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The Newsletter of the Steel Tank Institute, Division of STI/SPFA

Generator and Tank Systems are on the Radar in Florida

If the 2006 hurricane season again hits Florida with a vengeance, increasing numbers of businesses that are crucial to disaster recovery will be outfitted with emergency generator and storage tank systems.

On June 1, Gov. Jeb Bush signed a new law requiring hundreds of gasoline stations and convenience stores to be equipped with generators. The legislation's objective is to keep key retail operations open in case of emergency, according to the Associated Press wire service.

Many of the requirements stipulated in the new law won't take full effect until 2007.

The generator bill calls for the owners of service stations with 10 or more stores in a county to provide a backup-generator capability, which can include an ability to move a generator to a location where it is needed.

The bill also focuses mandates on new stations, renovated facilities and stations located near interstates and along major evacuation routes. The requirements include installation of wiring that simplifies a switch to generator-run power and ensures capability to maintain operation of fuel dispensers and other equipment. However, stations are not required to purchase a generator to store at each location.

A couple of months prior to the statewide action, city commissioners in Stuart, Fla. required gas stations in that community to have permanent generators – or be wired for portable generators – by Sept. 1, according to the Palm Beach Post newspaper. Leaders wanted to make it easier for residents to find gasoline during blackouts, such as those caused by hurricanes in 2004 and 2005.

Elsewhere in the state, Royal Palm Beach leaders passed a generator ordinance applying to new gas stations, and St. Lucie County commissioners adopted a resolution encouraging the legislature to require grocery stores and gas stations to have generators for use in an emergency.

State environmental regulators have said that new storage tank systems for backup generators will require secondary containment if tanks are larger than 550 gallons (2,081 liters).

The Florida Petroleum Marketers and Convenience Store Association has expressed concern about mandates that could cripple small businesses that can't afford generators, while acknowledging that many gas station owners already are purchasing such systems.

At the same time, one of Florida's leading supermarket chains has made a significant investment this year in backup power systems. Similarly, hospitals in the state are upgrading their generator fuel storage capabilities.

Publix Super Markets Inc. unveiled a \$100-million upgrade of its backup generator power capability to sustain operations through major hurricane-related outages, according to the St. Petersburg Times newspaper.

The grocer joins Home Depot Inc. and Lowe's as major Florida retailers equipped with sufficient backup power to operate stores whenever electricity systems shut down. Most grocers and discount stores ordinarily have enough emergency power capability on site to keep the facility lit, registers online and some perishables chilled. But insufficient backup power leads many stores to discard frozen and refrigerated foods that spoil after hurricanes.

The move by Publix – purchasing 400 generators capable of 500 kilowatts – removes the risks involved in a hurricane's aftermath as business owners scurry to obtain expensive generators that have to be trucked in to a storm-damaged area.

Some of the generators will be located at Publix stores in flood-prone areas. Other stores will be pre-wired for generators that can be stored at Publix warehouses, and trucked in on an as-needed basis. http://www.sptimes.com/2006/03/14/Business/Publix_powers_up_for_.shtml

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Wisconsin Memo Explores Post-Installation and Pre-Operation Tank Testing Needs

Which post-installation integrity test makes the most sense for assuring the proper operation of an underground storage tank (UST) system?

The Wisconsin Department of Commerce's Storage Tank Regulatory Section addressed the issue this spring in a policy letter that examined the effective relationship of testing a tank after installation, and testing the connection to a piping system.

"The department's understanding of tank installation standards and expectations in the field is that any UST system, including double-wall systems, is required to pass a system tightness test after installation and prior to being placed in operation," the memo said. "Several recent issues have presented the need to revisit and modify pre-operational integrity test requirements."

Key issues cited in the guidance memo were:

- Environmental contamination as hydrocarbon vapors escape from UST systems
- Tank inspectors increasingly discovering the source of water in tank systems as surface water migration related to loose fittings
- As the use of ethanol-blended motor fuels escalates, the need also grows to eliminate water from entering storage systems to preserve fuel quality for motorists
- Resolving whether a vacuum test of the interstice of a double-wall tank can determine both interstice and primary tank tightness

Wisconsin's exploration of these issues holds lessons for tank system owners and managers across the country as last year's passage of the federal Energy Act requires a greater emphasis on tank system integrity tests.

Vacuum testing of the interstitial space of double-wall tank designs, in particular, has been an ongoing source of discussion for more than a decade by various industry stakeholders, including the National Fire Protection Association (NFPA). For instance, consider this excerpt from the installation instructions of the Permatank technology:

"The tank is shipped from the factory with a minimum 13 inches Hg (44 kPa) vacuum inside the tank interstice. A vacuum gauge is factory-installed on the tank to monitor the interstice vacuum pressure. Upon delivery of the tank to the site, read and record the vacuum gauge pressure as noted on the Installation Checklist Form. IMPORTANT: If the vacuum gauge reading has dropped 5 inches Hg (16.9 kPa) or more below the gauge reading recorded when the tank was delivered, call the tank manufacturer immediately."

The logic is simple: If the vacuum hasn't decreased significantly, there must not be any breach of the inner or outer tank.

Wisconsin regulators came to the following conclusions:

- Neither the vacuum within the steel tanks' interstice nor the brine within a fiberglass-reinforced plastic (FRP) tank's' interstice are intended to test the final tank-to-pipe connection made in the field since this connection is not part of the secondary containment tank.
- The department agrees that interstitial testing as recommended by the tank manufacturer is no less reliable than performing individual tests on the interstice and the primary tank. Therefore the interstice test will serve to comply with the intent of NFPA 30-4.4.2.3 for double-wall tanks.
- An integrity test of the tank system connections is required to demonstrate that the system as installed is tight. While a pressure test is the preferred method, either vacuum or pressure integrity testing is acceptable for both single-wall and double-wall tanks under the oversight of a certified installer.

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STI/SPFA NEWS

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Events Click the link for a
complete listing of current
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Brochures, course
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requirements and location
information is available for
each course. Register
online using our secure
site. Check back often as
courses are added
frequently.

2006 AST Inspector Training Courses

There are currently no courses scheduled. Contact Dana at 847/438-8265 x 246 to request a course for your company.

2006 Cathodic Protection Tester Courses

July 12 & 13, 2006 Richmond, VA

Contact: Lucy 847/438-8265 x 248.

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EPA Underground Tanks Office Opens Comment Period for Grant Guidelines

Three draft grant guidelines – closely related to requirements stemming from last year's federal passage of the Energy Act – are up for review and comment until June 24 on the website of the U.S. Environmental Protection Agency (EPA).

- Grant Guidelines To States For Implementing The Delivery Prohibition Provision Of The Energy Policy Act Of 2005 (EPA 510-D-06-003, May 2006)
- Grant Guidelines To States For Implementing The Secondary Containment Provision Of The Energy Policy Act Of 2005 (EPA 510-D-06-001, May 2006)
- Grant Guidelines To States For Implementing The Financial Responsibility And Certification Provision Of The Energy Policy Act Of 2005 (EPA 510-D-06-002, May 2006)

By visiting online http://www.epa.gov/oust/fedlaws/epact_05.htm#Drafts, interested parties can view the drafts and get details about how and where to submit comments. The Office of Underground Storage Tanks will accept comments on the three documents from May 25 to June 24.

EPA, in conjunction with states and other stakeholders, developed the grant guidelines for state underground storage tank programs. After receiving comments, EPA will develop final guidelines and incorporate them in grant agreements between EPA and states.

Individuals with questions on the draft guidelines can contact:

Delivery prohibition. Timothy Roberts at roberts.timothy-p@epa.gov, or 703-603-7144

Secondary containment. - Paul Miller at miller.paul@epa.gov, or 703-603-7165

Financial responsibility and certification. Maricruz MaGowan at magowan.maricruz@epa.gov, or 703-603-7175

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Unique Combination of Steel Wind Tower and Diesel Generator Sets Serves Alaskan Island

The strength of steel is playing a prominent role in providing electrical power to remote communities.

On the Alaskan island of St. Paul in the Bering Sea, a native corporation is generating electricity from steel wind-turbine towers combined with diesel generator sets, according to Worldwide Independent Power magazine.

Faced with escalating fuel and uncompetitive electricity costs, Tanadgusix Corp. looked for a way more than five years ago to employ wind energy and reduce diesel fuel consumption.

A design by Northern Power Systems created a stand-alone hybrid wind and diesel system to serve an average load of 60 to 125 kilowatts (kW) and virtually year-round space heating requirements at POSS Camp, an industrial facility near the island's airport, 300 miles west of the Alaska mainland.

The system included a 225 kW wind turbine and two 150 kW diesel generator sets. The system generates electricity and takes care of space heat requirements for airline offices, equipment repair and storage facilities. The painted tower – fabricated of hot-dipped galvanized steel – holds the turbine hub at a height of 110 feet (33.5 meters).

A unique facet of the system kicks in when the wind turbine surpasses facility requirements – the diesel engines shut down. Minimizing diesel usage provides long-term energy cost savings for the corporation.

The plant has operated for more than five years with high levels of availability – averaging 99.9 percent for the first two years, which translates into fewer than eight hours of annual down time.

2006 Water Storage Tank Seminars

September 12, 2006 Sacramento, CA

October 17, 2006 Kansas City, KS

November 9, 2006 Richmond, VA

Check the web site for seminar brochures, which will be posted as soon as locations are confirmed. Contact: Anne at 847/438-8265 x 233.

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570 Oakwood Road Lake Zurich, IL 60047 847/438-8265

info@steeltank.com

Tank Talk is published quarterly by the Steel Tank Institute Division of STI/SPFA.

Jim Wisuri, Editor

Contributing Editors: Wayne Geyer, Lorri Grainawi, Anne Kiefer, Larry O'Shea, Dana Schmidt. During those two years, the wind turbine supplied 54 percent of the total electric and thermal energy used by the airport facilities – and in some months wind power met more than 70 percent of electricity needs.

Two diesel generator sets – each designed to provide the entire needed electrical load – gave the POSS camp safeguards with redundancy.

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Fungus-Water Combination in Fuel Led to Forced Landing for Helicopter in Hawaii

The fuel tank of a passenger helicopter that made a forced landing during May 2005 was contaminated with a fungus that thrives in water and can collect in fuel mixtures, a federal report said.

The Maui News in April cited a recent report by the National Transportation Safety Board (NTSB), which said the Hawaii-based helicopter operator had complied with requirements for dealing with the problem of fuel contamination by cleaning fuel screens and nozzles. But maintenance personnel had not opened and cleaned the fuel tank itself, the NTSB report said.

The federal report focused on an emergency landing made by a helicopter that carried a pilot and three passengers. No one was injured when the pilot landed on the rocks along the shoreline after the engine lost power at an altitude of 500 feet. The helicopter, however, was reported to have suffered substantial damage.

The NTSB report noted that the helicopter had been used on the island of Kauai a few days prior to the crash. The helicopter had been refueled from a remote fuel tank with a damaged cover. The fuel supply had not been checked properly for contaminants.

On a flight back to Maui, the helicopter was refueled on the island of Oahu. But the engine would not start and the pilot discovered a "brown watery contamination" in the fuel. A maintenance crew purged and cleaned the fuel system, and replaced the fuel nozzle and filters. But maintenance crew members indicated they did not open and clean the fuel tank.

Microscopic fungi growth can occur in water and contaminate diesel and jet fuel. "The fungi will grow rapidly, requiring only trace amounts of water and minerals for sustainability," the NTSB report said. "Once this growth begins, the fungi turn into a type of slime. As they grow, the fungi will chemically alter the fuel to produce water, sludge and acidic byproducts. A myriad of problems within the fuel system can occur, including clogging of the various fuel filters and fuel system components."

When the disabled helicopter's fuel tanks were examined, the NTSB report said investigators found the sides and bottom of the tanks were coated with a "brownish watery substance" that also was discovered on a fuel pump screen and a fuel outlet line. http://www.mauinews.com/story.aspx?id=18672

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Pressure Vessel Conference Features Leading Experts

The June 22 Pressure Vessel Conference presented by STI/SPFA will include industry experts who can shed light on the steel plate market, new developments in alloys, emerging issues in ASME codes and updates on the latest in non-destructive examination.

The one-day conference will be held at the Marriott Houston Hobby Airport.

Some speaker-roster highlights include:

- An overview of the 2006 steel plate market by John Dosher of Jacobs Consultancy
- · A review of ASME code issues by Domenic Canonico
- · A status report on hexavalent chromium 6 regulations by Jerome Spear of J.E. Spear Consulting
- An update on revisions to API 934 for CR/MO steels by Ken Orie of Mittal Steel USA

• An update on radiographic non-destructive examination by Jim St. John of Enerfab

Other presentations will include a discussion of the purchasing outlook from the perspective of a major end-user and a panel discussion focused on the outlook for, and availability of, steel in 2006.

The overall conference will present information that will be useful to steel plate product fabricators, suppliers of equipment, materials and services to the industry, management and executive level personnel with responsibility for engineering and technical decisions, market strategies and overall business direction, and members and prospective members of the Steel Tank Institute and Steel Plate Fabricators Association.

For more information on registration, click here, or call 847-438-8265.

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How a Northeast Convenience Store Operator Controlled Microbes with Biocide

Time and again, the filters in the product pipe became clogged. For Stewart's Shops Corp., a convenience store chain based in Saratoga Springs, N.Y., the repeated phenomenon at numerous locations was taking a toll.

In addition to the climbing cost for replacement filters and service labor, the build-up of microbial contamination on underground storage tank bottoms was also affecting UST system performance. So, Stewart's management team decided to try a biocide in the tank system.

"We tested biocide at eight locations mid-year in 2000," said David Rothberg, gasoline marketing manager for Stewart's. "We had been experiencing frequent filter changes, and worse – failures in tanks that were less than 10 years old."

Plugging of filters due to microbiological contamination was causing slow flow rate at dispensers, which frustrated customers.

"Stewart's has high standards for the quality of products being sold in our convenience shops," Rothberg said. "We produce and/or private label a lot of the ice cream and dairy products in our shops and have a large amount of control in that process. However, we do not make our own gasoline or diesel and therefore do not have as much control in the production and handling of petroleum products delivered into our storage tanks."

Stewart's sells more than 200 million gallons of gasoline annually at 277 locations in upstate New York and Vermont.

Stewart's uses a filter in every dispenser that is sensitive to both particulate matter and water.

Since the initial test, Stewart's has increased the use of biocide in UST systems. The chain now kills bacterial contamination with biocide at about 80 percent of its stores, and will include all of its retail gasoline outlets in the program by the end of the year.

"The results have been excellent in both improving the quality of petroleum product being sold and, we believe, long-term prevention of deterioration and potential failure of our underground storage tanks," Rothberg said. "Our plans are to continue to increase the number of locations being treated semi-annually with the biocide. We have progressed from changing filters due to slow-flow rates, caused by microbiological contamination, from once a week (four-five times a month) to once a month in high volume unleaded locations.

"We continue to treat all products (plus super and diesel) semi-annually. We also have instituted a program where we do bottom sampling on a regular basis, and have seen a huge improvement in the quality of petroleum products being sold since the start of biocide use.

"The dollar savings have been tremendous," he added. "We have reduced the number of filters being used, and decreased labor expenses for filter maintenance. More importantly to Stewart's, we are confident that our customers are buying a high quality petroleum product."

Rothberg's advice to other petroleum marketers is simple. "I would encourage everyone in the petroleum business to minimally do bottom sampling of their storage tanks," he said. "And, if frequent filter changes

are	a frustration,	then	pursue a	biocide	treatment	program.	"

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Convenience Store Count Continues to Grow

The number of convenience stores in the United States rose to 140,655, as of year-end 2005, according to a survey commissioned by the National Association of Convenience Stores (NACS).

The data confirmed ongoing growth within the industry. Ten years ago, the official convenience store count stood at 101,100. Twenty years ago there were 90,900 stores. And 30 years ago there were 35,600 convenience stores, of which only 20.6 percent sold motor fuels.

The number of convenience stores that sell motor fuel was pegged at 112,007 locations – or 79.6 percent of all c-stores, a slight decrease from the previous year.

Overall, the tally showed that 1,615 more convenience stores opened than closed during 2005.

Other highlights of the NACS report showed:

• Texans love convenience. Texas was home to nearly one-tenth of all U.S. convenience stores, with 13,884 c-stores in the LoneStarState. Including Texas, the top 10 states account for more than half of all convenience stores in the nation. The remainder of the top 10 includes:

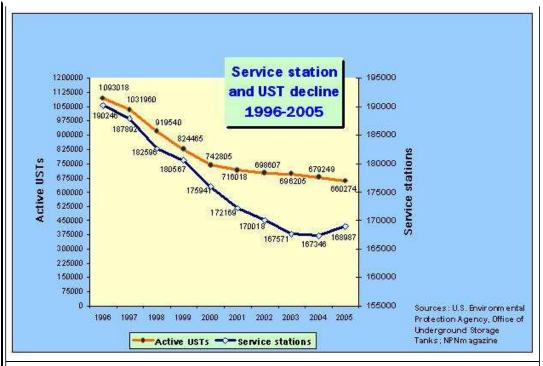
California	9,597
Florida	9,090
New York	7,376
Georgia	6,121
North Carolina	6,098
Ohio	4,968
Michigan	4,642
Virginia	4,398
Illinois	4,378

- Fuel brings in customers. Texas reported the most stores selling motor fuels 11,902 stores, or 85.7 percent of all convenience stores in the state. However, several states had higher percentages of stores selling motor fuels, led by North Dakota (97.1 percent), lowa (96.8 percent), Kansas and Wyoming (both 96.5 percent) and South Dakota (96.3 percent). The two states that mandate full-service sales for motor fuels had among the lowest percentages of c-stores marketing petroleum. New Jersey had the smallest percentage of stores selling fuels (30.1 percent), and Oregon had the third lowest (51.7 percent).
- Single-store owners dominate: The convenience store industry continued to be dominated by small, independent operators – stores owned and operated as a one-store business or franchise. The number of one-store owners stood at 84,574 stores, or 60.1 percent of all stores in the United States.

The NACS store-count data was based on the convenience store universe, as tracked and marketed by TDLinx, based in Wilton, Ct.

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Diminishing Gas Stations Chart



Industry and regulatory data shows the clear dropoff in the use of regulated underground storage tanks (USTs) during the last decade, and, to a lesser degree, the decreasing number of service stations across the country. While the number of USTs in the United States has plummeted, the average capacity of each new UST continues to climb. Click here to cross-reference a chart from the October 2005 edition of Tank Talk.

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AST Repair Standard Committee Seeks Experts, Stakeholders

The Steel Tank Institute (STI) has announced that the STI SP031 Standard, "Standard for Repair of In-Service Shop Fabricated Aboveground Tanks for Storage of Flammable and Combustible Liquids" is beginning a review process.

STI welcomes interested and qualified persons to serve on a balanced review committee. The review process will entail in-person meetings, beginning this fall, including work processed via teleconference.

Individuals with expertise in the field, or positions as stakeholders in the issue of repairs to shop-fabricated tanks, can complete this application and forward it to STI

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Steel Facts

Steel's strength makes it highly resistant to extreme natural disasters, such as earthquakes. The 1994 Northridge, Calif. earthquake destroyed the surrounding transportation infrastructure. However, 96 percent of the existing steel bridges were completely undamaged, even though they were designed using 1940s technology. http://www.steel.org/Content/NavigationMenu/Construction/Bridges/Bridges.htm

The design of Taipei 101, the world's tallest building, includes a wind damper on the 88th floor, a 680-ton (616,886 kilograms) steel ball designed to reduce the impact of strong winds. The design successfully helped the building withstand Typhoon Haitang in July 2005 with winds that were recorded at 142 miles per hour (227 kilometers per hour). http://www.int.iol.co.za/index.php? set id=1&click id=126&art id=gw1121667840392T536

The diversity of ways to take advantage of the strength of steel is reflected in a new database from ASTM International. The online tool gives users the ability to search for the latest steel data for more than 50,000 alloys. http://www.astm.org/cgi-bin/SoftCart.exe/SNEWS/FEBRUARY_2006/wilhelm_feb06.html? L+mystore+yvih5164+1142622294

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Online Sources of UST & AST News and Information

Online Publications

2004 Biodiesel Handling and Use Guidelines

http://www.nrel.gov/vehiclesandfuels/npbf/pdfs/tp36182.pdf#search='2004%20Biodiesel%20Handling% 20and%20Use%20Guidelines

Buncefield Fire http://www.buncefieldinvestigation.gov.uk/

Engineering News-Record Special Section on Steel

http://www.enr.com/resources/special/archives/2005/steel.asp

Fuel Oil News http://www.fueloilnews.com/

International Code Council http://www.ecodes.biz/

National Ethanol Vehicle Coalition E85 Compatible Products and Manufacturers List http://www.e85fuel.com/pdf/E85_Equipment_and_manufacturers.xls

National Petroleum News http://www.npnweb.com/

Petroleum Equipment & Technology http://www.pe-t.com

Steel Tank Institute Water in Fuel Tanks Research http://www.steeltank.com/library/pubs/waterinfueltanks.pdf

TulsaLetter http://www.pei.org/TulsaLetter Underground Tank Technology Update http://uttu.engr.wisc.edu

Associations

American Automobile Manufacturers Association discussion on fuel compatibility standards http://www.eere.energy.gov/afdc/e85toolkit/pdfs/aama_eth_standards.pdf

American Iron & Steel Institute http://www.steel.org

NEW American Lung Association of the Upper Midwest http://www.cleanairchoice.org/outdoor/

American Petroleum Institute http://api-ep.api.org/

American Water Works Association http://66.45.110.61

NEW Clean Diesel Fuel Alliance http://www.clean-diesel.org/index.htm

National Association of Convenience Stores http://www.nacsonline.com/NACS/News/

National Biodiesel Board http://www.biodiesel.org

National Ethanol Vehicle Coalition http://www.e85fuel.com

National Leak Prevention Association http://www.nlpa-online.org/standards.html

National Oilheat Research Alliance http://www.nora-oilheat.org

Petroleum Equipment Institute Learning Center http://learn.pei.org/home.php

Petroleum Marketers Association of America http://www.pmaa.org/

Safe Tank Alliance http://committees.api.org/ehs/safetank/index.html

Society of Independent Gasoline Marketers of America http://www.sigma.org/

Steel Plate Fabricators Association http://www.spfa.org/

Steel Tank Institute http://www.steeltank.com

Federal Regulatory Agencies (United States)

U.S. Department of Energy Alternative Fuels Data Center http://www.eere.energy.gov/afdc/index.html

U.S. Department of Energy Alternative Fuels Data Center Related Industry Links http://www.eere.energy.gov/afdc/progs/related2.cgi?afdc||0

U.S. Department of Energy E85 Fleet Toolkit Equipment Requirements and Specifications http://www.eere.energy.gov/afdc/e85toolkit/

U.S. Department of Energy, Energy Information Administration Ethanol Compendium http://www.eia.doe.gov/oiaf/ethanol3.html

U.S. Department of Energy Equipment Conversions http://www.eere.energy.gov/afdc/e85toolkit/conversions.html

U.S. Environmental Protection Agency, Office of Underground Storage Tanks http://www.epa.gov/swerust1/

NEW U. S. Environmental Protection Agency, Office of Underground Storage Tanks, Draft Grant Guidelines

http://www.epa.gov/oust/fedlaws/epact_05.htm#Drafts

U.S. Environmental Protection Agency, Office of Underground Storage Tanks, MTBE and Underground Storage Tanks http://www.epa.gov/swerust1/mtbe/index.htm

U.S. Environmental Protection Agency, Oil Program, Spill Prevention Control and Countermeasure http://www.epa.gov/oilspill/spcc.htm

NEW U. S. Environmental Protection Agency, Region III, UST Inspectors Workshop http://www.epa.gov/reg3wcmd/inspector_workshop/Compatibility.pdf

Regulatory Agencies (United States)

California Air Resources Control Board http://www.arb.ca.gov/homepage.htm

U.S. Environmental Protection Agency database of state UST program websites http://www.epa.gov/swerust1/states/stateurl.htm

Regulatory Agencies (Australia)

Department of Environment and Conservation, New South Wales (new UST secondary containment requirements) http://www.environment.nsw.gov.au/resources/upssris067.pdf

Model Codes and Testing Organizations

American National Standards Institute http://www.ansi.org

ASTM International http://www.astm.org/

International Code Council http://www.iccsafe.org/

International Code Council jurisdictions http://www.iccsafe.org/government/jurisdictionadoptions.xls

International Fire Code Institute http://www.ifci.org/

National Fire Protection Association http://www.nfpa.org/

Southwest Research Institute http://www.swri.edu/

Underwriters Laboratories http://www.ul.com/

Underwriters Laboratories Canada http://www.ulc.ca

Underwriters Laboratories Collaborative Standards Development System http://csds.ul.com/Home/Default.aspx

Meetings and Conferences

June 4 to 7, 2006

WindPower 2006, American Wind Energy Association, Pittsburgh, Pa.

http://www.awea.org

June 4 to 8, 2006

NFPA World Safety Conference & Exposition, Orlando, Fla.

http://www.nfpa.org/

June 5 to 7, 2006

26th Annual Conference & Trade Show, Independent Liquid Terminals Association, Houston, Texas

http://www.ilta.org

June 11 to 15, 2006

AWWA 2006 Annual Conference & Exposition, San Antonio, Texas

http://www.awwa.org/ace06/

June 20 to 21, 2006

10-Hour Safety Training Meeting, STI/SPFA, Deer Park, Texas

http://www.steeltank.com

June 22, 2006

Pressure Vessel Conference, STI/SPFA, Houston, Texas

http://www.steeltank.com

July 23 to 27, 2006

ASME Pressure Vessels and Piping Conference, Vancouver, B.C., Canada

http://divisions.asme.org/pvp/call/PVP06CallForPapers.doc

July 24 to 27, 2006

StormCon, Denver, Colo.

http://www.StormCon.com

Aug. 22 to 23, 2006

Oilheat Visions Conference, Providence, R.I.

http://www.nefi.com

Sept. 10 to 13, 2006

2006 APWA Congress, American Public Works Association, Kansas City, Mo.

http://www.apwa.net

Sept. 19 to 21, 2006

Pacific Oil Conference, Reno, Nev.

http://www.petroshow.com

Sept. 25 to 28, 2006

API Storage Tank Conference and Safe Tank Entry, Tulsa, Okla.

http://www.api-u.org

Oct. 9 to 11, 2006

2006 PEI Convention at the NACS Show, Las Vegas, Nev.

http://www.peinet.org/show/

Oct. 21 to 25, 2006

WEFTEC, Dallas, Texas

http://www.wef.org/conferencesTraining/Conferences/WEFTEC

Oct. 29 to 31, 2006

73rd Annual NLGI Meeting, Orlando, Fla.

http://www.nlgi.org

Nov.10 to 12, 2006

2006 Annual SIGMA Meeting, Chicago, III.

http://www.sigma.org

Nov.14 to 16, 2006

Stainless Steel World Solutions USA 2006 Conf/Expo, Houston, Texas

http://www.stainless-steel-world.net/ssw2006main/index.asp

Nov. 28 to 30, 2006

Power-Gen International Conference, Orlando, Fla.

http://pgi06.events.pennnet.com/fl/index.cfm

Feb. 20 to 22, 2007

Western Petroleum Marketers Association, Las Vegas, Nev.

http://www.wpma.com

March 5 to 7, 2007

19th Annual National Tank Conference, San Antonio, Texas

http://www.neiwpcc.org/tanks07

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