

zephyr®

Currents

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Getting the Knack of the New NAAQS

Standards for protecting the air we breathe have been on the books almost as long as the Clean Air Act itself; EPA issued National Ambient Air Quality Standards (or NAAQS) for sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter (PM), and photochemical oxidants (ozone) in 1971, and for lead in 1978. Since those early years, EPA has revised almost all of these standards, with ozone taking first place in terms of the number of changes. Arguably, however, no changes have brought more air quality permitting challenges to industry than the significant tightening in 2010 of the almost 30-year-old SO₂ and NO₂ standards and a change this year in EPA's policies for permit applicants attempting to demonstrate compliance with the standard for fine particles (PM_{2.5}). In the cases of all three pollutants, applicants are just now becoming aware of permitting obstacles that were scarcely imagined a year ago.

NO₂

The NO₂ NAAQS was revised in April with the addition of a new 1-hour primary standard of 100 parts per billion (ppb). While it remains straightforward to demonstrate compliance with the existing annual standard, showing compliance with the new 1-hour NAAQS is more involved — it is based on a 3-year average of the 8th highest 1-hour daily maximum concentrations.

The adequacy of the tools for demonstrating compliance has drawn criticism from the regulated community — current air dispersion models, like AERMOD, don't yet calculate concentrations to facilitate comparisons with the new 1-hour NO₂ NAAQS. Although private companies have developed "work-arounds" to deal with this issue, EPA has not formally approved them. Applicants, however, are encountering even bigger problems in showing NO₂ compliance in modeling demonstrations. For example, for some pipeline compressor stations that were previously modeled in compliance with the annual standard,



maximum concentrations have been modeled to exceed the new 1-hour limit by factors of 10 and more.

In order for applicants to demonstrate compliance with the new NAAQS, EPA recognizes that they must be able to account for the fact that not all the NO_x that is emitted converts to NO₂. However, more sophisticated and realistic modeling approaches than the default NO₂/NO_x ratios EPA now allows are often needed to enable the applicant to "model in." In particular, techniques already part of AERMOD which recognize the role that ambient ozone plays in limiting the conversion of stack emissions of NO_x to ambient NO₂ are available. Although these techniques have been readily accepted by air quality permitting staff in many state agencies, EPA has stated that its approval of the use of ozone limiting features of the model is not automatic — applicants will be required to provide extensive supporting documentation to justify their use.

SO₂

A new SO₂ 1-hour NAAQS of 75 ppb goes into effect August 23, replacing the old 24-hour and annual primary standards. Like NO₂, demonstrating compliance with the 1-hour SO₂ standard will be cumbersome; it's based on a 3-year average of the 4th highest 1-hour daily maxima — a statistical result that

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FROM THE TRENCHES

I Love a Rainy Night

It's a rainy night in early February. Another field researcher and I are driving on private ranch roads in an area in Central Texas proposed for development. As part of the process of receiving approval from the Fish and Wildlife Service for the project, we have to know if populations of the federally-protected *Bufo houstonensis* are present. Put simply, we're on a quest for toads — the Houston Toad to be exact.

To find these little 2- to 3-inch, brownish-gray, endangered amphibians, we perform field surveys of about 20 to 30 hours per week over a 4-month period during late winter and spring. Additionally, since Houston Toads are quiet during the day, our surveys can't begin until after sunset.

It's been spitting rain off and on for the last two weeks, and nightly temperatures have remained above 57°F — perfect conditions for toad activity. It's on nights like these that the males congregate in ephemeral ponds and join in a shrill chorus in the hopes of attracting mates and continuing their species. It is also on nights like this that biologists like me traipse through the woods, stopping every so often to listen for that toad's unique call — our marker for knowing they are present.

It has been a good night so far. Before we hit the field, we stopped at a local establishment for some great barbeque and are in good spirits. Our survey has produced useful results; we know the toads are active because we have heard their distinctive trills outside the project area, but have heard none within the development parcel itself. We've got just one area left to survey before heading home — unfortunately, it's a tract that is far from the highway and usually the wettest.

After travelling down several rutted dirt tracks, crossing dozens of small streams, and navigating various gates we reach our objective: an isolated stretch of muddy road bordering a series of permanent and ephemeral ponds. I immediately stop at the first survey spot and listen for toads. After about 10 minutes and no toads, I return to the truck and look at the road before us. As usual, I see two slight rises in the roadway surrounded by a sea of mud. Undaunted, I gun the engine and make for the first rise. After about 20 seconds of fishtailing in almost every direction, I make it up and over the top, trying to maintain my momentum to make it through the next patch of mud. Within seconds, the truck has bottomed out, mud is up to the grill, and we're stuck.

Plan "B" is initiated. Not at all worried, I call the other survey crew on site and wait for help. An hour later they arrive with tow-strap in hand. After traversing the first stretch of mud, they stop on the



rise and get out the tow-strap. The only problem is that the tow-strap is a little short, so they have to move closer and over muddier ground in order to attach the tow-strap. Within seconds of trying to dislodge our truck, theirs is stuck too.

Plan "C" is initiated. We call the onsite land manager who lives nearby, wake him with our call, and explain our predicament. Within an hour he is there. Having lived in the area several years, he's confident he knows the terrain and can extricate both vehicles. Before reaching the first rise, his truck is stuck too. It is now midnight, and we have three trucks mired in the mud at least five miles from the nearest paved road.

Plan "D" is initiated. The five of us start walking back the way we entered. About an hour and a half later, we meet up with the wife of one of the biologists. She greets us with a few expletives about being awakened after midnight and having to drive over 60 miles to retrieve us. We all cram into her 1970's muscle car, which is currently being remodeled and without back seats. On our way home we laugh about the situation and devise a game plan (Plan "E") to return the next day to collect our vehicles.

I wouldn't trade my profession as a wildlife biologist with anyone. How many other jobs pay you to observe animals in a four-wheel drive vehicle at night, in the rain, and through the mud, on someone else's property? I think I'll be doing this for a few more years. I also think I'll keep a really long tow-strap handy as well. New Plan "A". ✨

Clay Fischer
Natural Resources Project Manager

District Court Dismisses PSD Claim Against Power Plants

In a March 9, 2010 opinion, a U.S. District Court held that the U.S. EPA could not bring claims against a power plant owner for failure to obtain a prevention of significant deterioration (“PSD”) permit (*United States v. Midwest Generation, LLC*, 2010 WL 889 986 (N.D. Ill March 9, 2010) (No. 09-CV-5277)).

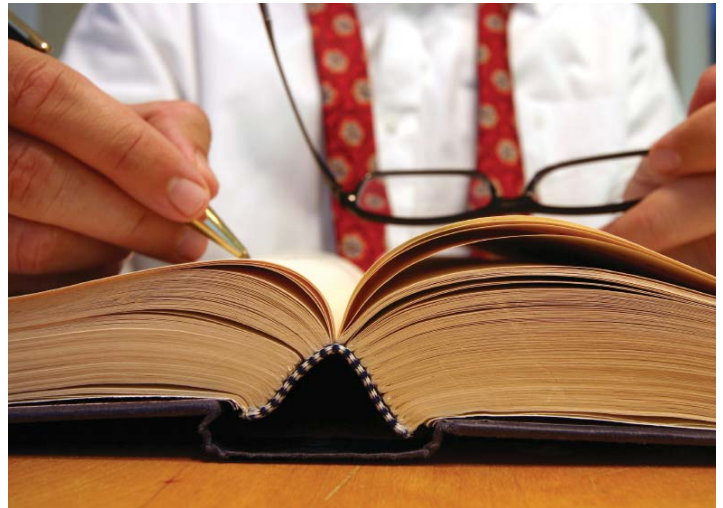
In this case, EPA alleged that Midwest Generation was operating its coal-fired power plants in violation of the Clean Air Act PSD requirements. The power plants at issue were purchased by Midwest Generation in 1999 from Commonwealth Edison Company (“ComEd”). ComEd had modified and operated the plants without obtaining PSD permits, and did not install best available control technology (“BACT”). After purchase, Midwest Generation modified one plant and continued to operate the other six plants without obtaining PSD permits.

The district court found two independent bases for dismissing the PSD claims. First, the court held that Midwest Generation could not be held liable for the failure of ComEd, the prior owner, to obtain the necessary PSD permits. The court followed a line of cases holding that failure to obtain a PSD *construction* permit does not result in a continuing PSD violation if the facility continues to *operate* absent a PSD permit. Since the improper construction was conducted by the prior owner, the court reasoned that only the prior owner could be liable, as continued operation of the facility did not violate PSD permit requirements. See Section 7475 of the Clean Air Act (“CAA”).

Second, the court used the same underlying rationale to dismiss EPA’s penalty claims for all the modifications, even the modification made by Midwest Generation. In dismissing these penalty claims, the court applied the general five-year federal statute of limitations found in 28 U.S.C. §2462, which applies to claims for civil penalties under federal law. The court, following several other court opinions, held that since the construction activities were concluded over five years before the lawsuit was filed, the claim for penalties were untimely, since the PSD violation did not continue to accrue while the plants were operating.

Under both rationales, therefore, the court expressly rejected EPA’s theory that continued operations of a facility constructed in violation of the PSD pre-construction review requirements continues for every day the facility operates. This “continuing violation” issue has been the subject of several court decisions. Significantly, the appellate courts have reached opposite conclusions, in two cases involving identical parties.

In *National Parks Conservation Association v. Tennessee Valley Authority*, 480 F.3d 410 (6th Cir. 2007), the court held that the



environmental group’s action could proceed, even though the construction activities had occurred more than five years before the suit was filed. Reaching an opposite conclusion, the United States Court of Appeals for the 11th Circuit in *National Parks Conservation Association v. Tennessee Valley Authority*, 502 F.3d 1316 (11th Cir. 2007), held that the plaintiff’s claims were barred by the five-year statute of limitations. The United States Supreme Court declined to hear the environmental group’s appeal of the 11th Circuit decision.

The district court in the *Midwest Generation* opinion, as did the 11th Circuit, distinguished the 6th Circuit case in finding that the 11th Circuit result was grounded on language in the Tennessee SIP that imposed an obligation to obtain an after-the-fact construction permit when one had not been obtained prior to construction. Since the federal CAA contains no such requirement, both courts held that the reasoning in the 6th Circuit *Tennessee Valley Authority* opinion did not apply.

The rejection of the continuing violation theory has important implications for requirements such as BACT that are part of the pre-construction permitting process. The holding in the *Midwest Generation* case severely undercuts the EPA’s ability to impose BACT requirements to facilities which have changed ownership. However, other requirements based on the requirement to obtain operating permits would not be affected. In addition, the court held that Midwest Generation could be liable for injunctive relief, including BACT, for modifications it made that were not subject to PSD review. The statute of limitations only applies to penalty claims, not claims for injunctive relief. Therefore, to the extent Midwest Generation itself had violated PSD requirements, it is

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News Briefs

national news

EPA Proposes to Regulate Coal Combustion Ash

On June 21, EPA proposed to regulate coal combustion residuals (CCRs) under the Resource Conservation and Recovery Act (RCRA). Otherwise known as coal ash, CCRs, which are generated from combustion of coal in electric power generating plants, are currently exempt from regulation under the federal waste rules. EPA is proposing two options for regulating the disposal and management of CCRs: as special wastes under RCRA Subtitle C or as non-hazardous wastes under RCRA Subtitle D. Under either option, composite liners, groundwater monitoring, and post-closure care would be required for surface impoundments and landfills associated with the disposal of CCRs. Existing impoundments not having composite liners or not refitted with them would have to be closed. Disposal in mines would not be regulated with this rule. For further information, please contact Betty Moore at 512.879.6622 or bmoore@zephyrenv.com or contact Paul Moore at 512.879.6642 or pmoore@zephyrenv.com.

EPA Issues Air Permitting Rule for Greenhouse Gases

On May 13, EPA issued its new greenhouse gas (GHG) air permitting rule for stationary sources. Also referred to as the GHG Tailoring Rule, it establishes a phased schedule for the permitting of GHG-emitting sources under the Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs. Phase 1 applies to sources that undergo PSD review for non-GHG air pollutants between January 2 and June 30, 2011 and have GHG emissions increases of 75,000 tons per year or greater on a CO₂ equivalent (CO₂e) basis. It is important to note that there is no “grandfathering” for pending applications, meaning that PSD applications that are pending as of January 2, 2011 could be affected. Under Phase 2, PSD permits will be required for new projects on or after July 2, 2011 with GHG emissions of 100,000 tons per year or greater and for modifications with GHG emissions of 75,000 tons per year or greater regardless of whether the source is subject to those permitting requirements for other pollutants. Also, beginning on July 2, 2011, Title V operating permits will be required for sources with CO₂e emissions of 100,000 tons per year or greater

if those sources don't already have them. For more information, contact Jennifer Seinfeld at 410.312.7915 or jseinfeld@zephyrenv.com.

EPA to Expand GHG Emissions Reporting for Petroleum and Natural Gas Sources

On April 12, EPA proposed to require expanded monitoring and reporting of GHG emissions from petroleum and natural gas systems. Operations that are covered by the rule include onshore and offshore petroleum and natural gas production operations, and natural gas processing, compression, storage, and distribution operations. When final, the rule will require monitoring and reporting of GHG emissions from a broad range of sources such as process vents, tanks, flares, and equipment leaks. GHG emissions from stationary combustion units were previously covered in a 2009 rulemaking. The supplemental rule is expected to take effect in 2011. For further information, contact David Mahler P.E. at 410.312.7909 or dmahler@zephyrenv.com.

Fungus Disease Could Restrict Wind Energy Developments in Bat Habitats

In May, scientists with the U.S. Geological Survey's National Wildlife Health Center documented a fungus associated “white-nose syndrome” (WNS) in bat populations in Oklahoma — the first time that this disease, which has drastically reduced populations of cave hibernating bats in the northeast U.S., has been observed in a bat species which does not occur east of the Mississippi River. The discovery of WNS in the central U.S. could potentially have long-term effects on wind farm developments, as some species with already low populations could experience mortality levels that result in them being listed as endangered or threatened. For more information, contact Clay Fischer at 512.879.6629 or cfischer@zephyrenv.com.

EPA Proposes Changes to Emissions Standards for Large Engines

On June 8, EPA proposed to revise its Subpart IIII new source performance standards for stationary compression ignition engines with cylinder displacements of 10 liters and larger. Under these revisions, engines with model years of 2013 and higher would be required to meet emission limits consistent with recent revisions to standards for similar mobile source marine engines. In addition, the proposed changes would allow operators of engines to develop engine-specific

maintenance procedures instead of relying on manufacturer maintenance requirements as long as they perform additional testing. EPA is also proposing to allow the use of higher sulfur fuel (up to 1,000 ppm) for engines greater than 30 liters/cylinder. For more information, contact Kevin Ellis at 512.879.6647 or kellis@zephyrenv.com.

EPA Proposes to Revoke Air Permitting Aggregation Rule

On March 29, EPA proposed to revoke the part of its New Source Review (NSR) air permitting rule, promulgated on January 15, 2009, which requires that emissions from nominally-separate changes be aggregated as a single project for NSR applicability if they are substantially related. If the rule is revoked, EPA will revert to its previous policy of performing a case-by-case review of all relevant and objective factors related to whether changes at a source should be considered as one common aggregate change or project. This revocation proposal is an outgrowth of a court order, issued in response to a petition from the Natural Resources Defense Council, that EPA reconsider the NSR aggregation rule. For more information, contact Roger Brower at 410.312.7907 or rbrower@zephyrenv.com.

EPA Proposes Hazardous Air Pollutant Standards for Industrial Boiler Area Sources and Replacement for Vacated Boiler MACT

On June 4, EPA proposed hazardous air pollutant emissions standards for new and existing industrial, commercial, and institutional boilers and process heaters located at major source facilities and for coal-, biomass-, and oil-fired industrial, commercial, and institutional boilers located at smaller “area sources”. Under the major source rules, also referred to as the Boiler MACT, existing large coal-, biomass-, oil-, and certain gas-fired (excluding natural gas and refinery gas) units would be subject to emission limits for mercury, hydrogen chloride, dioxin/furan, particulate matter, and carbon monoxide emissions. Of special note, under the area source rules, coal-fired boilers (excluding existing small — heat input <10 MMBtu/hr — boilers) would be subject to a mercury emission limit equivalent to the proposed major source MACT standard proposed for existing units. In addition, affected major sources and area sources would be required to adopt certain energy efficiency measures and would have to meet certain operating and maintenance requirements. EPA estimates that the emission reductions associated with these rule changes would result in 2,000 to 5,000 fewer premature deaths in 2013, as well as other health benefits. For more information, contact Lou Corio at 410.312.7912 or lcorio@zephyrenv.com.

state news

EPA Says Houston Meets Air Quality Standard for Fine Particles

On April 28, EPA announced that the Houston-Galveston-Brazoria area is in compliance with the air quality standard for fine particles (PM_{2.5}), according to a May 4 press release from the TCEQ. Overall average PM_{2.5} levels in the Houston area have declined

since June 2009 from 13.2 micrograms per cubic meter to 11.9 micrograms per cubic meter. Most significant, average PM_{2.5} levels at the Clinton Drive monitor, which has the highest readings in the area, have dropped over the same period from 16 micrograms per cubic meter to 12.5 micrograms per cubic meter. The federal standard for PM_{2.5} is 15 micrograms per cubic meter. Compliance with the PM_{2.5} standard was largely achieved through voluntary measures including paving roads and parking areas, putting cleaner railroad engines into service, and more effective dust reduction measures by industry. For more information, contact Michele Foss at 281.668.7342 or mfoss@zephyrenv.com.

TCEQ Invokes VOC Contingency Rules for Storage Tanks in DFW Area

On May 11, the TCEQ announced that contingency measures for reducing VOC emissions will be invoked for the Dallas/Fort Worth (DFW) area. These measures, described in the TCEQ’s Chapter 115 rules, regulate the degassing or cleaning of stationary, marine, and transport vessels, requiring that all stationary storage tanks greater than one million gallons capacity and transport vessels greater than 8,000 gallons capacity and storing materials with vapor space partial pressures greater than 0.5 psi of volatile organic compounds (VOC) comply with specific emissions specifications, control requirements, monitoring and testing requirements, and recordkeeping requirements. The contingency measures are being invoked as a result of the DFW area failing to meet the 1997 eight-hour ozone NAAQS standard by the June 15, 2010, attainment deadline. Affected sites must comply as soon as practicable, but no later than one year from the date of the May 11 notice. For more information, contact Ellen Ward at 512.879.6634 or eward@zephyrenv.com.

TCEQ Adopts Changes to Air Permitting Public Participation Rules

On June 2, the TCEQ adopted amendments to its air permitting rules that change public notice requirements for minor new source review (NSR) applications. Under these changes applicants for minor NSR permits are required to publish both an initial notice (Notice of Receipt of Application and Intent to Obtain Permit) and a second notice (Notice of Application and Preliminary Decision). Prior to the rule change, second notice was only required when a request for a contested case hearing had been made during the first notice period and not withdrawn before the preliminary decision was issued. The levels of emissions increases that trigger the requirement for public notice remain unchanged with the new rules. The revised public notice rules will apply to air permit applications submitted after the effective date of the rule. For more information, contact Larry Moon at 512.879.6619 or lmooon@zephyrenv.com.

TCEQ Proposes Rules to Prevent Air Permit Applicants from Circumventing Public Notice

On April 30, the TCEQ proposed amendments to its Chapter 106 and 116 rules to prevent air permit applicants from circumventing

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public participation requirements of the NSR air quality permitting process. The proposed changes would 1) restrict an owner or operator of a facility authorized by a PBR or standard permit from applying for an NSR permit for the same facility for a period of 12 months after the PBR or standard permit was registered or claimed, and 2) require that an applicant wait 12 months before authorizing the facility with a Standard Permit or PBR if an air application is withdrawn, voided, or denied after it was declared administratively complete. However, if an air application is withdrawn, voided, or denied before it is declared administratively complete, then a facility may be authorized by a standard permit or a PBR if it qualifies. The anticipated adoption date for the new rules is September 15. For more information, contact Larry Moon at 512.879.6619 or lmoon@zephyrenv.com.

EPA Proposes to Disapprove TCEQ Affirmative Defense Provisions for MSS Emissions

On May 13, EPA proposed to disapprove those portions of the TCEQ's Chapter 101 rules which provide for affirmative defense against penalties for excess emissions from planned maintenance, startup, and shutdown (MSS) activities if air quality permit applications for such MSS emissions are submitted by specified dates. EPA proposed this disapproval on the grounds that, by their very nature, planned maintenance activities are predictable and planning can be taken to minimize their emissions. This proposed disapproval affects every stationary source which is required under Chapter 101 to submit a MSS application. Regardless of EPA approval or disapproval, the TCEQ maintains that MSS permit applications are to be submitted by applicable due dates published in Chapter 101. For more information, contact Karen Olson at 512.879.6618 or kolson@zephyrenv.com.

EPA Takes Over Operating Permit Review for Three Texas Sources

On May 25, EPA announced it was taking back from the TCEQ the process of review and issuance of the Title V permit for the Flint Hills Resources refinery in Corpus Christi, and on June 15, it announced it was taking over the Title V permits for the Chevron Phillips Cedar Bayou Ethylene and Utilities Plant in Harris County and the Garland Power and Light Power Plant in Collin County. This action is a follow-up to objection letters EPA prepared concerning these and 36 other Title V permits drafted by the TCEQ. Among other things, EPA objected to the TCEQ's practice of incorporating by reference NSR permits issued under the state's flexible permitting and qualified facilities permitting rules — rules the EPA contends do not meet federal Clean Air Act requirements. The three plants in question will be required to submit new Title V applications for EPA review. For more information, contact Larry Moon at 512.879.6619 or lmoon@zephyrenv.com.

TCEQ Proposes Flexible Permit Rule Changes

On June 16, the TCEQ proposed changes to its Chapter 116 flexible air quality permitting program in response to EPA's December 2009 threat to disapprove this program. Under flexible permits, certain emissions changes can be authorized at a site without amending the permit as long as emissions do not exceed pre-established sitewide caps. EPA has faulted the flexible permitting program for not meeting the requirements of the federal Clean Air Act, alleging that it allows applicants to circumvent federal Nonattainment and Prevention of Significant Deterioration New Source Review. On June 30, EPA formally disapproved the existing flexible permitting program, but will examine the TCEQ's proposed changes once they are finalized. For more information, contact David Cabe at 512.879.6644 or dcabe@zephyrenv.com.

EPA Invites Texas Flexible Permit Holders to Voluntarily Secure Audits

Just one day after the TCEQ formally proposed changes to its flexible permitting rules to address EPA concerns, EPA offered its own fix for dealing with alleged problems that flexible permits raise in Title V permitting. EPA's mechanism, a voluntary compliance audit program for Title V applicants with flexible permits, would begin with a third party audit for the purpose of identifying, for each affected emissions unit, all federally applicable limitations and requirements. Based on the results of the audit and subsequent negotiations between EPA and the permit holder, a consent agreement and final order would be created setting forth emission unit requirements and requiring the inclusion of those requirements in federally enforceable permits for the site. Finally, all audited permit holders would be required to perform community projects with a clear nexus to their source's emissions. For more information, contact David Cabe at 512.879.6644 or dcabe@zephyrenv.com. ✨

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liable for injunctive claims only. For violations that occurred under ComEd's ownership, however, the court held that both penalties and injunctive relief were unavailable for PSD violations. ✨

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FROM THE PRESIDENT

When Bureaucracies Collide

With 17,000 employees, the U.S. Environmental Protection Agency is, reportedly, the biggest environmental agency in the world. Since the Agency's inception in 1970, Congress has given EPA a broad mandate to protect the nation's environment in many program areas, including air quality, waste management, and water quality.

With nearly 3,000 employees, it's been reported that the second largest environmental agency in the world is the Texas Commission on Environmental Quality. The TCEQ is so large because Texas has about 7 percent of the nation's manufacturing capacity, 25 percent of the nation's oil-refining capacity, and produces and consumes more electricity than any other state.

Although the TCEQ administers many Federal environmental programs delegated to it by the EPA, considerable tension has long existed between the two agencies. Much of this can probably be attributed to shifting political winds, but some is attributable to honest differences in policy and approaches to permitting and compliance. Whatever the reason, EPA is beginning to take a very hard line against the TCEQ's approach to certain aspects of its air quality permitting program. For example, Al Armendariz, the administrator of EPA's Region 6, warned last month that EPA would take over Texas air permitting unless the State realigns its permitting process to match current EPA policy. This came on the heels of EPA taking control of the Title V operating permit renewals for a refinery, a power plant, and a chemical plant and threatening to do the same for 39 other Title V operating permits. The response from Texas regulators and industry groups has been claims of heavy handedness on the part of EPA, and lawsuits against EPA have been filed or are in preparation.

A major bone of contention is the Texas "flexible permits" program. This state permitting mechanism establishes emission caps for groups of emission sources at a site based on what would be emitted if Best Available Control Technology were applied site-wide, and these emission caps are then incorporated into the Title V permit by reference. EPA contends that Texas flexible permits violate the Federal Clean Air Act because they allow facilities to circumvent Federal permitting requirements. But Texas officials insist their flexible permits do not circumvent requirements and that site-wide caps have helped to significantly reduce emissions across the State.

I believe there is some validity in each side's point of view — EPA seems to be saying, "The Clean Air Act is Federal law and we



have the ultimate responsibility to ensure that programs instituted under the Act are implemented consistent with federal requirements. We delegated the Title V program to Texas for implementation in the first place, and if we don't think Texas is doing it right then we can take it back." And the TCEQ seems to be responding, "Because we've done way more than the Clean Air Act requires (e.g., bringing pre-1972 emission sources into our state's minor new source air quality permitting program, as well as addressing all air contaminants and all emission source sizes), we've been able to make substantial improvements in actual air quality. It is not appropriate to assume that we are doing anything wrong just because our programs don't look exactly the same as other, smaller states with a smaller regulatory burden."

But, at the end of the day, my take is this: the real issue is a lack of communication about the specific issues and a failure to consider alternative solutions that both the TCEQ and EPA can agree on. There should be a way for two mature agencies to make a sincere effort to resolve their differences without resorting to playing tug of war with regulatory programs — a game that can only hurt regulated businesses, the economy, and the environment. Let's work something out! ✨

Joe Zupan
President

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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is not generated by current versions of the regulatory models. Test cases modeled so far indicate that most new SO₂ sources applying Best Available Control Technology can, by themselves, meet the standard. However, compliance with the standard will likely be problematic for projects to be located at sites with large, less well controlled existing SO₂ sources.

PM_{2.5}

Until recently, applicants for permits for major sources of PM_{2.5} could use the analysis of the source's PM₁₀ impacts as a surrogate for directly evaluating PM_{2.5} — a helpful policy to applicants given the gaps in the knowledge base for quantifying and modeling PM_{2.5} emissions and the relative ease in demonstrating compliance with the PM₁₀ standard. However, this changed in February with EPA's proposal to end the PM₁₀ surrogacy policy and to require that PM_{2.5} be evaluated directly. As an additional complication, EPA is considering lowering the annual standard and tightening the 24-hour limit even more. Look for revised standards to be proposed by EPA in late 2010.

These changes raise permitting difficulties on several levels. First, ambient PM_{2.5} is comprised of filterable and condensable components emitted directly by sources, as well as particulate sulfates and nitrates created from the transformation of SO₂ and NO_x in the atmosphere. Unfortunately, much is still unknown about the direct emissions of PM_{2.5} from many types of sources, and EPA has not provided definitive guidance for handling atmospheric transformations in the impacts analysis process. Adding to the permitting challenge, EPA has yet to define significant impact levels and significant monitoring concentrations for PM_{2.5} — basic information needed to conduct an air quality impacts analysis.

Background Concentration Issues

Defining representative background concentrations in the air permitting process is an issue common to all of these pollutants, but especially so for PM_{2.5}, where background levels in many parts of the country are closely approaching the standard. For example, the annual average PM_{2.5} concentration measured in 2008 at a monitor in Houston was 14.3 µg/m³ — just below the current annual standard of 15 µg/m³. As for the new 1-hour SO₂ and NO₂ standards, even though levels may not be approaching the standards at many locations, it's not unusual to see backgrounds "using up" half to two-thirds of the standards, leaving little room for compliance when an applicant's modeled impacts are added. For SO₂ in particular, care must be taken not to double-count source contributions as monitors, historically, have been located near large SO₂ emitters that would normally be included in the inventory of existing sources modeled in the permit application process.

Finally, we may not be at the end of this story, as EPA is in the process of determining whether revisions to the secondary standards for SO₂ and NO₂ are in order. Look for those revisions to be finalized in 2012. ✨

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