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# Currents

a quarterly publication of zephyr environmental corporation

## From Landfill to Zero Landfill

**W**hether you call them solid waste landfills or just plain dumps, the disposal of waste materials in them is becoming increasingly problematic. Existing landfills worldwide are running out of capacity, and construction of new units may not be feasible for a number of reasons, not the least of which is the lack of available real estate. This is truly an issue in Japan, where 127 million people are crowded onto an island smaller than the state of California.

Another major deterrent to new landfills is their lack of popularity. Over the last 30 years, opponents have criticized the potential health and environmental risks of landfills, preventing many companies from proceeding with plans to expand or build them. For example, long-term plans for a large landfill that would have accommodated a significant percentage of the non-hazardous solid wastes from the Houston industrial area were blocked under a combination of intense pressure from the public and lack of support from the state environmental protection agency. This and other experiences highlight the pressing need for innovative options to the disposal of waste materials—options that not only make financial sense, but which are environmentally friendly and socially acceptable.

Not surprisingly, a new term has entered the lexicon—the “zero landfill”. Recently appearing in newspaper articles and government publications, “zero landfill” refers to innovative recycling efforts that result in little, if any, trash being disposed of in a landfill. As you might expect, Japan was one of the first nations to adopt this “zero landfill” concept in a big way, with many of the Japanese automakers, including Toyota, Subaru, and Honda, leading the way. As a bonus, these companies are transferring the “zero landfill” concept to their manufacturing locations in other countries, including the U.S.



While industry is a big player in the solid waste management game, municipalities clearly have the most to gain from implementing the “zero landfill” concept. But, how, you might ask, can a typical landfill be converted into a zero landfill? After all the recyclables (e.g., plastics, metals, paper/cardboard, glass, and e-scrap) have been segregated from municipal garbage, what do you do with the rest? What about vegetation wastes, such as tree limbs, shrubs, and grass trimmings, generated in cities across the country, that are often overlooked as waste? Even if these biomass materials are first shredded, they must go somewhere.

One option is to send municipal waste materials to a “waste-to-energy” facility, where the trash and biomass wastes are destroyed through combustion. According to the Department of Energy there are currently 90 waste-to-energy plants in the U.S., burning 14 percent of our country’s solid waste. The electricity produced by these facilities supplies almost three million homes. For each 1,600 pounds of trash burned, about 45 cubic feet of landfill space are saved. Based on a technology that’s been in existence for over a century, materials

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# FROM THE TRENCHES

## The Tale of the Jed Clampett Well

**C**ome and listen to a story about a man named Jed. A poor mountaineer, barely kept his family fed. Then one day he was shootin' at some food, and up through the ground come a bubblin' crude.

OK, I'm not Jed Clampett, nor was I out hunting for a critter to feed my family. But I did find oil a bubblin' through the ground on that fateful day. Diesel fuel oil that is, and not "Texas Tea".

I was the third consultant to be engaged by a truck rental company to come up with a more effective remedy for what remained of a 150,000-gallon diesel fuel release from a 200,000-gallon plus underground storage tank. The release had taken place ten years earlier, and the two previous consultants had employed variations of free-product recovery using wells in attempts to recover the fuel and prevent it from seeping into a small creek located downgradient of the release area.

Based on historical information from the previous consultants and data obtained from my subsurface investigation, the estimated volume of free-phase fuel that remained after ten years of pumping was between 60,000 and 65,000 gallons. Diesel fuel was also

observed still seeping into the small creek, which fed a tributary of a major river used for public water supplies. So earlier attempts had not been as successful as hoped.

The first part of our remedy was to install a cut-off wall along the creek bank. This wall was constructed of interlocking sheets of polyethylene liner material put in place with a vibratory hammer. A hydrophilic seal was installed at each interlocking joint to create a tight seal. A series of fifteen recovery wells with passive free-product collectors were installed on the upgradient (upstream) side of the cut-off wall to intercept and remove free-phase fuel without the need to discharge recovered groundwater, as was the case with the previous recovery attempts.

We had just hand augered the ninth passive recovery well borehole to the top of the groundwater zone when we all heard a repeated "burping" sound coming from the borehole. Curious as to the source of the "burping", we removed the hand auger from the hole. What followed was the loud hissing of escaping gas followed by the unmistakable sound of fluid entering the borehole under pressure. Trying to be a little safety minded, we all backed several feet away from the borehole until the gurgling sound had stopped and a few minutes had passed to allow the wind to disperse any gases.

A sample jar was lowered into the borehole to obtain a sample of the fluid. The retrieved jar (see photo) contained an amber colored fluid that had the distinctive odor of diesel. My client, who was present to observe this event, used some colorful expletives to express his displeasure at having encountered such free flowing diesel fuel so close to the creek. I, however, was not so disheartened. I noted that suspended in the fuel were white globs of fibrous slime. These globs of slime, along with the gas pocket and diesel fuel under pressure, indicated to me that Mother Nature was attempting to deal with the fuel release in her own way.

Later we took direct measurements of dissolved oxygen and dissolved carbon dioxide concentrations in the groundwater across the release area. My evaluation of this data indicated that native soil and groundwater microbes (bugs) were in the process of degrading not only the dissolved fuel constituents, but also the free-phase diesel fuel. The limiting factors appeared to be the concentration of free-phase diesel fuel and the oxygen availability.

Armed with this knowledge, I performed a short term pilot test to measure the air flow characteristics of the saturated and



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## Rethink the Air Quality Planning Process – And Favor Public Health Over Paperwork

Once again, the Environmental Protection Agency is on the verge of requiring states to develop air quality plans that will surely fail to achieve the national air quality standards. EPA is likely to soon release its recommendation to lower the ground-level ozone standard, triggering a new round of changes to State Implementation Plans (SIPs)—the air quality blueprints that states are required to develop for any area in “nonattainment” with the standards.

Trying to meet the new ozone standard in nonattainment areas using the current SIP process will cost businesses and taxpayers many billions of dollars without corresponding environmental benefits. States will try and fail to meet the standard, expending time and money in a paper chase that most can't win because they have little control over the majority of the emission sources. Those states that do win will rely largely on federal emission reductions already on the books, making one ask what environmental good comes from requiring states to develop plans that tell the federal government what the federal government is already doing.

The biggest chunk of ozone-related pollution now comes from mobile emission sources, such as cars, and from pollution blowing in from other states and countries. Such pollution is generally outside state control. Nonetheless, current federal law requires states to be responsible for achieving the air quality standards. Essentially, states are being told to build a barn without using a hammer or nails. It is not fair to make states responsible for achieving the air quality standards, tie their hands, and then threaten to remove their transportation funding if they fail.

A recent study found that approximately half of the ozone pollution in the Houston area can be background pollution blowing in from other states and countries. Of the half of the ozone that is formed in the Houston area, half is the result of emissions from federally regulated sources such as cars and trucks. That leaves less than 25 percent of the emissions that the state can control. When the federal government is requiring a 55-percent reduction and the state only controls 25 percent, you can't get there from here. The alternative is to ask for more time or require people to stop driving their cars.



While some air quality improvements will undoubtedly continue to be made through the current SIP process, the circuitous process often reinforces the problem, creating the appearance of environmental protection without supplying much substance.

What is needed is a new air quality planning process that aligns responsibility for achieving the air quality standards with the authority to achieve the standards. Aligning responsibility with authority would allow states to spend their time and resources on issues they can more efficiently and properly control rather than on justifying what they cannot effectively do.

Many experts are pointing at impending CO<sub>2</sub> legislation as a potential opportunity to make structural improvements in the air quality planning process. Certainly, with the challenges of addressing CO<sub>2</sub> it will be even more critical to have an air quality planning process that is efficient, results-oriented, aligns authority with responsibility, and is multi-pollutant in scope.

As EPA considers further tightening of the ozone standard and setting standards for CO<sub>2</sub>, developing the proper planning mechanism to efficiently and effectively achieve these various goals is imperative. If the goal is the moon, it would be a long ride and painful ride on a pogo stick.

**Jed Anderson**  
*Attorney at Law • Houston*

# News Briefs

## **national news**

### **Senate Panel Approves Global Climate Change Bill**

On December 5, the U.S. Senate Environment and Public Works Committee voted in favor of S 2191, the Lieberman-Warner "America's Climate Security Act of 2007". This legislation calls for a reduction in U.S. emissions of roughly 70 greenhouse gases by 2050 using a cap-and-trade program. The proposed program is similar to the existing sulfur dioxide cap-and-trade program applied to the energy, manufacturing and transportation sectors. For more information, contact Brett Davis at 512.879.6628 or [bdavis@zephyrenv.com](mailto:bdavis@zephyrenv.com).

### **OSHA Clarifies When Employers Must Pay for Personal Protective Equipment**

On November 14, OSHA published a final rule creating a clear and consistent policy concerning the type of personal protective equipment (PPE) that employers must provide at no cost to employees. The rule provides specific information for safety toe footwear, everyday clothing, and gear for protection from weather/temperature related elements. It also establishes requirements for replacement of employer issued and employee owned PPE. OSHA will begin enforcement of this rule six months after its publication. For more information, contact Tiffany Ashwell at 512.879.6630 or [tashwell@zephyrenv.com](mailto:tashwell@zephyrenv.com).

### **Court Orders EPA to Review NO<sub>2</sub> and SO<sub>2</sub> Standards**

EPA has agreed to review the potential hazards of nitrogen dioxide and sulfur dioxide pollution and revise the National Ambient Air Quality Standards, if necessary. This action is a result of a court settlement finalized on November 19 resulting from a lawsuit brought by the Center for Biological Diversity in coalition with Valley Watch and three individuals. The Clean Air Act requires EPA to review the NAAQS every five years, but EPA has not reviewed the NO<sub>2</sub> or SO<sub>2</sub> standards since 1996. Under the settlement, EPA has agreed, according to a detailed schedule, to issue Integrated Science Assessments and decisions on any revisions to the NAAQS. EPA will complete all actions by October 2010. For more information, contact Roger Brower at 410.312.7907 or [rbrower@zephyrenv.com](mailto:rbrower@zephyrenv.com).

### **EPA Proposes Spill Rule Changes**

On October 1, EPA proposed changes to its spill prevention, control, and countermeasure rule to provide clarity and tailor and streamline requirements to encourage greater compliance. The proposed amendments will exempt certain regulated facilities; revise definitions; amend requirements for site diagrams, general secondary containment, security, and integrity testing; and streamline a number of requirements for oil production facilities. EPA also provided clarification in the rule preamble on additional issues raised by the regulated community. For more information, contact Rebecca Luman at 281.668.7343 or [rluman@zephyrenv.com](mailto:rluman@zephyrenv.com).

### **USFWS Proposes Threatened & Endangered Species Recovery-Crediting System**

The U.S. Fish and Wildlife Service (USFWS) has drafted guidance on an innovative new program to help conserve imperiled species affected by the actions of federal agencies. Federal agencies will receive credits for conservation actions they undertake on non-federal lands and will be able to store these credits for use at a later time to offset impacts from its other projects on federal lands. Credits must be used to benefit the same species for which they were accrued. USFWS will review each agency's proposal for specific activities related to particular listed species to determine whether or not it is appropriate to allow the activity through the use of credits. For more information, contact Brad Watson at 512.879.6624 or [bwatson@zephyrenv.com](mailto:bwatson@zephyrenv.com).

### **EPA Proposes to Revise Treatment of Fugitive Sources for NSR**

In November, EPA proposed revising the provisions of the December 2002 NSR Reform Rule related to the treatment of fugitive emissions for the purposes of determining whether a physical or operational change at an existing major source qualifies as a major modification. EPA has proposed to reverse the existing policy and include fugitive emissions in the major modification determination only for sources in the categories that have been designated through rulemaking pursuant to the Clean Air Act. In other words, to determine whether a change is a major modification, EPA has proposed to adopt the same approach to fugitive emissions currently used for determining whether a source is major. For more information, contact Lou Corio at 410.312.7912 or [lcorio@zephyrenv.com](mailto:lcorio@zephyrenv.com).

## **Homeland Security Lists Chemicals of Concern in Consequence Assessments**

On November 20, the Department of Homeland Security released Appendix A of the Chemical Facility Anti-Terrorism Standards regulation which lists the chemicals of interest and their corresponding screening threshold quantities. This is the list of chemicals that, if possessed by a facility in the specified quantity, trigger a requirement to complete and submit an online consequence assessment using the Top-Screen tool. The deadline for affected facilities to complete the Top-Screen is January 22, 2008. For more information, contact Kiley Taylor at 410.312.7905 or [ktaylor@zephyrenv.com](mailto:ktaylor@zephyrenv.com).

## **EPA Considers New Ambient Lead Standard**

As part of its periodic review of the air quality standards, EPA released, in December 2006, a policy assessment of scientific and technical information related to the ambient standard for lead. Based on this assessment, EPA is considering that the level of the standard be dropped from the current 1.5 micrograms per cubic meter for a 3-month average to values close to the background of levels of lead in the air (i.e., in the range of 0.05 to 0.2 micrograms per cubic meter). After reviewing comments on its assessment, EPA plans to propose changes to the standard by May 1, 2008 and to take final action by September 1, 2008. Since the elimination of lead in gasoline in the early 1980's, concentrations in lead in the air have decreased dramatically, with almost all areas of the United States meeting the current standard. For more information, contact David Cabe at 512.879.6644 or [dcabe@zephyrenv.com](mailto:dcabe@zephyrenv.com).

## **SUVs To Get Tighter Fuel Efficiency Standards**

On November 15, the Ninth Circuit Court of Appeals in San Francisco ordered tighter fuel efficiency standards for SUVs, pickups, and other types of light trucks. In 2006, the National Highway Traffic Safety Administration had required light trucks to achieve only 24 miles per gallon (mpg) by 2011, or less than 2 mpg over 2007 models, while the fuel efficiency standard for other types of automobiles, which had been in place for almost 20 years, remained at 27.5 mpg. The November Court action was taken to close a "loophole" which provides lower fuel efficiency standards for the "light truck" vehicle class. Congress approved new car and truck fuel standards into its energy bill, increasing fuel economy standards to 35 mpg by 2020. President Bush signed the bill into law on December 19. For more information, contact Mark Fridel at 281.688.7354 or [mfridel@zephyrenv.com](mailto:mfridel@zephyrenv.com).

## **EPA Amends VOC Equipment Leak Standards for SOCOMI Facilities and Refineries**

On November 8, EPA amended its New Source Performance Standards for VOC equipment leaks from SOCOMI facilities and petroleum refineries. These amendments apply to existing SOCOMI and refinery facilities that are already subject to NSPS regulations, Subparts VV and GGG, respectively. The changes clarify certain definitions and requirements and are intended to

reduce the burden on industry to comply with the original regulations. In addition, EPA promulgated new standards for VOC equipment leaks for SOCOMI facilities and petroleum refineries that are constructed, reconstructed, or modified after November 7, 2006. The new regulations reflect changes to the standard based on work practice improvements demonstrated since the original NSPS was promulgated. For more information, contact Shahjabeen Hashim at 281.668.7359 or [shashim@zephyrenv.com](mailto:shashim@zephyrenv.com).

## **OSHA Policy Sharpens Focus on Combustible Dusts**

On October 19, OSHA issued a new safety and health instruction for inspecting workplaces subject to combustible dust hazards. The new instruction informs businesses on how to achieve compliance with OSHA requirements for reducing the potential hazards of combustible dust fires and explosions. All industries that have particularly prevalent issues with the potential for dust related-fires and explosions are affected, including the agricultural, chemical, textile, forest products, and furniture sectors. For more information, contact Tiffany Ashwell at 512.879.6630 or [tashwell@zephyrenv.com](mailto:tashwell@zephyrenv.com).

## **EPA Identifies New and Equivalent Methods for Measuring Air Contaminants**

On November 8, EPA designated new equivalent methods for measuring ozone and sulfur dioxide in the ambient air. These methods allow operation at temperatures between 20 to 30° C and ranges of 0-0.1 ppm, 0-0.2 ppm, and 0-0.5 ppm. Samplers utilizing these new methods are commercially available. For more information, contact Paul Little at 281.668.7347 or [plittle@zephyrenv.com](mailto:plittle@zephyrenv.com).

# **state news**

## **EPA Proposes to Reclassify the Beaumont/Port Arthur Area as Nonattainment for Ozone**

EPA has found that the Beaumont/Port Arthur (BPA) region did not meet the 8-hour ozone standard by the June 15, 2007 deadline. As a result, EPA will propose to reclassify the BPA area (Hardin, Jefferson, and Orange Counties) as a moderate 8-hour ozone nonattainment area. The reclassification will require Texas to revise its clean air plan for the BPA region to bring it into attainment no later than June 15, 2010. The EPA timeline will require the State to submit the plan revisions and implement all control measures by January 1, 2009. For more information, contact Bob Henderson at 281.668.7345 or [rhenderson@zephyrenv.com](mailto:rhenderson@zephyrenv.com).

## **Governor Appoints Bryan Shaw as Commissioner of the TCEQ**

On November 1, Governor Rick Perry appointed Dr. Bryan Shaw to the TCEQ Commission. His term will expire August 31, 2013. Dr. Shaw will not be up for confirmation until 2009, when

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the legislature reconvenes. Dr. Shaw is an Associate professor in the Biological and Agricultural Engineering Department at Texas A&M University in College Station, Texas, where his research has focused on air pollution, pollution control, and dispersion modeling. He is active on numerous federal government committees at EPA and the Department of Agriculture. For more information, contact Ed Fiesinger at 281.668.7353 or [efiesinger@zephyrenv.com](mailto:efiesinger@zephyrenv.com).

### Corpus Christi Ozone Plan Approved

On November 6, EPA approved the plan developed by Corpus Christi, Texas to maintain compliance with the 8-hour ozone air quality standard. Although Corpus Christi does not currently violate the standard, the voluntary plan describes numerous local measures to prevent the area from going “nonattainment”. Similar to other proactive “early action” plans approved for cities across the United States, the Corpus Christi plan potentially provides an alternative to future EPA-imposed controls. For more information, contact David Cabe at 512.879.6644 or [dcabe@zephyrenv.com](mailto:dcabe@zephyrenv.com).

### NRG Offer of Emissions Offsets Sweetens Texas Coal Plant Proposal

In the wake of the recent cancellation of plans for several new coal-fired power plant units in Texas, NRG is moving forward with its application for a new coal-fired unit at its Limestone Electric Generating Station with a commitment to offset annual emissions of nitrogen oxides, sulfur dioxide, and mercury. According to a November 29 letter to the TCEQ, emissions of these air contaminants would either remain the same or decrease with the construction of the new unit. The emissions reductions would be achieved through the use of lower-emitting coals and upgrades to existing emissions controls on other units at the Plant. For more information contact David Cabe at 512.879.6644 or [dcabe@zephyrenv.com](mailto:dcabe@zephyrenv.com).

### TCEQ Revises Effects Screening Level List

The TCEQ has revised and significantly expanded the list of Effects Screening Levels (ESLs)—conservative chemical-specific air concentration screening thresholds used primarily in air quality permitting to determine whether human health and welfare will be protected. The revision process was verified by an independent scientific review to incorporate the most current and relevant federal and state guidelines using the highest scientific standards. Updates to the ESL list, which is available on the TCEQ website, will be posted as ESLs are revised. For more information, contact Louisa Preston at 512.879.6646 or [lpreston@zephyrenv.com](mailto:lpreston@zephyrenv.com).

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with energy value can be converted, in an oxygen starved reactor, to synthetic natural gas (syngas) for use in electrical generation or steam production. With this method of combustion, air pollutants can be controlled more effectively than in a traditional waste incinerator.

Some critics object to the large amount of ash that is created when solid waste is burned. However, about one third of the ash produced is used in landfills as a daily or final cover, which saves on excavation of soil to meet this need. Ash is also used to build roads by mixing it with base material, and it can be part of the mix in making cement blocks. Still another beneficial use for the ash is in the construction of artificial reefs.

A much more efficient method of managing solid wastes is to prevent them from ever entering the landfill. Industries have several options for diverting their waste streams from landfills and putting them to good use. By establishing simple segregation policies for recyclable materials, the ideal of a “zero landfill” can become close to a reality. Recycling companies entering today’s marketplace are developing new technologies to improve recycling methods. But beyond what happens at the recycling facility, these companies are making it easier for their suppliers to recycle, providing separate containers for each recyclable material, as well as incentives, such as “no cost” removal and transportation of recycled materials. Some companies even pay for recycled waste materials, such as scrap metal, e-scrap, filter press cake, plastics, and retired equipment and assets.

Virtually every material a company receives can be recycled. Paper and cardboard packaging can be sent to a local recycler for paper recycling. Wooden crates in which equipment arrives can go to a local recycler and be blended with other biomass materials to make mulch or solid fuel. Corrugated Services, a corrugated paper manufacturing company in North Texas, plans to take the wood pallets on which recycled paper is delivered to the plant and burn them to generate almost four megawatts of electricity for use in the plant.

Much of the plastic in waste materials can be used in the production of consumer products such as flooring for playground equipment. Computers, printers, cell phones, and other electronic scrap can be recycled as well. For example, the ECS Refining plant in Terrell, Texas, recovers tin, zinc, and even precious metals such as gold, silver, and palladium from these waste streams.

The bottom line is that the world’s population is growing, and with that growth comes more waste. Governments, industry groups, companies, and even individuals who are willing to find alternative methods to reuse the trash created every day will go a long way towards cutting their costs and improving the earth for

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## The Environment in 2007 – Now THAT was a Paradigm Shift!

In my column in the January 2007 edition of “Currents”, I posed the question as to whether “2007 would be the year of Alternative Energy?” Well, alternative energy certainly figured prominently in the environmental news in 2007, but I think we would all have to agree a year later that 2007 was the year of “Global Climate Change.”

In 2007, in a first that’s unlikely to be repeated anytime soon (if ever), Al Gore won both the Academy Award and the Nobel Peace Prize for his work on global climate change. Also last year, the U.S. Supreme Court issued a landmark decision that the EPA was obligated to consider treating greenhouse gases as “pollutants” for purposes of policy development. And in October of 2007, the State of Kansas denied an air quality permit for two proposed coal-fired generators at the Sunflower Electric Power Corporation plant near Holcomb in western Kansas—a decision that marks the first time a U.S. power plant proposal has been rejected for its potential contribution to climate change.

It would appear that 2008 will be another action-packed year in the environmental arena. At a recent talk he gave in Austin, Richard W. Sprott, president-elect of the Air & Waste Management Association and Executive Director of the Utah Department of Environmental Quality, said that in today’s election-year political environment, there is going to be a lot of legislative activity regarding global climate change, not to mention other initiatives regarding alternative energy and energy independence. In fact, he stated that “upcoming global climate change legislation will make the Clean Air Act of 1990 look like an opening number.” Sprott, and many others, predict that no matter which party wins the White House in November, environmental regulation and policy development will be taking center stage for the foreseeable future.



I’m also noticing a lot of new players starting to take a very active role in environmental issues. One unlikely entrant into the fray is Google, that announced in late November that it will spend \$500 million to develop cheap energy alternatives to coal. The initiative, “Renewable Energy Cheaper than Coal”, has the goal of producing one gigawatt of power within a few years. One gigawatt can power a city the size of San Francisco, with 750,000 residents. Renewable energy experts welcomed Google’s entry. “Google sells a product you can’t put your hands on that people love to use, which isn’t dissimilar from the electric utility business,” says Mike Eckhart, president of the American Council on Renewable Energy.

So, fellow environmental professionals, I suggest you strap in—it’s going to be a wild ride! Presumably, it will be powered by clean and renewable energy, and constructed with a view to sustainability. ✨

**Joe Zupan**  
President

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the generations to come. By exploring and possibly utilizing a “zero landfill” policy in our daily lives and in our businesses, we can extend the life of current landfills for use in disposing of those waste items that absolutely have no other home. Eventually, if we are diligent, a need for the current landfills may not even exist. At least we can be hopeful. ✨

**Tim Jones**  
Project Manager

Zephyr is a professional services firm providing worldwide consulting, training and data systems to the industrial, commercial and public sectors. The firm’s major areas of practice are air and water quality, waste issues, worker and community safety, and incident management.

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unsaturated subsurface soil zones, as well as changes in the level of oxygen in the saturated and unsaturated zones. I used the pilot test data and simple analytical models to devise a sparging and venting system that would increase the oxygen levels in the unsaturated soil and groundwater. The air flow through the subsurface would only be enough to enhance the ongoing biodegradation, while keeping the offgas emission of fuel components well below state air quality standards. This remediation technique is known as biosparging and bioventing.

We planned the biosparge wells configuration to help contain the free-diesel fuel plume and emulsify the free-diesel fuel to make it more susceptible to biological degradation. By the time I left the project, after almost nine years, the free-phase diesel plume had divided into two smaller plumes and the original coverage area had been reduced by more than seventy percent. Dissolved fuel constituent concentrations in the groundwater outside of the free-phase diesel plume no longer exceeded the cleanup standards.

The moral of the tale is this: where one person can only see a problem, another can look past it and find the solution. Oh, by the way, the ninth passive recovery well was christened the "Jed Clampett Well". ✨

**Paul C. Moore, P.G.**  
Project Hydrogeologist

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### California Sues EPA for Right to Control Vehicle Greenhouse Gas Emissions

In November, California sued EPA to force a decision on a two-year old request for authorization to implement the nation's first greenhouse gas emission standards for cars and light trucks. EPA subsequently promised a December decision, which, if favorable to California, would likely result in as many as 16 other states (including Maryland, but not Texas) also adopting the standards, to become effective in 2009. In a related action, the California Air Resources Board announced December 6 that refineries, power plants, cement kilns, and manufacturing plants must begin reporting their greenhouse gas emissions in 2009. For more information, contact Brett Davis at 512.879.6628 or [bdavis@zephyrenv.com](mailto:bdavis@zephyrenv.com).

### TCEQ Appoints Les Trobman as General Counsel

On December 5, the TCEQ unanimously appointed Les Trobman as General Counsel to replace Derek Seal, who left the TCEQ to go into private practice. Mr. Trobman, who received his law degree from Tulane Law School in New Orleans in 1999, previously served as special counsel to the deputy director of TCEQ's Office of Legal Services. As general counsel, he serves as the agency's chief advisor on law and ethics for the three commissioners. For more information, contact Ed Fiesinger at 281.668.7353 or [efiesinger@zephyrenv.com](mailto:efiesinger@zephyrenv.com). ✨

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