

zephyr®

Currents

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HazMat/Emergency Predictions and Resolutions for the New Year

It's January, the official month of predictions and resolutions. Now, I don't have a clue what will happen to interest rates or Angelina Jolie in 2007. Then again, I don't work for the *Wall Street Journal* or the *National Enquirer*. I work for Zephyr and the HazMat Academy, so my predictions all deal with hazardous materials and my resolutions relate to emergency response and preparedness.

SPILL PREDICTIONS

Based on past trends, there will likely be 22,000 fixed facility reportable chemical and oil spill incidents in 2007. The National Response Center (NRC), "the sole federal point of contact for reporting oil and chemical spills," tracks these HazMat incidents annually. In 2006 there were 21,751 fixed facility reportable releases. For the past four years the number of fixed facility incidents has been rising. So, in 2007, we can expect another record year for facility HazMat incidents.

The NRC also tracks pipeline and transportation HazMat incidents. If 2007 follows recent trends, we can reasonably expect 4,800 vessel incidents, 3,300 highway incidents, 1,900 pipeline incidents, 1,400 rail incidents, and 220 air incidents.

All told, the number of reportable HazMat incidents should be in the neighborhood of 33,620, or a little more than 90 every day in 2007. Happy New Year.

GRIM PREDICTIONS

What about HazMat injuries and deaths? For that prediction we turn to the Occupational Safety and Health Administration (OSHA), which tracks workplace injuries and fatalities. In 2007 we can expect that 5,600 people will die in work-related incidents, with 150 of those



fatalities due to chemical exposure. If that news isn't bad enough, the worst news is that those predictions are based on a four-year upward trend in work-related fatalities.

On a somewhat brighter note, there will probably only be 1,234,680 work-related injuries in 2007, of which about 18,440 will be due to chemical exposure. The good news is that this is less than in 2006, reflecting the downward trend in work-related injuries over the last four years.

So, who's going to respond to all of those HazMat incidents and injuries? It will be our nation's first responders: firefighters, EMS personnel, and facility emergency response team members. In 2007 the Department of Homeland Security (DHS) will award \$3.4 billion in grants to those first responders. Sadly though, about 110 first responders will die in the line of duty, including one on a HazMat incident.

REGULATORY PREDICTIONS

Not surprisingly, emergency response and preparedness related regulations have changed since September 11, 2001. I predict

predictions >>> continued on page 6

FROM THE TRENCHES

A New Year, A New Training Attitude

I like training. I really do. Either as a student or a teacher, training is always something I can get excited about. It may be because I learn something new every time, and who doesn't want to know more? It may be that no two days of training are exactly alike, so I can always look forward to what the day will bring. It could just be the satisfaction of working with a group of people to come to a common understanding on a topic, because a solid day of teamwork just feels good.

So, I don't quite get it when I see how some folks approach their training programs. Call it laziness, boredom, or maybe even fear, whatever the reason may be, "getting away" with poor training, especially emergency response training, is like building a paper house. It may be cheap and easy, and it probably looks great on a sunny day, but it definitely won't keep you dry when a real rain-storm hits.

In my experience, fixing a broken training program begins with an attitude adjustment. Think about this: when you're asked to attend training at work, what's your first reaction? Are you less than enthused at the thought? Does it feel like you train for things that only rarely happen? Now, put yourself in different shoes; if you were an athlete on a sports team, how would you approach a day of practice? Football practices, soccer practices, even golf lessons, all have the same obvious goal: to improve as an individual and a team before the first whistle blows on game day. I think the parallel is clear.

If you think of your training as practice, you might realize a few things. First and foremost, according to one of my favorite coaches, you have to "practice like you play, because you're going to play like you practice." That means you have to take these phrases out of your lexicon: "if this were a real emergency, we would do this differently..." and "normally we have such and such piece of equipment at our responses . . ." When I proctor a live exercise, like a simulated chemical release from a pipeline, I allow the participants to skip only those activities that involve unnecessary expense or risk of injury. Your team just bought the latest, greatest air monitor? Well, turn that puppy on and give me some readings! I've seen this single aspect of training turn up more unexpected learning opportunities than nearly any other technique I use.

Also, when training becomes practice, your team will come to appreciate frequent training. Did you know that the average college football team spends literally hundreds of hours practicing each season for just a dozen quick games? Nobody seems to think this is strange. How about your response team? Your stakes are certainly much higher than a football team's. Do you train more than



once a year? Does it seem like monthly sessions are just too much, when you only have a few emergencies each year? When teams train frequently, I find that team members become more confident in their abilities to do their job. Being confident leads to being comfortable with new material, and, suddenly, training becomes something they look forward to, not dread.



Of course, the most obvious difference between most folks' perception of training vs. practice is usually in a word: fun. That doesn't mean you should go hire a slapstick comedian as your new trainer. In fact, the students have just as much to do with the mood during training as the trainer. If training is going to be fun, egos need to be checked at the door, office politics need to be forgotten, and everyone needs to agree that they are there for the same reason. Just think, if everyone agreed to learn at least one thing and laugh at least one time at every class, training would change forever.

The fact is, things will get hairy enough when the real alarm sounds. Every true emergency response brings difficulties, demands, and risks that are hard to anticipate. Training should help take that pressure out of your job, not add to it. Go by any school at recess time and you'll see that we all have the capacity to enjoy effective training. We just have to remember to approach it the way a true team should. Just like Coach always said: Practice often, practice like you play, and smile while you practice, and you'll find victory comes with ease. ✨

Kenny Pailes
Training Specialist

Current Directions in Regulating Nanotechnology

Depending on what you read, “nanotechnology” can appear to mean a variety of different things, ranging from the creation of particles on a very small scale using traditional techniques, to manipulation of atoms to create new small scale structures, to the creation of small scale manufacturing devices which, in turn, manufacture materials on a small scale. The small scale has been variously described as “less than 100 nanometers,” “at least one dimension less than 100 nanometers,” and “a scale at which a material exhibits different physical or chemical characteristics from those the material exhibits on a macro scale.”

Appropriate to this article, nanoparticles may interact with the environment and affect human health quite differently from larger particles. Also, they may not be amenable to traditional capture, control, monitoring (both detection and quantification), and testing techniques. What makes nanotechnology and nanoparticles extremely difficult to address in the existing environmental regulatory and legal contexts are the rapid speed at which both the technology and materials are advancing and, of course, public conceptions — right or wrong — of the potential risks and unknowns.

Despite these challenges, the question of whether to regulate nanoparticles is almost a foregone conclusion. While there is legitimate concern that regulatory processes are not keeping pace with industry advancements, there is increasing recognition of the essential need for government regulatory systems to ensure the safety of the materials and the vitality of the nanotechnology industry. The reasons are varied, but most concerns center around the long term liabilities related to cleanup, natural resource damages, and toxicological impacts on human health. Government regulation and regulatory compliance can be the basis for a strong legal defense to future liability. Of more immediate impact, the implications for investment risk translate directly into dollars, whether the company is a small start-up trying to raise capital or a publicly traded corporation subject to SEC accounting disclosure requirements. And while large investors will seek independent, sophisticated advice on such issues, they also remain sensitive to general public opinion regarding risk and, therefore, the possibility of “backlash” legislation.

So far, funding to the traditional health, safety, and environmental agencies (especially to EPA) to address nanotechnology issues has been relatively meager, but it is increasing. Recognizing that the business community cannot expect government to move as fast as the technical developments, early in 2006 at least one company and one environmental group began to jointly call for a

stakeholder consensus on what information is needed to properly assess the environmental risks of nanoparticles and technology, and for industry to go out and develop that information. And, in September, the National Science and Technology Council, a cabinet level council created by Executive Order, released a report identifying specific needs for federal government research and information gathering on the environmental risks of nanoscale materials.

Although there has been some debate as to whether existing environmental laws are robust enough to “deal with” nanotechnology challenges, in mid-2006 the American Bar Association developed briefing papers on the major federal statutes and their potential applicability to the nano field. In general, the ABA concluded that EPA is not likely to need significant additional regulatory authority, although it will need to make significant policy decisions and regulatory interpretations and will need to develop new techniques to quantify and monitor pollutants in order to adequately address nano issues. Indeed, EPA already has been working on these areas via internal meetings with other federal agencies involved in the nano field.

Of more direct impact to industry, in July 2006, NIOSH published for public comment a draft document on the state of knowledge of occupational exposure to nano materials. And within the very near future, NIOSH is expected to release its first monitoring guidelines for workplace health surveillance. According to NIOSH, a successful workplace program would begin with a needs assessment and progress from there, as the results may indicate, to health monitoring and medical surveillance. These step-wise assessments appear rational, almost obvious. The more important aspect of the guidance is the official recognition that the rapidly expanding and changing nano field requires regular re-assessments as an essential component of a successful workplace program. Indeed, NIOSH states that its own guidance is a living document and will be updated as information develops.

For those who wish to learn more about the EHS implications of the nano field, the nonprofit Foresight Nanotech Institute has been working privately since the mid 1980s on these and other important policy and technical issues. The Institute will soon release a “Technology Roadmap for Productive Nanosystems” which stakeholders have developed to guide the next level of nanotechnology developments. In so doing, the roadmap will outline key policy issues which must be addressed in order for the industry to move forward.

Rodman C. Johnson
Brown McCarroll LLP

News Briefs

state news

TCEQ Proposes Changes to Houston-Area VOC Rules

On December 13 the TCEQ proposed revisions to VOC control, monitoring, testing, recordkeeping, and reporting requirements for storage tanks, transport vessels, and marine vessels in the eight-county Houston/Galveston/Brazoria ozone nonattainment area. Under the proposed rule, floating roofs on tanks would have improved controls and emissions from certain tank floating and landing events, flash gas emissions from oil and condensate tanks, and degassing vapors from storage vessels, transport vessels, and marine vessels would need to be vented to a control device. For more information, contact William Lathan at 281.668.7356 or wlathan@zephyrenv.com.

TCEQ Proposes Revisions to NO_x Rules

On December 13 the TCEQ proposed changes to its Chapter 117 rules including ratcheting down the NO_x standard from 40 ng/J to 10 ng/J on Type 0 water heaters by January 1, 2007. The changes would also exempt residential swimming pool and hot tub water heaters from the requirements altogether. For more information, contact Pete Stevenson at 512.879.6619 or pstevenson@zephyrenv.com.

Pennsylvania Plan Would Cut Mercury Emissions 90 Percent

In November, the Pennsylvania Environmental Quality Board approved a plan to reduce mercury emissions 80% by 2010 and 90% by 2015. The plan requires annual caps on mercury emissions for each electric generating unit, based on budget allocations under the EPA's Clean Air Mercury Rule. However, unlike the federal rule, the Pennsylvania plan prohibits the use of any emissions credit trading to meet these caps. Assuming the plan is passed by the state legislature this winter, Pennsylvania would join Illinois as one of the first major coal-producing states to enact stricter-than-federal mercury standards. Nationally, Pennsylvania is second only to Texas in total mercury emissions. For more information, contact Lou Corio at 410.312.7912 or lcorio@zephyrenv.com.

TCEQ Publishes Guide for Public Participation in Permitting

The TCEQ has published a new brochure, *Public Participation in Environmental Permitting*, to facilitate public involvement in the permitting process.

Topics addressed include the administrative and technical review of permits, responding to the public notice, protesting the Executive Director's decision, protesting an approved permit, and review of requests for reconsideration and contested case hearings. For more information, contact Louisa Preston at 512.879.6646 or lpreston@zephyrenv.com.

EPA Proposes New Clean Air Rules for DFW Area

On December 13 the TCEQ proposed more stringent emission control, monitoring, testing, recordkeeping, and reporting requirements for stationary NO_x sources in the Dallas-Fort Worth eight-hour ozone nonattainment area as well as other specified counties in northeast Texas. The rules are needed to help the DFW area demonstrate attainment with the eight-hour ozone National Ambient Air Quality Standards (NAAQS). For more information, contact Pete Stevenson at 512.879.6619 or pstevenson@zephyrenv.com.

TCEQ Addresses PM_{2.5} in Rock Crusher Case

In a December 7 ruling that the permit should be issued, the TCEQ Commissioners rejected the recommendation of the Administrative Law Judge in the contested case hearing concerning the air permit application by KBDJ, L.P. for a rock crusher in Hays County, Texas. Contrary to the finding of Judge William Newchurch that KBDJ failed to demonstrate that its emissions will not lead to an exceedance of the PM_{2.5} air quality standard, the Commission confirmed longstanding EPA and TCEQ policy by finding that demonstrating compliance with the PM₁₀ air quality standard is an acceptable surrogate for determining compliance with the PM_{2.5} standard. For more information, contact David Cabe at 512.879.6644 or dcabe@zephyrenv.com.

Martin Hubert Resigns as TCEQ Commissioner

TCEQ Commissioner Martin Hubert has resigned his position with the TCEQ to become Deputy Comptroller under Susan Combs. Hubert worked for Combs when she was Agriculture Commissioner. For more information contact Ed Fiesinger at 281-668-7353 or efiesinger@zephyrenv.com.

national news

EPA Proposes Changes to Equipment Leak Rules

On November 7 EPA proposed changes to the New Source Performance Standards (NSPS) for SO₂ Process Units (Subpart VV), Polymer Manufacturing (Subpart DDD), Petroleum Refineries (Subpart GGG), and Offshore Gas Processing Plants (Subpart KKK). These changes would increase the stringency of leak definitions for pumps and valves, require annual monitoring of open ended lines, and

clarify and correct existing rules. For more information contact Ed Fiesinger at 281.668.7353 or efiesinger@zephyrenv.com.

Supreme Court Hears Greenhouse Gas Case

In an ongoing effort to force EPA to regulate greenhouse gases, twelve states, three major cities, and numerous environmental and citizens organizations presented arguments before the Supreme Court on November 29. The plaintiffs' position was that the heat trapping effects of greenhouse gas emissions can be "reasonably anticipated to endanger public health or welfare", requiring associated regulation under the Clean Air Act. The Supreme Court is not expected to issue a decision until mid to late 2007. For more information contact Brett Davis at 512.879.6628 or bdavis@zephyrenv.com.

EPA Revises SPCC Plan Rules Again

On December 26 EPA revised its Spill Prevention, Control, and Countermeasure (SPCC) Plans rules to provide for 1) an option for self-certification of Plans for facilities that store 10,000 gallons of oil or less and meet other qualifying criteria, 2) alternatives to the secondary containment criteria, and 3) exemptions for certain vehicle and motive power fuel tanks. These revisions will go into effect February 26. EPA also proposed to extend the compliance dates for preparing, amending, and implementing SPCC Plans to July 1, 2009. For more information contact Michele Foss at 281.668.7342 or mfoss@zephyrenv.com.

EPA Issues Emissions Trading Rule to Regulate Regional Haze

On October 5 EPA finalized requirements for an emissions trading program as part of its Regional Haze Rule. These requirements provide states with a process for demonstrating that an emissions trading program may be used as an alternative to applying Best Available Retrofit Technology (BART) requirements. The final rule specifically addresses the SO₂ emissions trading program developed by some western states and allows those states to revise their regional haze implementation plans for submittal in late 2007. For more information, contact Bill Jones at 410.312.7910 or bjones@zephyrenv.com.

EPA Issues and Reconsiders Changes to Cement Kiln Rules

On December 8, EPA revised its Portland Cement (PC) MACT standard to include new mercury and hydrocarbon emission limits for cement kilns built after December 2, 2005. The new changes prohibit cement kilns from using fly ash generated in utility boilers equipped with certain types of mercury emission controls unless the owner can prove no increase in mercury emissions. Kilns built before December 2, 2005 need only meet work practice requirements. In a separate but related action, EPA announced it will be reconsidering limits on emissions of mercury and hydrocarbons from new cement kilns based on updated control equipment information. For more information, contact Lynne Spector at 410.312.7906 or lspector@zephyrenv.com.

EPA Finalizes TRI Rule Changes

EPA has revised its TRI reporting requirements to expand the use of the less detailed Form A in lieu of Form R. In particular,

persistent bioaccumulative and toxic (PBT) chemicals, under certain conditions, can now be reported using Form A; however, this less complex form cannot be used for dioxin and dioxin-like compounds. Reporting facilities are allowed to use Form A for non-PBT chemicals if releases of a particular chemical to the environment or quantities disposed of do not account for more than 2,000 pounds of the total waste management limit for that chemical. For more information contact Lynne Spector at 410.312.7906 or lspector@zephyrenv.com.

EPA Extends Nonattainment Designation Date for Early Action Compact Areas

In 2002 EPA entered into compacts with 33 communities across the United States to defer the designation of nonattainment with the ozone air quality standard. These compacts were contingent upon those communities reducing excessive ozone levels sooner than required by the Clean Air Act. EPA had subsequently extended the nonattainment designation dates for these areas twice — first, until September 30, 2005 and again, until December 31, 2006. However, in consideration of the substantial progress made by thirteen areas, including Washington County, Maryland and San Antonio, Texas, EPA extended the nonattainment designation date for these thirteen areas until April 15, 2008. For more information, contact David Cabe at 512.879.6644 or dcabe@zephyrenv.com.

EPA Establishes Monitoring Requirements for PM_{2.5}

On December 18 EPA revised its Parts 53 and 58 ambient air quality monitoring regulations to better serve its program of regulating levels of fine particulate matter (PM_{2.5}) and other atmospheric contaminants. EPA believes these changes will improve the existing national network of monitors, provide a better database for research needs and for regulatory development, and promote the commercialization and EPA approval of continuous PM_{2.5} mass monitors. Federal, state, territorial, local, and tribal governments as well as the ambient air monitoring industry, including instrument manufacturers and analytical laboratories, are affected. For more information, contact Paul Little at 281.668.7347 or plittle@zephyrenv.com.

EPA Exempts CERCLA Reporting for Certain Air Releases of NO and NO₂

On October 4 EPA adopted a rule that reduces reporting burdens under CERCLA and EPCRA. In this final rule, releases of NO and NO₂ to the air from combustion and/or combustion-related activities that are less than 1,000 pounds in 24 hours are administratively exempt from the reporting requirements of 40 CFR 302.6 and 40 CFR 355.40. Emissions associated with start-ups, shut-downs, upsets, and emissions from certain processes at nitric acid manufacturing plants are included in this exemption. For more information, contact Michele Foss at 281.668.7342 or mfoss@zephyrenv.com.

that there will be at least two more rule changes in 2007. (This isn't much of a prediction because two proposed rules are already scheduled to be finalized this year.) The first is a rule proposed by the Department of Transportation (DOT) to enhance the safety and security of HazMat shipped by rail. This rule would require that certain shipments of explosives, toxic and poisonous gases, and radioactive materials be visually inspected for evidence of sabotage prior to shipping and would require that those shipments be routed around major population centers. Facilities that ship HazMat by rail should take note of this rule. In fact, facilities that ship HazMat by any mode of transport should take note because, according to the DOT, "the focus on rail is intended to be only one phase in a multiphase effort by DOT and DHS to assess and secure hazardous materials in all modes of transportation and to create an end-to-end secure supply chain." What that entails remains to be seen.

The big regulatory development in 2007 comes from the Department of Homeland Security. By April 2007 the DHS should finalize its chemical plant security rule, which will require chemical facilities that store, use, or manufacture certain chemicals in certain threshold quantities to conduct "security vulnerability assessments" and develop security plans. The DHS has not yet determined which chemicals will be regulated and in what threshold quantities, but they have indicated that EPA Risk Management Program (RMP) chemicals and threshold quantities are being considered. The rule would require all affected chemical facilities to go through a secure online screening process to determine if they are "high-risk" facilities. These "high-risk" facilities will be required to develop security measures to address potential attacks, including attacks involving vehicle-based explosive devices, assault teams, theft of chemicals, and cyber attacks.

For most EHS professionals, security issues and DHS regulations are new responsibilities that I predict will become a regular part of the job in 2007. In fact, I predicted that back in July 2004 right here in *Currents*.

And by the way, the EPA, Coast Guard and DHS will conduct at least seven surprise drills at oil facilities and pipelines in 2007. That's not a prediction; that's a guarantee.

RESOLUTIONS

Since we can expect 33,620 HazMat incidents and 18,000 HazMat related injuries in 2007 (not to mention a few natural disasters), we should all resolve to be better prepared for emergencies than we were in 2006. As individuals we should be ready to care for ourselves and our families for up to three days without any outside sources of electricity, water, food, and emergency services. So, resolve to get some basic emergency supplies together and create a family emergency plan. Go to www.ready.gov to get started.

A good resolution for businesses is to dust off their emergency plans, conduct a few realistic drills and exercises, and make sure that their employees are trained to handle basic emergency situations.

And last, but not least, the entire emergency response community, from volunteer firefighters to the Secretary of Homeland Security, should resolve to finally fix their communications systems problems and adopt a unified command system that will ensure safer responses in the future.

Here's to a safe and happy 2007. ✨

Kiley Taylor

*Manager of Training Services for
Zephyr and The HazMat Academy*



EPA Amends NESHAP General Provisions

On December 26 EPA proposed to amend the NESHAP General Provisions to enable a major source to become an area source at any time if the source limits its potential to emit hazardous air pollutants (HAPs) to less than major source thresholds. HAP major source thresholds are 10 tons per year (tpy) of any single HAP or 25 tpy of any combination of HAPs. Sources potentially affected by this action include all major sources regulated under section 112 of the Clean Air Act. For more information, contact Lynne Spector at 410.312.7906 or lspector@zephyrenv.com.

EPA Finalizes NESHAP for Oil & Natural Gas Production Area Sources

On January 3 EPA issued a national emission standard for hazardous air pollutants (NESHAP) to regulate hazardous air pollutant emissions from oil and natural gas production facilities that are area sources. This rule also allows the use of an ASTM standard as an alternative test method to EPA Method 18 for compliance with the NESHAPS for oil and natural gas production facilities. For more information, contact Pete Stevenson at 512.879.6619 or pstevenson@zephyrenv.com. ✨

Will 2007 be the Year of Alternative Energy?

I've discussed alternative energy in this space before (see *Currents*, October 2006, "Just How Green are Alternative Fuels?"), but 2007 is really shaping up to be a watershed year for alternative energy. In years past, alternative energy has been viewed as something akin to eating your oatmeal every morning — "it's probably good for us, but it's kind of hard to get excited about."

However, new winds are blowing (and quite a few windmill farms are being constructed to take advantage of them!) Consider: the new Congress has zeroed in on alternative fuels as not just "virtuous" public policy, but has also linked the development of alternative fuels to America's economic and national security as we try to reduce our reliance on imported oil. Adding to this political impetus, there seems to be a lot of economic pressure as well. With oil prices topping out at \$70+ per barrel, venture capital funding dedicated to the development of alternative fuels broke all records in 2006, and funding levels in 2007 are very likely to set new records as well. According to the 2006 *Cleantech Venture Capital Report* on North American venture capital investing, whereas in the dot-com bubble era of 1999-2001 the percentage of venture capital investments dedicated to alternative clean energy projects was approximately 3% of the total, by 2009 the report suggests it will jump to 10% of all venture capital activity, amounting to somewhere between \$6.2 and \$8.8 billion annually.

Some important technological and engineering advances have also been keys to attracting new capital. In addition to the kinds of alternative fuels we've heard more about lately such as E-85 and biodiesel (see *Currents*, October 2006), a number of other alternative fuels are already reaching the world market. For example, the Scandinavian countries and Germany have been recently adding capacity to produce biomethane from various agricultural wastes. More than 8,000 vehicles in Sweden are powered by a combination of natural gas and biomethane, and Swedish carmaker Volvo is selling vehicles that can run efficiently on multiple fuels including E-85, biodiesel, and biomethane. The American trade publication *Fleets and Fuel* recently stated, "We're extremely excited about the potential for biomethane — its potential production efficiencies are terrific, and not at all dependent on the fossil fuel markets," and reported, "Because its production actually consumes potent greenhouse gases that are often vented to the atmosphere, there's a double benefit in terms of climate change mitigation."¹



Manufacturing innovations and economies of scale are also driving new interest in the development of solar technologies. In a recent interview with the University of Pennsylvania Wharton School's on-line publication², *Knowledge at Wharton*, Nicholas Parker, co-founder and chairman of Cleantech Capital Group, a research firm based in Ann Arbor, Michigan., stated that "The reason [clean technology] jazzes venture investors more than other areas is that it doesn't require huge project financing. Typically, returns in clean tech are in the 20% or higher range. Even so, not every alternative energy opportunity is suited for venture capital. Biomass energy — energy from plants and plant-derived materials — requires facilities that are more capital intensive, and some wind projects do not have risk/return profiles that are ambitious enough. Solar energy, on the other hand, is among the hottest spots for venture capital." Parker further explains that "Solar is a swing for the fences VC play," noting that it "is growing faster than wireless at its fastest adoption rate."

Oil, gas, and coal will be the cornerstones of America's energy needs for many years to come; however, in 2007 they may be sharing the stage more than ever with a growing mix of alternative energy sources. ✨

Joe Zupan
President

¹ Press release dated January 1, 2007, *Fleets & Fuels*: Rich Piellisch, Editor info@fleetsandfuels.com; www.fleetsandfuels.com

² Knowledge@Wharton, April 26, 2006 on-line

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