Tank Talk

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

Secondary Containment or Financial Responsibility: More New State Rules on Horizon

The newest chapter of the federal rules governing underground storage tanks (USTs) has raised questions that may take nearly two years to sort out in individual states – while creating insurance and tank and pipe manufacturer dilemmas that last even longer.

The U.S. Environmental Protection Agency's Office of Underground Storage Tanks on Jan. 22 posted the financial-responsibility regulatory guidelines that will influence enforcement of the Energy Policy Act of 2005. To align with the energy law's mandates, states can create regulatory programs that are no less stringent than the federal EPA rules in requiring the use of either secondary containment for UST systems or financial responsibility for manufacturers and installers.

Follow this link to the EPA's website for complete details on what the agency posted: http://www.epa.gov/oust/fedlaws/epact_05.htm#Final. Also, the Petroleum Equipment Institute has created a link that summarizes the intentions of regulators in individual states: http://www.pei.org/energyact/#state.

Recently published reports indicate that 90 percent of states plan to require secondary containment systems for USTs and piping. The other five states are indicating that they will either enact a program requiring that manufacturers and installers provide financial responsibility for long periods of time to cover their products and service, or they are undecided about which way to go.

Facing 30 years of financial responsibility on USTs, some tank and piping manufacturers are questioning how practical such a rule could be, with or without insurance support.

One UST manufacturer said:

"We have made a decision not to sell tanks for installation in any financial-responsibility states. We are also looking at discontinuing the manufacture of any USTs. What steps would my staff have to take to be sure that a tank we manufactured would not be installed in a financial-responsibility state? I do not want the hassle."

"I understand that insurance is available today with a 10-year retroactive date for coverage, but 30 years is a stretch. Plus, how can I accept the burden to 'maintain' the financial responsibility for 30 years? What if the insurance market changes so dramatically that coverage is not available – at any price? We have seen that occur in the past."

"My concern is not about the current availability of insurance. We have it. But a federal or state requirement to keep it in place may not be possible. I know the regulators do not see insurance availability as a problem, but I know enough about insurance to be wary."

Though some types of coverage are available for manufacturers, the insurance

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mandated by the federal rule, which is subject to interpretation at the state level, simply does not exist. Cradle-to-grave environmental insurance cannot be obtained for manufactured products.

In addition to risk-management issues, other tank and pipe manufacturers that do business in several states have expressed concern about meeting a host of unique requirements from one jurisdiction to the next, and a wide range of effective dates for the state rules. Installers who are working with petroleum marketers that have planned service-station or convenience-store upgrades or expansion programs also are eagerly awaiting news on when new equipment requirements will take effect.

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Gauging SPCC Compliance Costs for Bulk Plants
By Tim Laughlin

It has become apparent that the new U.S. Environmental Protection Agency (EPA) Spill Prevention Control and Countermeasure (SPCC) regulations will have varied cost impacts to owners and operators of aboveground storage tanks (ASTs) and containers for petroleum.

For those who haven't yet dealt with the cost framework, I thought it might be helpful to review some compliance-related issues for shop-fabricated tanks at petroleum storage facilities in North Carolina and Virginia. Obviously, the issues may vary from state to state, which can affect final costs.

If you're just getting acquainted with SPCC, otherwise known as the federal oil pollution prevention regulation, and you want more background, check out this EPA link: http://www.epa.gov/oilspill/spcc.htm. At the end of this article are several other links to online materials that provide more insight into SPCC requirements.

The EPA proposed revisions to the SPCC rule in 1991, 1993, and 1997. These revisions will become effective on Oct. 31, 2007 (or July 1, 2009, if the latest EPA proposal is approved).

Owners and professional engineers (PE) must become familiar with the new standards that have been established by industry groups such as Steel Tank Institute, American Petroleum Institute, Petroleum Equipment Institute and the National Fire Protection Association, and will be enforced by EPA. Some relevant industry standards are API 340, API 2610, API 653, API 12R1, API 570, API 2350, NFPA30, PEI-RP200 and STI-SP001-00.

Here's a quick wrap-up of some of the most prominent cost issues that an AST owner or manager may face:

Engineering fees. The first cost for consideration is what to pay for the services of a professional engineer. Depending on the facility, SPCC plans can typically range from $500 to $10,000. SPCC plan amendments typically cost from $200 to $1,000. EPA may require that existing spill plans with an engineering certification are invalid due to insufficient data in an original SPCC plan prepared many years ago. The EPA has proposed a PE-certification exemption for facilities with fewer than 10,000 gallons (37,843 liters) if certain criteria are met.

Secondary containment. SPCC requires all loading-unloading racks and aboveground piping to have secondary containment. When secondary containment is not practical from an engineering standpoint, it would not be required. Some engineering reasons why secondary containment might not

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STI/SPFA NEWS

STI/SPFA Calendar of Events

Courses are posted at the above link as soon as dates & locations are confirmed. Check back frequently for new course postings.

Brochures, course information, educational requirements and location information are available at our secure online registration link above.

2007 AST Inspector Training

be mandated are: insufficient space, loading-unloading spill-risk potential, adverse weather conditions (e.g., ice or snow that could lead to a vehicular collision) in the area of the loading-unloading systems. A PE will make this determination. Loading-unloading technology can be very complex and may require containment systems consisting of curbed concrete pads with oil-water separators, or something as simple as sloping the area to an earthen berm. The cost associated with the various secondary containment issues can range from $2,000 to $50,000.

Testing. Integrity testing of tanks and piping must be performed in accordance with industry standards (STI SP001) or PE-equivalent environmental protection requirements. Horizontal and vertical tanks on sufficiently impervious materials or liners – or enclosed tanks (double wall) not in contact with the ground – may only require that an owner conduct external visual inspections based upon PE review and establishment of baseline of tank-integrity conditions. When repairs are done, integrity testing must be performed by companies or individuals in accordance with industry standards (STI, NFPA, API, PEI or the guidance of a professional engineer).Typical, turn-key, non-destructive, integrity testing for shop-fabricated ASTs is costing about $3,500 per tank, plus downtime. Installing tanks on sufficiently impervious materials/liners is about $3,000 per tank, plus downtime.

Overfill-prevention systems and alarms. These will have to be installed in accordance with industry standards and fire codes. Similarly, overfill prevention must be inspected and tested to conform with industry standards. Vent whistles can be used at a smaller facility where the whistle could be heard during tank filling. Another equivalent method is allowed. However, a facility operator or driver must check a container's visual tank gauge prior to unloading and at frequent intervals throughout the process. Electronic overfill detection systems can cost about $1,500 to $3,000 per tank.

Corrosion protection for buried piping. All buried piping that is installed or replaced after Aug. 16, 2002 must have protective coating and wrapping and cathodic protection – or meet 40 CFR part 280 or the requirements of a state program.

Bulk tanks. Secondary containment systems or their equivalents for bulk tanks, loading and unloading areas and piping systems must be sufficiently impervious. Compacted clays, uncoated concrete, coated concrete, petroleum-resistant liners or geo-membranes may meet this requirement upon review by a PE. Cost can be considerable for older facilities where tanks are installed on porous earth.

Security measures. Fencing and area security lights are required. Equivalent environmental protection for facility fencing that may be approved by a PE could include security guards, regular police patrols and fencing around only the oil-handling equipment and tanks. Depending on facility layout, perimeter-security fencing (six-feet high with remounts and deterrents) can be costly.

Let's see what happened in a case where many of these factors had to be addressed at a North Carolina bulk petroleum plant. After an EPA Region IV inspection, the owner spent $75,000 (including engineering services) to achieve compliance.
Prior to inspection, the facility had no secondary containment for loading and unloading areas and dike walls were not sufficiently impervious. The facility is about 100 years old (though the tanks were newer). The owner installed quick drainage-catchment systems with curb concrete pads and an oil-water separator with coated, concrete-block dike walls. He did this before the EPA sent him a

Courses

April 30 - May 4, 2007
Norfolk, VA

May 14 - 18, 2007
Chicago, IL

Contact Dana at 847/438-8265 x 246 to request a course for your company.

2007 Cathodic Protection Tester Courses

April 4 & 5, 2007
Frankfort, KY

April 17 & 18, 2007
Lacey, WA

May 22 & 23, 2007
For Regulators ONLY

Contact: Lucy at 847/438-8265 x 248.

2007 Water Storage Tank Seminars

Contact: Anne at 847/438-8265 x 233.

STI/SPFA Pressure Vessel Conference

May 8 & 9, 2007
Coatesville, PA
Sponsored by Industeel - Mittal USA Plates

CHECK THE WEB SITE FOR MORE DETAILS & REGISTRATION FORM COMING SOON!

October/November 2007
Houston, TX

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“notice of violation.” Therefore, no fines have been levied, as of yet. His design is well thought out, and may even exceed some EPA mandates.

During 2006, I know of about 10 SPCC inspections conducted in North Carolina by EPA. Most of the facilities’ owners have spent between $10,000 and $25,000 to achieve compliance. Only one operator was fined $500 in connection with a spill that left the property.

Tim Laughlin is a professional engineer who serves as technical director for the North Carolina Petroleum Marketers Association.

Other Online Resources for Understanding and Meeting SPCC Mandates

EPA Sample Contingency Plan
http://www.epa.gov/oilspill/pdfs/guidance/F_ContingencyPlan.pdf

EPA Sample Bulk Storage Spill Plan
http://www.epa.gov/oilspill/pdfs/guidance/D_BulkStoragePlan.pdf

EPA Regional Inspector Guidance Document
http://www.epa.gov/oilspill/guidance.htm#Content#Content

EPA Settlement Agreement with the Petroleum Marketers Association of America
http://www.epa.gov/oilspill/pdfs/SettlementAgreement.pdf

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Examining the Frequently Asked Questions About STI SP001

Inspection of aboveground storage tanks (ASTs) can be a critical compliance issue under the planning requirements of the U.S. Environmental Protection Agency’s rule for Spill Prevention Control and Countermeasure (SPCC).

And, as with most compliance matters, questions inevitably emerge.

Steel Tank Institute in 2000 released the first version of Standard for the Inspection of Aboveground Storage Tanks – the STI SP001 standard – which provides a means for AST owners to comply with EPA mandates.

The standard, now in its fourth edition, has been updated by consensus of tank owners, tank manufacturers and other industry leaders. Here is a sampling of the most common questions that tank owners and managers have about STI SP001:

- Does the standard comply with EPA’s requirement for tank integrity testing?
- Why does STI SP001 require internal inspections when one cannot easily access the inside of a small shop-fabricated tank?
- My tank contains sulfuric acid (or hydrochloric acid, etc.). Can STI SP001 be used to inspect this tank?
- I have an insulated tank, and it will cost a lot of money and time to remove all of the insulation and then replace it. What must I do?
- Who can inspect a tank per STI SP001 for me?

To address these issues, and other related matters, STI/SPFA has developed a list of frequently asked questions (FAQ). Click here to view the FAQ document, which will be updated periodically.

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NACS: Fewer Than 3 Percent of C-Stores are Owned by Major Oil Companies

The brightly lit sign by the road may say “major oil” to motorists and pedestrians, but within the realm of convenience stores in the United States, the majors are minority owners.

The National Association of Convenience Stores (NACS) says that fewer than 3 percent of c-stores are owned and operated by any of the integrated, major oil companies.

That means the vast majority of c-stores are owned by independent entrepreneurs who likely live near the facility. NACS statistics show that of 110,895 convenience stores selling gasoline in the United States during 2004, about 55 percent (61,148 stores) were one-store operations. That more than quadruples the 14,612 stores that were operated by a company owning 500 or more stores.

Since the early 1970s, the convenience store industry has redefined itself as America’s preferred provider of petroleum.

In 1971, only 6.8 percent of convenience stores – a total then of only 1,401 stores nationwide – sold gasoline. Today, more than 80 percent of convenience stores sell gasoline. Motor fuels (gasoline and diesel fuel) sales account for 66.5 percent of the convenience store industry's total sales.

Convenience stores in 2004 sold an estimated 79 percent of all gasoline purchased in the U.S. – a sharp increase from a decade ago when convenience stores sold an estimated 59 percent of the country's gasoline.

While most of the 110,895 convenience stores selling gasoline in the United States sell a branded version, only 2,886 were owned and operated by one of the five major integrated oil companies; that’s merely 2.6 percent, according to TDLinx, a firm that counts c-stores. The major-oil c-store location inventory includes:

- BP North America – 1,243
- Exxon Mobil Corp. – 882
- ChevronTexaco Corp – 363
- Shell Oil Products US – 243
- ConocoPhillips Inc. – 155

The misunderstanding about major-oil ownership stems from contractual relationships that call for neighborhood gas stations to get marketing support from an oil company in exchange for carrying branded gasoline. Agreements to carry certain brands of fuel are similar to those in which a convenience store owner agrees to sell a particular brand of soda pop at its fountain dispenser.

For more detail from the NACS report, visit:
http://www.nacsonline.com/NACS/Resource/PRToolkit/Campaigns/prtk_gp2006_WhoSellGas.htm

The overall importance of convenience stores to the American motoring public is also underscored by a report called Gasoline and the American People by Cambridge Energy Research Associates (CERA). The report said the number of retail stations has dropped by 25 percent in the United States during the past 25 years, while the amount of gasoline pumped per station has climbed by 73 percent. This corresponds with Steel Tank Institute data that shows an ever-increasing average for new underground-storage tank capacity.

The capacity gains also reflect a dramatic shift in the competitive landscape for convenience stores during the last decade as hypermarkets have increased from 111 stations to 4,073.

A demographic shift will also influence the future of convenience stores, according to the CERA report. There are more personal vehicles registered in the United States than licensed drivers, and nearly 15 percent of the drivers are older than age 65, an increase that is reducing the growth rate of miles driven per licensed driver.

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Ecleberry Honored as Leader through Shifting Tides of Steel Tank Industry

As an industry leader and a corporate executive, Ron Ecleberry has rolled with the changes.

During the last decade and a half, the outgoing chairman of the STI/SPFA Board of Directors, and ongoing vice president of sales for Modern Welding Co. in Owensboro, Ky., has seen reversals in marketplace demand, the emergence of new tank technologies, regulatory shifts, and the arrivals and departures of various competitors.

“We’ve been through the situation when the majority of tank production was underground, and now the majority is aboveground,” said Ecleberry, who recently completed his 15th year on the board of either STI or STI/SPFA. “We got through 1998, which was the largest year ever for tank production because of the EPA deadline, then 2000 until 2005 when things were slow. And now things are back on the upswing again in demand for both underground and aboveground tanks.”

Ecleberry’s efforts in providing leadership through the ups and downs of ever-changing market conditions was honored earlier this month at the STI/SPFA Winter Meeting as he was named to the association’s Hall of Fame.

In addition to providing counsel to the STI/SPFA board, Ecleberry played a key role in the combination of STI and SPFA.

Bringing the two associations together had strategic value because the members of each group had a common bond of essentially making their profits from forming and welding steel. Modern Welding for many years had been a member of both groups, but during the 1990s had dropped its SPFA membership.

A phone call to Ecleberry from an SPFA member – designed to encourage a membership renewal – sparked a conversation that eventually led to the two groups joining forces.

“We started talking about how we could put something together that would benefit the members of both associations,” he said.

After several months of discussions, a new STI/SPFA entity took root in February 2004.

Also honored in February as new members of the STI/SPFA Hall of Fame were:

- Jeff Hock, executive vice president, Enerfab
- Jim Rhudy, vice president, Health, Safety & Environment, CB&I and outgoing chairman of STI/SPFA Safety & Health Committee

• George Ruchti, director of operations, American Spiral Weld Co., and chairman of STI/SPFA Steel Pipe Section

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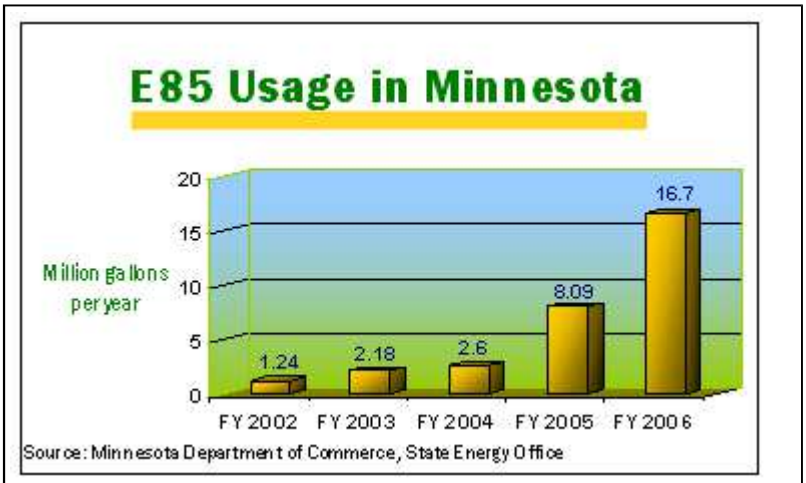
E85 Usage in Minnesota



Support for E85 (85-percent ethanol) fuel is spiraling in Minnesota thanks to the efforts of both state government and non-governmental organizations. Data from the Minnesota Department of Commerce show E85 usage for the last five years in rapid ascent, particularly since the start of 2005. The figure for fiscal year 2006 is an 11-month total.

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Ameron International Receives Pipeline of the Year Award

A 7.2-mile (11.6-kilometer) welded steel pipeline to connect the Lake Skinner Reservoir and a fast-growing community in southern California has been recognized by STI/SPFA as the Pipeline of the Year.

Placed in operation in November, the 10-foot (3.05-meter) diameter pipeline was manufactured by Ameron International in Rancho Cucamonga, Calif. for the Metropolitan Water District of Southern California.

Connecting the reservoir to the city of Temecula in Riverside County, the pipeline's capacity is 78.5 cubic feet/linear foot (2.22 cubic meters/linear meter).

Steel-wall thicknesses ranged from .5 inch (1.27 centimeters) to .75 inch (1.9 centimeters) with standard pipe lengths cut at 40 feet (12.19 meters) and connected with field lap-welded joints. Most pipeline sections were provided with beveled (mitered) bell ends. The steel pipe was cement-mortar coated in the shop and lined in the field after installation with cement mortar lining.

Ameron provided 30-inch (76.2-centimeter) diameter access manholes for every 1,000 feet (304.8 meters) of pipe.

Two-thirds of the pipeline had horizontal and vertical curves that were installed with mitered joints (up to four degree miter angles) instead of fabricated elbows.

Due to limited space to string the pipe in residential areas, a unique project requirement entailed immediate installation of pipe sections after unloading from a trailer. Deliveries had to be carefully coordinated on a just-in-time basis with the contractor's installation schedule. Up to 20 truckloads were delivered per day with about a 90-mile (144.8-kilometer) journey from the manufacturing plant to the job site.

Projects evaluated in the Pipeline of the Year Award competition were judged on the following criteria:

- Uniqueness of design
- Engineering
- Demonstrating the advantages of steel
- Promotional value
- Aesthetics

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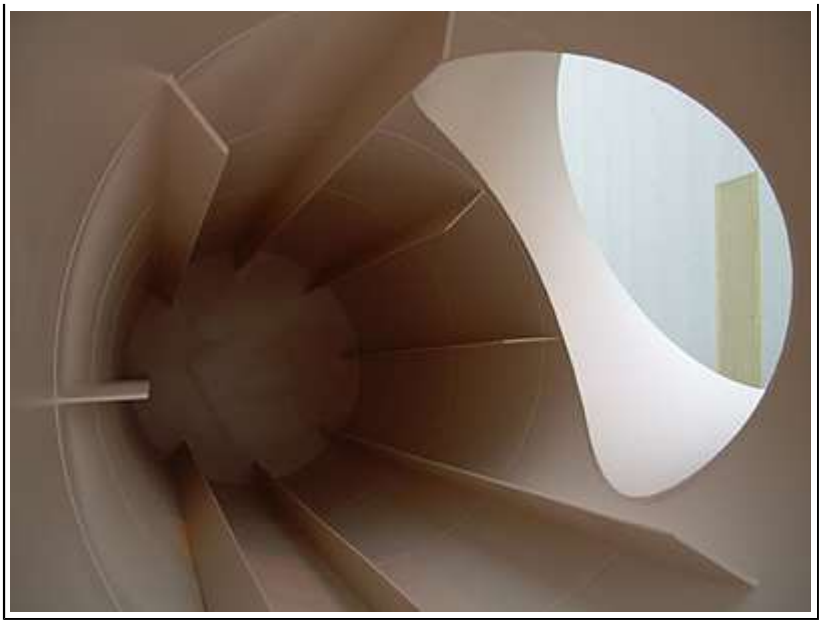
Hanson Pipe & Precast Receives Fabricated Pipe Fitting of the Year Award



Ten 96-inch outside-diameter pump cans designed to treat river water in north central Texas for diversion to a lake 40 miles away have been recognized by STI/SPFA as the Fabricated Pipe Fittings of the Year.

The 62-foot pump cans were manufactured by Hanson Pipe & Precast in Grand Prairie, Texas for the North Texas Municipal Water District (NTMWD) Conveyance Pump Station project.

The pump station is a part of a 1,840-acre East Fork Raw Water Supply Project under construction in Kaufman County, Texas.

NTMWD will use this artificial wetland to polish water drawn from the East Fork of the Trinity River, much of it treated by the district's wastewater treatment plants. The output will be piped about 40 miles north to Lake Lavon, the district's primary source of water.

The project will initially supply about 72 million gallons per day (MGD) of raw water to the district. By 2030, the project is expected to provide nearly 91 MGD.

Each pump can was built in two 31-foot sections for field assembly. The fittings are lined and coated with coal-tar epoxy in accordance with AWWA Standard C210.

The project was designed by Freese & Nichols, Inc., and Alan Plummer Associates, Inc., and is being constructed by Archer Western Contractors, a Walsh Group Company. Baugh & Associates from Houston, Texas assisted Hanson in quoting and securing the order for the pump cans.

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'Clean' Coal-to-Liquid Process Fuels Hope for New Petroleum Alternative

Could coal become a meaningful answer in the quest for liquid alternative fuels? The Reuters news service in December reported on several ways in which researchers and businesses are pursuing the development of coal-to-liquid (CTL) fuel. Consider:

- The United States Air Force has successfully tested flying a B-52 bomber with a coal-based fuel.
- In South Africa, CTL fuel meets 30 percent of transportation fuel needs.
- Major coal-mining companies in the United States, which has more coal reserves than Saudi Arabia has oil, are investing in CTL technology.
- China, which has received considerable criticism for air pollution in its fast-growing cities, plans to spend $25 billion on CTL plants.
- In October, Montana Gov. Brian Schweitzer and a consortium of energy and technology companies announced the state will be home to one of America's first CTL energy plants. The $1 billion Bull Mountain plant is slated to produce 22,000 barrels per day of diesel fuel and 300 megawatts of electricity – enough to power 240,000 homes – in six years.

This array of development owes a debt to a scientific breakthrough from more than 80 years ago. The Fischer-Tropsch process was developed by German researchers Franz Fischer and Hans Tropsch in 1923. Germany and Japan used the process during World War II to produce alternative fuels. For example, in 1944, Germany produced 6.5 million tons, or 124,000 barrels a day.

If it gains traction, CTL fuel would compete in the same realm as alternative fuels such as ethanol and biodiesel and be marketed using the same fight song – lower cost, environmentally friendly and promoting energy independence for the United States.

"America must reduce its dependence on foreign oil via environmentally sound and proven coal-to-liquid technologies," said David Neeleman, founder and president of JetBlue Airways Corp. "Utilizing our domestic coal reserves is the right way to achieve energy independence."

JetBlue is supporting a bill in Congress that would extend tax credits for alternative fuels. The airline hopes that CTL technology can produce jet fuel for the equivalent of $40 a barrel.

Montana’s governor and the companies behind the Bull Mountain plant, including Arch Coal and DKRW Advanced Fuels LLC, say the production of fuel and electricity will dramatically reduce or eliminate greenhouse gases associated with coal-generated electricity. Arch Coal has a 25-percent stake in DKRW, and the companies are also developing a CTL plant in Medicine Bow, Wyo.

Similarly, Peabody Energy recently announced plans to evaluate sites in the Midwest and Montana for CTL projects. If the effort moves ahead, the plants’ production could range from 10,000 to 30,000 barrels of fuel per day – and use anywhere from 3 million to 9 million tons of coal annually.

Another alternative fuel company, Syntroleum, said recently that its ultra-clean jet fuel was successfully tested in a B-52 at Edwards Air Force Base in California. The bomber flew with a 50-50 blend of CTL and JP-8 jet fuel. "The program ... is the first step in opening up new horizons for sourcing fuel for military purposes," said a fuels expert with the Air Force Research Laboratory at Wright-Patterson Air Force Base in Ohio.

The flight test was part of the U.S. Department of Defense’s Assured Fuel Initiative to develop secure domestic sources for military energy needs. Pentagon planners hope to reduce its use of crude oil and foreign producers so that about half of military aviation fuel comes from alternative sources by 2016.

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Ohio Examines Need for Fuel-Quality Inspection

State senators in Ohio last year considered legislation that would mandate fuel-quality checks at service stations. Ohio is one of only four states – the others are Alaska, Nebraska and Pennsylvania – that do not require such monitoring, according to the Cincinnati Enquirer newspaper.

"People need to know that they are getting what they pay for, especially in light of rising gas prices," said Butler County Auditor Kay Rogers, who testified before senators in December during hearings on the legislation introduced in late fall. "Also, high amounts of contaminants can lead to costly car damage."

Under Senate Bill 383, the 88 county auditors in Ohio would have the authority to conduct random checks of service-station compliance with quality standards. Under current law, county auditors can inspect gasoline pumps once a year to gauge the accuracy of the price per gallon and quantity delivered.

The proposed law was assigned to the Senate Agriculture Committee for review. However, neither the committee nor the state senate took action on the bill prior to the end of the legislative session. As of Feb. 21, the bill had not been resubmitted for consideration by lawmakers.

The Ohio Petroleum Council had expressed doubts about the proposal – preferring a standardized approach statewide versus the possibility of unique requirements in every county.

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UL 142 Panel Enacts Changes to Fabrication Standard and Considers More

The removal of weak-shell-to-roof design as a permitted form of emergency venting on shop-fabricated aboveground storage tanks (ASTs) is among several notable changes to the UL 142 standard.

Underwriters Laboratories in December published changes to UL 142 after the document was reviewed recently through a consensus-based Standards Technical Panel (STP) process.

Other significant UL 142 modifications include:

- Actual AST capacity changes to 105 percent of nominal (from 110 percent)
- A carbon-equivalency equation now agrees with UL 58 (CE = C+ (Mn +Si)/6 + (Cr + Mo + V)/5 +(Ni + Cu)/15)
- Schedule 40 fittings are permitted instead of Schedule 80
- Tank heads shall be flat, flanged or flanged and dished. (Deleted from the standard were flat heads.)
- Flanged head radius must be a minimum of two times the head thickness (vs. the previous standard of 1.5 times)
- Allowance of vertical and horizontal bracing of bulkheads, and multiple pieces for single bulkheads
- Provision of a secondary tank wrap of 300 degrees, or 95 percent of capacity, whichever is greater

Still under consideration by the UL 142 STP committee are changes such as:

- Removal of bracing for the second side of a double bulkhead

- Increasing the maximum capacity of horizontal tanks to 75,000 gallons (283,822 liters) and 13-foot (3.96 meter) maximum diameter
- Increasing the maximum capacity of vertical tanks to 50,000 gallons (189,215 liters) and 14-foot (4.27 meter) maximum diameter
- Tanks larger than 76-inch (1.93-meter) diameter must have manholes
- Lift-lug testing should show capability of holding two times the tank weight during a one-minute lift

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Facts of Steel, Volume VIII

Completed in 1977, the trans-Alaska oil pipeline covers 800 miles of mountain, muskeg (peat bogs) and river valleys as it spans from Prudhoe Bay to Valdez – which is about the same distance as a trip from downtown Manhattan to downtown Chicago. The pipe is ½-inch (12.7 millimeter) thick steel with a diameter of 48 inches (1.22 meters). Viewed from a nearby highway, it looks thicker than that because the steel pipe is wrapped with four inches (101.6 millimeters) of fiberglass insulation. It's also coated with aluminum sheet metal. For the section near Alaska's Denali Fault, engineers incorporated seismic design factors such as the use of 20-foot (6.1 meter) steel bars on which the pipeline rests. The bars enable the pipe to move in a controlled fashion from side-to-side if an earthquake caused a lateral slip along the fault line.
http://www.gi.alaska.edu/ScienceForum/ASF12/1290.html

To relieve traffic congestion in the Denver metropolitan area, two government agencies spent $1.75 billion and five years to complete the Transportation Expansion Project – also known as T-REX – which dismantled a long stretch of expressway and rebuilt it into a combination of 19 miles of light rail and 17 miles of widened highways. Completed last November, the project used 6.9 million pounds (3,129,790 kilograms) of structural steel and 57 million pounds (25,855,000 kilograms) of steel rebar among other construction materials, according to the Rocky Mountain News newspaper. Beyond that, about 30 percent of the 7,500 tons (6,803,900 kilograms) of new train track was recycled from steel recovered from the demolition of Mile High Stadium, which once was home to the Denver Broncos football team. http://www.rockymountainnews.com/drmn/local/article/0,1299,DRMN_15_5150708,00.html

Austenitic grades are the most commonly used families of stainless steel and represent more than 70 percent of production. As sufficient amounts of nickel are added to stainless steel, they modify the crystal structure to austenite. This often is a stainless steel with 18-percent chromium and 8-percent nickel content. Austenitic grades are non-magnetic and cannot be hardened by heat treatment.
– Stainless Steel World magazine

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GAO Report Recommends Better Use of Public Funds for UST System Clean-Ups

Responding to congressional inquiries, the General Accounting Office (GAO) in February issued a report on how the U.S. Environmental Protection Agency (EPA) should ensure the effective use of public funding for underground storage tank (UST) system clean-ups.

GAO recommended that EPA take steps to:

- Ensure that states verify tank owners' financial responsibility coverage on a regular basis
- Improve the agency's oversight of the solvency of state assurance funds
- Assess the relative effectiveness of options for financial responsibility coverage
- Focus on how EPA distributes Leaking Underground Storage Tank Trust Fund money to the states

To view the 112-page report, go to www.gao.gov/cgi-bin/getrpt?GAO-07-152.

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Online Sources of UST & AST News and Information

Online Publications
2006 Biodiesel Handling and Use Guidelines
http://www.nrel.gov/docs/fy06osti/40555.pdf

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

NEW Energy Tomorrow, American Petroleum Institute www.energytomorrow.org

NEW California Air Resources Board, Enhanced Vapor Recovery Phase II Advisory: http://www.arb.ca.gov/vapor/advisories/adv359.pdf

NEW California State Water Resources Control Board, Marina Fueling Facility Project Report http://www.waterboards.ca.gov/ust/leak_prevention/marina/docs/mff_projectreport.pdf

NEW California State Water Resources Control Board, Results of Secondary Containment Survey http://www.waterboards.ca.gov/ust/leak_prevention/secondary_containment/survey.html

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

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

National Biodiesel Board Fuel Quality Policy
http://www.biodiesel.org/pdf_files/fuelfactsheets/20060621_TAB_11_Fuel_Quality_Policy.pdf

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/

Steel Tank Institute Water in Fuel Tanks Research
https://www.steeltank.com/Portals/0/pubs/KeepingWaterOutofYourStorageSystem_updated%20_2_.pdf

TulsaLetter http://www.pei.org/TulsaLetter

Wisconsin Department of Commerce Ethanol Storage and Dispensing Conversion Policy http://commerce.wi.gov/ERpdf/bst/ProgramLetters_PL/ER-BST-PL-EthanolConversionPolicyMemo.pdf

Associations

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

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

American Water Works Association http://66.45.110.61

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 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://osha.gov/dcsp/alliances/api_nfpa/api_nfpa.html#api

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 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

NEW U.S. Environmental Protection Agency, Laws and Regulations
http://www.epa.gov/epahome/laws.htm

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, Energy Act Guidelines for Secondary Containment and Financial Responsibility http://www.epa.gov/oust/fedlaws/epact_05.htm#Final

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

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

State Regulatory Agencies (United States)

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

NEW California Air Resources Board, Vapor Recovery Information
http://www.arb.ca.gov/vapor/vapor.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

Department of Environment and Conservation (Liquid Chemical Storage Best Practices), http://www.environment.nsw.gov.au/licensing/envcomplchemicals.htm

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

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

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Upcoming Meetings & Conferences

Feb 28 to March 2, 2007
OPIS Ethanol and Biodiesel Supply Summit, Washington, D.C.
www.opisnet.com/supply

March 5 to 7, 2007
19th Annual National Tank Conference, San Antonio, Texas

http://www.neiwpcc.org/tanks07/

March 6 to 8, 2007
International Forecourt & Fuel Equipment Show, IFFE, Birmingham, U.K.
http://www.forecourtshow.com/

March 6 to 8, 2007
Power-Gen Renewable Energy & Fuels Conference, Las Vegas, Nev.
http://pgre07.events.pennnet.com/fl/index.cfm

March 7 to 8, 2007
Convenience U Show, CARWACS, Toronto, Ontario
www.carwacs.com

March 11 to 15, 2007
Corrosion 2007 Conference and Expo, NACE International, Nashville, Tenn.
www.nace.org/c2007

March 18 to 20, 2007
EGSA Spring Convention, Electrical Generating Systems Association, Savannah, Ga.
http://www.egsa.org/meetings/eventdetail.cfm?eventID=21

March 19 to 22, 2007
NHA Annual Hydrogen Conference 2007, National Hydrogen Association, San Antonio, Texas
www.hydrogenconference.org

March 19 to 22, 2007
17th Annual West Coast Conference on Soils, Sediments and Water, Association for Environmental Health and Sciences, San Diego, Calif.
http://www.aehs.com/conferences/westcoast/index.htm

April 4 to 5, 2007
Cathodic Protection Testing Training and Certification Program, STI/SPFA, Frankfort, Ky.
http://www.steeltank.com/EducationEvents/SeminarsEvents/tabid/106/ctl/Detail/mid/501/EventID/14/Default.aspx

April 16 to 18, 2007
2007 Spring Refining and Equipment Standards Meeting, American Petroleum Institute, Seattle, Wash.
http://www.api.org/meetings/topics/refining/index.cfm

April 17 & 18
Cathodic Protection Testing Training and Certification Program, STI/SPFA, Lacey, Washington
http://www.steeltank.com/EducationEvents/SeminarsEvents/tabid/106/ctl/Detail/mid/501/EventID/16/Default.aspx

April 17-18, 2007
Safe Tank Best Practices Conference, South Houston, Texas

April 22 to 26, 2007
2007 Global Congress on Process Safety, Houston, Texas
http://www.aiche.org/Conferences/Specialty/GCPS.aspx

April 22 to 27, 2007
2007 Spring National Meeting, American Institute of Chemical Engineers (AIChE)
Houston, Texas

http://www.aiche.org/Conferences/SpringMeeting/index.aspx

April 30 to May 4, 2007
Aboveground Tank System Inspector Training, STI/SPFA, Norfolk, Va.
http://www.steeltank.com/EducationEvents/SeminarsEvents
/tabid/106/ctl/Detail/mid/501/EventID/12/Default.aspx

May 1 to 3, 2007
Electric Power 2007, GenCo Alliance, Rosemont, Ill.
www.electricpowerexpo.com

May 5 to 8, 2007
Fleet Management Institute and Law Enforcement Group Conference, Houston,
Texas http://www.nafa.org/

May 9 to 11, 2007
International Conference on Aboveground Storage Tanks, NISTM, Orlando, Fla.
http://www.nistm.org/

May 14 to 18, 2007
Aboveground Tank System Inspector Training, STI/SPFA, Chicago, Ill.
http://www.steeltank.com/EducationEvents/SeminarsEvents
/tabid/106/ctl/Detail/mid/501/EventID/13/Default.aspx

June 2 to 7, 2007
American Industrial Hygiene Convention and Expo, Philadelphia, Pa.
http://www.aiha.org/Content/CE/aihce/aihce.htm

June 3 to 6, 2007
WindPower 2007, American Wind Energy Association, Los Angeles, Calif.
http://www.eshow2000.com/awea/

June 3 to 7, 2007
NFPA World Safety Conference & Exposition, Boston, Mass.
http://www.nfpa.org/categoryListWSCE.asp?categoryID=1059&cookie%5Ftest=1

June 11 to 13, 2007
27th Annual Conference & Trade Show, Independent Liquid Terminals Association,
Houston, Texas
www.ilta.org

June 12 to 13, 2007
North American Heating & Energy Expo, Boston, Mass.
http://www.nefi.com/expo07/index.html

June 24 to 28, 2007
ACE 07, American Water Works Association, Toronto, Ont., Canada
http://www.awwa.org/ace07

June 25 to 27, 2007
Safety 2007, American Society of Safety Engineers, Orlando, Fla.
http://www.asse.org/education/pdc/regfees.php

June 26 to 29, 2007
International Fuel Ethanol Workshop and Expo, St. Louis, Mo.
www.fuelethanolworkshop.com

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