S-K Item 303.⁶ Item 303, *Management's Discussion and Analysis of Financial Condition and Results of Operation*, requires disclosure of any known trends, demands, commitments, events, or uncertainties that are reasonably likely to have a material effect on the company. These material changes include known future increases in labor costs, cost of materials, price increases, or inventory adjustments. This requirement applies to matters that have not had an impact in the past, but would have an impact on future operations, as well as matters that have impacted reported operations but are not expected to impact future operations. If a company cannot conclude that the trend or event is not reasonably likely to occur *and* is not reasonably likely to be material, it must make the disclosure.

III. Identifying Environmental Liabilities.

A company is required to recognize environmental liabilities as a contingent loss on its balance sheets. To standardize this process, pressure has been placed on the SEC to codify two standards adopted by the American Society of Testing and Materials ("ASTM Standards") in March 2002 for estimating and disclosing environmental costs and liabilities: ASTM E2137, *Standard Guide for Estimating Monetary Costs and Liabilities for Environmental Matters*, and ASTM E2173, *Standard Guide for Disclosure of Environmental Liabilities*.

A. ASTM E2137. This standard provides guidance for estimating costs and liabilities arising from environmental matters that can be used in business decision-making. The standard defines the following four methods by which a company can estimate such costs:

1. The *Known Minimum Value* approach, which only identifies costs that are *reasonably certain* to be incurred, should be used only when the outcome is so uncertain that it is premature to try to estimate a range of values.

⁴ 17 C.F.R. § 229.101.

⁵ 17 C.F.R. § 229.103.

⁶ 17 C.F.R. § 229.303.

2. The *Range of Values* approach sets a range of values without probabilities for situations in which probabilities for various outcomes cannot be determined. If some outcomes are more probable than others, the *Most Likely Value* or the *Expected Value* approach is recommended.
3. The *Most Likely Value* approach uses engineering estimates to develop the cost of the scenario most likely to occur. This approach can be used only if there is a scenario or outcome that has a significantly greater probability of occurrence than others.
4. The *Expected Value* approach calculates a value based on statistical data that is obtained from an analysis of comparable events, using such methods as a decision tree approach or simulation modeling. This approach may be most useful with a situation in which there are a large number of comparable events.

The standard provides that one or more of the above methods be used to estimate environmental liabilities after considering a range of other factors, such as the type of event (including new federal or state air emission control requirements, a leaking landfill, or findings resulting from a compliance audit), the number and location of affected facilities, the nature and extent of any contamination, the number of operable or waste management units at facilities, and litigation activities related to the event. The standard also acknowledges that a reasonable cost estimate may not be possible when the uncertainties are great. After assembling this type of information, the standard provides that accounting, corporate, or regulatory policies be used to evaluate the impact of this information on cost estimates. ASTM E2137 thereby provides a framework that can be used in corporate matters, such as strategic planning, regulatory requirements, insurance premium calculations, and claims settlements.

B. ASTM E2173. Under this standard, a company is required to disclose certain minimum information when it finds that “its environmental liability for an individual circumstance or...in the *aggregate* is material,” including the following:

1. The number of sites at which the company has been identified as a Potentially Responsible Party (“PRP”) and a discussion of cost-sharing arrangements with other PRPs;
2. The number of claims, notices, demands, requests for payment, or suits that have been presented to the company;
3. An estimate of the company’s environmental liabilities, including a description of how the company estimated such liabilities; and
4. Disclosure of any material loss contingencies.

The series of options in Standard E2173 were adopted to ensure consistency with “good commercial and customary practice” in the United States for disclosing environmental liabilities in both audited and unaudited financial statements.

The ASTM emphasizes that it intends each of these standards to supplement and be consistent with Generally Accepted Accounting Principles or other accounting and actuarial standards set by the Financial Accounting Standards Board and the SEC.

A petition filed in September 2002 by a coalition of charitable foundations and investment funds asks the SEC to adopt both of these standards as regulations—an action that would, according to petitioners, help remedy two sources of underreporting environmental liabilities: (1) claims that environmental costs are not readily estimable because of associated uncertainties, and (2) individual evaluation of the materiality of environmental costs and liabilities, rather than evaluation on an aggregate basis. The petition currently is pending with the SEC.

* * *

*Rather than persecute me,
I choose that you would shoot me.
It ain't nobody's business if I do.*

* * *

IV. Enforcement Enhancements in Sarbanes-Oxley.

The Sarbanes-Oxley Act includes numerous enhancements and additions to federal “white collar” and other criminal laws, including those relating to the destruction, alteration, or falsification of documents with the intent to obstruct justice. Prior to the passage of the Act, an individual who “corruptly persuaded” anyone to destroy, alter, or conceal evidence could be prosecuted, but the Act did not explicitly address the retention of accounting work papers for a fixed period of time.⁷

Section 802 of the Sarbanes-Oxley Act added a new criminal provision that covers the alteration, destruction, or falsification of records, documents or tangible objects by any person with intent to impede, obstruct, or influence the investigation of any matters within the jurisdiction of any governmental department or agency, or of any bankruptcy proceeding.⁸ The Act provides for fines and imprisonment of not more than 20 years for knowingly altering any record, document, or tangible object with the intent to influence the investigation of any matter within the jurisdiction of any department or agency of the United States or in relation to or contemplation of any such matter. Additionally, a new criminal provision in the Act requires accountants to retain work papers accumulated during a covered audit for a period of five years, and provides for a maximum period of imprisonment of ten years for failure to do so.⁹ These incredibly broad provisions provide prosecutors with significant powers to curtail legal representation of a company during an investigation. For example, a prosecutor could claim that

⁷ 18 U.S.C. Sec. 1512.

⁸ 18 U.S.C. Sec. 1519.

⁹ 18 U.S.C. Sec. 1520

counsel altered a document with the intent to influence an investigation by making comments on a draft report of an internal investigation.

Although the focus of the Sarbanes-Oxley Act is on securities and accounting issues, the Act contains a broad new whistleblower protection provision that can subject a corporation or its employees to criminal sanctions or to a civil action for damages for retaliation against individuals providing information about a wide range of potential civil, criminal, and regulatory violations. Penalties for violation of this new criminal prohibition are severe, as violators may be fined and imprisoned for up to ten years. In light of the breadth of this new provision, it is important that a company take no action that could be perceived as retaliatory when an individual has provided information to federal officers or employees about a potential violation of a law or regulation.

V. Federal Enforcement Initiatives.

Almost immediately after the Act was signed into law by President Bush, the U.S. Attorney General released guidance on how the U.S. Department of Justice (“DOJ”) would implement the Act. In his statement releasing the guidance, Attorney General John Ashcroft encouraged full cooperation among the DOJ, the U.S. Attorney’s Offices, and the Federal Bureau of Investigation to “enhance” the prosecution of “significant financial crimes.” A copy of the guidance, *Field Guidance on New Criminal Authorities Enacted in the Sarbanes-Oxley Act of 2002 (H.R. 3763) Concerning Corporate Fraud and Accountability*, is included as Attachment A.

As further guidance, the DOJ, U.S. Environmental Protection Agency (“EPA”), and National Association of Attorneys General released guidelines in March 2003 to assist states and the federal government in the conduct of joint civil environment enforcement litigation. This 127-page document, *Guidelines for Joint State/Federal Civil Environmental Enforcement Litigation*, advances the DOJ’s priorities for promoting cooperation in environmental enforcement cases and provides a tool for joint enforcement efforts.¹⁰ The guidance emphasizes that joint enforcement is particularly useful in large, complex cases or in cases that involve claims under multiple environmental statutes, and that the combined resources and experience of federal and state litigators can be invaluable when long-term oversight or factual development of a case requires intensive investigation.

VI. Responding to Investigations.

Both the DOJ and EPA have indicated that they will place a high priority on pursuing cases and criminal investigations involving enforcement of environmental laws. Because many of the procedures in criminal investigations are counter-intuitive to civil lawyers, the importance of involving experienced criminal attorneys at the outset of an investigation is crucial. Criminal enforcement defense counsel can advise on several important issues, including dealing with investigators, communicating with employees, joint defense agreements, responding to subpoenas, responding to searches and seizures, performing an internal investigation,

¹⁰ Because of its length, this guidance document is not attached but may be obtained at <http://www.usdoj.gov/enrd/Guidelines.pdf>

communicating with prosecutors and shaping the course of the investigation, and advising of the necessity for individual employees of the company to have separate counsel.

* * *

*If my friend ain't got no money
and I say, "Take all mine, honey"
It ain't nobody's business if I do.*

*If I lend him my last nickel
and it leaves me in a pickle,
It ain't nobody's business if I do.*

* * *

VII. Conclusion.

An obvious result of the Sarbanes-Oxley Act should be an in-depth review by companies of their internal procedures currently being used to evaluate, estimate, and disclose environmental costs and liabilities, and to identify any shortfalls in those procedures that do not provide such an assessment in a manner that enables the company to report such liabilities in its required filings with the SEC. Obviously those employees preparing the SEC reports cannot disclose a matter that is not brought to their attention. Companies should consider the adequacy of their Environmental Management Systems in this regard. Moreover, the most knowledgeable company employees should be involved in developing the environmental disclosures and adequate communication among environmental managers, lawyers, and business managers should occur sufficiently in advance of SEC filing deadlines.

Finally, environmental liabilities associated with separate business units should be disclosed in a way that provides a true picture of the impact on the overall company such that the disclosure is not "misleading."

**Field Guidance on New Criminal Authorities
Enacted in the Sarbanes-Oxley Act of 2002 (H.R. 3763)
Concerning Corporate Fraud and Accountability**

Attachment A

Section 802. Criminal Penalties for Altering Documents

Previous law: Prior to the Sarbanes-Oxley Act of 2002, anyone who "corruptly persuades" others to destroy, alter or conceal evidence can be prosecuted under 18 U.S.C. § 1512. Section 1512 reaches destruction of evidence with intent to obstruct an official proceeding which may not yet have been commenced. However, Section 1512 does not reach the "individual shredder." While prosecution of obstruction under 18 U.S.C. § 1505 does not require "corrupt persuasion," it does require the existence of a pending proceeding. In addition, existing law does not explicitly address the retention of accounting work papers for a fixed period of time.

Amendment: Section 802 adds two new criminal provisions, 18 U.S.C. §§ 1519 and 1520. Section 1519 expands existing law to cover the alteration, destruction or falsification of records, documents or tangible objects, by any person, with intent to impede, obstruct or influence, the investigation or proper administration of any "matters" within the jurisdiction of any department or agency of the United States, or any bankruptcy proceeding, or in relation to or contemplation of any such matter or proceeding. This section explicitly reaches activities by an individual "in relation to or contemplation of" any matters. No corrupt persuasion is required. New Section 1519 should be read in conjunction with the amendment to 18 U.S.C. 1512 added by Section 1102 of this Act, discussed below, which similarly bars corrupt acts to destroy, alter, mutilate or conceal evidence, in contemplation of an "official proceeding."

Accountants who fail to retain the audit or review workpapers of a covered audit for a period of 5 years will violate Section 1520, which creates a new felony, with a maximum period of incarceration of ten years. Under rulemaking authority granted in Section 1520(b), the SEC will promulgate rules relating to the retention of workpapers and other audit or review documents.

New 18 U.S.C. § 1519 provides:

Whoever knowingly alters, destroys, mutilates, conceals, covers up, falsifies, or makes a false entry in any record, document, or tangible object with the intent to impede, obstruct, or influence the investigation or proper administration of any matter within the jurisdiction of any department or agency of the United States or any case filed under title 11, or in relation to or contemplation of any such matter or case, shall be fined under this title, imprisoned not more than 20 years, or both.

New 18 U.S.C. § 1520 provides:

(a)(1) Any accountant who conducts an audit of an issuer of securities to which section 10A(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78j-1(a)) applies, shall maintain all audit or review workpapers for a period of 5 years from the end of the fiscal period in which the audit or review was concluded.

(2) The Securities and Exchange Commission shall promulgate, within 180 days, after adequate notice and an opportunity for comment, such rules and regulations, as are reasonably necessary, relating to the retention of relevant records such as workpapers, documents that form the basis of an audit or review, memoranda, correspondence, communications, other documents, and records (including electronic records) which are created, sent, or received in connection with an audit or review and contain conclusions, opinions, analyses, or financial data relating to such an audit or review, which is conducted by any accountant who conducts an audit of an issuer of securities to which section 10A(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78j-1(a)) applies....

(b) Whoever knowingly and willfully violates subsection (a)(1), or any rule or regulation promulgated

by the Securities and Exchange Commission under subsection (a)(2), shall be fined under this title, imprisoned not more than 10 years, or both.

(c) Nothing in this section shall be deemed to diminish or relieve any person of any other duty or obligation imposed by Federal or State law or regulation to maintain, or refrain from destroying, any document.

Sec. 805. Review of Federal Sentencing Guidelines for Obstruction of Justice and Extensive Criminal Fraud

Previous Law: Questions have arisen whether the Sentencing Guidelines sufficiently address obstruction of justice crimes.

Amendment: This section directs the Sentencing Commission to undertake an expedited review of these issues, particularly in light of the two new obstruction of justice statutes, described above. It also directs the Sentencing Commission to consider a number of factors such as destruction of a large amount of evidence, participation of a large number of individuals, or destruction of particularly probative or essential evidence, which might be considered sufficiently aggravating as to warrant additional enhancements or inclusion as offense characteristics. The Attorney General has advised the Sentencing Commission of this provision and asked the Commission to implement it fully and expeditiously.

Sec. 807. Criminal Penalties for Defrauding Shareholders of Publicly Traded Companies

Previous Law: Title 18 does not have a specific crime directly prohibiting securities fraud schemes. Prosecutors have found it necessary to reach many securities fraud schemes through the mail and wire fraud statutes. Securities fraud has also been prosecuted as a violation of provisions of title 15.

Amendment: New 18 U.S.C. § 1348 creates a specific felony for securities fraud punishable by up to 25 years incarceration. This provision complements existing securities law. The statute requires a nexus to certain types of securities, no proof of the use of the mails or wires is required. The text of the new section provides:

Whoever knowingly executes, or attempts to execute, a scheme or artifice-

(1) to defraud any person in connection with any security of an issuer with a class of securities registered under section 12 of the Securities Exchange Act of 1934 (15 U.S.C. 781) or that is required to file reports under section 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 780(d)); or

(2) to obtain, by means of false or fraudulent pretenses, representations, or promises, any money or property in connection with the purchase or sale of any security of an issuer with a class of securities registered under section 12 of the Securities Exchange Act of 1934 (15 U.S.C. 781) or that is required to file reports under section 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 780(d));

shall be fined under this title, or imprisoned not more than 25 years, or both.

Sec. 902. Attempts and Conspiracies to Commit Criminal Fraud Offenses

Previous Law: Under Chapter 63 (Mail Fraud) of Title 18, conspiracies to violate the mail fraud statute (§ 1341), the wire fraud statute (§ 1343), the bank fraud statute (§ 1344) and the health care fraud statute (§ 1347) are punishable by a maximum 5 year sentence. The wire fraud offense did not explicitly reach "attempts" to commit the substantive offense. However, this was not an impediment in practice, because proof of a scheme to defraud did not necessarily require proof that the scheme was successful.

Amendment: New 18 U.S.C. § 1349 provides that attempts and conspiracies to commit the substantive Federal fraud offenses listed above, as well as the new securities fraud offense, will have the same maximum punishment as

the substantive crime. This section also effectively adds an "attempt" to commit the wire fraud offense as a federal crime. The remainder of the fraud statutes listed above already include "attempts."

New 18 U.S.C. § 1349 provides:

Any person who attempts or conspires to commit any offense under this chapter shall be subject to the same penalties as those prescribed for the offense, the commission of which was the object of the attempt or conspiracy.

Sec. 903. Criminal Penalties for Mail and Wire Fraud

Previous Law: The maximum term of imprisonment for violations of the mail and wire fraud statutes (18 U.S.C. §§ 1341, 1343) is 5 years, with the exception of fraud affecting a financial institution, which has a maximum term of incarceration of up to 30 years.

Amendment: This section amends 18 U.S.C. §§ 1341 and 1343 by increasing the maximum 5 year penalty for mail or wire fraud to 20 years. The maximum term of incarceration for fraud affecting a financial institution remains at a maximum of 30 years.

Sec. 904. Criminal Penalties for Violations of the Employee Retirement Income Security Act of 1974

Previous Law: Under 29 U.S.C. § 1131, any person who willfully violates the reporting and disclosure requirements concerning employee benefit plans as set forth in 29 U.S.C. §§ 1021-1031, or any regulation or order issued thereunder, is punishable by a fine, and/or a term of imprisonment not to exceed 1 year.

Amendment: This amendment increases the fines in Section 1131 to \$100,000 (for an individual person), \$500,000 (for persons other than an individual). Section 1131 also increases the maximum term of imprisonment from 1 year (a misdemeanor) to a maximum term of imprisonment of 10 years. The increase in the fine for individuals will have no limiting effect insofar as individuals convicted of violating Section 1131 will now be subject to the alternative fine provisions of 18 U.S.C. § 3571 for felony convictions. In the absence of restrictive language in Section 904 of the Act, individuals will be subject to the maximum fine of \$250,000, or fine based on the defendant's gain or the victims loss, under § 3571. While the amendment also increases the fine in § 1131 to \$500,000 for persons other than an individual, this change has merely increased the fine to the level of the maximum fine for an organization already set forth in § 3571.

Section 905. Amendment to the Sentencing Guidelines Relating to Certain White Collar Offenses

Previous Law: Questions have arisen whether the Sentencing Guidelines sufficiently address white collar offenses.

Amendment: This Section reaches beyond Section 803 of this Act, which addresses sentencing guidelines solely for obstruction of justice, to require that the Sentencing Commission study the existing guidelines and consider expedited issuance of amended guidelines within 180 days after enactment of this Act, which would address all the new criminal provisions and increased criminal penalties in this Act. This section also requires the Sentencing Commission to consider the broader issues of whether the white collar crime guidelines provide for sufficient deterrence and punishment, and assure reasonable consistency with other relevant directives and guidelines. The Attorney General has advised the Sentencing Commission of this provision and asked the Commission to implement it fully and expeditiously.

Section 906. Corporate Responsibility for Financial Reports

Previous Law: There are no statutory requirements that the chief executive officer or the chief financial officer certify certain periodic corporate financial statements. By instructions issued by the SEC for periodic and other

filings, there was a general requirement that the forms had to be signed by officers, and in the case of annual reports, by a majority of the directors as well. These signing requirements did not include any type of certification or other attestation regarding the accuracy or completeness of the report. On June 20, 2002, the SEC published a Notice of Proposed Rulemaking, contemplating a requirement that a company's chief executive officer and chief financial officer certify that the information contained in its financial reports is complete and true in all important respects. See 67 Fed. Reg. 41877 (2002). More recently, the SEC issued an order requiring that the principal executive officer and principal financial officer of the largest 947 companies whose securities are registered with the SEC certify the completeness, truth and accuracy of the most recent annual report, subsequent 10-Q and 8-K reports, and proxy materials filed with the Commission.

Amendment: This section enacts new 18 U.S.C. § 1350, which creates a requirement that the chief executive officer and the chief financial officer (or the equivalent thereof) of the "issuer" provide a statement which certifies that the periodic reports containing the financial statements, filed by an issuer with the SEC, fully comply with the requirements of Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, and that the information contained in the periodic reports fairly presents, in all material respects, the financial condition and results of operations of the issuer. Certifying a report, knowing that it does not comport with all of the requirements of § 1350, is punishable by a fine of not more than \$ 1,000,000 and imprisonment of up to 10 years. A willful violation is punishable by a fine of not more than \$5,000,000 and imprisonment of up to 20 years.

New Section 1350 provides:

(a) CERTIFICATION OF PERIODIC FINANCIAL REPORTS.- Each periodic report containing financial statements filed by an issuer with the Securities Exchange Commission pursuant to section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a) or 78o(d)) shall be accompanied by a written statement by the chief executive officer and chief financial officer (or equivalent thereof) of the issuer.

(b) CONTENT.- The statement required under subsection (a) shall certify that the periodic report containing the financial statements fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and that information contained in the periodic report fairly presents, in all material respects, the financial condition and results of operations of the issuer.

(c) CRIMINAL PENALTIES.- Whoever

(1) certifies any statement as set forth in subsections (a) and (b) of this section knowing that the periodic report accompanying the statement does not comport with all the requirements set forth in this section shall be fined not more than \$1,000,000 or imprisoned not more than 10 years, or both; or

(2) willfully certifies any statement as set forth in subsections (a) and (b) of this section knowing that the periodic report accompanying the statement does not comport with all the requirements set forth in this section shall be fined not more than \$5,000,000, or imprisoned not more than 20 years, or both.

Sec. 1102. Tampering with a Record or Otherwise Impeding an Official Proceeding.

Previous Law: Title 18 U.S.C. § 1512, in part, provides a 10 year maximum term of incarceration for an offender who corruptly persuades another person with the intent to, in part, destroy or alter evidence.

Amendment: The amendment adds new subsection (c) to Section 1512 and renumbers existing subsections (c) through (i) as (d) through (j). New subsection (c) imposes a fine and/or a term of imprisonment of up to 20 years on any person who corruptly alters, destroys, mutilates or conceals a record, document or other object with the intent to impair the object's integrity or availability for use in an official proceeding, or who corruptly otherwise obstructs, influences or impedes an official proceeding. Section 1512, as amended, should be read in conjunction with the new

Section 1519, added by section 802 of this Act, which criminalizes certain acts intended to impede, obstruct or influence "any matter" within the jurisdiction of any Department or agency of the United States, or in relation to or contemplation of any such matter. The term "corruptly" shall be construed as requiring proof of a criminal state of mind on the part of the defendant.

New Section 1512 (c) provides:

(c) Whoever corruptly-

(1) alters, destroys, mutilates, or conceals a record, document, or other object, or attempts to do so, with the intent to impair the object's integrity or availability for use in an official proceeding; or

(2) otherwise obstructs, influences, or impedes any official proceeding, or attempts to do so,

shall be fined under this title or imprisoned not more than 20 years, or both.

Section 1104. Amendment to the Federal Sentencing Guidelines

Previous Law: Questions have arisen whether the current Sentencing Guidelines sufficiently address securities, accounting, and pension fraud, and related offenses.

Amendment: This section requests the Sentencing Commission to study existing guidelines and consider expedited issuance of amended guidelines within 180 days after enactment of this Act, which address securities, accounting, and pension fraud, and related offenses. The Attorney General has advised the Sentencing Commission of this provision and asked the Commission to implement it fully and expeditiously.

Section 1106. Increased Penalties Under Securities Exchange Act of 1934

Previous Law: Section 78ff of Title 15, Sec. 32(a) of the Securities Exchange Act of 1934, provides for a criminal fine of \$1,000,000 for individuals and/or imprisonment of up to 10 years, or a fine of \$2,500,000 for anyone other than an individual.

Amendment: This amendment increases the fine amounts to \$5,000,000 and \$25,000,000 respectively, and raises the maximum term of imprisonment to 20 years.

Section 1107. Retaliation Against Informants

Previous Law: There is no explicit protection from retaliation for an individual who provides truthful information to a law enforcement officer concerning the commission or possible commission of a Federal offense.

Amendment: New subsection (e) of 18 U.S.C. § 1513 creates a felony offense for any person knowingly to take any action, with intent to retaliate, harmful to a person who provides such information concerning a federal offense.

New subsection (e) of § 1513 provides:

(e) Whoever knowingly, with the intent to retaliate, takes any action harmful to any person, including interference with the lawful employment or livelihood of any person, for providing to a law enforcement officer any truthful information relating to the commission or possible commission of any Federal offense, shall be fined under this title or imprisoned not more than 10 years, or both.

Retroactive Application of the New Provisions:

The Ex Post Facto Clause prohibits, *inter alia*, punishing as a crime an act previously committed that was innocent when done and increasing the punishment for a crime after its commission. *See, e.g., Carmell v. Texas*, 520 U.S. 513, 522 (2000); *Collins v. Youngblood*, 497 U.S. 37, 42 (1990). The Act adds several new criminal provisions: 18 U.S.C. 1519 and 1520 (added by Section 802); 18 U.S.C. 1350 (added by Section 906); 18 U.S.C. 1512(c) (added by Section 1102), and 18 U.S.C. 1513(e) (added by Section 1107). Those new criminal provisions will apply only to criminal conduct committed after the effective date of the Act. The Act also includes criminal provisions increasing the punishment for some existing criminal offenses: 29 U.S.C. 1131 (added by Section 904) and 15 U.S.C. 78ff (added by Section 1106). The increased penalties set forth in those provisions will apply only to criminal conduct committed after the effective date of the Act.

Section 807 adds a new criminal provision, 18 U.S.C. 1348, that creates a felony for securities fraud punishable by up to 25 years' imprisonment. Section 903 amends the existing mail and wire fraud statutes, 18 U.S.C. 1341 and 1343, to increase the maximum term of imprisonment for schemes to defraud not affecting financial institutions to 20 years' imprisonment. Those provisions will apply to any criminal conduct committed after the effective date of the Act. It is unclear, however, whether those provisions can be applied to schemes to defraud that straddle the effective date of the Act, *i.e.*, schemes begun before the effective date of the Act but continuing after the effective date of the Act. Generally, mail and wire fraud offenses are complete upon the use of the mails or wires. *See, e.g., United States v. Barger*, 178 F.3d 844, 847 (7th Cir. 1999). Similarly, the new securities fraud offense will likely be considered complete upon the execution of the scheme. *Cf. United States v. De La Mata*, 266 F.3d 1275, 1287 (11th Cir. 2001) (bank fraud statute, 18 U.S.C. 1344), cert. denied, 122 S. Ct. 1543 (2002). The Ex Post Facto Clause likely bars applying the new provisions to schemes to defraud that extend beyond the effective date of the Act if the use of the mails or wire in a mail or wire fraud scheme occurred before the effective date of the Act or the execution of a securities fraud scheme occurred before the effective date of the Act. On the other hand, the Ex Post Facto Clause should pose no bar to applying the new provisions to schemes to defraud that began before the effective date of the Act if the use of the mails or wire in a mail or wire fraud scheme occurred after the effective date of the Act or the execution of a securities fraud scheme occurred after the effective date of the Act.

Finally, Section 902 adds a new criminal provision, 18 U.S.C. 1349, that punishes attempts and conspiracies to commit fraud offenses, including the new securities fraud offense. The Ex Post Facto Clause should pose no bar to applying that provision to a conspiracy that straddles the effective date of the Act because conspiracy is considered a continuing offense. *See, e.g., United States v. Hersh*, No. 00-14592, 2002 WL 1574990 (11th Cir. July 17, 2002).

Go to: [Cover Memo](#) // [AG's Reading Room](#) // [Attorney General's FOIA Page](#) // [FOIA Home Page](#) // [Justice Department Home Page](#)

BIOGRAPHY OF ROBERT T. STEWART

Robert T. Stewart is a Partner in the Environmental Department of the Austin office of Baker Botts L.L.P. He provides legal counsel to a wide range of industrial clients, focusing on air pollution control law, toxic torts, criminal investigations, waste remediation, and environmental enforcement defense. He represents a broad array of industrial and commercial clients in administrative and federal and state court proceedings. He also counsels clients on compliance with SEC disclosure requirements regarding environmental liabilities. Prior to becoming a lawyer, Mr. Stewart worked as a chemical engineer for Union Carbide Corporation.

Mr. Stewart received his bachelor's degree in chemical engineering from Lehigh University in 1973. He received his law degree, magna cum laude, from the University of Michigan Law School in 1977, where he was order of the coif. He is a member of the Environmental Law Institute and serves as Immediate Past Chair of the Environmental and Natural Resources Law Section of the State Bar of Texas.




Mr. Stewart is admitted to practice in Texas, California and Ohio. He is also admitted in the United States District Courts for the Western, Southern and Northern Districts of Texas and the Fifth Circuit.

RISK




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**SCIENTIFIC, LEGAL
& POLICY ISSUES**




Cumulative Risk at the TCEQ

<div style="text-align: center;"> <h2 style="color: yellow;">Cumulative Risk</h2> <hr style="border: 1px solid red;"/> <p>Russ Baier, TCEQ Policy and Standards Section</p>  </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 5px;">Slide 1</th> <th style="text-align: right; padding: 5px;">Cumulative Risk</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="padding: 5px;">NOTES:</td> </tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> </tbody> </table>	Slide 1	Cumulative Risk	NOTES:															
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<div style="text-align: center;"> <h2 style="color: yellow;">Concerns</h2> <hr style="border: 1px solid red;"/> <ul style="list-style-type: none"> ● Scenarios <ul style="list-style-type: none"> ▸ Multiple Sources ▸ Multiple Pollutants/Stressors ▸ Multiple Pathways ▸ Other Aggravating Factors ● Related Activities <ul style="list-style-type: none"> ▸ Planning Processes ▸ Monitoring/Assessment ▸ Compliance/Enforcement ▸ Control, Cleanup, and Prevention ▸ Environmental Justice Concerns  </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 5px;">Slide 2</th> <th style="text-align: right; padding: 5px;">Concerns</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="padding: 5px;">NOTES:</td> </tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> </tbody> </table>	Slide 2	Concerns	NOTES:															
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<div style="text-align: center;"> <h2 style="color: yellow;">Other States & EPA</h2> <hr style="border: 1px solid red;"/> <ul style="list-style-type: none"> ● EPA's Framework for Cumulative Risk Assessment (Final – May 2003) ● California's HARP/ISCST3 modeling ● New Jersey's Technical Manual 1003 ● Michigan's Air Toxics Rule  </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 5px;">Slide 3</th> <th style="text-align: right; padding: 5px;">Other States & EPA</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="padding: 5px;">NOTES:</td> </tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> <tr><td colspan="2" style="height: 20px;"></td></tr> </tbody> </table>	Slide 3	Other States & EPA	NOTES:															
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Cumulative Risk at the TCEQ

<p style="text-align: center;">HB 2912, Section 1.12</p> <hr style="border: 1px solid red;"/> <p>The Commission Shall:</p> <ul style="list-style-type: none"> ● Develop and implement policies, by specific environmental media, to protect the public from cumulative risks in areas of concentrated operations; and ● Give priority to monitoring and enforcement in areas in which regulated facilities are concentrated. 	<p>Slide 4 HB 2912, Section 1.12</p>
<p style="text-align: center;">Definitions</p> <hr style="border: 1px solid red;"/> <ul style="list-style-type: none"> ● Legislative Terms of Interest: <ul style="list-style-type: none"> ▸ “Cumulative Risk” ▸ “Areas of Concentrated Operations” ● Wide Spectrum of Options 	<p>Slide 5 Definitions</p>
<p style="text-align: center;">Competing Interests</p> <hr style="border: 1px solid red;"/> <ul style="list-style-type: none"> ● Interest Groups Advocating Equally Wide Spectrum of Actions ● Policy Development will depend upon <ul style="list-style-type: none"> ▸ Human Health/Environmental Protection ▸ Technical Feasibility ▸ Economic Limitations 	<p>Slide 6 Competing Interests</p>
<p>NOTES:</p>	
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Cumulative Risk at the TCEQ

<p style="text-align: center;">Commissioner Work Session</p> <hr/> <p style="text-align: center;">November 8, 2002</p> <ul style="list-style-type: none"> ● Provide a Basis for Shaping the Scope and Focus of Future Cumulative Risk Policy Development ● Directed Staff to Report Back to Them Regarding: <ul style="list-style-type: none"> ▸ Current Agency Activities Relating to Cumulative Risk, and ▸ Geographic Features and Programmatic Situations that Have Prompted Agency Action 	<p style="text-align: center;">Slide 7 Commissioner Work Session</p> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p style="text-align: center;">Current Activities That Address Cumulative Risk</p> <hr/> <ul style="list-style-type: none"> ● Improvement and Protection of Ambient Conditions Regardless of Number of Pollutants or Sources <ul style="list-style-type: none"> ▸ Standards ▸ Monitoring ▸ Assessments ▸ Control Measures ▸ Remediation Actions 	<p style="text-align: center;">Slide 8 Current Activities That Address Cumulative Risk</p> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p style="text-align: center;">Criteria Air Pollutants</p> <hr/> <ul style="list-style-type: none"> ● NAAQS and State Implementation Plan Development ● Dispersion Modeling for Air Permit Reviews ● Fixed and Mobile Monitoring ● Targeted Compliance Investigations 	<p style="text-align: center;">Slide 9 Criteria Air Pollutants</p> <p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Cumulative Risk at the TCEQ

<p style="text-align: center;">Air Toxic Pollutants</p> <hr/> <ul style="list-style-type: none"> ● Air Pollution Watch List ● Fixed and Mobile Monitoring ● Air Dispersion Modeling (Max. Ground Level Conc.) (considering conservative, worst-case scenarios) ● Application of Effects Screening Levels (ESLs) (considering margin of conservatism, both short-term and long-term exposure) 	<p style="text-align: center;">Slide 10 Air Toxic Pollutants</p>
	<p>NOTES:</p>


Surface Water Quality

- SWQ Standards – Designated Uses, Bacteria, Toxic Pollutants
- Monitoring and Assessments
- Total Maximum Daily Loads (TMDLs)
- Permitting – Oxygen Demand, Total Toxicity, Effluent Limits
- Source Water Assessment and Protection (SWAP)
- Industrial Pretreatment Program (at POTWs)
- Dairy Outreach Program Areas (CAFOs)






Groundwater Quality




- Source Water Assessment and Protection (SWAP)
- Drinking Water Standards
- Groundwater Cleanup Standards
- Texas Pesticide Management Plan
- Edwards Aquifer Regulations





Cumulative Risk at the TCEQ

<div style="text-align: center; border-bottom: 2px solid red; margin-bottom: 10px;"> <h2 style="color: gold;">Air Quality</h2> </div> <ul style="list-style-type: none"> ● SIP Development – Emissions Inventories, modeling, control strategies for groups of sources ● Air Permitting – Emissions Offset, Prevention of Significant Deterioration ● Air Permitting – Additional Scrutiny and Potential Restrictions For Areas/Pollutants on Watch List <div style="text-align: right; margin-top: 20px;">  </div>	<div style="background-color: #cccccc; text-align: center; padding: 5px;"> Slide 16 Air Quality </div> <div style="padding: 5px;"> NOTES: <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table> </div>								
<div style="text-align: center; border-bottom: 2px solid red; margin-bottom: 10px;"> <h2 style="color: gold;">Water Quality</h2> </div> <ul style="list-style-type: none"> ● SWQ Permitting – Discharges May Be Limited to Meet Load Allocations ● Nonpoint Source Activities – Implementation of Best Management Practices for Certain Types of Sources ● Source Water Protection – Susceptibility May Be Based on Concentration of Facilities Near a Water Source <div style="text-align: right; margin-top: 20px;">  </div>	<div style="background-color: #cccccc; text-align: center; padding: 5px;"> Slide 17 Water Quality </div> <div style="padding: 5px;"> NOTES: <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table> </div>								
<div style="text-align: center; border-bottom: 2px solid red; margin-bottom: 10px;"> <h2 style="color: gold;">Waste Management</h2> </div> <ul style="list-style-type: none"> ● Waste Permitting – Consideration Given to Proximity of Generating Facilities in Determining Need and Land Use Compatibility ● Priority May Be Given to Permits in Areas With High Volume Generation or Low Capacity <div style="text-align: right; margin-top: 20px;">  </div>	<div style="background-color: #cccccc; text-align: center; padding: 5px;"> Slide 18 Waste Management </div> <div style="padding: 5px;"> NOTES: <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> <tr><td style="height: 20px;"> </td></tr> </table> </div>								

Cumulative Risk at the TCEQ

<p style="text-align: center;">Monitoring/Enforcement</p> <hr/> <ul style="list-style-type: none"> ● Compliance Planning – Integrating Efforts, Often Targeted at Specific Locations to Address Persistent Problems ● Monitoring Strategies – Placement Designed to Consider Risks (Air Toxics); Evaluate Impacts (SWQ); Support Planning (TMDL); Assess Ecosystem Health (Estuary Programs) ● Investigations (incidents, industry-related requirements, industry/population interface) Used to Target Concentrated Enforcement 	<p style="text-align: center;">Slide 19 Monitoring/Enforcement</p>
	<p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p style="text-align: center;">Examination confirms:</p> <hr/> <ul style="list-style-type: none"> ● That the agency is already addressing cumulative risk to some degree through normal operations in every media area, ● That routine assessment, control, and planning efforts focus on protecting the public from risks, and ● That the agency focuses much of its efforts on areas of the state which have large numbers or concentrations of facilities. 	<p style="text-align: center;">Slide 20 Examination confirms:</p>
	<p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p style="text-align: center;">NEJAC Work Group</p> <hr/> <p>National Environmental Justice Advisory Committee</p> <ul style="list-style-type: none"> ● TCEQ Participation - Jody Henneke, OPA ● Cumulative Risks/Impacts Work Group to Advise the EPA Regarding: <ul style="list-style-type: none"> ▸ How to Proactively Address Issues, ▸ How to Consider Additional Factors in Assessments of Vulnerable Groups, ▸ How to Ensure Differences in Vulnerable Groups are Assessed, ▸ How to Promote Effective Participation by Vulnerable Groups, and ▸ How to Develop Appropriate Intervention and Prevention Strategies 	<p style="text-align: center;">Slide 21 NEJAC Work Group</p>
	<p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Cumulative Risk at the TCEQ

<p style="text-align: center;">Title VI Agreement</p> <hr style="border: 1px solid red;"/> <ul style="list-style-type: none"> ● TCEQ and EPA Signed an Agreement in June 2003 to Resolve Outstanding Civil Rights Complaints ● Agreed to Develop MOA to: <ul style="list-style-type: none"> ▸ “Collaborate and Jointly Share Information Relating to the Further Study and Consideration of Cumulative Risk” ▸ “Coordinate, Where Appropriate, on Research and Data Collecting Activities Relating to the Study of Cumulative Risk” 	<p style="text-align: center;">Slide 22 Title VI Agreement</p>
<p style="text-align: center;">Questions</p> <hr style="border: 1px solid red;"/> 	<p style="text-align: center;">Slide 23 Questions</p>
	<p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
	<p>NOTES:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Russ Baier
Texas Commission on Environmental Quality
Policy and Regulations Division
Policy and Standards Section

Russ Baier received a Bachelor of Science in Marine Biology from Texas A&M University (TAMU). He began working for the Texas Air Control Board in 1981 in the Regulation Development and Control Strategy Planning Section where he coordinated State Implementation Plan (SIP) revisions and related rulemaking. In 1990, he established and managed a new section within the Compliance Division to implement the first vehicle emissions inspection and maintenance (I/M) program and was later named as the Director of the Mobile Source Division, responsible for the development and implementation of the vehicle emissions I/M program, alternative fuels program, transportation/air quality planning requirements, and other mobile source control strategies for the SIP.

He transferred to the newly formed Office of Policy and Regulatory Development (OPRD) of the Texas Natural Resource Conservation Commission in 1994 as Director of the Policy Research Division and coordinated research projects and other activities regarding multi-media and cross-media environmental regulatory issues and related policy development projects. In 1998, he helped to organize, and became a founding member of, the Strategic Environmental Analysis (SEA) Group in the Office of Environmental Policy Analysis and Assessment (OEPAA) which was responsible for evaluating critical and emerging issues and providing input and recommendations to Executive Management and other decision-makers regarding future strategic directions of the agency. He coordinated or participated in the preparation of the State of the Texas Environment Reports in 1998, 2000, and 2002; the agency's Sunset Evaluation Report; Environmental Issues Rankings Reports; and special issue reports addressing a wide range of environmental challenges facing the agency and the state. He also served as lead for the legislative implementation team to address cumulative risk provisions of HB 2912 and related activities.

In 2003, he transferred to the Policy and Standards Section of OEPAA to help develop and document critical agency policies and positions and to coordinate issues at a state and national level.

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Risky River

Understanding the Risks Inherent in Risk-Based Corrective Action (with apologies to Willie Nelson)

*By: Nathan Block, J.D. and
Christopher Pepper, J.D, M.S*

I. Introduction

Risk-based corrective action (RBCA---often pronounced ‘Rebecca’) has become the model for most regulatory systems for dealing with releases of hazardous substances to the environment. Rather than requiring the automatic removal of all contamination, these systems establish cleanup goals based on the assessed risk to human health and the environment.¹ Because environmental risk assessment is a complex, multi-disciplinary endeavor, involving considerable professional expertise and judgment, it is important for practitioners of environmental law to understand the fundamental framework of RBCA if they are going to provide their clients with adequate counsel on RBCA issues.

As complex as they may be, RBCA systems are designed to allow for site-specific risk-based corrective action decisions. After all, contaminated sites generally lack homogeneity (i.e. no two sites are ever the same and have different chemicals of concern (“COCs”), different geology and soil types, etc). Consequently, the legal, scientific, and transactional issues vary from site to site and from release to release. Fortunately, volumes of work have been written on the subject of risk assessment,² and we make no attempt to explain them all here. Rather, this paper is designed to distill some of the more esoteric discussions on the problems associated with environmental risk assessment into practical considerations that practitioners can apply to real world RBCA situations.

II. Overview of Limitations of Environmental Risk Assessment

To understand the risks of environmental risk assessment (ERA), it is critical to understand that any system of decision-making based on risk assessment is a complex, multi-disciplinary endeavor. Even though modern scientific methods clarify a great number of ambiguities, RBCA processes are improved if human elements and uncertainty are managed.³ Consider the following hypothetical: elevated levels of lead and other heavy metals have been discovered in the soil near an existing residential neighborhood and in an adjacent parcel of property that is planned for development of a public elementary school. Assume it is substantially certain that the contaminant source is a metal recycling facility that existed near the affected area for thirty years, but closed down ten years ago. A wide variety of scientific disciplines would need to be involved before intelligent decisions can be made about appropriate responses to this problem.

Environmental scientists, engineers and geologists must determine how much contamination is present and how far it extends both laterally and vertically. Analytical chemists and quality control specialists will identify and measure the concentrations of contaminants. Medical doctors and epidemiologists may be involved to determine whether or not the neighborhood residents are suffering any adverse health impacts. Toxicologists may be employed to evaluate and determine the pathways of possible exposure and the likely doses. This information will then be used to construct a model of risk to the neighborhood. However, even with the greatest of “multi-disciplinary efforts”, there would still be uncertainty in the risk assessment. This uncertainty is directly related to a variety of factors such as risk tolerance, variability in the steps of the decision making process and the difficulties inherent in managing large quantities of diverse data.

A. Risk Context

The ultimate goal of risk assessment is to develop a model, based on scientifically defensible probabilities, that assesses the risk to human health and the environment and then applies a cost-benefit analysis to determine the appropriate response to the problem.⁴ In the abstract, most people would agree that spending millions of dollars on a cleanup is not the best allocation of resources if there is virtually no risk of harm from the contamination.⁵ The more difficult problem is determining what level of risk is “virtually no risk.” This question can be very difficult for an environmental lawyer whose job it is to represent a client interested in buying or selling contaminated property, redeveloping a distressed property, or establishing cleanup goals for a contaminated property. Thus, the context in which the risk assessment takes place directly impacts the complexity of the risk-based decision process.

Often, property owners and even attorneys expect that risk assessment systems, particularly those created or directed by a regulatory agency, will provide a complete, true and accurate estimate of risk. This expectation is far from the reality.

Risk assessment can provide an estimate of risks within the framework and limitations of the risk assessment process, no more. Risk assessment is not a crystal ball. It cannot be used to predict exact results. It cannot say that you will or will not be the person to have their health affected by a chemical, process, activity, or site. It can give risk estimates with associated limitations and uncertainties.⁶

Considered in the broader context, such as a Brownfield redevelopment project that will expose new residents to an old problem or a monitored natural attenuation remedy where the potential for off-site migration is controlled but cannot be eliminated, an examination of risk tolerance becomes critical. The potential future risks must be examined and a number of site-specific questions must be answered. For example, what

is the risk of future migration and exposure? Even if there are no current exposure pathways, is there a reasonably foreseeable circumstance that could create an exposure at a level that is potentially harmful? Regulatory risk assessment systems by design force a responsible party to evaluate and answer many of these questions. However, the regulatory system creates cleanup levels (e.g. PCLs) that are based on the values and risk tolerance that were considered appropriate in the regulatory rulemaking process.

B. Uncertainty

In addition to retrospective PCL levels, another chronic limitation of ERA is that the process involves a great amount of uncertainty. Dr. Glenn Suter II probably described uncertainty best when he said, “Before a person launches into uncertainty analysis it is important to know what is uncertain and how that uncertainty might influence a decision.”⁷ Uncertainty is inherent in the concept of RBCA, but it can be specifically traced to the complexity of the ecological system and to the economic costs associated with the data collection required to predict the behavior of these systems.⁸ The most uncertain aspect of many environmental risk assessments lies in the fact that scientific research has yet to answer all of the questions associated with the chemicals of concern and their respective biological receptors. Uncertainty is initially encountered when one explores the complexity of the roles associated with an ERA and understands that ERAs for contaminated sites can be multifaceted. Moreover, an ERA could be undertaken to determine any one or more of the following: to investigate the extent of contamination, to “estimate the magnitude and probability of risk to receptors at the site,” to formulate the “appropriate remedial objectives for the site,” and to predict the residual injuries to assess damages against the responsible party.⁹

1. Complexity

The problem of uncertainty is exacerbated as the scope of the risk assessment increases. For example, human health risk assessment is difficult for a number of reasons, particularly limitations on direct experimentation with humans. However, human health risk assessment has an advantage over ecological risk assessment when it comes to managing the degree of uncertainty because human health risk assessment considers only one species with a predictable number of exposure pathways. The same is not true of ecological risk assessment. The table below illustrates just some of the differences between human health and ecological risk assessment.

Component	Human Health Risk Assessment	Ecological Risk Assessment
Institutional Controls	Institutional controls may be considered when selecting exposure pathways	Nonhuman organisms are not excluded from waste sites by controls, such as fences or signs
Standard exposure factors	The U.S. EPS provides standard	Risk assessors must generate

	exposure parameters and toxicological benchmarks for humans	their own exposure parameters and toxicity data
Receptor species	Humans only	Nonhuman organisms (flora and fauna) and ecosystem parameters (e.g. nutrient flow)
Exposure routes	Ingestion of food and water, incidental ingestion of soil, inhalation of contaminants from air, dermal contact	As well as the exposure routes common to HHRA, other routes exist such as fish respiring water, benthic organisms consuming sediment, small mammals burrowing in soil leading to enhanced exposure, fish-eating wildlife consume the entire fish and chemicals accumulate to a different degree in different organisms
Chemical form	Total metals in water are assumed to be available to humans	Dissolved metals are available to aquatic biota for gill uptake
Spatial scale	Often assumes a residential scenario at the site, regardless of appropriateness	Scale is important, since a small site (e.g., a few acres) cannot support a population of larger organisms (e.g. deer, hawks) but could support small animal populations (e.g. shrews)
Temporal scale	Often only considered when seasonality may change chemical concentrations	Seasonality is more important in ERA, often because of habitat changes or changes in organism behavior

2. Modeling

One way for practitioners to overcome some of the uncertainty and to help predict future environmental conditions is to use GIS-based modeling within the framework of environmental risk assessment. Modeling involves 1) identification of the system's components and boundaries; 2) identification of the component interactions; and 3) characterization of those interactions using quantitative abstractions of mechanistic processes.¹⁰ While the data used to drive the models will likely be diverse, incoherent, and at times even contradictory, the models ultimately help in making better educated risk-based decisions. However, models also have an innate limitation in that the model is only as good as the data used and the assumptions around which the model is based. If an imprecise assessment has been done or if insufficient data are gathered, then any conclusions for this site are limited.

C. Adequacy of Risk Assessment

Finally, the most common limitation plaguing many well-attempted ERAs is inadequate or incomplete risk assessment. Incomplete risk assessment commonly occurs where poor initial assumptions are made about the site. RBCA systems such as TRRP formalize the risk assessment process, and while regulatory oversight can help to reduce the possibility of inadequate assessment, failure to account for all COCs, failure to account for all potential exposure pathways, and failure to adequately define the soil chemical and physical parameters are still possible. Since environmental investigations are unavoidably expensive and the temptation to do no more than is necessary to satisfy the applicable RBCA system is strong, the errors of the inadequate assessment are magnified when their use leads to the implementation of short-sighted corrective action decisions. Therefore, anyone involved in making risk-based corrective action decisions should weigh the potential for future liability against the cost of additional assessment before making the decision to stop investigation and move forward with a remedy and/or closure at a release site.

III. RISKS ASSOCIATED WITH EVOLVING SCIENCE

Advancing science and the development of better technologies to measure environmental contamination are constantly changing the landscape of risk assessment.¹¹ As a practical matter, the practitioner needs to pay close attention to the impending changes because they have the potential to affect a proposed cleanup and closure, either by making it less expensive or significantly more expensive.

A. Regulatory Protection

1. No Further Remedial Action Letter

Probably the most important goal of a party undertaking corrective action of a release is acknowledgement of completion from the regulatory agency in the form of a “no further action” (NFA) letter (also known as a “no further remedial action” (NFRA) letter). In the TRRP system, the issuance of an NFA letter indicates that the responsible party has satisfied the requirements of the program, unless there is a “substantial change in circumstances.”¹² The rule provides for five situations that constitute such a “substantial change in circumstances”:

- (1) An institutional or physical control fails to prevent exposure at the approved performance level.
- (2) An actual exposure condition is determined to be occurring at levels not protective of human health or the environment (e.g., unprotective ecological exposure is occurring).
- (3) New information indicates that the presence of COCs at the affected property was not sufficiently characterized such that an unacceptable threat to human health or the environment continues to exist.

(4) The exposure area upon which representative concentrations are based in accordance with §350.51 of this title (relating to Affected Property Assessment) changes, and as a result of the changed exposure area, there is an unacceptable threat to human health or the environment.

(5) A health and safety plan to ensure compliance with occupational inhalation criteria as RBELs as provided for in §350.74(b)(1) of this title (relating to Development of Risk-Based Exposure Limits) will no longer be maintained.¹³

Categorically, (1), (4) and (5) are reasonably defined as failures of the remedy that was chosen for the site, which could include engineering design failures and failure to properly maintain physical controls. These sorts of failures are not unique or necessarily even related to environmental risk assessment. Situations (2) and (3), however, potentially subject a responsible party to considerable legal and financial risk if the RBCA is not well planned or does not account for emerging trends in toxicology and risk assessment. Situations (2) and (3) create a significant risk of reopening a site as new data is developed and the cumulative and/or synergistic effects of chemicals are studied in greater depth. Additionally, particularly with ecological risk assessment, science is discovering that some compounds are more dangerous in lower concentrations than previously predicted.¹⁴

2. Technology re-openers

a. Reopeners based on PCL Changes

Hand in hand with sections 335.35(d)(2) and 335.35(d)(3), TRRP's other provisions also expect and address periodic changes in risk assessment technology and resulting adjustments to risk based standards.

[C]hanges made to this chapter in response to periodic reviews of the general procedures specified to generate PCLs, or in response to revisions to reflect new toxicity data, do not constitute a substantial change in circumstances, unless these changes are of such magnitude to present an unacceptable threat to human health or the environment when evaluated for future exposure conditions based on property-specific considerations. This subsection will only apply to affected properties regulated under §350.2(g) of this title (relating to Applicability) which have completed response actions under this chapter.¹⁵

The rule is written to provide the TCEQ with enough discretion for determining when a change to PCLs is of sufficient magnitude to constitute a substantial change in circumstances, but it provides no express guidance as to the required degree of risk or amount of change in the PCL.

The lack of definition and clear guidelines for establishing future PCLs should be troubling for both responsible parties and persons affected or potentially affected by a release. Suppose it is discovered that 1,1 trans-hypothetical compound, originally considered to have a lifetime excess cancer risk of 1×10^{-6} when in drinking water at a concentration of .5 mg/L or less, actually has an lifetime excess cancer risk of 1×10^{-4} at that concentration, and based on the new risk assessment, the PCL is changed to .025 mg/L. Because of the lack of a clear policy in the rule, parties are subject to a variety of difficult situations. For example, if the change in the standard gets a lot of press or becomes highly political, the agency may consider this to be a substantial change in circumstances.¹⁶ If however, the compound is not particularly well known, the change could pass completely under the radar. It is a difficult task to weigh the uncertain economic cost to industry and society when sites could potentially be re-opened for regulatory action. Therefore, not having a true “closure” (i.e. one guaranteeing no further liability will arise) associated with a cleanup will hinder the ability to transfer or redevelop property. Additionally, such lack of clarity may affect the need to protect human health and the environment when new information is discovered that clearly demonstrates that old assumptions about the protectiveness of a PCL are no longer accurate.

For the responsible party, this lack of certainty in the regulatory scheme may make it difficult to plan for the possibility of reopeners, manage accruals, budget for environmental projects, and sell property without fear of future claims. Additionally, one must consider a number of potential toxic tort concerns, from the probable to the unlikely. For example, it seems likely that toxic tort claims become possible when a responsible party negotiates a cleanup with an off-site affected landowner based on published PCLs, if those PCLs are subsequently lowered because of changes in scientific data. It also seems likely that courts could impose a duty on responsible parties to inform off-site affected landowners when standards change. Another open question involves the sale of a property closed under a standard that is or has changed. Is there a duty to disclose that the standard is no longer considered to be safe? Adding to these risks is the fact that the TCEQ regulations do not provide a timeframe for the agency to act in making a decision as to whether or not a change in PCLs constitutes a “substantial change in circumstances.” Some flexibility and discretion is necessary in the rule for the agency to ensure that it can protect human health and the environment, but the agency leaves affected persons and responsible parties without much to rely on other than TCEQ’s good faith.

b. TRRP and Arsenic PCL changes

In November 2002, TCEQ’s Toxicology and Risk Assessment Section issued an interoffice memorandum outlining the agency’s policy regarding changes to the EPA’s groundwater maximum contaminant level (MCL) for arsenic.¹⁷ The arsenic MCL was

lowered from a concentration of 50µg/L to 10µg/L.¹⁸ The memorandum provides that some sites that have been closed and obtained “no further action required” will be reopened to address the change in the arsenic MCL.¹⁹ Specifically the memorandum provides:

The new arsenic MSCs or PCLs will only be of issue in those instances where a public drinking water supply well, private drinking water well or surface water intake for drinking water was affected with arsenic at a concentration in excess of 10 µg/L at the time the project was closed. If such instances are identified, then adoption of the new arsenic MCL should be considered a “substantial change in circumstance” as set forth in §335.8(b)(5) or §350.35 and the project needs to be further addressed.²⁰

The memorandum also addresses sites that have already begun cleanup but have not yet obtained “no further action” status.²¹ For those sites, the agency will require compliance with the new arsenic standards in a defined list of situations:

- a public drinking water supply well, private drinking water well or surface water intake for drinking water is currently affected or threatened by the arsenic release;
- the soil or groundwater arsenic assessment was still on-going as of March 28, 2002; or
- the soil and groundwater arsenic assessments were completed prior March 28,2002, but the affected groundwater is anticipated to have a potential future use as a drinking water supply.²²

TCEQ’s MCL policy pronouncement is reasonable in light of the TRRP’s goal of protecting human health and the environment,²³ but the potential financial impact to sites that fall into one of these situations is substantial. If the groundwater conditions at a site had been assessed to find the lateral and vertical extent of a plume exceeding 50µg/L, significant additional expense will be required to extend the assessment out to a concentration of 10µg/L. A single groundwater monitoring well can easily cost three to five thousand dollars depending on the soil type and groundwater depth and additional delineation in a situation such as this could conceivably require dozens of wells to complete.²⁴

c. Changes to Methodology

On December 27, 2002, EPA published a revision of fifteen of its recommended water quality criteria for protecting human health, developed pursuant to section 304(a) of the Clean Water Act (CWA or the Act).²⁵ These revisions are intended as an update to the standards based on the EPA's new methodology for deriving human health criteria.²⁶

The recalculation of all fifteen water quality criteria integrates the updated national default freshwater/estuarine fish consumption rate of 17.5 grams/day. Thirteen of the criteria integrate a previously-determined relative source contribution (RSC) value from the national primary drinking water standards for the same chemicals. EPA also incorporated into the recalculations a new cancer potency factor (q1*) for 1,3-dichloropropene and vinyl chloride, and a new reference dose (RfD) for 1,1-dichloroethylene, hexachlorocyclopentadiene and lindane. EPA used the q1* to derive the criteria in these cases rather than the RfD because it resulted in more protective criteria.²⁷

Because the EPA and some states continually update criteria, standards and methodologies, proceeding with a cleanup based on a then existing standard, with actual or constructive knowledge of an impending change to that standard may satisfy the closure requirements of a particular state regulatory agency, but it may raise serious questions of intent in a toxic tort suit. Moving forward with a closure, having actual knowledge that the scientific research no longer supports a compound's existing cleanup standard, which the EPA or a state environmental agency is in the process of changing, but which has not completed the administrative process, strongly suggests an intent to avoid additional costs of cleanup at the expense of public health or the environment.

3. Additive, Antagonistic and Synergistic Effects

For parties relying on RBCA, a poorly understood but important concept likely to create future risk are the phenomena associated with the additive, antagonistic, and synergistic effects of a multiple chemical contamination and exposure scenarios.²⁸ It is common for contaminated sites to contain multiple contaminants.²⁹ Moreover, as chemicals degrade in the environment they create breakdown-products (also known as daughter-products) that often have different chemical properties than the parent compound, thus creating new risks.³⁰ Mixtures and interactions of chemicals can alter the risk associated with each chemical individually.³¹ For instance, chemical mixtures may cause an additive response (whereby the two chemicals act individually) and antagonistic response (whereby one chemical prevents a response of another chemical such that the total response is less than expected), or a synergistic response (whereby the two chemicals interact to cause response that is greater than the expected response). A synergistic response may result in one chemical aggravating the toxicity of another chemical or in the creation of a new compound that is toxic in a manner dissimilar to that of either of the component chemicals.³² The physiochemical interactions of chemical mixtures is complex, and toxicological studies and environmental risk assessments focus on the impact of one compound at a time, leaving chemical mixtures unconsidered in most cases.³³

Currently, very little is known about such complex interactions relative to what is known about the effects of individual compounds,³⁴ and RBCA-based statutes such as TRRP attempts to deal with cumulative effects of chemicals by establishing hazard quotients for each chemical.³⁵ In cases where there are more than 10 COCs above the applicable PCLS at a site, one must make adjustments to the critical PCLs to bring the cumulative hazard index below 10.³⁶

It is important to note that if multiple carcinogens or noncarcinogens are present, the individual risk level for each carcinogen or hazard quotient for each noncarcinogen can never exceed one in 100,000 or one, respectively. Therefore, individual risk levels and hazard quotients cannot be upwardly adjusted to meet the cumulative risk levels. Taking carcinogens as an example, when ten or more carcinogens are present at their one in 100,000-based protective concentrations, the allowable one in 10,000 cumulative risk level would be reached. If there are more than ten carcinogens, each at their one in 100,000-based protective concentration level, then the protective concentration level for at least one individual carcinogen will have to be downwardly adjusted to a concentration less than the one in 100,000-based value (e.g., one in 1,000,000) so that the cumulative risk of one in 10,000 is not exceeded.³⁷

This approach potentially accounts for some synergistic effects of chemicals but would do so only by accident and only if the risk relationships are linear.³⁸ If two compounds acting together create a different risk pathway or affect a different organ or tissue system than either alone, for example, the TRRP method of accounting for risk from multiple compounds may not be adequate. The current method for accounting for cumulative risk does not distinguish which compounds are involved. That is, so long as the cumulative hazard index is brought below 10, it does not matter which chemical PCLs were reduced to achieve that reduction.³⁹

Consider a site at which there are 12 COCs above the applicable PCL. Among those chemicals are Compound A, Compound B and Compound C. Compound C is the easiest to remediate and is therefore chosen for the greatest reduction in its PCL to reduce the combined index. It is possible that Compounds A and B, together manifestly more toxic than either alone, could remain at the Tier 1 (or site specific Tier 2) PCLs, without regard to their particular combined effect, so long as the combined hazard index is 10 or less.

4. Extrapolation

It is probable in many cases that the underlying risk assessment for each individual chemical is more than adequately protective. To develop risk assessment for humans, toxicological studies must extrapolate from species to species, from acute to chronic exposures, and from high to low doses.⁴⁰ Toxicologists use a variety of factors to select animals for studies that will provide the most useful data.⁴¹ For example, if a chemical was to be studied for its effects on the liver, an animal whose liver functions

most similarly to humans might be chosen for the study. To account for and protect against the uncertainty inherent in extrapolation, the EPA has developed a standard set of uncertainty factors for use when extrapolating toxicity values across species.⁴² The uncertainty factors are:

- (1) a factor of 10 is used to extrapolate to humans from another species
- (2) a factor of 10 is used to extrapolate from an average human to a sensitive human
- (3) a factor of 10 is used to extrapolate from anything less than a long-term study to a chronic basis
- (4) a factor of 10 is used to extrapolate from a dose causing an effect to one where no effect would occur.⁴³

In extrapolation between species, the EPA applies an uncertainty factor of 10 to the dose tested in animals.

This is equivalent to assuming that the chemical is 10-times more toxic in humans than in the test animal. Although this factor was not based on science when it was developed in the 1950s, further studies have demonstrated that this factor is protective in 95 percent or more of cases.⁴⁴

Although a number of factors⁴⁵ are used to mitigate uncertainty in risk assessment, there is currently no standard factor to account for the interaction of multiple chemicals.⁴⁶ Some sophisticated environmental risk assessments will attempt to quantify cumulative, synergistic and antagonistic effects in a site specific risk assessment, but this is a daunting task because of the virtually limitless permutations that chemical combinations can take and because of limited knowledge about the mechanisms for these effects.⁴⁷ So long as this continues to be the case, the potential for chemical interactions will create some uncertainty for those relying on RBCA systems to close sites.

II. LEGAL RISKS

By design, RBCA systems tend to allow polluters to leave some, if not all of their hazardous substances in the environment, so long as the risks associated with them are controlled either by reducing or limiting exposures (institutional or physical controls) or by monitored natural attenuation, whereby the constituents are allowed to degrade below risk based protective levels before they can migrate to a point at which human health or ecological exposures occur. A number of potential legal risks, including a variety of common law actions as well as toxic tort liability, are inherent in this approach.

A. General Incompatibility with Common Law Traditions

Victor B. Flatt, Associate Professor of Law at the University of Georgia has written a very interesting article, which argues that RBCA systems are out of sync with the common law of torts.⁴⁸ In “[H]e Should At His Peril Keep it There. . .”: *How the*

Common Law Tells Us That Risk Based Corrective Action is Wrong, Professor Flatt argues that because RBCA systems often allow polluters to leave at least some of their pollution behind, there are “moral and ethical problems [in] allowing environmental risks to fall involuntarily on innocent people.”⁴⁹ The policy behind RBCA stands for the proposition that the “harm or risk of harm to humans or the environment should be ameliorated or controlled only to the extent that the measurable benefits of that control outweigh the risk of the harm.”⁵⁰ In Professor Flatt’s analysis, this makes RBCA unjustifiable as a matter of social and legal policy because it “works a major change in how our society has historically approached entitlements to safety through the common law of torts.”⁵¹

What has yet to be fully explored, with respect to implementation of a pure risk based decision paradigm for environmental decisions generally, is the effect that such proposals will have on society’s entitlements to a clean environment and the abandonment of the driving policy in American common law and historic legislation that private actors should not be allowed to shift their costs or harms upon innocent third parties . . . Although this policy decision is not necessarily off limits to our society, it should be entered into thoughtfully and not as merely an adjunct to creating more efficient administrative decisions.⁵²

At the heart of Professor Flatt’s argument is a belief that RBCA puts economic efficiency ahead of other values such as fundamental fairness,⁵³ environmental protection, and problems associated with calculating objective risk.⁵⁴ Saving for now the argument over whether Professor Flatt is ultimately correct in his assessment of RBCA, his primary concerns do clearly arise in the context of RBCA systems such as TRRP. Individuals affected by a release may reject the values of the RBCA system and choose not to accept the shifting of risk. That is, an affected, innocent owner may argue that they have a right to have their land not be the repository for another’s waste material. The “chemical trespass scenario” is extremely interesting, especially in light of our advancing analytical detection and quantification methods, and new lines of case law may develop, even if the chemicals pose no true harm. While it may be a simplistic analogy, think of a person throwing rocks onto another’s land. Although there may be no “harm” or “danger” associated with benign materials like rocks, does not the property owner have a right to insist that this trespass cease and the offending materials be removed? It is the authors’ opinion that a “chemical trespass scenario,” even at concentrations below state action levels (PCLs), is nonetheless a trespass and does not square well with common law jurisprudence. In such situations, the affected innocent owner may look to common law for relief to the disadvantage of one who in good faith has relied on a RBCA system.

The regulatory structure of TRRP shifts risk to innocent affected persons in several ways. First, in its most stringent applications and when corrective action is

required under any program area of the TCEQ Remediation Division,⁵⁵ TRRP requires one to remediate COCs to the Tier 1, Residential PCLs.⁵⁶ Because the Tier 1, Residential PCLs are in almost all cases above naturally occurring background, they are not “no risk” levels. TRRP allows excess lifetime cancer risks as high as 1 in 100,000 (1×10^{-5}) for single contaminants, and cumulative risk from ten or more COCs on a TRRP site cannot exceed 1 in 10,000 (1×10^{-4}).⁵⁷ The allowance for risk levels in TRRP is something of a departure from the historic approach of the EPA in managing risk, as is evidenced by comparison of the TRRP system to the EPA approach.

In risk management decision for chemicals based on risk assessment, a target cancer risk of 1 in 1,000,000 (1×10^{-6}) is typically used for chemical exposure. This is an involuntary risk and therefore not as well tolerated as voluntary risks. This level of risk was established by regulatory agencies as a level below which was considered a “trifle” and not of regulatory concern. This is approximately the same risk of being struck by lightning. U.S. EPA considers this 1 in 1,000,000 risk as “the maximum lifetime risk that is essentially zero.”⁵⁸

Assuming, for the sake of argument that the 1 in 1,000,000 (1×10^{-6}) is essentially “no risk,” then the TCEQ approach of setting risk thresholds (Tier 1 Residential PCLs) at a level higher than a “no risk” level and only requiring remediation to the Tier 1 PCLs,⁵⁹ leaves “some risk” to the property of an innocent owner. This situation shifts risk to that innocent owner, which he may never have agreed to accept.

TRRPs regulatory allowance for risk transference becomes even more manifest when one considers the issue of deed recordation for institutional controls. The general policy of TRRP is that if an affected off-site landowner consents to a deed restriction (i.e. restrictive covenant) as an institutional control, the cleanup levels can be set at commercial / industrial standards or at site-specific residential standards (Tier 2 or Tier 3 PCLs); but if the landowner does not consent, remediation to the Tier 1, Residential PCL is required on off-site affected properties.⁶⁰ However, if the responsible party can demonstrate that it is “technically impracticable” to reach the Tier 1 PCLs, a decision based at least in part on economic efficiency,⁶¹ the landowner’s consent for a deed restriction can be bypassed.⁶² The regulations provide:

Landowner consent shall not be required for the filing of deed notice or VCP certificate of completion under this chapter if it is technically impracticable to obtain a residential-based Remedy Standard A response action, and the person demonstrates that:

- (1) the non-innocent landowner refuses to grant consent for the filing of a deed notice or VCP certificate of completion, or an innocent landowner refuses to file a restrictive covenant;
- (2) a court of competent jurisdiction has determined the amount of compensation due the landowner as compensation for filing a deed notice or VCP certificate of completion in the real property records for that property; and
- (3) the person has paid into the court registry compensation, if any, determined by the court.⁶³

The authors were unable to find a reported case in which a court has made such a determination, and it is probable that this will in reality be a very uncommon situation. However, the regulations create some tough questions that attorneys should consider carefully. The common law of nuisance and trespass generally provide that a person should be free to enjoy his property without unreasonable interference, and that others may not trespass onto the property.⁶⁴ Considering the historic common law approach to property, forcing a person to accept a restriction to his or her deed and having a court set the reasonable compensation for that deed restriction do seem to be a departure from common law policy. This departure may become more difficult to accept when one considers that the reason for such action is to foster regulatory efficiency.

Allowing a court to set the compensation for a deed restriction also raises a number of as yet unanswered questions about the assessment of compensation. Would that assessment of compensation account for or preclude a claim for stigma damages and diminution of value to the property? Would that assessed value also include compensation for living with increased risk on the property or somehow preclude future toxic tort claims?

B. Risks Associated with Common Law Causes of Action

Common law claims against those responsible for releases of toxic or hazardous substances into the environment are always a possibility. Because those claims are an ever present risk, discussion of them is beyond the scope of this paper, except as they relate directly to the use of RBCA.⁶⁵

1. Trespass

Trespass to land is important in the context of RBCA because it is possible for a responsible party to complete all aspects of a remedy under TRRP and continue to have an ongoing trespass to property. In certain situations, especially if intent to trespass was present, then Texas law might recognize pollutants crossing a property line as trespass.⁶⁶ Because trespass to land is an intentional tort, some argue that its application in environmental pollution cases should be limited to those cases where the tortfeasor

intends the invasion of the property and that cases of accidental releases should be actionable under a negligence theory.⁶⁷ The debate is significant because anecdotal evidence suggests that aside from criminal acts, most releases that cause an invasion of property and for which there is a responsible party available to engage in RBCA were accidental rather than intentional.

Trespass may become an issue in RBCA because the decision to leave contaminants *in situ* after an accidental release is an “intentional act.” It seems likely that if there is no liability in trespass for the original act, there would be no liability in trespass for failure to remove the offending materials. Because the act of trespass is now intended, however, it is arguable that a trespass could arise at the time a decision is made to leave contamination on an innocent owner’s property without their consent. Because clean-up up to Tier 1 PCLs almost never returns the property to its pre-release state, most, if not all risk-based closures under TRRP would raise this issue.⁶⁸

Texas courts have most recently resolved trespass from releases of hazardous substances by addressing the element of duty and whether a release creates a duty to remove the material rather than the element of intent. In *Taco Cabana, Inc. v. Exxon Corp.*,⁶⁹ the San Antonio Court of Appeals held that because the contaminant levels were not at “unreasonable levels” (i.e. less than state action levels), there was no duty to remove or remediate.⁷⁰ According to the court, the statutory language establishing regulatory cleanup levels superceded any common law claims, including trespass.⁷¹ The El Paso Court of Appeals followed this reasoning in *Z.A.O., Inc. v. Yarbrough Drive Ctr. Joint Venture*,⁷² and held that because the appellant received a “no further action letter” from the state of Texas, it did not breach its duty, and the appellee could not maintain the action for trespass.⁷³

In both of the previously discussed cases, the courts implicitly reject the notion that a property owner has a right to have his property remain free of contamination from others, so long as the unwanted contamination does not exceed regulatory standards. However, in neither case does the court specifically address the policy questions raised by this determination, nor do the courts acknowledge that regulatory standards change as science changes. What may not be seen as an ‘unreasonable’ level of contamination today, may be discovered to be exceptionally dangerous tomorrow. An innocent landowner, who must accept contamination below a currently accepted regulatory level today, will face an entirely new set of challenges if that regulatory level is lowered to a point that would have been ‘unreasonable’ if it had been in effect at the time of the release. *Res judicata* may preclude re-opening the issue, and so much time may have passed that proving causation for a toxic tort suit may be impossible.

2. Negligence and Toxic Tort Protection

Reliance on RBCA also presents potential tort liability, particularly if the ability to model the additive or synergistic effects of chemicals is improved in the future. A hypothetical situation best illustrates these risks. Assume that Bob lives on the Gulf Coast of Texas near Create Co., a manufacturing facility that makes specialty plastic products. Create Co. failed to observe its own safety procedures or the best practices of the industry, and the result was a spill of approximately 400 gallons of the solvent trichloroethylene (TCE). The TCE migrates under Bob's property in a shallow groundwater-bearing unit. The TCE is degrading into vinyl chloride, a hazardous air pollutant, known mutagen, and known carcinogen and rising into Bob's house. The concentrations of vinyl chloride in Bob's house are below the TRRP Tier 1 Residential $\text{Soil}_{\text{Inh-V}}$ PCL and below the Commercial / Industrial $\text{TotSoil}_{\text{Comb}}$ pathway in the soil under Bob's property. Create Co. notifies Bob of the release and the TRRP risk assessment and secures his agreement to allow them to attenuate the TCE and vinyl chloride naturally without active remediation. Three years after TCEQ issues the no further remedial action (NFRA) letter to Create Co., Bob develops lymphoma.

In the intervening years, epidemiologists discover a rate of cancer higher than expected in people exposed to low doses of vinyl chloride that have also been exposed to xylene, a compound not strongly associated with cancer risk.⁷⁴ A toxicological study then shows that when vinyl chloride is combined with xylene in exposures to lab animals, the cancer rate is four times the rate observed with vinyl chloride alone. Bob has been exposed to xylene through his work as a commercial painter. Scientific uncertainty is always difficult to overcome in toxic tort cases on the issue of causation.⁷⁵ Nevertheless, Create Co, who relied, in good faith, on the regulatory RBCA system may now face a toxic tort suit. Bob can make a strong case that Create Co.'s negligent release was a contributing factor in his injury. He may also be able to show that, but for Create Co.'s negligence, the xylene alone would not have caused his injury. Create Co. will be able to argue that Bob assumed the risk by agreeing to the restrictive covenant. Bob will argue that he was assured that there was no risk.

Regardless of who succeeds, this hypothetical situation illustrates the need for responsible parties to weigh short-term costs against long-term risk when relying on RBCA. Although the regulatory system did not predict that there was a risk to Bob, perhaps Create Co. may have been better served to buy Bob's home and pay him to relocate. No one has a crystal ball that will predict all eventualities but consideration of the reasonable risks and avoidance of the least cost to closure scenario may help many parties relying on RBCA avoid future liability.

IV. CONCLUSION: UNDERSTANDING RISK ASSESSMENT IS THE KEY

For parties involved in risk-based corrective action, the single greatest defense against the risk of harm to human health and the environment or financial and legal liability is an understanding of the value of risk assessment. When parties truly understand the strengths and weaknesses of the risk assessment system being applied, they are much more equipped to make good decisions that will reach the desired goal. The greater the understanding of the site conditions and risk assessment, the more focused decisions can be on closing weaknesses in the assessment and reducing or eliminating risk. Consider for example, a release from a site that contains a variety of metals and several compounds suspected of being endocrine disruptors. If the decision-makers understand that little is known about the endocrine disruptors relative to the understanding of the fate, transport and adverse impacts of the metals, they may decide to rely on risk assessment and institutional controls manage the metals and focus their financial resources on removing the endocrine disruptors. Or, if removal of the compounds is impossible without causing greater environmental damage and leaving them in place to attenuate naturally is the only financially feasible alternative, one could employ a variety of insurance products from cost cap insurance to guard against excessive cleanup costs, to secured creditor environmental liability insurance (SCEL) to protect creditors against losses due to default loans related to pollution conditions at a site, to provide financial protection and allow for redevelopment of the property. The danger in any of these situations is that without an evaluation of all of the strengths and weaknesses of environmental risk assessment and RBCA, a party cannot decide how clean is clean enough. Without consideration of the myriad of weaknesses inherent in risk assessment, a party relying on RBCA may blindly stumble into a minefield of unintended consequences.

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The opinions expressed in this article are solely those of the authors and are not intended to express opinions of the Institute for Environmental and Human Health or TRC Environmental Corporation.

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- ¹ GLENN W. SUTER II ET AL., ECOLOGICAL RISK ASSESSMENTS FOR CONTAMINATED SITES 1-3 (2000).
- ² See, e.g., D.J. PAUSTENBACH, THE RISK ASSESSMENT OF ENVIRONMENTAL AND HUMAN HEALTH HAZARDS: A TEXTBOOK OF CASE STUDIES (1989); G.W. SUTER, RISK CHARACTERIZATION FOR ECOLOGICAL RISK ASSESSMENT OF CONTAMINATED SITES (1996); MENZIE-CURA & ASSOCIATES, INC., AN ASSESSMENT OF THE RISK ASSESSMENT PARADIGM FOR ECOLOGICAL RISK ASSESSMENT (1996).
- ³ See K.F. Macek, *Aquatic Toxicology: Ten Years in Review and a Look at the Future*, in AQUATIC TOXICOLOGY AND HAZARD ASSESSMENT (P.R. Parish et al. eds., 10th ed. 1988).
- ⁴ ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 453-454 (Robert Percival et al. eds., 3d ed. 2000) [hereinafter ENVIRONMENTAL REGULATION].
- ⁵ See generally, Mark Elliot Shere, *The Myth of Meaningful Environmental Risk Assessment*, 19 HARV. ENVTL. L. REV. 409, 468-473, 476-478 (1995).
- ⁶ SALLY L. BENJAMIN & DAVID A. BELLUCK, A PRACTICAL GUIDE TO UNDERSTANDING, MANAGING AND REVIEWING ENVIRONMENTAL RISK ASSESSMENT REPORTS 8 (2001).
- ⁷ GLENN W. SUTER, II, *An Overview Perspective of Uncertainty*, in UNCERTAINTY ANALYSIS IN ECOLOGICAL RISK ASSESSMENT 123 (William J. Warren-Hicks & Dwayne R.J. Moore eds., 1998).
- ⁸ UNCERTAINTY ANALYSIS IN ECOLOGICAL RISK ASSESSMENT 1 (William J. Warren-Hicks & Dwayne R.J. Moore eds., 1998).
- ⁹ *Id.* at 6-7.
- ¹⁰ THE FACULTY OF THE DEPARTMENT OF ENVIRONMENTAL TOXICOLOGY AND THE INSTITUTE OF ENVIRONMENTAL AND HUMAN HEALTH (TIEHH), TEXAS TECH UNIVERSITY, Ecotoxicology, in CASARETT & DOULL'S TOXICOLOGY: THE BASIC SCIENCE OF POISONS 1026-1032, 1030 (Curtis D. Klaassen ed., 6th ed. 2001).
- ¹¹ See generally, DANIEL SAREWITZ & ROGER A. PIELKE, JR., *Predicton in Science and Policy*, in PREDICTION: SCIENCE, DECISION MAKING, AND THE FUTURE OF NATURE 11-21 (Daniel Sarewitz et al., eds., 2000); Richard B. Stewart, *A New Generation of Environmental Regulation*, 29 CAP. U.L. REV. 49-50 (2001) (discussing the general advancements of science and the need for more regulatory driven science (i.e. science that is funded to answer real-world questions)).
- ¹² 30 TEX. ADMIN. CODE § 350.35(a) (West 2002).
- ¹³ *Id.* § 335.35(d).
- ¹⁴ Tyrone B. Hayes, Atif Collins, Melissa Lee, Magdalena Mendoza, Nigel Noriega, A. Ali Stuart, and Aaron Vonk, *Hemaphroditic, Demasculinized Frogs After Exposure to the Herbicide Atrazine at Low Ecologically Relevant Doses*, 99 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCE 5478 (2002).
- ¹⁵ 30 TEX. ADMIN. CODE § 350.35(e).
- ¹⁶ 30 TEX. ADMIN. CODE § 350.35(d) provides that a site for which a “No Further Action” Letter has been issued may be reopened and subject to additional remediation or risk assessment, if the TCEQ determines that there has been a “substantial change in circumstances.” The rule outlines five situations that may constitute a substantial change in circumstances. This language leaves considerable latitude for interpretation within the rule. For example § 350.35(d)(3) provides that inadequate risk assessment of the

site that results in an “unacceptable” human health exposure may constitute a substantial change in circumstances. However, in this context “unacceptable” is not defined and could certainly be interpreted differently by parties with different goals. Because of the indefinite nature of the rule, the possibility that various forms of external pressure may influence agency decisions becomes real. The risk of inconsistent interpretation must be accounted for and managed.

¹⁷ Memorandum from the Texas Commission on Environmental Quality to Toxicology and Risk Assessment and Remediation Division Project Managers (November 21, 2002), *available at* <http://www.tnrcc.state.tx.us/permitting/remed/techsupp/arsenicmemo.pdf>. [hereinafter TNRCC GUIDANCE]

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

²³ 30 TEX. ADMIN. CODE § 350.1 (West 2002).

²⁴ This estimate is based on the authors’ experience with attempts to delineate metal contamination in groundwater. However, the costs of such endeavors can vary widely and these estimates are provided for the purposes of example only.

²⁵ Revision of National Recommended Water Quality Criteria, 67 Fed. Reg. 79,091 (Dec. 27, 2002).

²⁶ *Id.*

²⁷ *Id.* at 79,095.

²⁸ Dwayne R.J. Moore & Steven M. Bartell, *Estimating Risks of Multiple Stressors: Advanced Methods and Difficult Issues*, in MULTIPLE STRESSORS IN ECOLOGICAL RISK AND IMPACT ASSESSMENT: APPROACHES TO RISK ESTIMATION 127-128 (Susan A. Ferenc and Jeffery A. Foran eds., SETAC Press 2000).

²⁹ *See id.* at 132-38. Here a case study concerning the exposure of two piscivorous (fish eating) species, namely mink and kingfishers, to mixtures of both polychlorinated biphenyls (PCBs) and mercury is explained. Exposure assessments were related with a decline in fecundity (reproductive ability) and there were different effects noted, namely in adult mortality and fecundity, due to the multi-contaminant exposure. In fact, researchers decided to “add” the methyl mercury and PCBs risk curve. Case studies such as these are very common and are necessary to evaluate multiple chemical exposure.

³⁰ Chlorinated solvents are a prime example. Under aerobic conditions TCE degrades to trans and cis DCE which degrade to vinyl chloride. Although TCE is toxic, vinyl chloride is considerably more toxic. *See* JAMES V. BRUCKNER & D. ALAN WARREN, *Toxic Effects of Solvents and Vapors*, in CASARETT & DOULL’S TOXICOLOGY: THE BASIC SCIENCE OF POISONS 880-84 (Curtis D. Klaassen ed., McGraw-Hill 6th ed. 2001).

³¹ Moore & Bartell, *supra* note 28, at 139, 146-147.

³² Brian D. Israel, *An Environmental Justice Critique of Risk Assessment*, 3 N.Y.U. ENVTL. L. J. 469, 497-98 (1994).

³³ *Id.* at 497.

³⁴ *Id.* at 489-99.

³⁵ TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, RISK LEVELS, HAZARD INDICES, AND CUMULATIVE ADJUSTMENT (RG-366/TRRP-18) 1 (August 2002), *available at* http://www.tnrcc.state.tx.us/admin/topdoc/rg/366_trrp_18.pdf [hereinafter TNRCC].

³⁶ *Id.* at 3.

³⁷ *Id.* at 2.

³⁸ If advanced statistical methods are used, then linear relationships between environmental stressors and measured effects are not always necessary. In a very thorough account of regression analysis, Dr. Anne Fairbrother and Dr. Richard Bennett advocate that environmental practitioners should inquire into several statistical methods, including the transformation of data to logarithms, before assuming just one statistical explanation. *See generally*, Anne Fairbrother and Richard Bennett, *Multivariate Statistical Application for Addressing Multiple Stressors in Ecological Risk Assessments*, in MULTIPLE STRESSORS IN ECOLOGICAL RISK AND IMPACT ASSESSMENT: APPROACHES TO RISK ESTIMATION 80-82 (Susan A. Ferenc and Jeffery A. Foran eds., SETAC Press 2000).

³⁹ TNRCC, *supra* note 35, at 9.

⁴⁰ Henry Pitot III & Yvonne Dragon, *Chemical Carcinogenesis*, in CASARETT & DOULL'S TOXICOLOGY: THE BASIC SCIENCE OF POISONS 301-303 (Curtis D. Klaassen ed., 6th ed. 2001).

⁴¹ GLENN SUTER & STEVE BARTELL, *Ecosystem-Level Effects*, in ECOLOGICAL RISK ASSESSMENT 122-24 (Glenn W. Suter II ed. 1993).

⁴² MARK E. STELLJES, TOXICOLOGY FOR NON-TOXICOLOGISTS 95 (2000).

⁴³ *Id.*

⁴⁴ *Id.* at 93-94.

⁴⁵ Moore & Bartell, *supra* note 28, at 147.

⁴⁶ *Id.* at 149-161.

⁴⁷ Leigh Ann Burns-Naas, B. Jean Meade, & Albert Munson, *Toxic Responses of the Immune System*, in CASARETT & DOULL'S TOXICOLOGY: THE BASIC SCIENCE OF POISONS 461 (Curtis D. Klaassen ed., 6th ed. 2001).

⁴⁸ *See* Victor B. Flatt, "[H]e Should at His Peril Keep It There . . .": *How the Common Law Tells Us That Risk Based Corrective Action is Wrong*, 76 NOTRE DAME L. REV. 341 (2001).

⁴⁹ *Id.* at 342.

⁵⁰ *Id.* at 345.

⁵¹ *Id.* at 344.

⁵² *Id.* at 357-358.

⁵³ *Id.* at 359.

⁵⁴ *Id.* at 354.

⁵⁵ TNRCC GUIDANCE, *supra* note 17, at 4.

⁵⁶ 30 TEX. ADMIN. CODE § 350.77(b) (2002).

⁵⁷ TEX. NAT. RES. CONSERVATION COMMISSION, COMPARISON OF 30 TAC 335 AND 30 TAC 350: POINTS TO CONSIDER IN MAKING THE SHIFT (RG-366/TRRP-4) 6 (March 2000), *available at* http://www.tnrcc.state.tx.us/admin/topdoc/rg/366_trrp_04.pdf.

⁵⁸ STELLJES, *supra* note 42 at 123.

⁵⁹ For the sake of simplicity, the discussion here is limited to Tier 1 PCLs. In many situations, TRRP allows for greater concentrations of COCs to remain in the environment if site-specific risk assessment has shown that higher concentrations do not create greater risk, based on the intended future use of the site. *See* 30 TEX. ADMIN. CODE § 350.75.

⁶⁰ TEX. NAT. RES. CONSERVATION COMMISSION, LAND USE CLASSIFICATION (RG-336/TRRP-7) 7 (March 2001), *available at* http://www.tnrcc.state.tx.us/admin/topdoc/rg/366_trrp_07.pdf.

⁶¹ 30 TEX. ADMIN. CODE section 350.33(f)(3) directs that the EPA's Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration, Office of Solid Waste and Emergency Response Directive 9234.2-25 (Sept. 1993), be used as guidance for evaluating claims of technical impracticability.

⁶² 30 TEX. ADMIN. CODE § 350.111(d).

⁶³ *Id.*

⁶⁴ *See* Jesse R. Pierce & C. Thomas Schmidt, *Common Law Claims in Environmental Contamination Cases*, Sec. A-1, State Bar of Texas Advanced Environmental Law Course (1997).

⁶⁵ A detailed discussion of common law claims is beyond the scope of this article, thus the common law claims discussed are limited primarily to those directly related to real property. For the most part, negligence and toxic tort claims are beyond the scope of this paper, however, they are legal risks that should be considered by responsible and affected parties.

⁶⁶ *Mitchell Energy Corp. v. Bartlett*, 958 S.W.2d 430, 446 (Tex. App.-Fort Worth 1997, pet. denied); *Taco Cabana, Inc. v. Exxon Corp.*, 5 S.W.3d 773 (Tex. App. – San Antonio 1999, writ den'd). While not directly saying the plaintiff's cause of action for trespass could be maintained, the court in *Taco Cabana* did imply that if contaminant levels were above regulatory action levels, there would be cause for a trespass action. The Texas case law that has evaluated chemical trespass scenarios seems to blur the concepts of nuisance and trespass. *See also*, *Atlas Chemical Industries, Inc. v. Anderson*, 524 S.W.2d 681 (Tex. 1975) (expressly holding that if a chemical (i.e. pollutant) traverses a property line, then a trespass occurs...whether its "worth" being "actionable is another matter.").

⁶⁷ *Pierce et al.*, *supra* note 64, at A-10.

⁶⁸ *Id.*

⁶⁹ *Taco Cabana, Inc.*, 5 S.W.3d 773.

⁷⁰ *Id.*

⁷¹ *Id.* at 780.

⁷² *Z.A.O., Inc. v. Yarbrough Drive Ctr. Joint Venture*, 50 S.W.3d 531 (Tex. App. – El Paso 2001).

⁷³ *Id.* at 544.

⁷⁴ JOHN HARTE, et al., TOXICS A TO Z: A GUIDE TO EVERYDAY POLLUTION HAZARDS 435 (1991).

⁷⁵ Ashley T. Kever, Note, *The Plaintiff's Challenges To Proving Causation In Today's Toxic Tort Landscape*, 33 ST. B. TEX. ENVTL. L. J. 1 (2002).

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**RISK – SCIENTIFIC, LEGAL AND
POLICY ISSUES**

“TRRP Guidance Review”

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**15th Annual Texas Environmental Superconference
August 7-8, 2003
Four Seasons Hotel
98 San Jacinto
Austin, Texas**



TRRP – ACHES BY THE NUMBER OR EACH DAY I LOVE THE GUIDANCE MORE?

I. INTRODUCTION

Heartache, love...hate? Which is it? The Texas Risk Reduction Program (TRRP) is now almost 4 years old and there are still many issues outstanding with respect to how the Texas Commission on Environmental Quality (TCEQ) will interpret and apply the rule. To a certain extent, rules always continue to evolve and TRRP is no exception. However, in the case of TRRP, basic key elements, such as the procedures for groundwater classification, have only been finalized in recent months.

While the collaborative effort between the TCEQ and the regulated community has been effective in producing guidance that is arguably of higher quality than would have been the case with an “agency only” approach, the process has taken much longer than imagined by either the TCEQ or industry. The delay in completing guidance development has led to continued confusion with regard to how TRRP is being implemented and presents a challenge to both the TCEQ and the regulated community to stay the course in completing the development process. The guidance that has resulted from this process is somewhat akin to Willie’s music...it may not be everyone’s idea of harmony, but the end result is generally solid, and, hopefully, has staying power.

A summary of the current status of the TRRP guidance development process and insights into how key elements of the program are being implemented based on interviews with TCEQ personnel, personal experience, and discussions with other industry members is provided below. While it is impossible to succinctly state exactly how each issue is being handled by the TCEQ, since this varies by coordinator,

current agency interpretation, specific site facts and perception of the industry, the purpose of this paper is to hold a finger up in the air and give you the best estimate of which way the wind appears to be blowing on a variety of issues.

The TRRP guidance process was started in the fall of 1999 with the formation of the TRRP Guidance Development Steering Committee and individual work groups to create the guidance. The Steering Committee is comprised of members of industry, including the writer, representing trade organizations such as the Industry Council on the Environment and the Texas Chemical Council and members from oil and gas companies, chemical manufacturers, the legal community, real estate firms, small business and utilities. The TCEQ members include Chet Clarke, who heads the committee, and Greg Tipple, both of whom participate regularly, and Paul Lewis, Anne Strahl, Chuck Stone, and Chris Chandler, who participate on a part time basis.

The Steering Committee oversees the workgroups developing the guidance documents and the workgroups are also comprised of a mix of agency and industry members. A document finalized in a workgroup passes through the Steering Committee for review and approval prior to going through a final TCEQ approval process. This provides industry a real voice in development of the guidance thanks to the TCEQ’s willingness to accept input.

There are a total of 34 guidance documents and 8 forms either finalized or in the development process. As of July 12, 2003, 19 guidance documents have been finalized and all of the forms are available. In addition to these documents, which are available for review on the TRRP web page and for which a listing is provided in Attachment A of this paper, other information helpful to navigating TRRP has been developed in the form of memorandums, which cover spill response coordination and other issues, and the TRRP Question & Answer file on the web that summarizes the TCEQ position on various questions the Agency has been asked. In

addition, the TCEQ updated the Tier I PCL tables in March of this year and will update in March of each subsequent year the Chapter 327 concentrations that can be used in handling a spill response.

Review of the key facets of each guidance document and other guidance information is beyond the intent of this paper and, in all likelihood, beyond the interest level and attention span of most readers. Below is provided a review of how it appears the TCEQ is handling certain key issues we all deal with that significantly impact how sites are moved through the regulatory process to closure.

II. GUIDANCE DOCUMENTS

A. Groundwater Classification (TRRP 8)

Classification of groundwater has the greatest impact on the cleanup standards for affected properties and the guidance for this key issue was finalized in March of this year.

- Saturated Soil - The facet of this guidance that has received the most attention is the saturated soil designation, which was formerly referred to as a “non-groundwater bearing unit”. A saturated soil designation removes groundwater ingestion from the risk evaluation process, thus greatly elevating cleanup and assessment levels. The procedures to confirm that the hydraulic conductivity is less than 1×10^{-5} cm/sec are now formalized in guidance, which is helpful. Be aware that there is still significant resistance among some at the TCEQ to this designation and it may not be as easy to achieve as reading the guidance may suggest. This is particularly true in areas such as Dallas/Fort Worth where groundwater may migrate through the weathered portion of the limestone or through fractures in the unweathered limestone. The TCEQ will want a “sniff test”, meaning that if there is

“significant” migration of the plume beyond that suggested by a low hydraulic conductivity, they will not agree with a saturated soil designation. The definition of “significant” will vary by coordinator as there is no set guideline.

- Early Groundwater Classification - Due in no small part to the complexity and cost of completing an Affected Property Assessment Report (APAR), as well as the key impact classification has on assessment and cleanup standards, the TCEQ encourages submitting information to the State prior to completing your APAR to gain concurrence with the classification of groundwater. There have been cases of coordinators refusing to classify the groundwater without an APAR. If you encounter this problem, refer them to language in TRRP 8 – Groundwater Classification, which repeatedly encourages early submission of groundwater classification information to the TCEQ both in the text and in shadow boxes in the guidance document. This was language that was inserted into the document at the Steering Committee level with the express purpose of allowing the responsible person to know their classification prior to incurring the expense of filling out the APAR. Since completion of the APAR requires repeated comparisons against site cleanup and assessment levels, significant cost would be incurred if, after TCEQ review of the APAR, they disagreed with the groundwater classification.
- Averaging Yields – The TCEQ is struggling with classification of groundwater on sites where yields from different wells across the property vary from above and

below the Class 3 threshold. It is not uncommon to have one well produce in excess of the Class 3 yield threshold while others are far below that volume. Be aware that you can average yields across a site to lower the effective yield to below the Class 3 threshold, though this typically requires negotiations with your coordinator. You may also want to consider conducting testing in a higher producing well for a longer period of time to ascertain if the well can sustain the higher yield since the threshold is based on continuous ability of the well to yield the higher volumes over a long period of time.

- Inadequate Characterization – It is important to submit sufficient information to the TCEQ so that they can have the basis to concur with the classification. In talking with the Agency, they are receiving numerous submittals with either an inadequate number of wells evaluated, only wells outside of the plume characterized or with inappropriate evaluation methods used.

B. Data Quality (TRRP 13)

TRRP 13 was finalized in February of this year and speaks to data quality issues. There are a number of key points to be aware of to ensure your data is accepted by the TCEQ.

- After February 1, 2003, all soil data must be on a dry weight basis. This does not necessarily mean that sampling method EPA 5035 has to be used, though it is required for Superfund sites. It does mean that moisture content of the soil has to be factored into the analyses. Soil data that is not on a dry weight basis collected prior to this date is acceptable assuming detection limits are low enough

and appropriate methodology was used.

- A laboratory review checklist prepared and signed by the laboratory must accompany every data package.
- A data usability summary should be submitted with the TRRP-required reports.

C. Notifications (TRRP 17)

Utility Right of Way Notifications - Other than the relative complexity of notification requirements under TRRP, the TCEQ does not appear to be receiving many questions regarding this section of the rule. In discussions with Chet Clarke, TCEQ, he indicated they have received some queries with respect to notification of easement holders as to whether just the company had to be notified or if workers did as well. Specifically, the TCEQ has received questions concerning the provisions under TAC Chapter 350.55(e) to ascertain if the rule could be interpreted to mean that utility line workers have to be notified due to the “actual or probable exposure” language. This provision requires individual notice among other requirements. Based on conversations with TCEQ staff, the intent is that the easement holder only, such as SBC, be notified.

D. NAPL Recovery (TRRP 32)

The TCEQ is developing guidance to more clearly determine how to evaluate non-aqueous phase liquid (NAPL) and to develop criteria for when it might not be necessary to recover NAPL. The basic approach being developed in the new guidance is to triage sites dependent on explosive hazard, mobility, potential drinking water impacts and aesthetic issues, with the basic idea that it is not necessary that all NAPL be recovered to the extent technically practical. The TCEQ wants to look at qualitative criteria and not just quantitative.

An example of the new approach would be that if the NAPL is creating an explosive hazard but no other impacts, it may be

possible to remove the volatile fraction through vapor extraction or other techniques and leave the remaining NAPL constituents behind. The TCEQ might also encourage innovative techniques on a high risk site where standard approaches would not be effective. If the site has no issues regarding explosive hazards, problems with migration, drinking water impacts or aesthetics, no action regarding the NAPL may be necessary.

The guidance for NAPL evaluation and recovery is scheduled to go back to the workgroup for review in August for a final review by the members and then it will be sent to the Steering Committee for evaluation.

E. Facility Operations Area (TRRP 34)

The TCEQ has received two applications thus far regarding the provision in the rule allowing a facility such as a refinery to lump various site impacts on a facility into one facility operations area (FOA). These applications have been approved internally by staff and are up to the hearing process.

II. MEMORANDUMS

The TCEQ has issued five memorandums that are on the web page dealing with a wide range of TRRP issues. Below is a listing of each of these memorandums, which, with the exception of the spill response memorandum, are generally self-explanatory and are not discussed further here.

- *Coordination of Remediation Activities Related to Emergency Response and Historical Releases*, May 27, 2003 – This memorandum delineates the responsibility for spill response between the Central and regional offices and specifies what type of reporting should be completed for either a current or historical release (Attachment B). The inclusion of historical releases has been the topic of many discussions in industry and the TCEQ has

received unofficial comments regarding this provision as well. Key components of the memorandum include:

- i. Establishes cleanup and reporting criteria for current releases that can be cleaned up under the 180 day spill rule contained in 30 TAC §327.5.
- ii. Establishes a cleanup standard using Chapter 327 PCLs for current releases that meet specific criteria, without implementing TRRP and its associated reporting requirements (e.g., APAR, SIN, RAP, RACR, etc.).
 1. The Chapter 327 PCLs are generally, if not completely, equivalent to the TRRP Tier 1 Residential PCLs for a 30-acre source area, which are the most conservative cleanup standards under the TRRP rule.
- iii. Any response action that requires greater than 180 days (from initial notification) to remediate will automatically be defaulted into TRRP with all its reporting requirements and oversight will be delegated to the Central Office.
- iv. If a RP chooses to utilize TRRP cleanup standards in Chapter 350, a current release with “soil only” impact may be eligible for reduced APAR reporting under TRRP by using the worksheet provided as Attachment 2 to the memorandum.
- v. A requirement for historic releases to be reported to the TCEQ within 24 hours of discovery is provided in the memorandum. The Central

Office will provide oversight for all historic releases. The memorandum also provides reporting protocol for historic releases.

- vi. There are no reporting requirements for currently non-reportable releases that are cleaned up to background or pre-existing conditions. However, the RP is required to maintain the records in a reviewable format. If Chapter 327 PCLs or TRRP rule standards are utilized to remediate current non-reportable releases, reports must be submitted to the regional office for review. If necessary, the regional office will refer the site to the Central Office for review.

Other TRRP-related memos include:

- *Implementation of the New Arsenic MCL in the Remediation Programs*, November 21, 2002.
- *COCs for Which Calculation of a Human Health PCL is Not Required*, January 7, 2003.
- *Evaluation of the Potential Health Impacts of Exposure to Iron, Calcium, Magnesium, Potassium, Sodium and Phosphorous Through Soil Ingestion*, October 9, 2001.
- *Transition to TRRP of Projects with Portions Closed Under the 30 TAC 335 Risk Reduction Rules*, July 8, 2000.

III. OTHER ISSUES:

A. TRRP Questions & Answers (Q&A)

The TRRP Q&A section of the web page, which is a running summary kept by Chris Chandler of questions that the TCEQ has answered, has not officially been updated on the web since June 2001. Chris has been tracking it internally and there is a new draft update prepared that hopefully will make it to the web page in the next few months.

B. Affected Property Assessment Report (APAR)

The APAR is being revised periodically, and there is an effort internally to determine if there is a way to streamline the reporting to help reduce the costs. Possible methods would be to reduce the repetitive nature of filling out the tables or perhaps some figure reductions. In addition, if your site has no concentrations above the Tier 1 PCLs for Class 1 or 2 groundwater, Corrective Action is not requiring a full APAR. If the concentrations exceed the Tier 1 levels or require a Class 3 or saturated soil designation to meet Tier 1 concentrations, then an APAR will be required. The Voluntary Cleanup Program is requiring an APAR in any situation.

C. Petroleum Storage Tank (PST) Transition to the TRRP

There is a mailout going to RPs and CAPMs reminding them of the September 1, 2003, date after which all new releases will be governed under the TRRP.

- Guidance – A document comparing requirements under TAC Chapters 334 and 350 was prepared by Chet Clarke and posted to the web page on July 12, 2003.
- Training – Training classes will be held by the TCEQ in August and probably at later dates as well for PST staff and CAPMs on TRRP.
- MTBE – MTBE will be a COC for PST sites governed under TRRP.
- Other Gasoline Constituents – There is no plan to start evaluating other constituents present in gasoline and diesel such as 1,3,5 trimethylbenzene and multiple other compounds. The plan is for the same constituents evaluated currently by the PST program to be evaluated under TRRP, with the exception of MTBE being added. Note that for bulk fuel terminals and pipelines transporting fuels such as gasoline or diesel, the TCEQ currently intends that you

only evaluate those compounds required for PSTs storing fuel. There is some ongoing discussion regarding this issue at the TCEQ, so you should check with your coordinator on a site specific basis.

- TRRP Software – The TCEQ is going to utilize TRRP software called TRRP Commander, prepared by H2A, Ltd., in order to assist staff in evaluating TRRP submissions. Other software, such as GSI's, is acceptable as well.

D. Indoor Air Issues

There has been a great deal of consternation with indoor air issues both within and outside of the TCEQ and this issues impacts sites under both Chapter 335 and Chapter 350. The problem lies with poor science behind models used to estimate potential indoor air impacts from sources such as fuels or chlorinated solvents and with the low risk based exposure levels (RBELs) in TRRP. The result is often calculations showing likely indoor air impacts when none exist. The TCEQ had internal workgroups that struggled with this issue much of last year and no resolution was reached. The current status is that, if indoor air is the only issue preventing closure of a site, then the TCEQ will provide closure as long as there is not a clear indoor air issue to be resolved. The TCEQ is continuing to study this issue, but no resolution has been reached currently. You should note that the indoor air quality may be raised in TCEQ correspondence for a site and it may come back as an issue at a later date.

IV. CONCLUSION:

TRRP guidance development, while messy, has involved a collaborative process that has led to better documents than might have otherwise have been developed. The guidance is continuing to evolve 4 years after implementation of the rule and 19, or just over 55% of the planned total of 34 documents, have been completed to date, leaving much work to be done. In addition to the guidance documents, the TCEQ posts

memorandums, TRRP Q&A's and updated cleanup standards periodically to the web that are critical in dealing with the TRRP process. The continually evolving nature of the guidance associated with this somewhat complex set of rules presents a real challenge to stay abreast of changes as they occur. It's enough to give you TRRP-aches by the number!

ATTACHMENT A

GENERAL

RG-366	Topic*	Availability*
TRRP-1	Introduction to TRRP	2/00
TRRP-2	Applicability and Grandfathering	2/00
TRRP-3	Compatibility with RCRA	4/00
TRRP-4	Comparison to 30 TAC 335	2/00
TRRP-5	Use of Data Collected for 30 TAC 335	5/00

AFFECTED PROPERTY ASSESSMENTS

RG-366	Topic*	Availability*
TRRP-6	Planning and Receptor Surveys	4 th Qtr 2000
TRRP-7	Landuse Determinations	4 th Qtr 2000
TRRP-8	Groundwater Classification	4/00
TRRP-9	Exposure Pathway Evaluations	6/00
TRRP-10	Determining Target COCs	10/00
TRRP-11	Contrasts in Data Needs for Tiers 1, 2 and 3	1/01
TRRP-12	Assessment Requirements (Extent determinations)	4/00
TRRP-13	Validation Requirements for Analytical Data	4/00
TRRP-14	Screening of COCs	4/00
TRRP-15	Determining Representative Concentrations	7/00
TRRP-16	Analytical Testing	4 th Qtr 2000
TRRP-17	Notification of Affected Persons	4/00

DEVELOPMENT OF HUMAN HEALTH PCLS

RG-366	Topic*	Availability*
TRRP-18	Risk Levels and Cumulative Adjustments	1/01
TRRP-19	Toxicity Factors and COC Properties	10/00
TRRP-20	Exposure Factors	1/01
TRRP-21	Determining Points of Exposure	4/00
TRRP-22	Development of Human Health PCLs	8/00
TRRP-23	Correct Use of Tier 1 PCL Tables	3/00
TRRP-24	Determining PCLs for Surface Water and Sediment	8/00
TRRP-25	Determining Critical PCLs	8/00
TRRP-26	Use of Tier 1 and 2 Natural Attenuation Factor Models	9/00
TRRP-27	Development of PCLs for TPH	3/00

REMEDY STANDARDS

RG-366	Topic*	Availability*
TRRP-28	Application of Remedy Standards to Affected Properties	4/00
TRRP-29	Soil and Groundwater Response Objectives	4/00
TRRP-30	Compliance Sampling and Monitoring	4 th Qtr 2000
TRRP-31	Evaluating the Effectiveness of Remedies	4 th Qtr 2000
TRRP-32	Demonstrating Sufficient NAPL Recovery	4 th Qtr 2000
TRRP-33	Monitored Natural Attenuation Demonstrations	3 rd Qtr 2000
TRRP-34	Facility Operations Area	4/01

STANDARDIZED REPORT FORMS

Form no.	Title	Availability*	Form No.	Title	Availability*
10323/SIN	Self-Implementation Notice	2/00	10327/RAER	Response Action Effectiveness Report	1/01
10324/NOI	Notice of Intent [Grandfathering]	3/00	10328/RACR	Response Action Completion Report	7/00
10325/APAR	Affected Property Assessment Report	5/00	10329/PRACR	Post Response Action Care Report	1/01
10326/RAP	Response Action Plan	7/00			

*Topic refers to subject matter, not the title. Availability is a target date only. Documents will be issued as completed. See <http://www.tnrcc.state.tx.us/permitting/trrp.htm> for updates on guidance documents.

ATTACHMENT B

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Regional Directors
Regional Section Managers
Field Operations Division

Project Managers, Corrective Action
Section, Remediation Division

Date: May 27, 2003

Thru: Jennifer Sidnell, Division Director
Field Operations Division

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Litigation Division

From: Susan D. Bredehoeft, Senior Waste Program Liaison
Waste & Emergency Response Program Support, Field Operations Division

Cathy Remmert, Team Leader
Corrective Action Section, Remediation Division

Subject: Coordination of Remediation Activities Related to Emergency Response and
Historical Releases

I. INTRODUCTION

This memo serves as guidance for remediation activities related to release response situations which include new and historic releases as defined below. The memo outlines the criteria for oversight by Region Offices as well as the criteria and information needed for referral of a release response action to the Corrective Action Section (CAS) of the Remediation Division. This memo, effective June 6, 2003, supercedes earlier guidance on the subject, including the November 14, 2000 memo entitled "Coordination of Remediation Activities Related to Emergency Response", and is applicable to reports submitted on or after June 6, 2003.

II. DEFINITIONS

Discharge or spill (30 Texas Administrative Code (TAC) §327.2) - An act or omission by which oil, hazardous substances, waste, or other substances are spilled, leaked, pumped, poured, emitted, entered, or dumped onto or into waters in the State of Texas or by which those substances are deposited where, unless controlled or removed, they may drain, seep, run, or otherwise enter water in the State of Texas.

Current release (defined in this guidance) - Any reportable or non-reportable release discovered for which there is an active source. Refer to the flow chart in Figure 1 of this document. For example: the responsible person (RP) discovers contamination during a routine tank cleanout. Although the tank was emptied for the inspection, it would be considered an active source based on the status prior to cleanout.

- **Reportable release** (30 TAC §327.3) - Current release of oil, petroleum product, used oil, hazardous substances, industrial solid waste, or other substances into the environment in a quantity equal to or greater than the reportable quantity listed in 30 TAC §327.4 in any 24-hour period.
- **Non-reportable release** (defined in this guidance) - Current release in which the quantity released is less than the reportable quantity specified in 30 TAC §327.4 and actions taken are in accordance with 30 TAC §327.5 (a) and (b).

Historic release (defined in this guidance) - A release from an inactive source and includes known and unknown quantities. An example of a historic release would include contamination discovered during excavation activities, such as an abandoned pipeline. Upon discovery of a historic release, notification is required per Texas Water Code (TWC) §26.039 if it has caused or may cause pollution. An assessment is required in order to determine the extent and level of contamination.

III. OVERSIGHT RESPONSIBILITIES

Region Office Staff - The Region Office will oversee the response to a *current reportable release* when any of the following criteria are met:

The responsible person (RP) will take 180 days or less from the date the release was reported to complete the cleanup, **AND**

- the RP will remediate the release to pre-release or background conditions; **OR**
- the RP will remediate the release using the Chapter 327 PCL procedure (see IV.B); **OR**
- the RP will remediate the release to meet the Chapter 350, Texas Risk Reduction Program (TRRP) rule, Remedy Standard A, Tier 1 values.

The Region will also oversee the response to a *current non-reportable release* if the RP chooses to remediate under Chapter 350, TRRP, Remedy Standard A, Tier 1 values or Chapter 327 PCLs. Region Office staff are responsible for ensuring that the RP has met all requirements of Chapter 327

(24-hour response provided, 30-day written report submitted with schedule, etc.) as applicable. Unresolved violations should be referred to the Enforcement Division.

Corrective Action Section - The Corrective Action Section (CAS) is responsible for oversight of response actions for the following types of releases:

- all historic releases;
- current releases remediated under TRRP Remedy Standard A, Tiers 2 or 3, and Remedy Standard B, Tiers 1, 2, or 3;
- current releases with notice from the RP that it is infeasible to complete response actions within 180 days from the date the release was reported; or
- current releases with documentation provided by the RP indicating groundwater has been impacted by the release.

IV. RELEASE RESPONSE & REPORTING REQUIREMENTS

Figure 1 illustrates the process for handling release response actions. Refer to the flowchart along with the text descriptions.

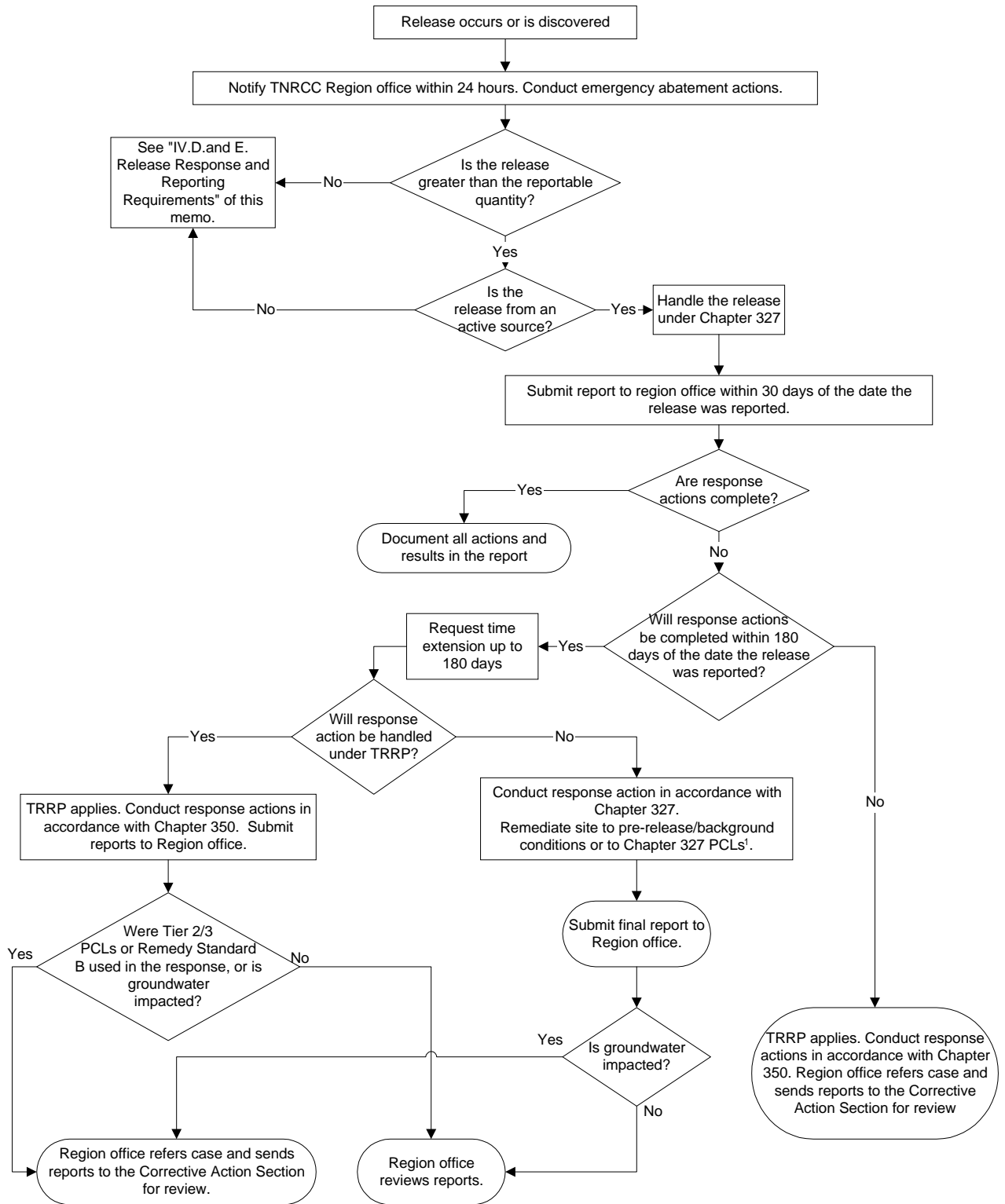
When a current reportable release occurs or a historic release is discovered, the responsible person (RP) must notify of the release to the TCEQ's Region Office during normal business hours or to the State's Emergency Response Center at 1/800/832-8224, as soon as possible but not later than 24 hours after discovery. The determination of how the release is handled depends on the source and the quantity of the release.

For all releases, the RP must take any emergency abatement actions necessary to prevent further damage from the release. The release must be contained and removed, and impacts to public health or the environment must be minimized. The Region Office and local authorities will assist the RP in determining the appropriate course of action.

A. Releases Handled under Chapter 327

The Spill Prevention and Control rule, 30 TAC Chapter 327, addresses all releases except for historic releases. If the current release is less than the reportable quantity or if the release is historic, refer to Sections IV.D. and IV.E of this memo and the August 27, 2002 TCEQ memo "Remediation Division Report Requirements for a Release Investigation", to determine the appropriate course of action. The memo is located at <http://www.tnrcc.state.tx.us/permitting/remed/ihw.html>. As defined in 30 TAC §327.5(c), the RP may choose to use 30 TAC Chapter 350 (TRRP) at any time following the release. Reporting is discussed in Section IV.C.

Release Response Actions



1. Use the checklist to determine if Chapter 327 Protective Concentration Levels (PCLs) can be used as cleanup levels.

Figure 1. Release Response Actions

If the release exceeds the reportable quantity and is from an active source, the RP must comply with 30 TAC Chapter 327 and §350.2(b) and coordinate actions with the TCEQ Region Office. When handling the release response actions under Chapter 327 within 180 days of release reporting, the RP must remediate the release to background or pre-release conditions, or under certain conditions, Chapter 327 PCLs as described in Section IV.B.

The Region Office will oversee the response actions, which may include investigating the release, gathering information, working with the RP to initiate response actions, and documenting phone calls, site visits, and directives given to the RP. If the RP is not responsive or violations are unresolved, the Region Office will refer the issue to the Enforcement Division.

Reporting under Chapter 327

30 Day Report - RP submits to the Region Office

- Submit 30 working days from the date the release was reported;
- Refer to 30 TAC §327.5 for the required contents of the report;
- 30-day report will be the final report if all response actions are complete at that time;
- If additional time is needed, the RP should include a request for an extension of time, not to exceed 180 days from the date the release was reported.

NOTE: If the release is cleaned up to pre-release or background conditions or Chapter 327 PCLs, the RP is NOT invoking the TRRP rules of 30 TAC 350, and TRRP reports should not be submitted.

180 Day Milestone - RP submits to the Region Office

- RP submits final report documenting completion of activities (refer to 30 TAC §327.5 for the required contents of the report); or
- RP informs the Region Office in writing that the response has not been completed within 180 days;
- This will serve as notification to use Chapter 350 for the response and initiates the referral of the site from the Region Office to the CAS.

B. Releases Handled under Chapter 327 Protective Concentration Levels (PCLs)

An alternative to cleanup of a release to pre-release or background conditions is through the use of Chapter 327 PCLs. The Chapter 327 PCLs are clean up values calculated to be protective of human health exposure potential, including soil ingestion, inhalation of vapors and dust, dermal contact, ingestion of vegetables by residents, and leaching of Chemicals of Concern (COCs) from soil to groundwater. The TCEQ Toxicology and Risk Assessment (TARA) Section has developed a table of Chapter 327 PCLs located at <http://www.tnrcc.state.tx.us/permitting/remed/ihw.html>. The table will be updated in March of each year unless a more frequent update is deemed necessary (see discussion box, page 7). The most current version of the Chapter 327 PCL table must be used. Be sure to obtain the latest table from the web site for the release response action.

Chapter 327 PCLs can be used under certain circumstances as the cleanup level rather than background, pre-release conditions or TRRP requirements. Chapter 327 PCLs cannot be used for response actions that exceed 180 days from the date the release was reported. The RP will use the Eligibility Checklist (Attachment 1) to determine if the Chapter 327 PCLs can be applied. If *all* answers on the checklist are “yes,” the RP may use the Chapter 327 PCLs. If *any* answer is no, the RP must clean up to background or pre-release conditions, or conduct response actions using the TRRP rule (Section IV.C.).

One cannot assume that the Chapter 327 PCLs are protective of releases to surface water or sediment or to ecological receptors. Any cleanup to Chapter 327 PCLs must include the determination that there is no impact to groundwater, or threat of impact to surface water, sediment, or ecological receptors either through leaching to groundwater or runoff of stormwater or erodible soils to surface water. The RP may use temporary physical controls, such as berms or trenches, as part of the emergency abatement actions to prevent the spread of the release. However, if permanent physical controls are needed to prevent migration to groundwater or surface water, the response actions must be conducted under the TRRP rule.

Most releases involve one or two COCs; *however*, in the event that there are more than 10 carcinogenic and/or more than 10 noncarcinogenic COCs, as indicated on the Chapter 327 PCL table, the RP will not be allowed to use Chapter 327 PCLs. When a COC has both carcinogenic and noncarcinogenic effects, the COC must be included in the count for both categories. If the release has 10 or more COCs of either category, the RP must respond to the release through one of the other options defined in this memo: background, pre-release or TRRP rule requirements. A downward adjustment to a COC’s PCL may be necessary as a result of the cumulative check, which is performed under the TRRP rule requirements.

Reporting under Chapter 327 PCLs

Chapter 327 PCL Report - RP submits to the Region Office

- Use same report format as conventional release response actions that are completed to pre-release or background conditions, that is, a letter report format;
- Include the report contents described in §327.5;
- A Chapter 327 PCL report must also include the following items:
 - S completed Eligibility Checklist (Attachment 1);
 - S completed Ecological Tier 1 Exclusion Criteria Checklist (30 TAC 350, Figure: §350.77(b));
 - S tabulated data for comparison of investigation and confirmation sample results to Chapter 327 PCL values; and
 - S additional information as may be requested by the executive director;
- If the RP chooses to switch to TRRP, or is required to switch, Chapter 327 PCL reports will not be accepted in lieu of, or in addition to the required TRRP reports.

C. Releases Handled under TRRP

The RP may choose to use the TRRP rule at any time during the initial 180 days. However, response actions must be managed in accordance with the TRRP rule if the actions will take longer

to complete than 180 days from the date the release was reported. If the response action will not be completed within 180 days, the RP must notify the Region, and the Region will refer the case to the CAS (Section V.). If the RP has not corresponded with the Region Office prior to the end of the 180-day period, the Region Office will contact the RP to determine the status of the response.

The Region Office will initially oversee the response actions and receive reports. Attachment 2 contains a list of questions for the reviewer to consider for a soil-only Affected Property Assessment Report (APAR). The list is not intended to be an outline for completing an APAR; it is a guide only. The RP may choose Remedy Standard A or Remedy Standard B at any Tier for response to a release. When using TRRP, all applicable conditions of the rule apply, including the requirements for assessment and cleanup reporting. The RP can self-implement the actions when conducting a Remedy Standard A response action; however, submittal of a Response Action Plan (RAP) is required when using Remedy Standard B. Refer to the TRRP rule and guidance on use of the rule located at <http://www.tnrcc.state.tx.us/permitting/trrp.htm> for the implementation details.

When completing reports under TRRP, current toxicity factors must be used. The Toxicity Factor tables will be updated in March of each year unless a more frequent update is deemed necessary. Be sure to obtain the latest table from the web site for the release response action (see box). Persons should consult the TRRP guidance titled *Toxicity Factors and Chemical /Physical Parameters* (RG-366/TRRP-19) for specifics on the policy and schedule for updating toxicity parameter tables.

Current toxicity factors must be used. This means that the toxicity factors need to be current during the March to February time period for the year in which the SIN or RAP is submitted to the TCEQ. For example, if an APAR is submitted in June 2002 based on the toxicity factors current as of March 2002, and then a RAP is submitted in August 2003, the RAP must address any PCLs that have been modified as a result of changes to the toxicity factors posted in the March 2003 update. If the toxicity factors change subsequent to the submittal of the SIN or RAP, then that situation will be addressed on a case-specific basis.
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Reporting under TRRP

Chapter 350 Reports for TRRP rules - RP submits to the Region Office

- APAR and the Response Action Completion Report (RACR) must demonstrate that attainment of Remedy Standard A under Chapter 350 has been achieved, or submit an APAR and a RAP for review and approval if Remedy Standard B will be chosen as the cleanup standard;
- If the RP *completes the response action* within 180 days and the release is remediated to Remedy Standard A, Tier 1, the Region Office will review the APAR, the Self-Implementation Notice (SIN), and the RACR. If the RP documents in the report that all cleanup actions required to meet Remedy Standard A, Tier 1 were achieved within 180 days (even though the report may not be submitted until after the 180-day timeframe), the Region will close out the release response actions;
- Any APAR, SIN, RAP, or RACR must be completed using agency forms. The forms are available at <http://www.tnrcc.state.tx.us/permitting/trrp.htm>.
- For Remedy Standard A, Tier 1 response to a “soils only” impact, a list of questions with corresponding applicable worksheets for the APAR is provided in Attachment 2. The checklist is not all inclusive and is recommended as guidance only.

D. Historic Releases

Historic releases are managed by the CAS. Reports are received through voluntary submittal by the RP, or via referral by the Region Office. All releases that have caused or may cause pollution require notification per TWC §26.039. Chapter 327 identifies the requirements for addressing and reporting current releases. Historic releases, however, are not covered by the reporting requirements of Chapter 327, because neither the quantity nor the time of the release is known. These unknown conditions necessitate a thorough assessment to determine the extent of contamination. The RP must comply with Chapter 350 investigation and reporting requirements, or the RP may qualify for the alternative reporting requirements that have been established by the agency in the August 27, 2002 report requirement memo (see Section IV A.) In general, the following options are allowed under the report requirements memo:

- RP must assess the release to determine the extent and level of contamination.
- If assessment results indicate COCs in environmental media are less than or equal to Method Quantitation Limit (MQL) or background, without requiring remedial activities to attain these values, contamination is not present and investigation report submittal is not required. For the benefit of the RP, documentation of assessment results should be retained in the facility records.
- If assessment results indicate COCs in environmental media are greater than MQL or background and less than TRRP Tier 1 Residential assessment levels (assuming Class 1 groundwater) and all criteria for the Ecological Tier 1 Exclusion Criteria Checklist are met, without requiring remedial activities to attain these values, contamination is present but is below action levels and a report is required (see memo for allowable report type).
- If assessment results indicate COCs in environmental media are equal to or greater than TRRP Tier 1 (and Class 1 groundwater) Residential assessment levels, contamination must be addressed, and TRRP reports must be completed.

If additional requirements have been placed on the closure/remediation from other rules, permits or orders, then the more stringent requirements will apply.

E. Non-Reportable Releases

There are no reporting or submittal requirements applicable under Chapter 327 for current non-reportable releases, unless specifically requested by the executive director (§327.5(b)). However, unauthorized releases of any quantity are prohibited by 30 TAC §327.1 and TWC §26.121 and, if of a quantity which causes or may cause pollution of waters in the State, must be abated and removed per TWC §26.266.

The RP is required to complete the release response action to pre-release, background, Chapter 327 PCLs, or TRRP. For pre-release or background, the RP will maintain the results in the operating record without direct involvement by the agency. Generators of hazardous or industrial solid waste are required by 30 TAC §335.9(a) to keep all records of waste activities regarding quantities generated, stored, processed and disposed of on-site, or shipped off-site for storage, processing or

disposal. The records may be maintained in any format, provided they are retrievable and easy to copy. Any TCEQ investigator would be able to review the records during an investigation, as needed.

If an RP chooses to use Chapter 327 PCLs for a response to a non-reportable release, the criteria detailed in Section IV.B. will be applicable. If an RP chooses to use Chapter 350, all investigation and reporting requirements will apply. Reports will be submitted to the Region Office for review. If the review indicates that the CAS is responsible for oversight (such as in Section III), the case will be referred to the CAS.

V. REFERRAL OF A RELEASE RESPONSE ACTION TO THE CORRECTIVE ACTION SECTION

The Region Office will investigate current releases, gather information, work with the RP to initiate response actions, and will complete a TCEQ Oil or Hazardous Substances Spill or Bypass Report. Based on documentation provided by the RP, the Region Office will review all applicable reports, or refer the case to the CAS using criteria specified in Section III. However, prior to referral to the CAS, the Region Office must ensure there is either a written response from the RP, telephone memo, or site visit documentation indicating the current status of the response actions in accordance with 30 TAC §327.5.

If the corrective action was conducted using Tier 1 PCLs and Remedy Standard A, the Region Office will review the reports and continue coordination of the case. The Region Office will refer the case to the CAS when Tier 2 or 3 PCLs are used, when a Remedy Standard B response action is used, or when the release response activities can be combined with ongoing corrective action (currently overseen by the CAS) at the affected property, as described in Section V.B.

A. Referral Documentation

The Region Office will submit all documentation provided by the RP and written documentation of all known facts about the release to the CAS along with a Remediation Referral Form (see Attachment 3). Types of documentation should include, as applicable:

- TCEQ Oil or Hazardous Substances Spill or Bypass Report;
- Copies of all RP correspondence (including documentation of groundwater contamination, inability to remediate within 180 days, etc.);
- Copy(s) of any Notice of Violation (NOV) letters, as applicable;
- Telephone memos;
- Documentation of verbal/written approvals and/or directives given to the RP;
- Documentation of extensions given to the RP;

NOTE: Extensions are not to exceed 180 days from the date the release was reported; and

- Documentation of site visits by Region Office staff.

B. Sites with On-Going Corrective Action

It is appropriate to include some release response actions with ongoing corrective actions (i.e. the

site is already in CAS under a permit, agreed order, or closure). However, the RP is still required to comply with the initial response action and reporting requirements of the Chapter 327 rules. For current reportable releases, a written status report must be submitted to the Region within 30 days of the date the release was reported. In addition to the 30-day report requirements of §327.5(c), the RP shall include: (1) a discussion of the circumstances that support including the release with the ongoing corrective action; (2) the location of the release in relation to the area with ongoing corrective action (e.g., the area in the permit, agreed order or closure), and (3) the CAS project manager or contact. Upon review, the Region may refer the site and all applicable information to the CAS.

C. Workplans

The TRRP rules were established to be self-implementing for the assessment (APAR) phase of a cleanup; therefore, prior agency approval is not necessary. TRRP also promotes completion of cleanup under Remedy Standard A without prior approval. However, a RAP under Remedy Standard B must be submitted to the agency for review and approval prior to implementation. For projects where Remedy Standard B will be applied, the Region will refer the APAR and the RAP to the CAS.

The RP may choose not to self-implement under Remedy Standard A of the TRRP rule by submitting the RAP to the Region with a request for review and approval; however, the 180-day clock does not stop for the review by the Region. The APAR should accompany the RAP. If the response is not completed within 180 days, copies of all comments, directives, and correspondence to and from the RP shall be included with the referral to the CAS. The Region staff will assist with any field work needed, such as site visits to follow up on the status of the remediation. CAS will route requests for field work through the FOD Central Office Waste & Emergency Response Manager.

Attachments: Attachment 1 - Chapter 327 PCL Eligibility Checklist
Attachment 2 - Reviewing a Tier 1, Soils-Only APAR Under TRRP
Attachment 3 - Remediation Referral Form

ATTACHMENT 1
Chapter 327 PCL Eligibility Checklist

Use this checklist to determine if the response action qualifies for use of Chapter 327 PCLs. If all the answers are yes, use of the Chapter 327 PCLs is allowed. Use of Chapter 327 PCLs is not a substitute for compliance with the rules of Chapter 327. Include a copy of this checklist in the report. If any answer is no, clean up the release to pre-release or background conditions, or proceed under TRRP.

1. Is this a current release? Q Yes Q No

The response action must be for a current release as defined in this memo. Chapter 327 PCLs cannot be used for historic releases, or cleanups which exceed 180 days from the date the release is reported

2. Is the spill confined to on-site property? Q Yes Q No

On-site property refers to land owned or controlled by the RP. Use of Chapter 327 PCLs is not applicable to releases that occur on land not owned or controlled by the RP. Similarly, Chapter 327 PCLs are not applicable to the off-site portion of an on-site release that extends beyond the limits of the on-site property.

3. Is the release confined to soils only, without impact to groundwater, or potential impact to surface water, sediments, or indoor air? Q Yes Q No

The use of Chapter 327 PCLs is limited to soils only. If other environmental media (surface water, groundwater, sediments) are threatened or impacted, now or in the future, the answer to this questions is “No”. Soils include earthen containment features such as liners, tank dikes, etc.

4. Does the release involve less than 10 carcinogenic and/or less than 10 noncarcinogenic chemicals? Q Yes Q No

If there are more than 10 carcinogenic and/or more than 10 noncarcinogenic COCs, the answer to this question is “No” and the RP will not be allowed to use Chapter 327 PCLs. When a COC has both carcinogenic and noncarcinogenic effects, the COC must be included in the count for both categories. Cumulative adjustments must be processed under TRRP.

5. Is the release area less than 30 acres in size? Q Yes Q No

The Chapter 327 PCLs are based on a source area size of less than 30 acres. If the affected area is greater than 30 acres in size, Chapter 327 PCLs do not apply.

6. Does the release site pass the Ecological Tier 1 Exclusion Criteria checklist? Q Yes Q No

Chapter 327 PCLs are protective of human health only. Determine if additional steps are necessary for ecological protection by evaluating the release site using the ecological checklist. Perform the evaluations and provide a completed Tier 1 Exclusion Criteria checklist as part of the release report. If the site does not pass the checklist, the answer to this question is “No”.

ATTACHMENT 2

Reviewing a Tier 1, soils-only APAR under TRRP

This list was created to aid the reviewer, and is not intended to be used as a guide for completing an APAR. Use this list of questions to assist in the review of an APAR for an affected property where the person assessed only soils and used only Tier 1 PCLs. This list does not cover all situations that may apply to the affected property, it may be used as a guide only.

Questions to ask	Where in the APAR to look
What is the overall situation at the affected property? What media is affected?	Executive Summary
Have owners of all sampled or affected properties been notified?	Executive Summary, Appendix 12
What COCs in which media require a remedy?	Executive Summary
What are the proposed future actions?	Executive Summary, Conclusions and Recommendations
Were any emergency or abatement actions taken in response to the release? Were previous assessment activities conducted?	Chronology
Is the source of drinking water for the affected property or nearby properties threatened or affected by the release?	Worksheet 1.0
What was the past use of the site? Current use? Future use?	Worksheet 1.1, Attachment 2A
How many affected properties were involved in the assessment?	Worksheet 1.2, 2.0, Attachment 2A
What are the sources of COCs? Are the sources ongoing?	Worksheets 2.0, 3.1, Attachment 2A
What is the geologic setting? How does the geology of the area affect migration of COCs?	Worksheet 2.1, Attachments 2B, 2F
Assume Class 1 groundwater in soils-only evaluation. Are there water wells within 500 feet of the affected property?	Worksheet 2.1, Worksheet 3.2, Appendix 2
What potential receptors were evaluated? Are there any threatened or affected receptors?	Worksheets 3.0, 3.2, Attachments 3A, 3B
Is there surface water nearby?	Attachment 1B, Worksheet 3.0
Based on the type and distribution of COCs, are there any other potential receptors that should have been evaluated?	Worksheet 3.0
Did the affected property pass the Exclusion Criteria Checklist for ecological effects? If not, is a Tier 2 or 3 ecological risk assessment included in the report? If so, how do the ecological PCLs compare to the human health PCLs?	Worksheet 3.3, Attachment 9A
What are the complete or reasonably anticipated to be complete exposure pathways? Do the answers make sense based on site conditions? Were PCLs developed for each complete or reasonably anticipated to be complete exposure pathway and for those pathways required to be evaluated by rule? Which pathways require a response action? Is there a threat of exposure to the PCLE zones?	Worksheet 4.0
Are there COCs present that have COC properties or toxicity factors different from those specified in the rule or guidance?	Worksheet 4.1, Appendix 4
Were any COCs screened from PCL development? If so, are the screening criteria correct?	Worksheets 4.2, 5.1, 5.6
What media were sampled? (surface soil and subsurface soil)	Worksheet 5.0, Attachment 5A
Were all samples collected and handled appropriately?	Worksheet 5.0, Appendix 5, Appendix 13
Were the assessment levels correctly determined for both surface soil and subsurface soil?	Worksheet 5.0, Appendices 9, 10
Was the extent of COCs defined in both the lateral and vertical directions in both surface and subsurface soil?	Worksheet 5.0, Attachments 2A, 5B, 5C, Appendix 9

Coordination of Remediation Activities

Page -13-

Were analyses conducted for all the right COCs? Were appropriate analytical methods use?	Worksheets 5.1, 5.6
Were PCLs determined for all COCs not screened out?	Worksheets 5.1, 5.6
Were the PCLs determined correctly? Do the Tier 1 values listed match the correct values in the Tier 1 PCL tables? Was a cumulative check conducted if there were more than 10 COCs?	Section 5, Appendices 9, 10
Were the critical PCLs determined correctly?	Worksheets 5.5, 5.9
Are all references clearly listed?	Appendix 1
Were all the lab QA/QC procedures and results acceptable?	Appendix 5
Were all MQLs appropriate based on the usage of the analytical data?	Appendix 5
Was all waste properly disposed?	Appendices 6, 7, and 8

Remediation Referral Form (revised 4/15/03)

ATTACHMENT 3

Complete and attach to documents being referred to another Section for review. The referral may be hand-delivered to the Section administrative staff, or sent via interagency mail using the appropriate mail code. Check the box indicating area referring to:

G CAS**G PST/SAM****G Field Ops****G VCP****IHW - SWR**

or Facility ("T") ID No.:

EPA ID:

Other Program ID
(Type & No.):**Facility Information**

Facility Name:

 First-time referral for facility
(Attach copy of Order, AFJ, NOV, or
other Directives)

 Ongoing referral of
facility documents

Physical Address:

Mailing Address:

County:

Facility Contact:

Phone No.:

Document to be reviewed
 Original or copy has been sent to Central Records
 Supporting documents are being sent with referral

Title & Date (and Program identifiers/Doc#, as applicable):

Referring program & reason for referral:

Enforcement

Document results from: Agreed Order Agreed Judgement NOV Other (describe below)
 Date of Order/AFJ/NOV _____
 Provision requiring document submittal & review _____

Field Ops

 Remediation will take >180 days Closure of other industrial unit Groundwater contamination is documented Release from permitted/interim status
unit Remediation being conducted under TRRP Remedy Standard A
Tiers 2 or 3, or Remedy Standard B Closure of RCRA permitted unit/BIF
(*send to Permits*) Historical contaminationPST/SAM/
CAS
 Meets criteria # _____ of Criteria Referral Memo
 NOTE: Receiving Section has 15 days to review/return case if
 applicability criteria are not met.
 Other (describe below)Waste Water
Permitting Municipal Waste Water Treatment Plant Closure Report**Other Information**

Comments/Other contacts:

 Referring staff requests to attend meetings scheduled with the facility**Receiving Section entry only**

Referring Staff Name, Program/Region & Phone No.:

Date Received (date stamp):

Referring Staff Signature:

Date:

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BIOGRAPHICAL INFORMATION

EDUCATION

- B.S. in Geology, Texas A & M University
- M.S. in Geology, Texas Tech University
- Analysis and Design of Aquifer Tests; National Well Water Association
- Groundwater and Contaminant Transport Modeling and Aquifer Characterization, Master Civil Engineering Coursework, Texas Tech University

PROFESSIONAL ACTIVITIES

- President/Dallas Operations Manager, Cirrus Associates, L.L.C.
- Past Vice-Chairman, Waste Committee Chairman and Texas Risk Reduction Program Liaison of Industry Council on the Environment
- Texas Risk Reduction Program (TRRP) Guidance Development Steering Committee Member
- Presenter, State Bar of Texas Advance Real Estate Law Course, Hyatt Hill Country Resort, July 2003



NEW ENVIRONMENTAL TECHNOLOGIES

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AUSTIN, TEXAS
AUGUST 7-8, 2003**

**MAKING IT TO THE BUZZER
EMERGING ENVIRONMENTAL TECHNOLOGIES**

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TABLE OF CONTENTS

INTRODUCTION	3
BACKGROUND	4
Initial Focus on Air Quality	4
Technology Demonstrations	5
Strategic Assessments	5
EMISSIONS REDUCTION TECHNOLOGIES	6
Clean, Alternative, and Synthetic Fuels.....	6
Emulsions.....	6
Sythetic Fuels.....	7
Biodiesel	7
E-diesel	7
Exhaust Gas Recirculation (EGR)	7
Post-Combustion Technologies	8
Particulate Matter (PM) Traps	8
Diesel Oxidation Catalysts.....	8
Selective Catalytic Reduction (SCR).....	8
Idle Reduction.....	8
Auxiliary Power Units	8
Truck Stop Electrification.....	8
TCET Retrofit Grants	9
TCET Hybrid Grant	10
TCET Engine Development Grant.....	10
Fuel Cell Vehicles.....	11
Industrial Projects Funded	12
Locomotive Project Funded.....	13
Brick Kiln Project Funded	13

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15th Annual Texas Environmental Superconference
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FARTHER DOWN THE LINE
(1st and 3rd Stanza)

Let's have a hand for that young cowboy
And wish him better luck next time.
I hope we'll see him up in Fargo
Or somewhere farther down the line.
This time he sure drew a bad one
One that nobody could ride.
By the way he pulled his hat on
You know he'd be there for the ride.

He almost made it to the buzzer
Somehow he gave up in the end
He put one hand around the other
And let that pick-up man on in
It was his last chance to ride it
Now he'll have to move along
But he knows back in his mind, that
He won't be away for long.

Recorded by Willie Nelson
Written by Lyle Lovett

INTRODUCTION

How appropriate Lovett's song is to set the theme for the conference session, "New Environmental Technologies." Texas has 'pulled its hat on' in determination to make it to the buzzer managed by the Environmental Protection Agency. The thematic aptness of Lovett's song is the more poignant for those of us who remember "Urban Cowboy," and wonder if Texas will ride the bull like John Travolta or Debra Winger. The bull--or bronc as you may choose--that we're challenged to ride is the one made notoriously prominent by Houston's inheriting the 'dirtiest city air' appellation from Los Angeles two years ago. Texas is astride Bad Air and will have a struggle to stay on for the time. Three areas in the state are in non-compliance, and several in near-non-compliance, with the National Ambient Air Quality Standards (NAAQS), and Texas has been given until

2007 to tame the chemical soup in the air into compliance before the buzzer will sound. Senator Buster Brown (aptly named for the theme as well) introduced and passed the innovative Senate Bill 5 in the 77th Legislature, creating incentive-based programs to help Texas achieve victory by the buzzer. The following paper outlines the role that The Texas Council on Environmental Technology has been designated to play in the challenge to ride a cleaner wind.

BACKGROUND

The Texas Council on Environmental Technology (TCET) a state agency created by the 77th Legislature (2001) through Senate Bill 5 is charged with developing and certifying new environmental technologies that cost effectively improve air quality in Texas while promoting the development of environmental technology businesses in Texas. TCET evaluates, seeks regulatory approval for, and facilitates the deployment of new environmental technologies that have the potential to improve air quality, water quality or reduce the generation of solid wastes.

Initial Focus on Air Quality

Senate Bill 5 directs the Council to: (1) facilitate the deployment of new environmental technologies that have the potential to improve air quality, water quality or reduce the generation of solid wastes, and (2) to facilitate the development of new technologies that will be applicable for the other components of the Texas Emission Reduction Plan (TERP). With the limited resources available in the current biennium, the Council focused all of its initial activities on technologies that will be effective in improving air quality; however, the Council anticipates that future activities will address the Council's full charge "to assist in developing solutions to air, water, and waste problem [in the state]". The ultimate goal of all environmental projects and activities defined in SB5 is to insure that Texas 'makes it to the buzzer.' EPA is the scorekeeper, and the year 2007 is when the buzzer will sound.

TCET's enabling legislation provides guidance in the allocation of resources, suggesting that grants awarded shall be directed toward a balanced mix of:

- (1) retrofit and add-on technologies to reduce emissions from the existing stock of vehicles targeted by the Texas emissions reduction plan;
- (2) advanced technologies for new engines and vehicles that produce very-low or zero emissions of oxides of nitrogen, including stationary and mobile fuel cells;
- (3) studies to improve air quality assessment and modeling;
- (4) advanced technologies that promote increased building and appliance energy performance; and
- (5) advanced technologies that reduce emissions from other significant sources.

TCET is one component of the Texas Emission Reduction Plan (TERP). TERP was designed by the 77th Legislature to replace mandatory measures that would have achieved reductions in emissions of oxides of nitrogen (NOx) in the state's nonattainment areas

with voluntary incentive programs. Emissions of nitrogen oxides in the atmosphere lead to ozone formation and negatively affect human health. The programs created by TERP play a critical role in the State's plans for achieving air quality objectives in urban areas and bringing "nonattainment areas" into compliance with the National Ambient Air Quality Standards (NAAQS). The primary goal of TCET is to facilitate the development of effective new technologies for reducing emissions that lead to ozone formation, and especially those technologies eligible for grants from TCEQ under TERP. The legislature has also charged TCET with facilitating the development of new technologies that have multiple environmental benefits, and to assess the health impacts of air pollution. Funding for the TCET comes from the TERP Fund, administered by the Texas Commission on Environmental Quality (TCEQ). Though funding was limited to about \$1.5 million per year in the current biennium, in the 2004-2005 biennium, TCET will receive 9.5% of the TERP funds, and may have approximately \$15 million to fund development of beneficial technology development.

Technology Demonstrations

In March, May, and December of 2002, and in March of 2003 the Council issued requests for proposals for the demonstration of new technologies with potential for improving air quality and for a health assessment study. Technical review committees consisting of representatives of the TCEQ, EPA Region 6, EPA's Office of Transportation and Air Quality, other state agencies, the regulated community and the environmental advocacy community have evaluated over fifty proposals. The review panels have identified multiple technologically sound, innovative proposals, worthy of funding, and the Council selected 15 projects for funding totaling almost \$2.5 million. Two projects have been completed, others are underway, and contracts for the most recent grants have either been signed or are near completion. The number of projects that funded was limited by the funding available (only about 15% of the projected funding identified in SB5), not by the number of technologically sound, innovative ideas. To date the Council has funded 15 contracts for almost \$2.5 million. More vigorous and broad support for a wider variety of technologies is anticipated for the 2004-2005 biennium.

Strategic Assessments

In addition supporting technology development, the Council initiated a strategic assessment of critical air quality technologies eligible for support under TCEQ's TERP incentive funding program. Technical support for this assessment is being provided by a contractor, selected through a competitive request for proposals process. The Council has also completed a strategic assessment of the health impacts of air pollutants, as directed by the legislation. Both of these activities have been completed and final reports are posted on the TCET website (www.tcet.state.tx.us).

The legislature identified five areas of focus for TCET's support:

(1) Retrofit and add-on technologies to reduce emissions from the existing stock of vehicles targeted by the Texas Emissions Reduction Plan

Both on-road and off-road diesel engines are a major source of NO_x emissions in urbanized areas of the state, ranging from 45% of total emissions in the Houston/Galveston area to 92% in the Dallas/Ft. Worth area. Federal standards for new heavy duty diesel engines introduced by 2006 represent a 90% reduction in NO_x emissions, 72% reduction of non-methane hydrocarbon emissions, and 90% reduction of PM emissions compared to the 2002/2004 emissions standards. The primary target for diesel emissions reduction technologies is the large inventory of existing vehicles. Given the very long life of heavy-duty diesels, retrofit technologies are the most practical prospect for reducing emissions.

Retrofit technology for mobile or off-road vehicles can be any change to an engine system above and beyond what is required by EPA regulations that improves the engine's emission performance: catalysts, filters, cleaner fuels or additives, idling control equipment, engine modifications, or any combination of these.

TCET's role is to fund the development, testing, demonstration, and verification of the effectiveness of retrofit technologies.

EMISSIONS REDUCTION TECHNOLOGIES

'Clean', Alternative, and Synthetic Fuels

Federal phase-in requirement requiring **low-sulfur gasoline (LSG)** for use in Tier 2 vehicles is as follows:

- 2004 = 300 ppm/gal cap, 120 ppm average
- 2005 = 300 ppm/gal cap, 90 ppm average
- 2006+= 80 ppm/gal cap, 30 ppm average

The application of LSG will reduce NO_x by about 74% of that produced by 1994 (Tier 1) vehicles.

Future federal standards will require **ultra-low sulfur diesel (ULSD)** for on-road use in vehicles certified to the federal 2007 HD engine emissions standards beginning June 1, 2006. NO_x will be reduced by about 95% of that produced by current HD vehicles. Texas will require Low Emission Diesel by April 1, 2005 for both on-road and off-road diesel use, reducing NO_x by about 5.7%. Sulfur will be limited to 500 ppm, aromatic hydrocarbons to 10% in volume, and minimum cetane number of 48. Sulfur will be reduced to 15 ppm in 2006 to meet federal ULSD specifications.

Emulsions may involve water, methanol, as well as other additives or stabilizers with the purpose of reducing emissions, improving combustion, and occasionally improving fuel economy. In general, adding water to the diesel combustion process decreases combustion temperatures and lowers NO_x emissions. Water can be added by in-cylinder injection, fumigation (introduction of water into intake air), and by fine dispersion of two immiscible liquids into each other. Several emulsions have been verified by EPA testing protocols: Lubrizol's "Purinox" has been verified by the California Air Resources Board

(CARB) to reduce NO_x by 14% and PM by 62.9%, and is allowed for both on- and off-road use. TotalFinaElf's "Aquazole" is CARB verified to reduce NO_x by 16% and PM by 60%, but is currently allowed only for off-road use.

Synthetic fuels (sometimes referred to as FT--or Fischer-Tropsch process--fuels) are typically produced from carbonaceous feedstocks by processes frequently referred to as gas-to-liquid, or GTL technologies. Such fuels are compatible with existing engines, with conventional diesel, can be designed for both engine performance and emissions, and have practically zero sulfur. Shell has documented that synfuels show a 40-60% emission benefit for CO, HC, and PM in light duty vehicles, compared to only 5-30% range in heavy-duty engines. However, such fuels manufactured from natural gas have no discernible greenhouse gas benefit; only synthetic fuels made from biomass can provide CO₂ emissions benefit. Direct liquefaction of coal for synfuel, whereby coal is converted to liquid hydrocarbons in a single step operation, could provide abundant quantities of synfuels if process economics can become competitive.

Biodiesel is a renewable fuel oxygenate derived from biomass feed stocks, from vegetable oils or animal fats for use in diesel engines. Potential reductions compared to conventional diesel:

- Pure biodiesel (B100) = HC 40%, CO 50%, & PM 70%. NO_x is increased by 9%.
- B20 (blend of 20% biodiesel and 80% petroleum diesel) = HC & CO 10%, PM 15%. NO_x increase of 2%.

E-diesel is an experimental fuel blend of diesel, up to 15% ethanol, and up to 5% special additives that prevent the emulsion from separating. Several issues, low flashpoint and tank vapor flammability, OEM warranty acceptance, and EPA fuel registration must be addressed. Potential reductions compared to conventional diesel:

- PM 27-41%, CO 20-27%, and NO_x 4-5%.

Exhaust Gas Recirculation (EGR)

EGR technology re-routes a portion of the exhaust gas into the intake air, reducing the combustion temperature and reducing NO_x by 50 to 80%. EGR displaces some of the oxygen inducted into the engine with inert gases, reducing the rate of NO_x formation. Exhaust recirculation has been used for over 30 years in gasoline and light duty diesel-engines, but not required of heavy-duty engines until 2002/2004 emissions limits were promulgated. There are concerns that EGR systems which introduce unfiltered exhaust gas into the intake manifold may affect engine durability by affecting lube oil quality and the life of cylinder bore, and piston rings. Current systems typically increase carbonaceous particulate and require exhaust system emission controls and the use of ULSD to operate correctly.

Post-Combustion Technologies

Particulate Matter (PM) traps remove particulates from the exhaust stream by collecting them on a porous ceramic filter element and are usually assisted by oxidation catalysts in order to regenerate. Such traps require ULSD to operate efficiently, and typically reduce PM by up to 85%.

Diesel oxidation catalysts are designed to reduce hydrocarbon (HC), carbon monoxide (CO), and particulate matter (PM) emissions from diesel engines by oxidation of the HC & CO over a precious metal catalyst, while PM is lowered by oxidation of its soluble organic fraction (SOF). This aftertreatment system also requires ULSD to operate efficiently, and achieves CO and HC reductions of up to 90% and PM up to 50%.

Selective Catalytic Reduction (SCR) systems use ammonia or urea as the reducing gas, which is injected into the exhaust stream and passed over a specially formulated catalyst-coated substrate. ULSD is required, and NO_x, CO and HC reductions of 50-90% can be achieved, as well as PM reductions of up to 30%.

Other aftertreatment devices involve lean NO_x adsorbers, lean NO_x catalysts, selective catalytic reduction (SCR) using various reductants, and integrated applications to solve emissions problems. SCR has long been used in large industrial applications, and is now being developed for heavy-duty on-highway diesels. Once problematic, diesel particulate filters (DPF) designed to reduce particulate matter (PM) are now planned for serial production. A major challenge is to integrate engine and post-combustion control devices into an overall emission control system.

Idle Reduction systems are designed to reduce or eliminate idle time of diesel vehicles and eliminate fuel waste as well as NO_x, and PM emissions. The Texas Motor Transportation Association reports there are 550,000 (200,000 in Houston alone) commercial trucks operating in the State of Texas. Trucks idle for long periods, and typically burn 1 gallon of diesel per hour of idle. EPA suggests that a class 8 (heavy duty) truck typically idles 8 hrs/night (300 nights/year). Each year a truck emits over .3 tons of NO_x and 21 tons of CO₂. Each year, collectively, trucks waste about 1.2 billion gallons of diesel and produce over 200,000 tons of NO_x, at idle.

Auxiliary Power Units (APU) are removable on-board generator sets that provide heating, cooling, and electrification for cab occupants during engine shut down. Such units often have paybacks approximating 1 year.

Truck Stop Electrification (TSE) systems provide cab attachments (window attached ductwork and ancillary services) cab air conditioning, telephone, television, internet access, internal and external power, and 100% reduction of idling fuel. TSE service is typically less than the cost of diesel fuel consumed during idle. EPA is working on programs to accelerate the introduction of idle control technology by the creation of an APU re-investment program and creation of Interstate Corridors Program. TSE technology has been successfully demonstrated in New York and Tennessee.

TCET Retrofit Grants

TCET has funded six projects in the first category involving vehicles targeted by TERP:

- Assessment of the state of technology development and needed support for one major contributor to emissions in the non-attainment areas, heavy-duty diesel engines. The final report on this project was submitted in June 2003, and is available on the TCET website. The review of technologies discussed in this section is greatly benefited by the report.
- Testing of a fuel line catalyst device that significantly reduces harmful exhaust emissions from internal combustion engines. The device may be used in either gasoline or diesel engines, but tests will be performed on diesel engines typically used in commercial truck and bus fleets. Particulate matter reductions are expected to be 40-50%.
- Environmental Technology Verification (ETV) testing of a catalytic device designed for gasoline engines, installed on the fuel line after the fuel filter and before the carburetor or injectors. The zinc and copper screens in the core device break down the hydrocarbon chains in the fuel, increasing vapor pressure, improving vaporization, and causing the air-fuel mixture to disperse more uniformly and mix more completely in the engine's combustion chamber. Previous tests of the technology by South Texas Community College, Mexico's National Institute of Ecology, and the City of San Antonio demonstrated reductions of 26-40% in NO_x, 32-97% for hydrocarbons, and 26-91% for carbon monoxide. Verification of these previous tests will allow SIP credit for the associated emissions reduction.
- ETV testing of a patented camshaft and timing modification, in addition to enhanced injectors for diesel engines. The technology has been tested by the developer on multiple spark-ignition engines with fuel efficiency improvements of as much as 100% or more, and emissions reduction of 50% or greater. Tests on two different diesel engines (a 1995 Perkins Inline Six Cylinder and a 1999 Detroit Diesel Series 60) reported NO_x emissions reduction of 21.5% and 23%, PM reductions of 23.5% and 30%, and fuel efficiency improvements of 19% and 31%.
- ETV testing of a series of homogenous combustion catalysts, added at very low levels (generally less than 50 ppm in the fuel) and fully miscible with diesel fuels. The catalysts will be tested in on-road and off-road vehicles extensively used in applications in Texas. The catalyst is projected to improve mileage in the range of 7 to 15% and to achieve emissions reduction in the range of 20-50% for NO_x, 15-30% for VOCs, 20-50% for PM, 15-30% for CO, and 5-15% for CO₂. Because of the low concentrations of the catalyst required, the additive promises to be very cost effective.
- Testing and verification of a thermal stability additive for low-sulfur fuel. The additive to be tested under EPA protocols has demonstrated promising results in on-road, off-road, marine, and stationary diesel engines. Preliminary tests by the

California Air Resources Board have indicated smoke opacity reduction by over 30%, NO_x by 9 to 24%, and SO₂ by almost 10%.

(2) Advanced technologies for new engines and vehicles that produce very-low or zero emissions of oxides of nitrogen, including stationary and mobile fuel cells.

Hybrid vehicles combine two or more sources of power that directly or indirectly provide propulsion power, resulting in greater fuel efficiency and cleaner emissions. *Gasoline engine/battery electric* is most common type i.e. Toyota Prius and Honda Insight and Civic Hybrid. The 2003 Honda Insight is certified by EPA to new EPA Tier 2-Bin 5 emission standard (0.07 grams per mile NO_x).

TCET Hybrid Grant

- TCET awarded a grant to a consortium comprised of the Houston Advanced Research Center, FedEx, the Alliance for Environmental Innovations and the Southwest Research Institute to test a *diesel/electric hybrid* pick up and delivery vehicle. In a press release on May 20, the [FedEx Corporation](#) announced that it planned to replace 30,000 of its delivery trucks with energy-saving, environmentally friendly hybrid-powered vehicles.

The company said that it had already purchased 20 such trucks to begin building what would be one of the first big commercial fleets of hybrid vehicles. The new trucks — powered by both diesel engines and electric motors in a mix controlled by onboard computers — will be introduced over the next several months in four American cities, with five trucks planned for Houston. The company plans to use the hybrids to replace its medium-size delivery trucks, the ones commonly seen on city streets.

While the new trucks will be more expensive to purchase, they increase fuel efficiency by 50 percent (with commensurate reductions of emissions) and will be less costly to maintain. FedEx hopes to break even over the 10 to 12 year anticipated life of the trucks.

TCET Engine Development Grant

- TCET awarded a grant for the design and build of a prototype advanced engine design. The objective is to a) test the prototype engine, prove and quantify its expected thermal efficiency of 54%, b) to prove and quantify the expected low level of NO_x emissions resultant of the low combustion temperature, c) measure and confirm expected engine power curves and related emissions, and d) evaluate and determine optimum materials for burner, optimum design of the combustion module to maintain cooling and assure most complete combustion for minimal CO, NO_x, and THC. The test engine design will be a 30kW to 50kW commercial

engine, though engine design is scalable over a wide range from 10kW to 100mW.

Fuel Cell Vehicles (FCV) are driven by two electrodes sandwiched around an electrolyte. Oxygen passes over one electrode and hydrogen over the other, generating electricity, water, and heat. When using hydrogen as fuel, fuel cells are a zero emissions technology. Toyota is demonstrating a fuel cell automobile in California, and General Motors Corp and FedEx Corp marked a first in Japan on Wednesday, July 9, 2003 by delivering packages in a fuel-cell vehicle (FCV). GM and FedEx will operate GM's HydroGen3 vehicles on FedEx Express's regular routes in Tokyo.

By storing liquid hydrogen on board the vehicle, HydroGen3 can run for 400 km (250 miles) before refueling, GM said. That is about 100 km more than FCVs developed by Toyota and Honda. The Japanese government wants to lay the groundwork for full commercialization of FCVs by 2005, with the aim of having five million of the vehicles on the road by 2020.

Automakers, however, have said commercialization could take longer due to high development costs and lack of infrastructure, such as hydrogen fuelling stations.

Given the shortfall of funds in the initial biennium, as well as the pressing need to support near term commercializable technologies, TCET has not yet funded any fuel cell projects

(3) Studies to improve air quality assessment and modeling

In the current biennium, TCET will commit 20% of its total funding to support this category. In the current biennium (2002-2003), TCET has supported one project.

- TCET has issued a grant to develop, validate, and quantify the potential emissions reductions and air quality benefits of a new technology: a virtual functionality test of exhaust gas recirculation (EGR) emission control systems (ECS) on light-duty gasoline vehicles. If successful, the virtual functionality test will be able to identify vehicles that have malfunctioning EGR systems and the state would have the prospect of having EPA allow additional SIP NOx credits for repairing those vehicles over the credit granted for inspection and maintenance programs alone.

(4) Advanced technologies that promote increased building and appliance energy performance.

To date, the Council has not funded development of building or appliance technologies. The current compelling focus is on diesel engine retrofits and industrial point source emissions. SB5 has addressed the issue of building energy performance by two important requirements:

- A. By adopting a statewide International Residential Code for single-family residential construction (as it existed on May 1, 2002), and for all other residential, commercial, and industrial construction, adopting the International Energy Conservation Code as it existed on May 1, 2001, and
- B. By requiring each political subdivision (in non-attainment areas and affected counties) to establish a goal to “reduce the electric consumption by the political subdivision by five percent each year for five years, beginning January 1, 2002.”

The Energy Systems Laboratory at Texas A&M conducts energy code training throughout the state for designers, engineers, architects, builders, code officials, code inspectors, and others involved in building trades. The State Energy Conservation Office has responsibility annually to provide the Environmental Commission “with an evaluation of the effectiveness of state and political subdivision energy efficiency programs.”

Some promising technologies for improving building energy efficiency are geothermal heat pumps, innovative lighting design, solid-state lighting, Energy Star rated appliances, low-e glazing and framing materials, smart glass and windows as energy sources, integrated electronics and fenestration products, and solar thermal and photovoltaic systems. There is currently a lack of integration tools, forms, and hardware necessary to optimize integrated building systems.

(5) Advanced technologies that reduce emissions from other significant sources

Sources of NO_x in the Houston/Galveston Area (HGA) and in East Texas are 88% and 74% respectively of NO_x emissions indicated in EPA data. Revised assessments of air emissions made in 2002 indicate that concentrations highly reactive volatile organic compounds (VOCs) in the Houston/Galveston area are higher than initially indicated and are a significant contributor to NO_x formation.

Industrial Projects Funded

- One is for improved assessment of industrial VOC emission sources using laser-imaging technology. The petrochemical industry is a significant contributor to VOC emissions through flares, cooling towers, emission events related to upset/startup/shutdown/maintenance, equipment leak fugitives, and process vents. TCEQ began long-range work on emerging technologies related to emission quantification of VOC emissions sources, and TCET provided a grant to continue development of the technology aimed at providing more quantitative measurements and to make the method applicable to a broader range of compounds.
- A second is for improved performance (up to 50% reduction in NO_x) of direct-fired conventional refinery heaters by using oscillating combustion. The flow rate of oxidant (air, oxygen, or oxygen-enriched air) to the burner is not oscillated. The effect of oscillating the flow rate is to produce fuel-rich and fuel-

lean zones in the flame. Since combustion under both fuel-rich and fuel-lean conditions produce low levels of NO_x, the total NO_x formed should be significantly lower than that which would occur if the combustion took place without fuel oscillation but at the same overall average fuel flow rate.

- A third is for improved SO₃ control in a fluid catalytic cracking unit (FCCU) by using sulfite/bisulfite (SBS) injection. FCCUs can produce high levels of SO₃ which pose both direct and indirect adverse health effects. Scrubbers (SCR) used for NO_x control convert SO₃ to sulfuric acid mist in the exhaust plume. The SBS injection technology is used successfully in commercial utility boiler applications, and will be demonstrated in a petrochemical plant in the Houston area.

Locomotive Project Funded

- Another project funded in this category involves locomotive switcher engines. The State Implementation Plan estimates that there are 400 local and switcher locomotives operating in the Houston/Galveston area. TCET has funded a project to outfit two BNSF switcher locomotives with switcher helix diesel engine fuel injectors. The project intends to demonstrate a reduction of the locomotive duty cycle emissions from the current SIP baseline to the EPA's Tier 1 Switch Cycle Standard required for all new switcher locomotives built after 1/1/2003. The injector incorporates internal design changes that affect the diesel fuel's start of injection for each individual speed and load point (locomotive notch settings). Projections are that the baseline weighted duty cycle of 17.5 gms/bhp-hr can be reduced to the Tier 1 standard of 11.0 gms/bhp-hr, which would be a 37.5% NO_x reduction, or approximately 5.3 tons of NO_x reduction/year per locomotive, or 2120 tons/year in the HGA.

Brick Kiln Project Funded

- TCET has funded emissions quantification of kiln modifications developed by New Mexico State University for deployment in Juarez, Mexico. Existing brick kilns burn trash, wood, tires, and other refuse for fuel, producing smog-forming nitrogen oxides, volatile organic compounds, poisonous carbon monoxide and lung-aggravating particulates. Those emissions are expected to be cut in half, by almost 200 tons per year, by a project supported by El Paso Electric (EPE). EPE has supported development and deployment of almost 60 of the kilns in Mexico to reduce pollution migration into El Paso from Juarez. The arrangement was made possible by TCEQ's allowance of a cap-and-trade program set up for older Texas power plants that allows facilities that cannot meet emissions reductions to purchase pollution credits from other plants. In 2001, the Texas Legislature expanded the program into Mexico, within 62 miles of the border.

One additional projects has been funded, and work completed.

- In response to the legislative mandate for TCET to support health effects studies, developed an assessment of information needs for air pollution health effects research in Houston. The complete report is available on the TCET website.

With the passage of HB1635 in the 78th R.S. (2003) Legislature, TCET anticipates significantly increased activity in developing new program announcements and supporting development, demonstration, and verification of additional environmental technologies. The agency will develop a strategic plan and hold public hearings regarding that plan to insure that needed technologies are identified and supported by the resources allocated to the agency. We feel the urgency of accelerating the development and verification of environmental technologies as expeditiously as possible, for the buzzer will sound in 2007, and we prefer to be picked off the bull rather than thrown.

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Dr. Matthews has been Director of the Energy Information Service at the University of Texas' Center for Energy Studies, Director of Training for a national energy consulting firm, Manager of Industrial and Commercial Energy Services for a wholesale electric utility, Director of the Texas Building Energy Institute, Executive Director of the Texas Energy Coordination Council (TECC), a state agency responsible for coordinating energy research at state universities, and is currently Executive Director of the Texas Council on Environmental Technology, a state agency responsible for providing grants for the development, demonstration, and verification of environmental technologies to reduce air emissions and improve the environmental media of water and earth. He has written numerous workbooks and manuals on energy efficiency and has conducted over 400 training programs to support energy conservation efforts in 22 states. He was primary author of the State Energy Plan (SEP), and chaired a committee that developed the Texas Energy Performance Contracting Guidelines for Texas governmental entities. At the request of the Senate Interim Committee on Electric Utility Restructuring, TECC developed a two volume report entitled Market-Based Methods of Providing Renewable Energy and Energy Efficiency Programs. Dr. Matthews develops status reports on activities and technologies supported by the council to the legislature biennially. A native West Texan, Matthews has lived in Austin since 1969. Dr. Matthews has degrees from Baylor University and the University of Texas at Austin.

**15th ANNUAL TEXAS ENVIRONMENTAL
SUPERCONFERENCE
FOUR SEASONS HOTEL
AUSTIN, TEXAS
AUGUST 7-8, 2003**

**IF YOU ARE GOING TO RIDE THE BULL,
YOU NEED ALL THE INFORMATION**
Progress in Environmental Information Technology

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Panel on New Environmental Technology
Progress in Environmental Information Technologies

Our theme song by Lyle Lovett is about attitude and mental concentration in the art of bull or bronc riding. Having grown up watching bull riding, I can tell you that surviving that sport depends on knowledge, not technology. Information is more important than equipment. In this presentation, I make the case for the significance of information technologies in the environmental arena.

I want to focus your attention on the concept of two types of technologies that are important to environmental improvement. One type of technology can help us do things. I will call that a material technology. Another type helps us understand things or processes and disseminate our knowledge. I will call this type an information technology. It may be a little confusing because information technology includes computers, which are material things. The distinction is between technologies that focus on materials and material processes and technologies that focus on information/data. HARC is using both types of technology to advance sustainability.

Material technologies will play an important role in reducing environmental impacts and making our society more sustainable. I can point to several types of material technology in which HARC is playing a role.

1. **Fuel cells** powered with **hydrogen** will reduce some types of pollution and some impacts of the fossil fuel technologies we depend on now. Some plans for hydrogen production are independent of fossil fuel and offer more sustainable energy supplies. HARC is leading a fuel cell consortium to create and study demonstration projects. We also are exploring the extraction of methane and hydrogen from solid waste remediation and waste water treatment.
2. **Renewable energy**, such as wind and solar, will play a role under certain conditions in reducing some impacts of fossil fuel technology and improving energy sustainability. HARC is a partner in integrated energy demonstrations using an optimal combination of energy sources and conservation technologies.
3. **Superconducting** technology will reduce power requirements and increase efficiency of motors and other electrical devices. HARC is working with University of Houston and the US Navy to demonstrate applications of superconducting wire.
4. **Green building** technology is the application of many new technologies to reduce the environmental impact of our built environment. Numerous material technologies are under consideration at HARC, especially as they relate to reduction of the urban heat island.

Material technologies are used to solve environmental problems that we understand and can solve without changes in human behavior. Some problems are poorly understood or require change in human behavior for alleviation. For these problems information

technology is of critical importance. Information technologies will play a significant role in determining what our environmental impacts are and planning how to reduce those impacts. Recognition of global climate change was dependent on advances in information technology. Study of climate is based on simple data put together in complex ways with massive computers. HARC has a variety of programs that illustrate the importance of information technology for environmental improvement. I use four large umbrella areas covering the acquisition, processing and dissemination of information.

1. **Remote sensing capabilities** are revolutionizing our approach to environmental monitoring. Monitoring was once the province of the field staff taking measurements or collecting samples by hand. Environmental assessment was limited to the times and places where the field staff could or would go. As more and more satellites are launched with better sensors, we are moving from collections with spatial and temporal limits to synoptic information gained from satellite or aerial sensors. We have moved from remote sensing data that is limited to two dimensions with coarse spatial resolution in few spectral bands to three dimensions with fine resolution from hyperspectral sensors with more than 220 bands of data.

HARC was funded by NASA to miniaturize and commercialize an airborne, research grade Light Detection and Ranging (LIDAR) system for the purpose of generating high resolution and accurate topographic data. Since commercialization through a company named TerraPoint, HARC has used LIDAR in several environmental projects.

The ALTIMS sensor delivers high resolution topographic data in the form of x, y, z coordinates, spaced approximately 1.5 m apart, with a vertical resolution of 15-30 cm. Such data are easily converted to digital elevation models (DEM) for further topographic analysis. We have used this data to map floodplains and endangered species habitat. It is currently being used to inventory large flat roofs in Harris County that are candidates for new cool roof technology.

2. **Computing power** has increased exponentially since 1965. This allows for the execution of complex modeling algorithms on a scale that was completely inconceivable a few years ago. In fact, fine-grained processes can be modeled globally over an extended temporal range of data in real-time. The implications for predictive environmental applications are profound.

Computing power is a limiting factor for developing explanatory models of complex environmental systems. Photochemical models to simulate accurately ozone formation and dispersion require advanced computing technology and software systems. It is relatively easy to measure wind speed, wind direction, air temperature, humidity, localized concentrations of common contaminants, etc., but it takes advanced computing to model and predict spatial and temporal distributions of ozone concentrations. As computing capabilities grow and modeling advances, environmental assessment becomes more realistic and

prediction becomes more accurate. HARC is currently managing air quality modeling research for the Texas Environmental Research Consortium in cooperation with TCEQ.

3. **Geographic information systems (GIS)** software is a wide reaching technology that touches virtually every aspect of environmental assessment and management. The GIS industry has grown tremendously over the past 10 years as improvements to software and computer technologies push GIS further into the public, private and institutional sectors of society. Some of the more traditional public sector applications include: demographic analysis, land records management, address matching, route planning, strategic response planning, emergency notification, infrastructure inventory/management, utility management, land use planning, site selection analysis, transportation planning and environmental permitting.

The recent development of Enterprise GIS allows users to eliminate data silos - segregated pockets of information- and results in less data redundancy and inefficiency. By collapsing segregated data into an enterprise GIS that is accessible to many departments, organizations are increasing the usefulness of the information they collect and maintain. Companies are now creating web GIS applications which provide the flexibility to easily share information with remote locations, thus reducing the amount of time required to make decisions.

HARC projects typify many of the environmental applications for GIS. HARC has performed analysis of LIDAR data to produce floodplain maps and digital elevation models. We have integrated environmental monitoring data from TCEQ and TPWD into geospatial databases with mapping applications. Whenever we are analyzing data with a spatial aspect, we use GIS for visualization and analysis.

4. The **World-Wide Web** has replaced libraries and paper documents as the initial source of information when researching environmental issues. There is an increasing amount of environmental data freely available for downloading. Establishing **the Internet** as the vehicle of choice for the transmission and dissemination of voluminous datasets has resulted in multiple benefits. In addition to being able to disseminate large datasets effectively, the internet allows the integration of disparate datasets that need not be physically distributed beyond their origin. With the growth of global cooperation, the need to contribute information to the Web has become an important measure of usefulness. To make this knowledge integration feasible, standards have been developed, which allow widely differing systems, architectures, and cultures to exchange information.

This trend is affecting many fields relevant to environmental management. HARC is engaged in several projects that illustrate this trend. We are compiling all of the long-term datasets on the Galveston Bay area into user friendly formats and making the data and simple analyses of status and trends available over the Web. We are working with USGS on the National Biological Information Infrastructure, which has the goal of facilitating internet access to all of the

biological information in the U.S. as long as it is supported by simple metadata on who, where, when and how the data were collected. While this seems a grandiose goal, there is a project of even greater scope called the Earth Portal, which will be based on a geo-browser that would facilitate 3-D searching through a virtual landscape in which one could locate all of the non-commercial environmental data available by location or topic. We are just in the planning stages of this effort.

I hope that I have convinced you that information technologies have a significant role to play in supporting environmental improvement and sustainability, that these technologies are expanding their functionality very rapidly and that projects are underway to harness this technology for better solutions to environmental problems.

Dr. Jim Lester

Director, Environment Group Houston Advanced Research Center

Dr. Jim Lester holds a Ph.D. in Zoology from the University of Texas at Austin and is currently the Director of the Environment Group at the Houston Advanced Research Center. As Director, he is responsible for development and implementation of projects to make more sustainable our management of water, air and biological resources.

He was a faculty member and administrator in the University of Houston System from 1975 to 2002. He held administrative positions at UH Clear Lake as a Dean, Associate Vice President, and Director of the Environmental Institute of Houston.

Dr. Lester serves in an advisory capacity to a variety of organizations. He is Past President of the Texas Environmental Education Partnership and is a member of the executive committee of the Galveston Bay Foundation. He serves as the chair of the Research Coordination Committee of the Galveston Bay Estuary Program, and on advisory committees for the Texas Sea Grant Program, Texas Environmental Research Consortium, and the Rice University Center for the Study of Environment and Society.

His scientific work is grounded in ecological and population genetics, which he has applied to projects dealing with biodiversity and development of new species for sustainable aquaculture. He is currently engaged in projects that analyze compilations of datasets from diverse sources to obtain new insights for watershed and landscape management. His group is collaborating with other organizations in application of information technology to make biological information more accessible and understandable via the Internet. He also supervises the management and coordination of a research program on air quality in the Houston-Galveston area.

Contact Information: Houston Advanced Research Center, 4800 Research Forest Drive,

The Woodlands, Texas 77381

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EPA/TCEQ POINT/ COUNTERPOINT

Paper not submitted

RICHARD E. GREENE
Regional Administrator

Richard Greene was appointed by President Bush in March, 2003, as Regional Administrator for the U. S. Environmental Protection Agency responsible for overseeing federal environmental programs throughout Arkansas, Louisiana, New Mexico, Oklahoma and Texas.

Prior to this position, he served an unprecedented five terms as mayor of Arlington, Texas, during which time his city achieved more progress in the field of environmental protection than at any time in its history. At the same time, Arlington was recognized for its innovative economic development programs producing significant gains in building the commercial tax base of the city while creating thousands of jobs for the people of the community.

His business career includes work in the fields of higher education, the media, the Olympic movement as well as senior management roles in the automobile and banking industries.

He holds a B. S. degree in business administration and is a graduate of the School of Mortgage Banking at Northwestern University in Chicago.

R.B. "Ralph" Marquez
Commissioner, TNRCC

Ralph Marquez of Texas City was appointed by Governor George W. Bush to the Texas Natural Resource Conservation Commission (TNRCC) on May 1, 1995, and was confirmed by the Texas Senate on May 5, 1995. His first term expired August 31, 1999, and he was reappointed for a second term that expires August 31, 2005. The Texas Senate confirmed his second appointment on Feb. 21, 2001.

Prior to his appointment, Marquez served on several TNRCC advisory committees and task forces. He is a registered professional engineer and has been a vice-chair of the Texas Chemical Council environmental committee, a board member of the Gulf Coast Water Authority, and served on the State of Texas Waste Reduction Advisory Committee. He also served as chairman of the City of Texas City Environmental Advisory Board.

From 1963 to 1993, Marquez worked for the Monsanto Company in various capacities, including internal company consultant for technical, regulatory and legislative environmental issues. He has a bachelor's degree in Chemical Engineering from the University of Texas and a master's degree in Future Studies from the University of Houston-Clear Lake.

Since joining the commission, Marquez has served on the U.S. Environmental Protection Agency's Clean Air Act Advisory Committee and the Governmental Advisory Committee to the U.S. Representative to the North American Commission for Environmental Cooperation. He also has served as chair of the Environmental Council of States Regulatory Reinvention Work Group. Marquez has been heavily involved in air, Mexico border, and regulatory innovation issues during his terms on the commission.

CORPORATE INITIATIVES



Sustainability At The Dow Chemical Company

By: Carlos Guimaraes Chairman of the U.S. Business Council for Sustainable Development & Vice President – Environmental Operations Business, The Dow Chemical Company



Corporate Profile

191 sites in 38 countries

3,400
products



\$28 billion
in sales

50,000 employees

Sustainability Profile

- To sell 3400 chemical products & generate \$28 billion requires a lot of resources
- 850,000 barrels of oil per day
- 900 billion pounds of fresh water per year
- 36,000 tons of chemical emissions per year
- Billions of pounds of waste



In Texas

Three major complexes

Half U.S. sales are made in Texas



8,000 people

35% of all Dow world production

\$1 billion economic impact on Texas Economy



Defining Sustainable Development

- **Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.**
 - **1987 World Conference On Environment & Development**



Sustainable Development At Dow

Triple bottom line



Stakeholders

Customers

Investors

Employees

Society



Economic Prosperity



- To constantly improve what is essential to human progress by mastering science and technology.

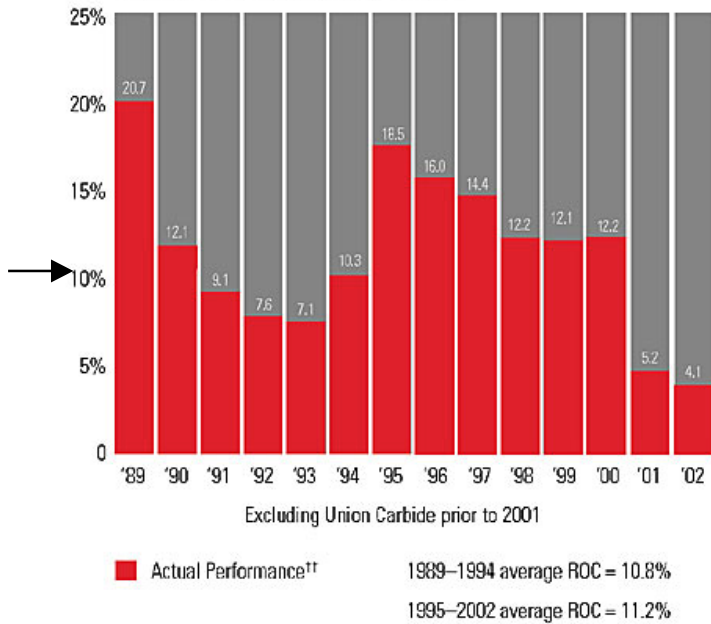


Financial Goals

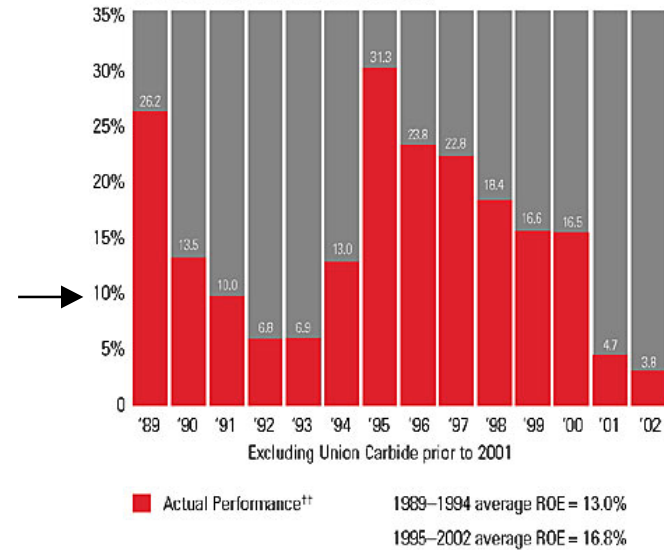
Financial goals

- 0% return in the trough
- 3% return of the cost of capital
- 20% return on equity
- 10% earnings per share growth annually

Financial Objectives: Return on Capital[†]



Financial Objectives: Return on Equity[†]





Environmental Goals



- In 1994, Dow announced aggressive environment health and safety goals for 2005
 - injuries
 - emissions
 - productivity

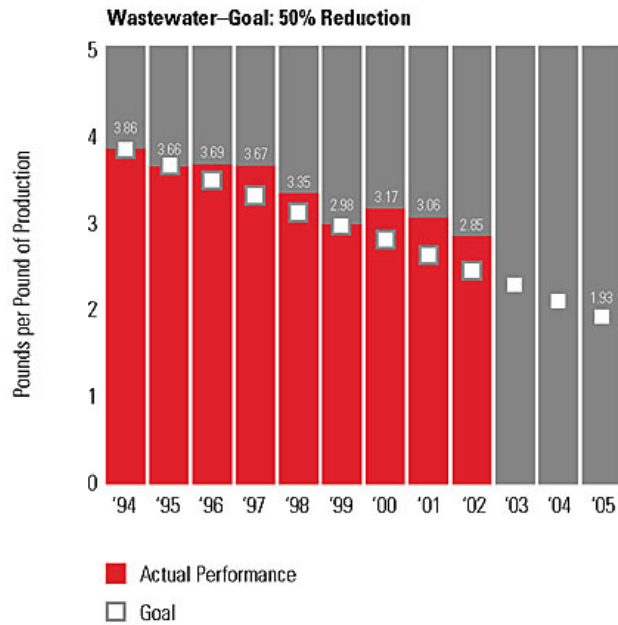
- \$1 billion invested for \$3 billion return



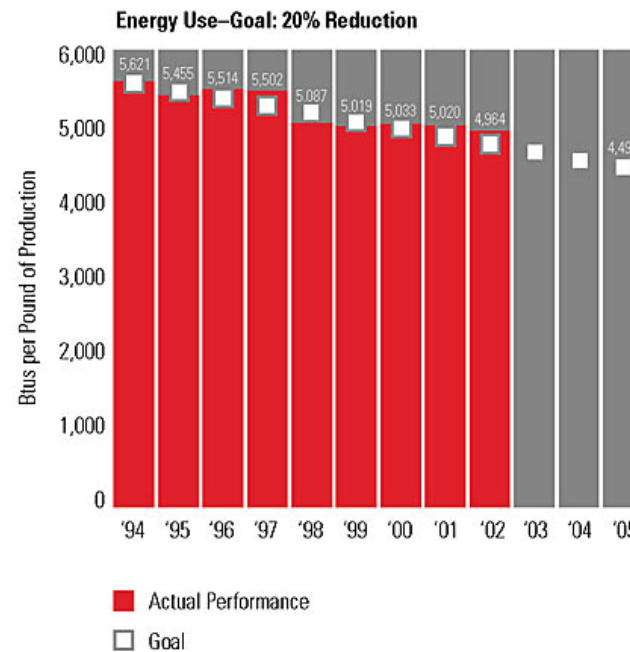
- Dow has established sustainable development goals
- Dow is committed to measurement and reporting.



Dow Resource Productivity Goals



Dow's goal is to reduce wastewater by 50%
Dow's goal is to reduce overall water usage by 50%.

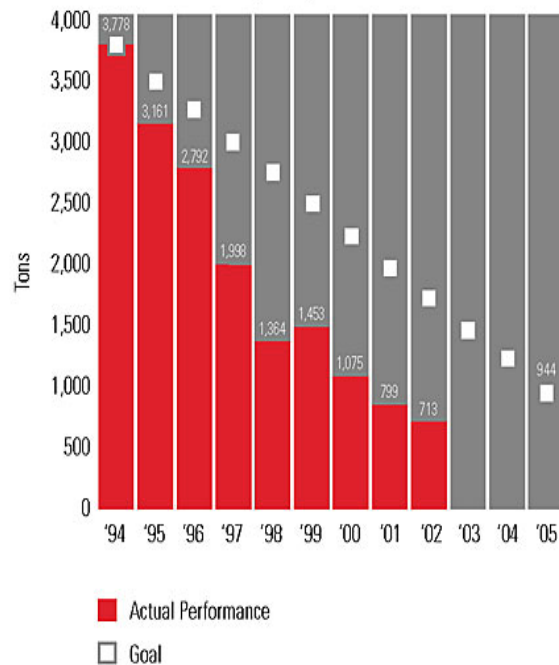


Our focus is on energy intensity-reducing the amount of energy needed to produce a pound of product by 2% per year from 1995-2005.



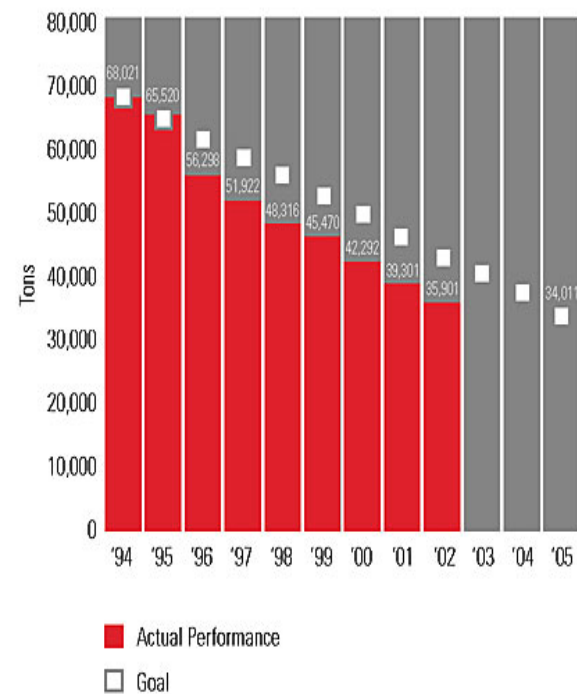
Dow Resource Productivity Goals

Emissions of Priority Compounds—Goal: 75% Reduction



Dow's goal is to reduce the emission of priority compounds by 75% by 2005.

Chemical Emissions—Goal: 50% Reduction



Dow's goal is to reduce overall emissions by 50% by 2005



Dow Resource Productivity Goal

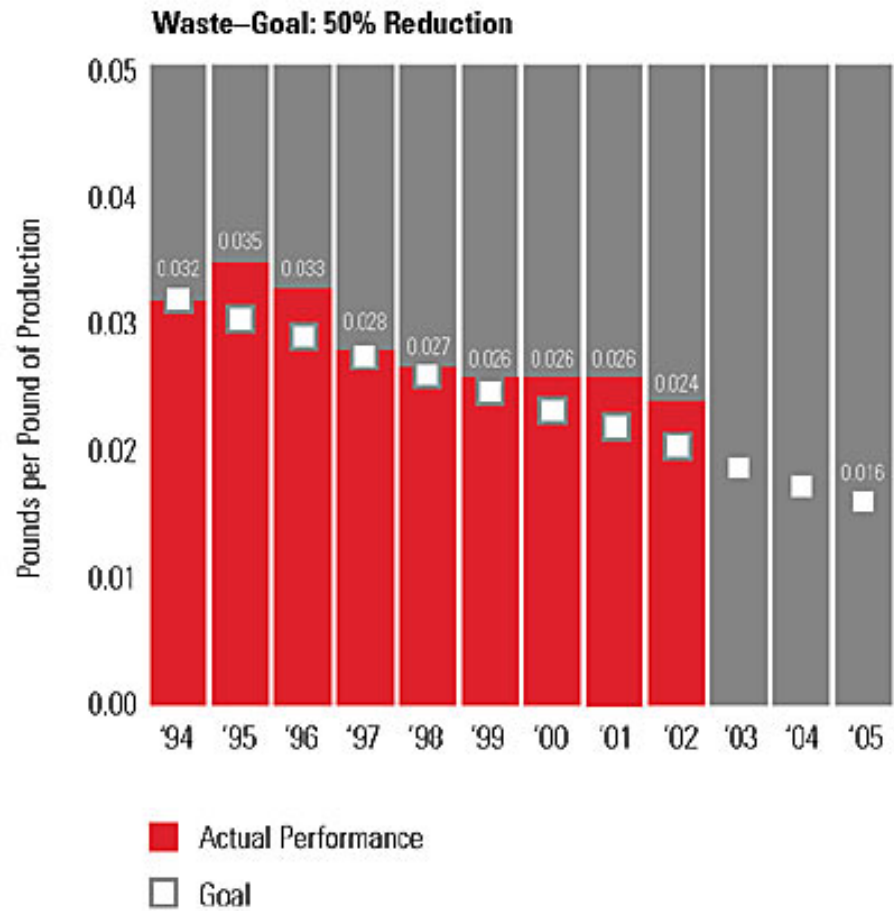


Investment

- **\$900 million**

Results

\$2.7 billion



- Introduced in 1986
- It recognizes individuals and teams for innovation in waste reduction
- 1,000 projects
- 5,000 people
- 1 US\$B

Corporate Social Responsibility



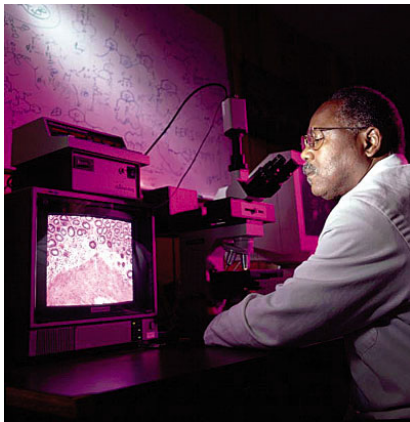
- We are responsible
 - code of ethics
 - people strategy
 - values
- We report progress
 - Financial
 - Sustainable reporting
 - Twenty one individual site reports
- We listen
 - Corporate Environmental Advisory panel
 - Community Advisory Panels
 - “Tell us what you think”
 - Public Interest Committee of The Board
- We are involved
 - Volunteerism
 - Industry Associations
 - NGO Participation
 - Homeland Security
 - Congressional testimony



Sustainability as a business opportunity



- FILMTEC* Water Purification Technology

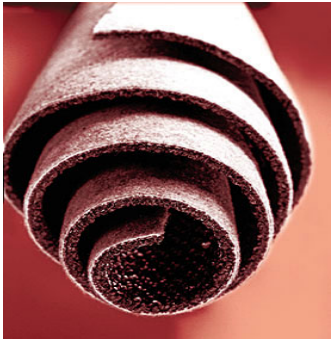


Improving cancer treatments



Clearing the air

Sustainability as a business opportunity



- Soy Based Carpet Backing



Lightening The Load

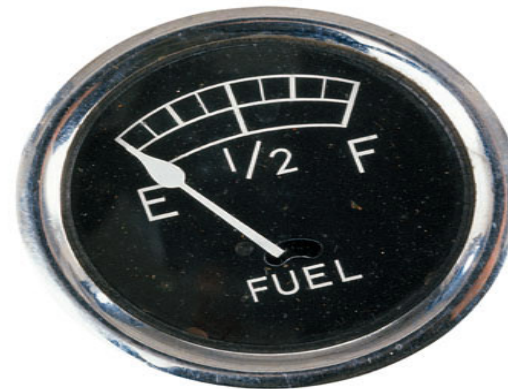


Recycling Polyurethane Foams

Sustainability as a business opportunity



- More Sustainable Polymers



Energy Initiatives

Carlos Guimaraes, Vice President, Global Environmental Operations, The Dow Chemical Company

Mr. Guimaraes is the Business Vice President for the Environmental Operations Business and Operations Vice President for the Chemicals Business at The Dow Chemical Company. He is responsible for the management of a portfolio of activities for the Dow Chemical Company including integration management, waste treatment, remediation and the development of the environmental related technologies focusing on source reduction, reuse and waste treatment at the least long-term cost for Dow.

Mr. Guimaraes joined Dow in 1975 as an electrical engineer in Aratu, Brazil. He has held a variety of operations roles including maintenance, production and the supply chain. In 1990, he became president of Dow Portugal and a member of Dows Europe Iscoyanate business. In 1992, he became operations director for Dow North Brazil, holding several positions as a Dow representative in the Brazilian chlorine and energy councils. In 1994, he was transferred to Mexico to become president of Dow Mexico. In 1996, he transferred to the U.S.A. where he served as business director for the RCl, HCl and Incineration business under the Chemicals business. In 1998, he became business director for the recently formed Environmental Operations business. He assumed his current positions in 2001.

He earned a bachelor degree in electrical/electronic engineering from Universidade Federal da Bahia, Brazil and is a graduate of the Advanced Management Programme at INSEAD, Fontainebleau, France.

Do Right Woman, Do Right Man
If you wanna do right...

CORPORATE INITIATIVES:

**PRODUCT LIFE CYCLES
DISCLOSURE AND REPORTING**

Lisa M. Shelton
Andrews Kurth

August 2003

Introduction

If you wanna do right

Go to the “About Us” button on the web site of most large corporations and you will see a link to its environmental, health and safety programs and philosophy either directly identified under environmental, health and safety or more recently under corporate governance. Interestingly, for the most part, these corporations are not responding to environmental legal mandates. Instead, these companies have initiated “transparency” efforts voluntarily. Several rationales have been offered for the voluntary movement and they all involve an emphasis on doing the right thing. These include the business philosophy of sustainability, investor pressure and increased scrutiny on corporate governance issues. Sustainability is a philosophy corporations such as Dow have embraced.¹ It is based on the Triple Bottom Line theory. Under the Triple Bottom Line theory, a balanced approach based on economic, environmental and social values is used in the evaluation of company performance.² Some investor groups have also taken up the banner of corporate responsibility, which includes respect for the environment as well as transparency.³ Other companies have expanded their environmental health and safety initiatives into a corporate governance or sustainability strategy.⁴

Many corporations publish sustainability, corporate governance or environmental health and safety reports which describe the principles by which the company intends to operate and the EHS metrics to be used to judge improvement toward delineated goals. Often these goals and metrics relate to the more traditional “end-of-pipe” environmental issues, such as air emissions, water and waste volumes. But the overarching principles go beyond end-of-pipe, focusing on producer responsibility, product stewardship, take-back and design for the environment. By whatever title, environmental issues are no longer viewed as a strictly end-of-pipe compliance matter to be dealt with by brick and mortar manufacturers. A center piece of this change is a shift from an end-of-pipe focus to product life cycles.

¹ Business Week Online: Dow Reaches for a Greener Future;
www.businessweek.com/content/may2003;tc2003051_6546_tc108.htm

² *Id.*

³ See for example, website at www.corporatesunshine.org; Calvert Online at www.calvertgroup.com

⁴ Speech by Björn Stigson, Walking The Talk - The Business Case for Sustainable Development, May 7, 2003; World Business Council for Sustainable Development, Zurich, Switzerland

I. PRODUCT LIFE CYCLE

The traditional focus on environmental impact for the ‘producer’ has been their own energy consumption, water use and solid waste disposal; disposal of their products fell to someone else when they finished using them. In the United States, the federal government and the states followed the end-of-pipe focus and enacted laws focusing on waste, air and water emissions.⁵ From a business standpoint, there were dual drivers to eliminate or reduce end-of-pipe environmental impacts: 1) compliance and 2) lowering the cost of production thereby more competitively producing a product. In addition, many corporations have sought an image as a “green” or socially responsible company. Pollution prevention became the do right mantra.

The next step was to move back up the chain to look at users. The Texas legislature jump-started the process over a decade ago by requiring the Texas Water Commission⁶ to establish Resource Exchange Network for Eliminating Waste (RENEW), a materials exchange network which promotes the reuse or recycling of industrial wastes.⁷ The network was established as a marketing channel for industries, businesses, and governmental units that want to sell surplus materials, by-products, and wastes to users who will reclaim or reuse.⁸ Users, however, did not control how products came to be and some reuse opportunities could be lost because of some factor up the chain.

Product focus is the next step to complete the cycle. A full product cycle review expands the focus of environmental programs from waste and emissions issues to process and product issues. When environmental issues are looked at throughout the product life cycle, the focus starts at the design phase and goes full circle through manufacture, marketing and finally recycling, reuse and disposal. Some programs focusing on small sectors of the marketplace have been established on products such as tires.⁹ More expansive programs are on the horizon as will be discussed below.

⁵ See for example: Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C.A. §§9601, et seq.; Solid Waste Disposal Act, 42 U.S.C.A. §§6901, et seq.; Texas Health & Safety Code, Chapter 361.

⁶ Texas Water Commission is a predecessor agency of the Texas Commission on Environmental Quality (TCEQ).

⁷ See website at www.tnvc.state.tx.us/exec/oppor/renew/renew.html.

⁸ Recycle Texas is an online service provided by the TCEQ which provides further information on recycling: www.tnvc.state.tx.us/exec/sbea/rtol/index.html

⁹ Texas Health & Safety Code Ann. §361.430(d) (Vernon 1992)

A basic tenet of the product life cycle viewpoint is that the cost of the product should include not only the cost to produce and advertise but also the aspects of reuse, recycling and disposal. The European Union has embraced this philosophy which underlies its approach to waste management: “extended producer responsibility or producer-pays.” The philosophy is described by the following quote from the EU Community Strategy on Waste Management:

“Considering the life cycle of a product from manufacture until the end of its useful life, producers, material suppliers, trade, consumers and public authorities share specific waste management responsibilities. However, it the product manufacturer who has a predominant role since he takes key decisions concerning his product which largely determine its waste management potential.”¹⁰

The European Union has adopted directives based on this philosophy and has extended the focus on producers to mandate responsibility for waste. But first, in the spirit of “do right,” voluntary efforts will be discussed.

A. Voluntary Producer Responsibility Efforts

Some companies have already adopted a product life cycle philosophy. Some of these efforts have focused on “taking-back” products for reuse and recycling, as well as proper disposal. Leasing arrangements have worked well for products with residual value such as office equipment. The carpet industry has also tried leasing but ‘operating leases’ create accounting and other issues which have not been easily resolved. The carpet industry has, however, been successful in designing products which encourage reuse in the form of refurbished carpet as well as encouraging suppliers to use fibers that can be recycled into new fibers.¹¹

In addition to “take-back” programs product content and reduced hazards materials use is a focus of extended producer responsibility. For example, in 1995 the semiconductor industry voluntarily signed an MOU with the EPA concerning the reduction of PFCs which are thought to contribute to global warming.¹² Some electronic companies have been looking at designs which reduce lead content of their products. Dow has formed a joint venture, Cargill Dow, LLC, which is

¹⁰ The Centre for Sustainable Design, producer responsibility at www.cfsd.org/ule/seeba/

¹¹ Carpet Take-Back: EPR American-Style, Bette K. Fishberg, Environmental Quality Management, Autumn 2000, Volume 10, Number 1.

¹² See: www.semichips.org/iss_environment.cfm

working on the development of polymers based on renewable resources such as starch from corn rather than using petroleum as the base.¹³

Many non-government organizations (NGOs), including those in the United States, have adopted the extended producer responsibility philosophy and are pressing for legislation to require producers to be responsible for costs over the entire product life cycle. The NGO community has also used other non-legislative means, such as the media and letter campaigns. Some NGOs would argue that they are in fact responsible for corporate efforts at extended producer responsibility.

B. NGOs and The Media

Much of the recent focus on producer responsibility has been on electronic equipment. The media coverage has highlighted issues related to electronic equipment disposal. Examples include a recent article in *The New York Times* which picked up on a report from the Silicon Valley Toxics Coalition and the Computer Take Back Campaign groups.¹⁴ These groups have been actively pursuing electronics manufacturers to get them to reduce hazardous materials in the equipment and establish recycling infrastructures according to criteria they have developed, so that electronics equipment no longer goes to landfills. An earlier article in the *Washington Post* titled “China Serves as Dump Site For Computers” focused on a report from Silicon Valley Toxics Coalition and Basel Action Network called: “Exporting Harm: The High-Tech Trashing of Asia,” which criticizes the industry for failing to assume responsibility for pollution and other issues related to recycling and disposal of electronic equipment including issues related to child labor and worker health.¹⁵ Companies such as Dell have been targeted by the Silicon Valley Toxics Coalition, which has pursued the company through media attacks, letter campaigns and demonstrations at shareholder meetings.¹⁶

The attention given to electronic equipment is coming from many fronts and includes legislative activity.

¹³ See website at www.cargilldow.com

¹⁴ New York Times, 2 PC Makers Given Credit and Blame in Recycling, June 27, 2003

¹⁵ Washington Post, February 24, 2003.

¹⁶ See Silicon Valley Toxics Coalition press release: “Hard Drive Across the West: Activists begin multi-city collection of discarded toxic Dell Computer gear for delivery to company’s July 17th shareholder meeting in Austin.”

C. Producer Responsibility Legislation

The adoption of producer responsibility legislation is taking place on a global scale. If you want to do it right, tracking this legislation is important. Because the focus is on the product rather than the end-of-pipe, companies with global markets must pay attention to local laws which may affect the product itself through “product content” or hazardous materials legislation, labeling requirements or the duties and liabilities which may be imposed for importing or exporting products. In other words, just because you are a Texas company you can be affected by the environmental laws in, say, Europe.

The European Union started its producer responsibility efforts with a packaging directive focused on beverage containers. In the 1990’s, an expanded Packaging Directive was adopted which directed Member States to establish systems which included mechanisms to finance the collection, sorting, recycling and recovery system. Most Member States introduced a system based on partial or total financing by producer/importers.¹⁷ Difficulties arose between the Member States because each system was different, and in some cases no system was instituted. In the early 2000’s, amendments were proposed in part to require harmonization of these systems.¹⁸

An End of Life Vehicle Directive (ELV) has also been adopted.¹⁹ The ELV Directive was again in part to harmonize the various national measures and “avoid distortion of competition in the community.”²⁰ The objectives include designing vehicles for recycling and recovery, targets for reuse, recycling and recovery and the polluter pays principle.²¹ The ELV Directive also requires Member States to ensure that materials and components put on the market after July 1, 2003 do not contain lead, mercury, cadmium or hexavalent chromium, with certain exceptions.²²

The EU continues to look at new chemicals regulation.²³ Many Member States already have legislation restricting certain hazardous materials, particularly with regard to lead and cadmium. Sony ran afoul of Dutch regulations restricting

¹⁷ Directive 94/62/EC

¹⁸ Proposal p. 10 for a Directive of the European Parliament and of the Council amending Directive 94/62/EC on packaging and packaging waste (Strausborg 30 June to July 2003)

¹⁹ Directive 2000/53/EC

²⁰ *Id.* at Article 1

²¹ *Id.* at Article 4

²² *Id.* at Article 4(2)

²³ See White Paper: Strategy for a Future Chemical Policy, Brussels, February 27, 2001

cadmium levels in October of 2001. The Dutch authorities determined certain peripherals supplied for use with the Sony Play Stations contained cadmium levels above the limit allowed under Dutch regulations. In response, Sony suspended shipments of certain products within Europe.²⁴

It is certainly no secret that the European Union recently adopted Directive 2002/96/EC of the European Parliament and the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) and Directive 2002/95/EC of the European Parliament and the Council of 27 January 2003 on restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS). Other countries have adopted laws relating particularly to electronic products with less fanfare. Japan requires manufacturers or importers to recover or recycle electronic equipment.²⁵ China has adopted legislation restricting the use of certain hazardous substances in electronic equipment,²⁶ and Brazil has adopted take-back legislation. The United States, with some exceptions, such as Prop. 65, at the state level, has not adopted such legislation.²⁷ It is beyond the scope of this paper to elucidate the many environmental laws which can apply to products. WEEE and RoHS are far-reaching examples of such laws.

1. WEEE

The recently-passed WEEE Directive requires Member States of the European Union to adopt programs which enable the WEEE Directive by August 13, 2005. WEEE requires the development of recycling and recovery programs where the producers are responsible for the end-of-life costs and activities. The responsibility for collection is shifted from the government to the private sector and must be “free of charge” to the consumer. The intent is to encourage the cost of disposal to be factored into the cost of the product.

‘Producer’ is defined very broadly as:

Any person who, irrespective of the selling technique used, including by means of distance communications. . .

²⁴ Sony press release at www.sony.net/SonyInfo/Environment/news/en_news_020226-1.html

²⁵ Basic Law for Establishing a Recycling-based Society, Ministry of Environment Japan, Law No. 110 of 2000.

²⁶ Constitution of the People’s Republic of China, Articles 33, 34 (1993). See also, press releases *Beijing Morning Post*: China Fights Electronic Pollution. China will implement new measures aimed at reducing six harmful substances found in electronic goods: mercury, lead, cadmium, chromium, PB and PBDE.

²⁷ The Safe Drinking Water and Toxic Enforcement Act or Prop. 65 was adopted in California in 1986. The proposition is intended to prohibit the contamination of drinking water and also contains strict labeling and notice requirements. See 22 CCR Section 25249.

- (i) manufactures and sells electrical and electronic equipment under his own brand,
- (ii) resells under his own brand equipment produced by other suppliers, a reseller not being regarded as the ‘producer’ if the brand of the producer appears on the equipment, as provided for in subpoint (i), or
- iii) imports or exports electrical and electronic equipment on a professional basis into a Member State.²⁸

Additional landmarks must be met by December 31, 2006. Member states must reach an average waste collection rate of 8.8 pounds per inhabitant annually. Producers must reach increasingly demanding recycling and recovery targets. Producers must also keep records on the amount of equipment going through recycling facilities.²⁹

It should also be noted that the WEEE Directive does not require consistency between the Member States. The WEEE Directive sets minimum standards for recycling obligations; the Member States are free to exceed these standards. Many of the difficulties in setting up the infrastructure to respond to this Directive will fall on the Member States and producers as the laws implementing the Directive are developed.

2. RoHS

The RoHS Directive restricts the use of lead, mercury, cadmium, hexavalent chromium and certain brominated flame retardants in the manufacture of new electrical and electronic equipment starting July 1, 2006. It does contain a list of certain exemptions. RoHS uses the same definition of producer as the WEEE Directive, so products imported into the European Union or sold over the internet will be required to meet the restrictions. RoHS is what is known as a “Single Market Directive,” which means that the aim is to avoid the creation of trade barriers or distortion of competition. Member states may not exceed the requirements thereby forcing consistency.

3. Federal and Texas efforts

Congress is looking at take-back and recycling legislation. Senator Thompson (D-CA) introduced H.B. 1165 to establish a grant and fee program through the

²⁸ WEEE Directive 2002/96/EC, Article 3(i), January 27, 2003

²⁹ *Id.*, Article 7 provision 3.

Environmental Protection Agency to encourage and promote the recycling of used computers and to promote the development of a national infrastructure for the recycling of used computers, and for other purposes. A fee would be collected on retail sale of a computer or monitor. Incentives are provided for computer manufacturers to take back their computers at the end of life.

Silicon Valley Toxics Coalition has developed model legislation which requires producers to develop a system to handle end of life electronics. Several states have used the model to develop proposed legislation. The model requires that historic waste and “orphan waste” be included. A ban is imposed on disposal of electronics and electronic components in landfills and incinerators, as well as bans on the export of CRTs to non-OECD countries. The model legislation would also phase out the use of lead, mercury, PVC and brominated flame retardants in electronic equipment.³⁰

Three bills relating to electronic equipment were filed in Texas during the last legislative session but did not pass. H.B. 595 was filed by Representative Dukes and proposed to establish a program to be administered by the TCEQ which would impose an advanced disposal fee. The fee could be suspended if the private sector implemented an alternate program. The bill was pulled by the author. S.B. 1239 and H.B. 2967 were filed by Senator Barrientos and Representative Naishtat, respectively. These bills proposed a program to be administered by the TCEQ which would prohibit manufacturers from selling electronic equipment in the state unless the TCEQ approves a plan for manufacturer-financed collection, treatment, recovery, reuse, recycling and disposition of electronic waste. The bill included a prohibition from disposal of electronic waste in a landfill incinerator or cement kiln or other facilities where it would be used for another form of energy recovery or energy generation which depends on combustion.

It remains to be seen whether the federal government or the states ultimately control the restrictions on electronic equipment. What appears to be certain is the issue is not going to go away.

II. DISCLOSURE AND REPORTING

One of the elements of a sustainability program is transparency through disclosure. As noted in the beginning, many corporations are looking to do the right thing and publish environmental health and safety or corporate responsibility reports. Since

³⁰ See www.svtc.org

these reports are in general a voluntary effort focusing on the good things the company is doing there is often a hesitancy to relate negative information such as high emissions or violations. Lawyers are often the most adverse to highlighting these issues. There is also a tendency to want to put the corporation's practices in the best light possible. There are two things to keep in mind when developing and reviewing these types of reports: 1) the picture you portray should be accurate and 2) if it is all perfect, who will believe you.³¹

Being truthful has taken on new implications with the *Nike v. Katsy* case.³² The potential implications of this case have been heavily debated. The case stems from an action filed against Nike for unfair and deceptive practices under California's commercial fraud statutes in state court challenging statements by Nike defending its labor practices. The case went to the California Supreme Court, which held that the public statements in question could influence consumers and therefore the statements must be treated as "commercial speech" which deserves limited constitutional protection. Nike took the case to the Supreme Court to affirm "its right to free and open debate."³³

One side of the debate on the free speech issue can be summed up in an excerpt from Business Ethics Magazine:

"Imagine if corporations were permitted to "plead the First Amendment," making it virtually impossible to use litigation to test the truth of company statements about their social and environmental records. This could be the impact of the position taken by Nike in a case to be decided soon by the Supreme Court, *Nike v. Katsy*. Nike argues that in defending itself against charges of using sweat shop labor, its statements were "political speech," subject to full First Amendment protections. But if this view prevails, it could invalidate many consumer protection laws and securities regulations. And it could permanently undermine the reliability of corporate reporting -- both financial and social. . . .

"In an amicus brief to the Supreme Court in support of *Katsy*, we argue that social disclosure should be subject to the same legal requirements as financial disclosure. Securities regulation the U.S. is premised upon compelled disclosure of specified information. The

³¹ For further inputs, see Global Reporting Initiative, a United Nations Environment Programme, has developed a framework for Sustainability Reporting. See website at www.globalreporting.org.

³² *Nike v. Katsy*, 539 U.S. _____ (2003)

³³ *Id.*

Supreme Court has struck down compelled disclosure of political speech, however, arguing that the right to speak also implies the right to remain silent. It is vitally important that government regulators retain the authority to compel accurate and timely disclosure of all material corporate information particularly information that is also a matter of broad public concern. Moreover, misleading social and environmental statements about a company's operations should be subject to anti-fraud liability, just as misleading financial reports are."³⁴

It is interesting to note that the Corporate Sunshine Working Group was formed to persuade the SEC to make comprehensive social and environmental reporting mandatory.³⁵

On the other side, more than 40 media outlets, corporations and associations joined Nike and filed amicus briefs concerned over the potential "chilling effect" of the ruling. As noted by Professor Lawrence Tribe, one of the attorneys representing Nike:

"This decision will have far-reaching implications not just in California, but across the country and around the world. This decision is a chilling conversation-stopper for any business or other organization whose public communications might reach the California market -- and that covers virtually every entity that sells any product or service. The decision deputizes any California citizen to drag a business into court and bring it to its knees unless it persuades a jury that everything it said was error free and omitted nothing...

The net effect of this novel ruling is to make it extremely dangerous for virtually any business or other organization to utter anything beyond the most innocuous and vaporous generalities about its practices, whether in this country or abroad. Especially at a time when the watchword is corporate transparency, we're fortunate that the First Amendment forbids legal schemes like California's, under which any savvy company would inform the public of next to nothing."³⁶

³⁴ Business Ethics: "Nike vs. Katsy: The Future of Social Reporting Is On The Line" (Spring 2003). See at: www.business-ethics.com/nike_vs_katsy.htm

³⁵ *Id.*

³⁶ Nike press release: "Statement by Nike, Inc. on Today's Procedural Decision By the U.S. Supreme Court in First Amendment Case." See at: www.nike.com/nikebiz/news/pressrelease

It is interesting to note that Nike is not filing its corporate citizenship report.

The Supreme Court ruled on June 26, 2003 stating that the writ of certiorari is dismissed as improvidently granted.³⁷ Justice Stevens was joined by Justice Ginsburg, and Justice Souter joined on the First Amendment section of the opinion. Justice Kennedy dissented, and Justice Beyer joined by Justice O'Connor offered a dissenting opinion. The decision of the Supreme Court was primarily based on procedural grounds of finality and standing. However, statements in the opinions are instructive on the issue of potential liability for factual inaccuracies and whether or not corporate reports constitute "commercial speech."

In his opinion supporting the Court's decision that the writ had been improvidently granted, Justice Stevens recognized that the speech in question "represents a blending of commercial speech, noncommercial speech and debate on an issue of public importance. He also noted that

"...if the allegations of the complaint are true, direct communications with customers and potential customers that were intended to generate sales and possibly to maintain or enhance the market value of Nike's stock -- contained significant factual misstatements. The regulatory interest in protecting market participants from being misled by such misstatements is of the highest order. On the other hand, the communications were part of an ongoing debate about important public issues,...[k]nowledgeable persons should be free to participate in such debate without fear of unfair reprisal. Whether similar protection should extend to cover corporate misstatements made about the corporation itself or whether we should presume that such a corporate speaker knows where the truth lies are questions that may have to be decided in this litigation."³⁸

Justice Beyer, in his dissent, determined that the issue before the Court had been finally decided. The federal question presented was "whether the First Amendment protects the speech in question from legal attack on the ground that it is 'false or misleading.'"³⁹ He recognized that the speech in question was a mixture of commercial and noncommercial elements and recognized that public speech should be afforded more protection than commercial speech.⁴⁰ "The commercial speech doctrine states that only truthful commercial aspect is afforded

³⁷ See *supra* at 31

³⁸ *Id.*, at 9

³⁹ *Id.*, at 13, et seq.

⁴⁰ *Id.*, at 12

First Amendment protection; hence, to the extent commercial speech is false or misleading, it is unprotected.”⁴¹ On the other hand, he notes, issues of public debate should be given “breathing space.” Justice Beyer went on to say that the form and content of the speech and question must be examined to determine if it is more pure commercial or has more elements of a public debate.

“The upshot is that commercial speakers doing business in California may hesitate to issue significant communications relevant to public debate because they fear potential lawsuits and legal liability.... This concern is not purely theoretical. Nike says without contradiction that because of this lawsuit it has decided ‘to restrict severely all of its communications on social issues that could reach California consumers, including speech in national and international media.’ It adds that it has not released its annual Corporate Responsibility report, has decided not to pursue a listing in the Dow Jones Sustainability Index, and has refused dozens of invitations... to speak on corporate responsibility issues.’ Numerous amici -- including some who do not believe that Nike has fully and accurately explained its labor practices -- argue that California’s decision will ‘chill’ speech and thereby limit the supply of relevant information available to those, such as journalists, who seek to keep the public informed about important public issues.”⁴²

As aptly put by the Court, “These constitutional questions are not easy ones, for they implicate both free speech and important forms of public regulations.”⁴³

So, if you wanna do right... it’s a complicated world.

⁴¹ *Id.*, at 19

⁴² *Id.*, at 20

⁴³ *Id.*, at 20

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**DISCOVERY
OF ELECTRONIC
DOCUMENTS**



**THE FUNDAMENTAL ISSUES
OF
ELECTRONIC DISCOVERY**

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Bob Robinson
General Counsel

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Contents

<u>I. TECHNICAL BASICS AND PRACTICAL MATTERS</u>	3
<u>II. ELECTRONIC DISCOVERY UNDER THE RULES OF CIVIL PROCEDURE</u>	5
<u>III. SPOILIATION OF ELECTRONIC DATA</u>	13
<u>IV. WHAT WILL THE FUTURE BRING?</u>	14

I. Technical Basics and Practical Matters

A. The expanding universe. Electronic discovery is an area of growing importance as the methods for storing electronic data have become vastly larger and less expensive over time. The result is that documents are being retained longer (partly because there is no longer an economic necessity to purge them) and computer systems are more likely to contain vestiges of “deleted” files. Today’s 250-gigabyte drives put massive storage capability on the desktops of end users at a cost of about \$240.

B. Electronic advantages in discovery. Digital documents are far more discovery-friendly, subject to keyword searching and loaded with additional information about when they were created, modified and accessed. They are inexpensive to duplicate and can be shared instantaneously over the Internet. They can be locked to protect them from alteration, and their identity can be authenticated using digital signature technology. The most common form of electronic evidence - email - is notorious for containing candid admissions not normally found in printed documents.

C. Electronic documents can be destroyed quickly. Although electronic documents can be easily deleted sometimes they can be re-created as well. The ease with which electronic data can be deleted requires quick action to preserve evidence once the need has been established. Data in a computer system changes constantly as the system continues to be used, so there is real danger that relevant data could be altered or lost unless measures are taken to preserve it. Making an image copy of a hard drive or retaining a copy of a backup tape can be a relatively inexpensive method of preservation. Taking a forensic duplicate or “image” helps preserve data while minimizing any business disruption, and satisfies the requirement that evidence be preserved completely and accurately. See Gates v. Bando , 167 F.R.D. 90, 112 (D. Colo. 1996). It should also be noted that most backup tapes do not contain forensic images of hard drives and therefore cannot be considered forensic duplicates of entire hard drives at the time of backup.

D. Other courts have also recognized the unique value of electronic records. In Armstrong v. Executive Office of the President, 821 F. Supp. 761 (D.D.C. 1993), the government claimed that paper printouts of email were sufficient to satisfy GRS retention requirements, but the court recognized the value of the metadata in the electronic files and ordered the production of backup tapes. In National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257 (E.D. Pa. 1980), the plaintiff had already provided paper printouts of the data, but

that court also recognized the value of the electronic version, and ordered the plaintiff to provide the electronic format as well, even though the process would involve months of work and thousands of dollars in extra expenses on the part of the plaintiff.

E. The search capabilities of electronic documents. The inherent nature of electronic documents brings efficiencies to the discovery process. The responding party generally can locate relevant documents with greater certainty, and can search vast amounts of information in a short period of time. The cost of culling through thousands of documents by hand (not to mention the possibility of miscommunication and error) is many times the cost of performing a thorough electronic search. However, not all electronic versions of documents are compatible with search tools. TIFF files and some *.PDF versions are not searchable without the use of Optical Character Recognition (OCR) technologies and/or do not contain metadata which can be a valuable part of the electronic document.

F. What does 'deleted' really mean? On a hard drive, data is written in chunks called clusters. Larger files may occupy several clusters, and one file can be spread out over several areas of the hard drive. The NT File System ("NTFS") used in recent versions of Windows (and the File Allocation Table, or FAT, in older versions) is like a 'Table of Contents' document on the hard drive with an entry for each file and information about where the clusters for that file are located. When a file is deleted, the entry for that file in the NTFS is erased, but the data in the clusters remain intact until that cluster is used again to write another file. In many cases, whole files or file fragments can be 'undeleted' or can be discovered using data recovery technology. Even if data has been deleted, you may be able to find evidence that the file was once present, or you may find some evidence that proves that the files were in fact deleted. With the advent of Intranet & Internet caching technologies within many enterprises, you may also find temporary duplicates of the same file on many other servers.

G. Requesting electronic data. When requesting electronic data there are some sources you should consider: Backup tapes, desktop and laptop PCs (office and home), network file servers, FAX servers, voicemail systems, cell phones, Palm devices and other PDAs, CDs, DVDs and Zip disks. Although backup tapes may be the most available source of electronic data, they are not always your most complete source for electronic documents. Usually only *selected* applications and data are designated to be backed up on a regular basis. Of these, only *active* files get backed up (not the deleted files or the slack space). Also, tapes made for

disaster recovery purposes frequently are re-used (overwritten) and are unrecoverable after being recycled.

II. Electronic Discovery under the Rules of Civil Procedure

A. Electronic information is clearly discoverable like other documents. The court in Crown Life Ins. Co. v. Craig, 995 F.2d 1376 (7th Cir. 1993), treated the production of a database the same as a document under Federal Rule of Civil Procedure 34 and ordered sanctions for failure to produce it. The question is no longer *if* electronic information is discoverable, it is now just exactly how deep you have to dig and who pays for it. Also, there remains a case-by-case analysis balancing the need for electronic data with the protections of Rule 26(c) against annoyance, undue burden or expense, oppression or embarrassment. Given the degree of care required to execute a thorough enterprise-wide search for electronic data, it is likely that a broad request will be met with a motion for a protective order.

As the Advisory Committee Notes to Rule 34 indicate, discovery of "documents" applies to electronic documents as well as paper ones. The Rule 34 definition of "documents" has been repeatedly held to include data compilations. The respondent may be required to use his devices (computer system) to translate the data into usable form.

Responding parties may not avoid be able to production of electronic information by producing paper copies instead. Even though a party produces a paper version of a document, the court may still require production of an electronic version. In Anti-Monopoly, Inc. v. Hasbro, Inc., 94 Civ. 2120 (LMM) (AJP), 1995 WL 649934 (S.D.N.Y. Nov. 3, 1995), the court stated that production of information in hard copy documentary form does not preclude a party from receiving that same information in computerized/electronic form. In Storch v. IPCO Safety Products Co., 1997 U.S. Dist. LEXIS 10118, 1997 WL 401589 (E. D. Pa. July 16, 1997), the court required production of files in electronic format so that the plaintiff would not need to go through the added step of re-inputting the information.

B. Sources of electronic information are many and varied. One of the most controversial areas of electronic discovery involves data resident on backup tapes due to the relative inaccessibility (and cost) of retrieving the data. Zubulake v. UBS Warburg, 2003 WL 21087884 (S.D.N.Y. May 13, 2003). (As will be discussed later in more detail, the court can protect against undue burden by restricting discovery or by requiring the discovering party to pay the costs.) If a

party chooses not to search backup tapes, it runs the risk that a trial judge may issue an adverse inference instruction similar to the following:

"If the evidence material to an issue in this case was peculiarly within the power of one party to produce and was not produced by that party and its absence has not been sufficiently accounted for or explained, then you may, if you deem it appropriate, infer that the evidence would have been unfavorable to the party which failed to produce it." See McPeck v. Ashcroft, 202 F.R.D. 31, 33 (D.D.C. 2001) (quoting Instruction 2.41, *Criminal Jury Instructions for the District of Columbia* (4th ed. 1993)). See also, Residential Funding Corporation v. DeGeorge Financial Corp., 306 F.3d 99 (2nd Cir. 2002) (where a party's failure to produce e-mails from tape backups in time for trial supported a motion for sanctions including an adverse inference instruction).

Courts have also interpreted Rule 34 to include **deleted** computer files. See, e.g., Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421 (S.D.N.Y. 2002). In addition, **personal information**, even if stored at home, can be discoverable under certain circumstances. See, e.g., Superior Consultant Co. v. Bailey, 2000 WL 1279161 (E.D. Mich. Aug. 22, 2000).

Direct access to a responding party's computer system for purposes of searching deleted files can be granted under Rule 34(a), but there must be proof that it could be possible to retrieve deleted information, and the process must be defined so as to avoid unnecessary burdens and protect private/privileged material. See Strasser v. Yalamanchi, 669 So.2d 1142 (Fla. App. 1996); see also Antioch Co. v. Scrapbook Borders, Inc., 210 F.R.D. 645 (D. Minn. 2002).

However, you should be careful about conducting an inspection and copying of documents in the responding party's computer system. The most important consideration during the initial phases of electronic discovery is preservation. If the parties rush into an inspection without first making a forensic duplicate (bit stream image) of the media, the information (and maybe your case) may be severely compromised. Also, during any on-site computer inspection, your expert should use the responding party's computer staff for hands-on work on their own computer system (while looking over their shoulders) to avoid inferences or accusations of tampering.

C. The initial obligation to produce electronic data. The "required disclosures" obligation to search and produce electronic data is not yet well-defined. Federal Rule of Civil Procedure 26(a) *formerly* required initial disclosure of "all documents (and) data compilations...that are relative to the disputed facts."

When the current rule was made applicable to all federal districts, the language was changed and now requires disclosure of “all documents (and) data compilations...that the disclosing party may use to support its claims or defenses unless solely for impeachment” (emphasis added).

In Kleiner v. Burns, 48 Fed. R. Serv.3d 644, 2000 WL 1909470 (D. Kan. 2000), the court noted that its interpretation of the advisory committee notes to Rule 26(a)(1)(B) would require initial disclosure of "data compilations" including voice mail messages and files, back-up voice mail files, e-mail messages and files, backup e-mail files, deleted e-mails, data files, program files, backup and archival tapes, temporary files, system history files, web site information stored in textual, graphical or audio format, web site log files, cache files, cookies, and other electronically-recorded information. "The disclosing party shall take reasonable steps to ensure that it discloses any back-up copies of files or archival tapes that will provide information about any 'deleted' electronic data" Id. at *4. The court noted that the obligation could be satisfied by providing a *copy* of the documents or a *description* by category and *location* per Rule 26(a).

D. Taking the first steps. The nature of electronic data requires quick action in litigation. Your primary goal is to have forensic images taken of all potentially relevant hard drives as soon as possible and to stop your opponent from recycling backup tapes. If electronic documents are likely to be essential in the case, the complaint should be specific enough to make it clear that these records are a necessary element of proof. You may want to consult with a reputable expert to help identify possible sources of electronic evidence and to discuss alternative strategies for preserving the evidence in the early stages.

Once the complaint is filed, you should *immediately* request opposing counsel to take specific actions to preserve the electronic records that may be relevant.

These steps include:

- Having a forensic duplicate (image) made from sector 0 to the end (not just a copy of active files) of each hard drive which may be the subject of discovery in this matter,
- Refraining from recycling of backup tapes,
- Refraining from deleting, defragmenting, or compressing material on the subject hard drives,
- Refraining from adding new software, operating systems or other new files to the hard drives, and
- Refraining from accessing any files that may be relevant until a forensic image is made.

Such a letter is an excellent method of putting your opponent on notice that electronic information is important in the case. If the opponent fails to comply, it creates a quick opening for a motion for a non-destruct order. If you receive one of these letters, beware. If you fail to comply, your client may be subject to a non-destruct order and may endure greater scrutiny by the court.

After any drive(s) in question have been imaged, they may be put back into service, minimizing any disruption to the business. It is possible to take images over a company's network, at night, so that no individuals lose work time.

You should also be prepared to recommend to your client that they follow the same guidelines for preservation of their own data, and agree with counsel to work together to identify specific media to be included in an agreed preservation order. A complete electronic discovery plan should also include:

- Provisions for electronic searching (including specific keyword searches),
- An agreement on whether or not residual data areas will be searched (for data fragments, etc.),
- Whether or not deleted files will be restored before searching (restoration will provide a better search result),
- A method for review for privileged and private documents,
- A method for production of electronic documents after the privilege review (including specific electronic format for different types of documents identified),
- A method for how preserved data will be archived during litigation and disposed of afterwards, and
- A proposal as appropriate for use of a third-party neutral expert to assist with preservation and production (highly recommended).

E. Identifying potential sources of data. The discovering party must determine what types of electronic records may provide supportive evidence. You can begin by identifying specific hard drives, tapes and other media you would like to have searched. This information can be acquired through the discovery conference, a deposition of a systems administrator or other knowledgeable person under Rule 30(b)(6), or through an on-site inspection per Rule 34(a). See In re Carbon Dioxide Industry Antitrust Litigation, 155 F.R.D. 209, 214 (M.D. Fla. 1993); Alexander v. FBI, 188 F.R.D. 111 (D.D.C. 1998). The utility of the deposition of a systems administrator should not be overlooked – careful questioning can reveal where the data is buried, who knows where it is, and whether retention policies are actually followed.

Deposition questions for the responding party's systems administrator should include background and details on:

- An overview of the network, file servers and backup systems,
- The email system and its backup process,
- Backup policies and hardware/software used for maintaining disaster recovery backups,
- Whether a records retention policy is in place, and details on how it has been implemented with respect to their electronic systems,
- Whether a litigation response plan was initiated in response to your claims, and how electronic documents are preserved and located as a part of that plan. Ask specifically about how any documents that were produced in the pending action came to be searched and/or preserved and what else was done on their part to find responsive documents,
- Depending on the nature of the action, you may need information on the company's web server environment and/or application databases,
- Voicemail server(s) and backups,
- FAX server(s) and backups,
- Home machines used for work purposes by employees and home access availability, and
- Information on specific individuals and their connectivity to the network systems and PDA devices,

F. Planning your response. Electronic discovery requests should include:

1. Limiting the scope of discovery to the extent feasible. One good way is to argue that only active files should be discoverable because it is the only material that is available in the ordinary course of business (unless there is some justification for believing that evidence has been or is being destroyed).

2. Protecting your client from burdensome requests involving substantial business disruption or expense in the document review process. Some courts will provide protection from overbroad requests or require the discovering party to share some of the cost if special procedures are ordered. Texas Rule of Civil Procedure 196.4 requires parties seeking discovery of electronic data to specify the form in which it should be produced. The responding party must comply if the requested data and form is reasonably available to the responding party in its ordinary course of business. The responding party may object if it cannot, through reasonable efforts, retrieve the information or produce it in the form requested. If the court orders a response, the court must also order

the requesting party to pay the reasonable expenses of any extraordinary steps required to retrieve and produce the information.

Generally, a court will consider protection appropriate if the burden and scope of the discovery requests are out of perspective with the amount in controversy and the importance of the issues in the case, or if there is little likelihood that the evidence found will be important in resolving the issues.

3. Having a litigation response plan in place and being able to articulate it. Outside counsel can help their clients to prepare such a plan ahead of time, which will help ensure that your clients remain in control of their own discovery. If they cannot show some level of preparation, then your client is more likely to be open to a broad third-party inspection and search of their systems. Ideally, your client should have the following in place:

- A litigation response plan describing all computer systems and backup systems - “We know what we’ve got”,
- A records retention program (written) for regulatory and business purposes - “Here’s our policy and how we comply with it”,
- A document retention policy (written and implemented) which documents a destruction policy and includes a ‘shut-off’ switch for litigation, and
- An effective search mechanism for electronic records (as part of an electronic records management system and/or email management system). Some vendors offer knowledge management products which can help organize electronic data for litigation. The most useful system is one that combines active and archived data in a de-duplicated database with search and output features.

G. Handling requests for deleted data. Absent an agreement to the contrary, it is relatively rare that deleted data will be subject to a discovery request.

However, in many cases, the court has granted access to the responding party’s hard drive data, including deleted files. Some examples follow:

- Antioch Co. v. Scrapbook Borders, Inc., 210 F.R.D. 645 (D. Minn. 2002)
- Playboy v. Welles, 60 F. Supp. 2d 1050 (S.D. Cal. 1999)
- Simon Property Group v. mySimon, Inc., 194 F.R.D. 639 (S.D. Ind. 2000). This case relied in part on a protocol adopted in Playboy v. Welles.

- Strasser v. Yalamanchi, 669 So. 2d 1142 (Fla. App. 1996)

H. What are the costs of electronic discovery and who should bear them?

- On-site imaging (forensic duplication of media)
- Restoration of backup data onto working server
- Restoration of deleted files
- Searching of tapes and hard drives
- Privilege review
- Data conversion / production format

The majority of courts hold the responding party responsible for the costs of electronic production.

In Re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. Lexis 8281 (N.D. Ill 1995). The searching of an email database was held to be ordinary and foreseeable and the responding party was ordered to pay the cost.

Bills v. Kennecott Corporation, 108 F.R.D. 459, 463-464 (D.C. Utah 1985) required the responding party to pay the cost, adding that “information stored in computers should be as freely discoverable as information not stored in computers”

There are major exceptions to this basic rule (note Texas Rule 196.4 discussed earlier). Until May 2003, the test used in Rowe Entm’t, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421 (S.D.N.Y. 2002) was considered the “gold standard” for apportioning electronic discovery costs. That opinion set forth, for the first time, a comprehensive set of factors to be used in shifting costs. In this case, the requesting party was ordered to pay the costs of discovering emails, based on the magistrate’s evaluation using the following eight factors:

- The availability of the evidence from other sources
- The relative resources of the parties
- The specificity of the requests
- The likelihood of the success of the electronic search
- The purpose of retention (business purpose vs. emergency backup or junk data)
- The relative benefit to the responding party in conducting a search of their own data
- The total cost of the search
- The ability and incentive of the responding party to control cost

A very recent case, Zubulake v. UBS Warburg, 2003 WL 21087884 (S.D.N.Y. May 13, 2003), builds on and modifies the Rowe test. As time passes, we predict **the test set forth in Zubulake will become the new “gold standard” for apportioning costs** in electronic discovery. This opinion sets forth a test that is specifically designed to protect smaller litigants from being buried in discovery costs, which would confound the public policies underlying discovery. Id. at *7.

In this case, Judge Scheindlin points out that the Supreme Court has clearly set forth a presumption that the responding party must bear the cost of discovery. Moreover, cost shifting can effectively end discovery when private parties are litigating against larger entities. “Thus, cost-shifting should be considered *only* when electronic discovery imposes an ‘undue burden or expense’ on the responding party.” Id. With regard to electronic information, that predicate test depends on whether the information is kept in a relatively accessible or inaccessible format. Id. at *9. If the data is stored in a relatively inaccessible format, the costs are more likely to be considered unduly expensive, so consideration of cost shifting is appropriate.

Once cost shifting is considered appropriate, the court specified the following seven factors (which is a modification of the Rowe test):

- The specificity of the requests
- The availability of the evidence from other sources
- The total cost of production, compared to the amount in controversy;
- The total cost of production, compared to the resources available to each party;
- The relative ability of each party to control costs and its incentive to do so;
- The importance of the issues at stake in the litigation; and
- The relative benefits to the parties of obtaining the information.

However, the court cautions that the factors cannot be applied mechanically – they are simply guides to determining whether “undue burden or expense” is an issue at hand.

I. Using an expert to facilitate discovery.

You may wish to hire an expert in the field of electronic discovery as a partisan expert, working solely for you, or engage one as a “neutral third party”,

answerable to the court, with costs shared between the parties. Each approach has its advantages and disadvantages.

1. Retained directly

- Preservation of hard drives and backup tapes - your media or that of opposing parties - via forensic duplication (imaging)
- Performing electronic searches of your client's data
- Conversion of documents for production
- Inspection agent for opposing party's electronic documents
- Discovery planning

2. Retained as a third-party neutral

- Assistance in defining mutual scope and process
- Creation of images/copies of agreed media
- Performance of agreed keyword searches
- Production of data for privilege review
- Formatting and delivery of data to requesting parties

III. Spoliation of Electronic Data

A. Real Consequences. Although no longer recognized as a separate cause of action in tort in most states, spoliation can lead to financial sanctions, adverse inference instructions and even default judgment. Under certain statutes, spoliation of information related to certain litigation, government investigations or bankruptcies can lead to incarceration. Perhaps most importantly, the public relations damage to your client in this post-Enron world may significantly impact its business.

B. The duty to preserve evidence. This attaches when the complaint is filed or when a party is otherwise put on notice that a suit is likely. See Turner v. Hudson Transit Lines, 142 F.R.D. 68 (S.D.N.Y. 1991). There need not be any manifestation of intent to sue – the test is based on whether a person would reasonably foresee or anticipate litigation given the totality of the circumstances. Trevino v. Ortega, 969 S.W.2d 950 (Tex. 1998).

C. Cannot claim exemption. A corporation cannot claim that it is excused from the duty to preserve because particular employees were not informed of the pending lawsuit. See Nat'l Assn. Of Radiation Survivors v. Turnage, 115 F.R.D. 543 (N.D. Cal. 1987).

D. Preservation of backup tapes. The duty includes preservation of backup tapes made for disaster recovery purposes. Normal recycling of backup tapes should be suspended. See Applied Telematics v. Sprint, 1996 U.S. Dist. Lexis 14053 (E.D. Pa. Sept. 17, 1996).

E. Negligent spoliation sanctionable? Jurisdictions are split as to whether negligent spoliation is sanctionable.

F. Implementing Retention policies for the right reason. At least one circuit is willing to extend sanctions to parties who adopt document destruction plans implemented to foil future, unknown and otherwise unanticipated plaintiffs. See, e.g., Lewy v. Remington Arms Co., 836 F.2d 1104 (8th Cir. 1988). Therefore, it is wiser to adopt a document retention plan for a purpose other than to “reduce future litigation” (a useful purpose: reduce costs of discovery and costs of litigation).

G. Ex-parte orders. In rare instances, it may be necessary to seek an ex-parte order to preserve computer data. If there is evidence that important data has been destroyed or is being destroyed, the court may order a third-party expert to access the data for purposes of making a forensic image. Although the preservation order may in some cases issue without a hearing, it is important to separate the issue of *preservation* of the data from the issue of *access* to the data. The issue of access, recovery and searching of the data should always be resolved at a hearing with both parties represented. See Sega Enterprises Ltd. v. Maphia, 857 F. Supp. 679 (N.D. Cal. 1994); see also First Technology Safety Systems v. Depinet, 11 F.3d 641 (6th Cir. 1993).

H. Advising clients regarding retention. Counsel has a clear duty to advise their clients on the requirements to preserve data pending litigation. NOW v. Cuomo, 1998 WL 395320 (S.D.N.Y. July 14, 1998). Corporations should also have a retention policy in place which includes an electronic repository and an electronic records management program consistent with their paper program. In order to protect from allegations of spoliation, any purging of electronic records should be done pursuant to a written policy, with a legitimate business justification, and with a past record of purging consistent with such a program. However, your client must focus on retention as well as destruction, and ensure that electronic data purposefully retained will remain accessible as technology and platforms evolve into the future.

IV. What Will the Future Bring?

Corporate clients have built mountains of stored electronic data for decades without regard to the full legal implications. A trend of electronic evidence usage that was beginning to become standard practice in discovery has accelerated due to the prominent role e-mail evidence has played in recent corporate scandals. This trend must not be ignored by corporations; it will hit every company eventually, and preparation can reduce the cost of discovery considerably. Specific trends and counter-measures include:

1. Corporate clients can expect to receive an increasing number of requests as high-profile cases highlight the effectiveness of electronic searches.
2. We can expect the electronic discovery process to become cheaper and faster with the advent of technologies that enable more efficient production of electronic data. Corporations should seek out these new technologies as soon as possible.
3. As a result, more judges will order production of electronic evidence because as it becomes more accepted, the cost and time burden on the producing party is being reduced.
4. As corporations adopt policies for document retention and destruction, they will adopt newly available technology to manage and destroy discrete information, both active and historical, in accordance with those policies.
5. Counsel will be held to a higher standard with regard to advising clients on document retention and production obligations (current and historical data on backup tapes) as well as the risks of spoliation.



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About RenewData

RenewData is a leader in the electronic evidence market providing services and software to aid corporations in assessing their legal position and liability risk relative to lawsuits or investigations. RenewData specializes in quick, cost-effective production, consolidation, storage and retrieval of active and archived e-mail, attachments and user files or “Enterprise User Information” (EUI).

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Bob Robinson is Senior Vice President and Sr. Corporate Counsel for Affiliated Computer Services, Inc., a premier provider of diversified business process and information technology outsourcing solutions to commercial and government clients worldwide. Bob is also an experienced general counsel, having served as General Counsel and Vice President of Business Development for Renew Data Corp. and as Vice President and General Counsel-Americas at Vignette Corporation. While at Vignette, he managed all legal affairs for the company from startup through its IPO and growth to a peak market capitalization of more than \$15 billion. He has experience with in-house litigation management and in process development for internal discovery management and document retention/destruction. He received his bachelor's degree in science from the Massachusetts Institute of Technology, and served for six years on active duty in the U.S. Navy. After leaving the service he received his Juris Doctor degree from the University of California, Berkeley's Boalt Hall School of Law, where he was inducted into the Order of the Coif.

OPEN MIKE

MANISHA D. PATEL, Esq.
Assistant Regional Counsel/Strategic Planning Advisor

Manisha D. Patel is an Assistant Regional Counsel in the Region 6 office of the United States Environmental Protection Agency (EPA) in Dallas, TX. Ms. Patel also serves as the Strategic Planning Advisor for the Region 6 office of the EPA. She has served as the Acting Deputy Regional Counsel for Region 6. Her current case assignments include defensive litigation and counseling cases under the Clean Air Act and the Clean Water Act. She has managed a variety of cases and legal matters in the areas of constitutional law, civil rights law and environmental justice. Ms. Patel is a recipient of the Vice President's Silver Hammer Award for Innovation in Government and has been awarded the Regional Administrator's 2000 Strategic Alliance Award for her work on Ozone Flex Agreements. Her accomplishments also include EPA's Bronze Medals for her work on the Offshore Oil & Gas Extraction General Permit, TMDL Agreements, and the municipal storm water permit for Austin, Texas.

Before joining Region 6, Ms. Patel was a litigation attorney in the Washington, D.C. office of Jones, Day, Reavis and Pogue, L.L.P. Ms. Patel holds a J.D. from Georgetown University Law Center in Washington, D.C. and a B.A. in Political Science and International Studies at Northwestern University in Evanston, IL. Ms. Patel is a certified mediator in the State of Texas. She is admitted to the Virginia State Bar.

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BIOGRAPHICAL INFORMATION

Lydia González Gromatzky is Deputy Director of the Office of Legal Services of the TCEQ. She is a graduate of the University of Texas School of Law. After graduation, she joined the Austin office of Hays, McConn, Price and Pickering. After approximately two years as an associate, she joined the Texas Water Commission as a staff attorney in the Legal Division in 1988. She subsequently held the position of senior attorney responsible for coordinating legal support to the industrial and hazardous waste and pollution cleanup divisions for approximately a year and a half. In September of 1993, she was promoted to the position of Assistant Director, a position which she held until her appointment as Special Counsel in August of 1998. She was promoted in September of 2001 to Senior Director and then appointed Deputy Director in November of 2002.

**BIOGRAPHY OF
LEONARD H.O. SPEARMAN, JR.**

Leonard H.O. Spearman, Jr., is the Deputy Director of the Office of Compliance and Enforcement of the Texas Commission on Environmental Quality (TCEQ) formerly the Texas Natural Resource Conservation Commission (TNRCC). This office oversees the agency's environmental objectives and initiatives for the Compliance Support, Field Operations, Monitoring Operations and Enforcement divisions. Prior to this assignment, he was the Regional Director for the Houston Regional Office of the TCEQ since 1997. The TCEQ is the premier state environmental agency with Houston's Region 12 overseeing the largest inventory of business, utilities, and industries in the state. Before coming to TCEQ, he was with Harris County Judge Robert Eckels serving as legislative coordinator.

Spearman was with the City of Houston as Manager of the Economic Development Division. Prior to that, he was with the U.S. Department of Housing and Urban Development in Washington, D.C. serving as Counselor and Special Assistant to the Assistant Secretary for Housing-Federal Housing Commissioner and served as Deputy Associate Director, Presidential Personnel for The White House.

Spearman is a graduate of the University of Florida and Texas Southern University's Thurgood Marshall School of Law.

LARRY STARFIELD
Deputy Regional Administrator

Larry Starfield is the Deputy Regional Administrator for the U.S. Environmental Protection Agency, Region 6, in Dallas, Texas. In this position, 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, he served as the Regional Counsel for Region 6. As Regional Counsel, 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 law. 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.

Mark R. Vickery

**Deputy Director
Office of Permitting, Remediation and Registration
Texas Commission on Environmental Quality**

Mark Vickery serves as Deputy Director for the Office of Permitting, Remediation and Registration of the Texas Commission on Environmental Quality. The Office is comprised of six divisions including Air Permits; Remediation; Registration, Review and Reporting; Waste Permits; Water Quality; and Water Supply. The Office also houses the Toxicology and Risk Assessment program of the agency.

Mark Vickery previously served as Deputy Director for the Office of Compliance and Enforcement of the Texas Commission on Environmental Quality. The Office of Compliance and Enforcement was responsible for four divisions, including Field Operations, which included 16 regional offices across the state.

Before assuming his duties as Deputy Director, Mr. Vickery served as Director of the Field Operations Division for two years. Other positions held by Mr. Vickery include Manager of the Waste Tire Recycling Program and management positions in the agency's regulatory enforcement programs. He has been with the TCEQ for 16 years.

Mr. Vickery is a native Texan and attended Texas Tech University in Lubbock, Texas where he received a Bachelor of Science Degree in Geology. Prior to joining the TCEQ, Mr. Vickery worked as an exploration geologist in Midland, Texas.

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On The Road Again...

August 7 & 8, 2003 The Fifteenth Annual Texas Environmental Superconference

Thursday • August 7, 2003

- 8:00-8:45** **Registration** *Shall We Gather*
- 8:45-9:00** **Welcoming Remarks** *Hello Walls*
Jeff Civins, Texas Environmental Superconference
Hal Ray, Environmental and Natural Resources Section (ENRSL) SBOT
Cindy Smiley, Air & Waste Management Association – Southwest Section
Carolyn Ahrens, Water Environment Association of Texas
Kim McLean, Texas Association of Environmental Professionals
Michael Byington, The Auditing Roundtable
Kinnan Golemon, ABA Section of Environment, Energy & Resources
Moderator: Mike Nasi, Lloyd Gosselink
- 9:00-9:45** **Legislative Update** *Last Thing I Needed First Thing This Morning (Was to Have You Walk Out on Me)*
Margaret Hoffman, Executive Director, TCEQ
Martin Rochelle, Lloyd Gosselink
- 9:45-10:10** **TCEQ Enforcement** *All of Me (Why Not Take All of Me)*
Leonard Spearman, Deputy Director, TCEQ
- 10:10-10:30** **Break** *Please Don't Talk About Me When I'm Gone*
Moderator: Betty Williamson, Chief, Superfund Management Branch, USEPA, Region 6
- 10:30-11:20** **Brownfields & Revitalization Issues – Initiative, Options, and Legal Implications** *If You've Got the Money Honey (I've Got the Time)*
Paul Connor, Division Director, OECA/OSRE/PPED, USEPA - DC
Roliff Purrington, Cherokee Investment Partners, LLC – Private equity
Mark Stacell, Marsh –Environmental Practice
Charles Epperson, Intera, Inc.
- 11:20 -11:50*** **Homeland Security** *Someone to Watch Over Me*
Tom Dunne, Associate Administrator, Office of Solid Waste and Emergency Response, USEPA- DC
- 11:50 -1:00** **Lunch** *Always on My Mind*
Moderator: Cindy Smiley, Baker Botts L.L.P.
- 1:00 -1:50** **Water Resources – Hot Issues** *Blue Eyes Crying in the Rain*
•In-stream Flow • Re-use • Groundwater Regulation
Myron Hess, National Wildlife Federation
Ken Ramirez, Bracewell and Patterson
Mary Sahs, Sahs & Associates, P.C.
- 1:50 -2:40** **Water Quality – Hot Issues** *Whiskey River*
• SPCC • SWANCC • Stormwater
Lynn Bortka, Senior Attorney, BP America, Inc.
Steve Ligon, Team Leader, Stormwater and General Permits Team, TCEQ
Bane Phillippi, Haynes and Boone, LLP

- 2:40 - 3:20** **EPA Policy Directions** *Time of the Preacher*
Phyllis Harris, Principle Deputy Administrator, Office of Enforcement and Compliance, USEPA - DC
- 3:20-3:40** **Break** *Milk Cow Blues*
Moderator: Gregg Cooke, Guida Slavich & Flores, P.C.
- 3:40-4:40** **Air Quality – Hot Issues** *Blue Skies*
• NSR Enforcement
• Routine Replacement Maintenance
• 8 Hour Standard Implementation • Clear Skies
Carl Edlund, Director, Multi Media and Planning and Permitting Division, USEPA – Region 6
Mark MacLeod, Environmental Defense
David Schanbacher, Chief Engineer, TCEQ
Chris Thiele, Vinson & Elkins
- 4:40-5:15*** **Role and Obligation of the Press** *Two Sides to Every Story*
Dina Cappiello, Environment Writer, Houston Chronicle
Patrick Crimmins
Randy Lee Loftus, Dallas Morning News
- 5:15-6:00** **Cash Bar** *I Gotta Get Drunk*

Friday • August 8, 2003

- 8:30-8:45** **Introduction** *Bloody Mary Morning*
Moderator: Danny Worrell, Brown McCarroll, L.L.P.
- 8:45-9:30*** **Corporate & Attorney Liability under Sarbanes Oxley** *Ain't Nobody's Business*
Elizabeth Bourbon, Senior Counsel, Valero Energy Corporation
Gary Prasher, Pricewaterhouse Coopers
Bob Stewart, Baker Botts L.L.P.
- 9:30-10:20** **Risk – Scientific, Legal and Policy Issues** *Heartache by the Numbers*
Russ Baier, TCEQ
Nathan Block, Project Manager, TRC
Dick Record, Cirrus Associates
- 10:20-10:40** **Break** *Wake Me When It's Over*
Moderator: Ralph Marquez, Commissioner, TCEQ
- 10:40-11:15** **New Environmental Technologies** *Farther Down the Line*
Hank Habicht, Global Environment and Technologies
Jerry Matthews, Texas Council on Environmental Technology/UT
Jim Lester, Houston Advanced Research Center

- 11:15-12:00** **EPA/TCEQ Point/Counterpoint** *Pancho and Lefty*
Richard Greene, Regional Administrator, USEPA Region 6
Ralph Marquez, Commissioner, TCEQ
- 12:00 -1:15** **Lunch** *They've All Gone to Mexico*
(Annual ENRSL meeting for those who would like to attend)
Moderator: Jim Morriss, Thompson & Knight, L.L.P.
- 1:15-2:00** **Corporate Initiatives** *Do Right Woman, Do Right Man*
• Product Life Cycles • Sustainability • Other
Carlos Guimaraes, VP-Environmental Operations Business, The Dow Chemical Company
Lisa Shelton, Andrews & Kurth, L.L.P.
- 2:00-2:40*** **Discovery of Electronic Documents -Technical and Legal Issues** *Remember Me*
Bob Robinson, General Counsel & Vice President of Business Development, Renew Data Corp.
- 2:40-3:30** **Open Mike** *Seven Spanish Angels*
Manisha Patel, Strategic Planning Advisor, USEPA - Region 6, Moderator
Lydia González Gromatzky, Deputy Director, Office of Legal Services, TCEQ
Leonard Spearman, Deputy Director, OCE, TCEQ
Larry Starfield, Deputy Regional Administrator, USEPA - Region 6
Mark Vickery, Deputy Director, Office of Permitting, Remediation & Registration, TCEQ
- 3:30** **Closing Remarks** *Funny How Time Slips Away*
Jeff Civins
- Sundaes** *Sweet Bye and Bye*
**Ethics Credit*

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Cancellation Policy: Registrants will receive a full refund if cancellation notice is received by July 26, 2003. After this date, a \$100 cancellation fee will be assessed.

