APRIL 1997

# Region III Oil Program Activities

Volume 4, Issue 2

## SPILL PREVENTION CONTROL AND COUNTERMEASURE OUTREACH SEMINAR

PRESENTED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION III

***May 28, 1997, 1:00 - 5:00***
***EPA Office***
***303 Methodist Building***
***11th & Chapline Streets***
***Wheeling, WV 26003***
***To Register contact Paula Curtin @ ☎(304)234-0256.***

***May 29, 1997, 9:00 - 1:00***
***U.S. Army Corps of Engineers***
***3500 Grand Avenue***
***Neville Island***
***Pittsburgh, PA***
***To Register contact Marjorie Easton @ ☎(304)234-0251.***

The seminar will provide a brief overview of Spill Prevention, Control & Countermeasures (SPCC) [40 CFR 112.7] and Facility Response Plan (FRP) [40 CFR 112.20] Regulations. The seminar will cover SPCC and FRP Regulations, the inspection process, enforcement and penalties.

The seminar has been developed by EPA and is designed to promote a better understanding and compliance with SPCC requirements (40 CFR 112). EPA staff will present information to assist in developing and implementing spill prevention plans. The seminar is recommended for those who are owners and operators of facilities that store oil in aboveground storage tanks, oil field operators, environmentalists, regulators, consulting engineers, and professional engineers that certify SPCC Plans.

The seminar is free. For additional information, contact Paula Curtin at (304) 234-0256, or Marjorie Easton at (304) 234-0251.

## *TECHNICAL NOTES*

### BASIC UPGRADE REQUIREMENTS FOR EXISTING UST'S

Spill Protection - Existing tanks must have catchment basins to contain spills from delivery hoses.
Overfill Protection - Existing tanks must use one of the following:

- Automatic shutoff devices
- Overfill alarms
- Ball float valves

Corrosion Protection - Existing tanks must match one of the following:

- Steel tank has corrosion-resistant coating and cathodic protection (such as an sti-P3 tank)
- Tank made of noncorrodible material (such as fiberglass)
- Steel tank clad with noncorrodible material (such as an ACT-100 tank) or tank enclosed in noncorrodible material
- Uncoated steel tank has cathodic protection system
- Uncoated steel tank has interior lined with noncorrodible material
- Uncoated steel tank has cathodic protection and interior lined with noncorrodible material

Existing Piping - Existing piping must match one of the following:

- Uncoated steel piping has cathodic protection
- Steel piping has a corrosion-resistant coating and cathodic protection
- Piping made of (or enclosed in) noncorrodible material (such as fiberglass)

### *ELECTRICAL INSULATING OILS*

Most transformer and electrical equipment oils used in the United States today are mineral oil which has been refined from naphthenic crude oil. This is due to the product's low pour point without the dewaxing required by paraffinic crude oil. It's viscosity also changes faster with temperature than the paraffinic oil allowing it a higher heat transfer rate. The final boiling point for the napthenic oil is approximately 429 degrees Centigrade.

To make transformer oil, crude oil is first distilled to extract the proper density fraction (approximately 3-10% of the whole crude). The oil is then refined using various combinations of acid treating, clay treating, hydro treating, hydrogenation, solvent extraction and/or dewaxing. The transformer oil must then be carefully handled and stored. Water and particulates are the most common contaminants. Other contaminated oils are difficult to remove.

## *PLANNING ACTIVITIES*

### ORSANCO HOSTS ANNUAL EMERGENCY

Karen Melvin, Chief, Removal Enforcement and Oil Section
841 Chestnut Building, Philadelphia, PA 19107
Phone: (215) 566-3275

Paula Curtin, Editor, Spill Enforcement Coordinator
303 Methodist Building, Wheeling, WV 26003
Phone: (304) 234-0256

## RESPONSE COORDINATORS MEETING

The Ohio River Valley Water Sanitation Commission (ORSANCO) hosted it's annual emergency response coordinators meeting April 15-16 in Ft. Mitchell, KY. The meeting was attended by EPA, USCG, USACE, State agency, water utility and ORSANCO emergency response personnel. Topics discussed at the meeting included a review of the various federal, state and local agency response authorities and capabilities, status of the development of Regional contingency plans, discussion of ORSANCO's draft Ohio River Interstate Notification Plan, procedures for notification of spills to the Ohio River and it's tributaries to water utilities, ORSANCO's HAZMAT tracking system and results of a time-of-travel model study jointly conducted by ORSANCO and USACE. ORSANCO maintains an informational bulletin board of recent spills to the Ohio River and its tributaries which can be accessed using a standard dial-up computer modem at (513) 624-3685. ORSANCO also maintains a computer web-site on the internet with similar information and its emergency response directory at "www.orsanco.org".

Parties responsible for the release or discharge of oil or hazardous substances to any navigable waterway are reminded that they are required to immediately notify the National Response Center (NRC) at 1-800-424-8802 (24-hour), appropriate State agencies in which the spill occurred and other agencies or offices as required by local law. Persons observing a spill who are not responsible for such discharge or release should also call the NRC to report the spill as soon as possible. ORSANCO should also be notified of the spill at 1-800-733-0174 (24-hour) after notification of the above agencies. Reporting to ORSANCO of a spill, release or discharge shall not relieve any municipality, corporation, person or other responsible party from responsibility for complying with any federal, state or local statutes. For additional information concerning ORSANCO, please contact Mr. Jonathan McSayles at (513) 231-7719.

# *REGULATIONS*

## ASTM COMMITTEE ON HAZARDOUS SUBSTANCES AND OIL SPILL RESPONSE

Did you know that the American Society of Testing and Materials (ASTM) has a committee on *Hazardous substances and Oil Spill Response*. The committee number is F-20 and is comprised of a hazardous substance division and an oil division. The oil division has eight (8) technical sub-committees: containment; recovery; treating agents; storage & disposal; *in situ* burning; surveillance and tracking; shore countermeasures; and spill management.

The next meeting of the F-20 Committee is scheduled for October 14-17, 1997 in San Diego, California. However, attendance to the meeting is not mandatory if you are interested in participating in one of the technical sub-committees. Much of the development of the standards created by ASTM sub-committees, like the F-20 committee, is done via mail. Your comments and feedback on proposed ASTM standards may provide the "experience" element which make the standard a realistic and beneficial guidance document. If you would like more information concerning the activities of the F-20 Committee, please feel free to contact ASTM Manager Len Morrissey at (610) 832-9730, or e-mail at "imorrissey@astm.org"

# *A BIT OF TRIVIA*

## BENSON'S FOLLY - THE FIRST PIPELINE

Today America's energy demands are served by the most expensive and extensive system of steel pipelines, with over one million miles of oil and gas lines with a total estimated value well over fifteen billion dollars. Tomorrow's pipelines may transport grains, raw materials in solid shapes and even fabricated metal parts.

This all started in 1878 when two young oil pioneers, Byron D. Benson and David K. McKelvey, founded the Tide Water Pipe Company, Ltd. in Titusville, Pennsylvania on November 13, 1878. These men, among others, invested $500,000 cash to build a pipeline from the rapidly developing Bradford, PA oil field to Williamsport, PA.

John D. Rockefeller shrewdly foresaw that control of the petroleum industry would belong to whoever could control the refining and transportation. By 1880 Rockefeller's Standard Oil Company owned 80 percent of America'a refining capacity and 90 percent of its pipelines, virtually eliminating competition.

Once the 109 mile stretch of pipeline was completed Tide Water would be able to convey crude oil at half the price Standard's pipeline subsidiary charged. At the time only a few pipelines existed. None were over 30 miles long and no existing pipeline was larger than 3 inches in diameter.

Most oil men were skeptical of the venture, and dubbed the project "Benson's Folly". Adding to the skepticism, the Tide Water Pipeline was built of wrought iron pipe 6 inches in diameter and was designed not only to run uphill 2,600 feet across the top of the Allegheny Mountains but across the Allegheny River in a 300 foot suspension.

Tide Water hired as its chief engineer General Herman Haupt, who during the Civil War was said to build bridges out of

cornstalks and fence rails to keep the Union Army moving.

The Reading Iron Company began shipping pipe on January, 1879. The nearest railroad delivery point was about 10 miles from the pipeline site and pipe had to be hauled as far as 25 miles. Because of the rugged mountain terrain, a single section of pipe, 17.5 feet in length was as much as a wagon could carry.

Numerous technical problems had to be overcome such as adverse weather, handigging the pipeline ditch, placing and fitting pipe by hand, backfilling the ditch by hand to name just a few. Because the pipe was so large in diameter, special tools had to be built. New specifications had to be developed for gate valves, flanges and unions so the pipe could withstand the high pressures proposed for the line.

On May 28, 1879, the pipeline and stations were ready to be tested. Almost 36 hours after the pumps were started, oil had traveled from Coryville, PA to the terminal tanks at Williamsport, PA. The pipeline was an unprecedented success. The problem of transporting oil was solved.

The original Tide Water pipeline became an important part of a 823 mile system. As years passed dwindling flow of oil from Pennsylvania and Illinois resulted in the sale of much of the pipeline system.

Much of the original 6" pipeline was purchased by Williams Brothers who cleaned the pipeline and installed three fiber optic cables for telephone communications.

Even today the pipeline is a very important link in information transportation.

*About the author: M.W. Farmer, POE is a consultant in Williamsport, Pennsylvania, and has gathered much of his information from Republic Steel's background material.*

**WHY? 42 Gallons = Barrel**

Did you ever wonder why 42 gallons equal a barrel and not 50 gallons? Well initially barrels ***were*** designed to "hold" 50 gallons. However, the barrels were made of loose fitting wooden planks and even looser lids that leaked a lot. Furthermore, the wooden barrels were transported from the oil fields by horse and wagon on bumpy unpaved trails which made them leak a lot more! The end result was that a barrel that started out at 50 gallons ended up at the customer's doorstep with a lot less. Customers were not pleased about paying for oil they did not receive. So an adjustment was instituted that averaged the loss to 8 gallons; hence, 42 gallons per barrel!

***RECOVERY METHODS***

**OIL DOESN'T ALWAYS FLOAT.**

Most oil spills result in floating oil slicks, especially for marine spills. There are very specific conditions which can cause an oil spill to sink rather than float in freshwater settings.

1. Oill has a specific gravity greater than 1.00 at ambient temperature will sink. Specific gravity is the ratio of the density of a material to the density of fresh water. Although nearly all crude and most refined products have a specific gravity less than 1.00 and thus float, some of the residual refined products are so heavy that their specific gravity is greater than 1.00 (e.g., very heavy fuel oils, asphalts). Spills of these oils can sink immediately and flow along with the bottom currents or as droplets in the water column. However, sinking oils can re-float in response to very small changes in water density. There have been several spills which occurred in the freshwater section of a river, where the oil originally sank and moved along the bottom; however,
at the fresh/salt mixing zone, where the water density increased with salinity, some of the oil rose to the surface. In other spills, oil has been reported to sink with very cold temperatures at night, only to re-float after absorbing heat from the sun during the day.

2. Oil of specific gravity just under 1.00 can form a very stable emulsion. Water-in-oil emulsions can contain up to 80 percent water, which will increase the specific gravity accordingly. Also, during the emulsification process, some sediment can be incorporated into the emulsion, either from the suspended sediments in the water mixed into the oil, or those adhered to the floating slick. A very small amount of sediment is needed to sink oil. Only residual refined products (e.g., No. 6 fuel oil, Bunker C) have a specific gravity of 0.99 or greater.

3. Oil which comes ashore, picks up sediment, and then is eroded from the shore. Medium and heavy oils pick up sediment when they strand, making the oil heavier than water. However, an oil/sediment mixture can be eroded from the shoreline, usually by waves, which tend to break up the oil slicks. The oiled sediment can be deposited in the near shore zone, but as small tarballs or widely scattered contaminated sediment, rather than a layer of sunken oil. In some instances, the tarballs can stick to each other, forming a tarmat just offshore.

4. Oil comprised of a blend of light and heavy refined products, and the light fraction is lost by evaporation. Many intermediate fuel oils are actually mixtures of No. 2 and No. 6 oils. If the spill conditions were such that the light oil completely evaporated, and the heavy oil was particularly heavy, the weathered oil might sink.

Taken from "Environmental Impacts of Freshwater spill Response Options", DRAFT, 1993
written by API and NOAA.

## *REGIONAL TRAINING*

### REGION III SPCC/FRP INSPECTOR TRAININ G COURSE

EPA Region III hosted the second offering of the EPA SPCC/FRP Inspector Training Course on April 14-18, 1997. Representatives from the Removal Enforcement and Oil Section and Regions 1, 2, 3, 4, and 6 and Headquarters Representatives provided the team of instructors. Students from five EPA Regions, Headquarters, other Federal Agencies and the Commonwealth of Virginia were among the participants. The five day course provided an overview of the Spill Prevention Control and Countermeasures (SPCC) and Facility Response Plan (FRP) regulations along with Inspection/Inspector Requirements. Sun Refinery in South Philadelphia opened their gates to about 50 class participants for the field trip on Thursday April 17th. A site specific case study was presented to the class during the field trip.

Thanks to the large group of dedicated folks for all the work they have put into this course, it was a worthwhile experience.

## *UPCOMING EVENTS*

### EPCRA WORKSHOPS

In anticipation of the July 1, 1997, reporting deadline for Form R and Form A (also known as the annual certification statement) under EPCRA Section 313, U.S. EPA Region 3 has arranged a series of compliance assistance workshops.

The workshops are open to industry, federal facilities, and other interested parties. Each session will provide a thorough discussion of the requirements of EPCRA Section 313. Below is a list of scheduled workshops and a contact number to obtain registration information.

**Delaware** - Dover, May 22, 1997, Contact: David Fees (302) 739-4791

**Maryland** - Baltimore, May 20, 1997; & Hagerstown May 22, 1997; Contact: Courtney Jones (301) 907-3844 Ext. 260

**Pennsylvania** - Reading, May 28, 1997; Contacts: Lorna Velardi (215) 731-4200, or Barry Palmer,(610) 375-6171; & Pittston, June 3, 1997; Contact: Leonard Carlin Fax: (717) 654-5137

**Virginia** - Roanoke, May 13, 1997; & Richmond, May 16, 1997; Contact: Debra Rainey, (301) 907-3844 Ext. 261

**West Virginia** - Charleston, April 23, 1997; Contact: Jan Taylor (304) 346-6264

To date, EPA Regions 2, 3, 5, 7, 8 and 9, as well as EPA Headquarters, have scheduled EPCRA Section 313 compliance assistance workshops. Current workshop information will also be maintained by the RCRA, Superfund & EPCRA Hotline at (800)424-9346, (800)535-0202, or (703)412-9810, respectively.

### NORTHEAST IN-SITU BURNING SYMPOSIUM

Northeast In-Situ Burning Symposium - A Symposium on In-Situ Burning: Its Role in Oil Spill Response, will be held on Monday and Tuesday, April 28-29, 1997. The symposium, sponsored by the U.S. Coast Guard and the Marine Preservation Association, will be held in Peabody, Massachusetts. It will bring together federal, state, and local officials, and representatives from industry and academia to facilitate in-depth understanding of in-situ burning as an oil spill response countermeasure. Region III will be represented by providing a member of the Steering Committee, who will serve as a facilitator for one of eight roundtable groups. This symposium will serve as a forum for the exchange of information between air quality and spill response professionals to provide a greater appreciation of each others authorities, responsibilities, and capabilities. The goal of the sponsors is to make in-situ burning a viable spill countermeasure by educating and fostering communication between stakeholders and encouraging the establishment of pre-authorization agreements.

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### AST-SYMPOSIUM-ATLANTA FIRE DEPT.

If you have some money in your travel budget, the Atlanta Fire Department is presenting an Aboveground Storage Tank (AST) Symposium June 2-6, 1997. The symposium consists of two unique three day courses.

Course "A" covers inspection of AST facilities for fire safety. The course involves design, construction, and leak detection of petroleum storage tank facilities. In addition, the course shows how to properly inspect ASTs so that they will not be subject to fire, or catastrophic failures. There will also be a section on EPA regulations affecting ASTs by EPA Region VI representative Don Smith.

Course "B" involves fire prevention, protection and suppression

of AST fires. The course shows how to mitigate consequences when a tank or a petroleum storage facility catches fire or explodes, what equipment is necessary, how to pre-plan for these events, when to stay and fight and when to evacuate.

The cost of each course is $600.00 or both courses can be taken for $900.00. For more information contact Chief Henry D. Jones of the Atlanta Fire Department at (404)853-7010 or you can access their internet web page at "http://www/atlanta/org/dept/fire/symp97.htm"

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**THE 9TH ANNUAL CEPP CONFERENCE**

Pittsburgh, PA will be the site of U.S. EPA Region III's 9th Annual Chemical Emergency Preparedness and Prevention (CEPP) Conference, December 2-5, 1997 at the downtown Hilton Hotel and Towers. The conference theme is "If Not Us, Who?", and will feature an award winning smorgasbord of preparedness and prevention topics.

Key topics covered at this year's conference will include: Crisis Management; Integrated Contingency Planning; Clean Air Act; Risk Management Planning; Oil Pollution Act; Exercise Design and Evaluation; Media Communications and Public Affairs Issues; Case Studies in Response, Enforcement, and Planning; Federal Facilities' Compliance Initiatives; LEPC and SERC Round table's; EPA Region III's innovative Chemical Safety Audit Program; and Environmental Crimes and Terrorism.

Invited, featured speakers include: Mike McCabe, EPA Region III Regional Administrator; Dr. John Paling, nationally known risk communications lecturer and author of "Up to Your Arms in Alligators"; John Ebersole, Chicago's HAZMAT Chief; "Masters of Disaster" Don and Beverly Abbot, and their one of a kind, hands on interactive tabletop scenario, "Abbottsville"; Jim Youngblood, Safety Director for West Virginia's Dept. of Highways and coach of the "Charleston Rockets" championship professional football team; Dave Piposzar, Allegheny County Dept. of Health Adm. and guru of Western PA's model hospital chemical emergency alliance;, Phil McArdle Fire Chief "Big Apple" Anti-Terrorism, and Bill Finan of HQS Chemical Emergency Preparedness and Prevention Office.

Who should attend?

- Environmental and emergency managers at all levels responsible for planning and implementing safety, emergency response, and environmental compliance programs.
- Industrial, State, Municipal and Government managers responsible for establishing and complying with environmental programs such as the Clean Air Act, Oil Pollution Act, and Emergency Planning and Community Right-to-know Act.
- LEPC and SERC members
- Emergency Medical Services System personnel
- Managers and officials responsible for safeguarding the public community, facilities and the environment against criminal acts or terrorism.
- Academia• Environmental activists

Registration fee is $60 (Limited)

For registration information contact Al Brown, EPA Region III, (215) 566-3302, or brown.alan@epamail.epa.gov.

**Conference attendance limited to first 1000 registrants**!

**REGION III RRT MEETING**

The next regularly scheduled Region III RRT meeting will be held on May 13-15, 1997. The meeting will take place at Rehoboth Beach, Delaware.

For further information, contact Linda Marzulli at (215) 566-3256.

## *GENERAL INFORMATION*

## SPCC/FRP OUTREACH MANUAL

**Have You Received Your Copy of EPA Region III's SPCC/FRP Outreach Manual?**

If you would like to receive a copy please send or fax to:

Regina Starkey (3HW32)
SPCC Coordinator
U.S. EPA - Region III
841 Chestnut Building Philadelphia, PA 19107
Fax #: (215) 566-3254
Phone#:(215) 566-3292

## *INTERNET INFORMATION*

**OIL SPILL RESPONSE ORGANIZATIONS - ON LINE**

Did you know that the US Coast Guard (USCG) OSRO Listings - On Line has a listing of Oil Spill Response Organizations (OSROs) that can be retrieved directly off the internet! The listing provides a matrix of OSR0 capabilities, USCG classification, phone numbers and response areas.

To retrieve a simple text printout go to USCG internet web site: "www.dot.gov/dotinfo/uscg/hq/g-m/nmc/response/data.htm"; the data is also available in a Fox-Pro database format under the USCG homepage at: "www.dot.gov/dotinfo/uscg/hq/g-m/gmhome.htm".

## KEEP A LOOK OUT

This publication will soon be available via the internet. Go to EPA Headquarters internet web site: "HTTP://WWW.EPA.GOV/oilspill/index.HTM.

*If you'd like to submit an article, comments, suggestions, etc., or receive your copy of this newsletter, please contact: Paula Curtin at (304) 234-0256, or you may send the information via Internet to:*

*CURTIN.PAULA @ EPAMAIL.EPA.GOV*

### EPA REGION III SPCC & FRP HOTLINE

Have a question on Spill Prevention, Control & Countermeasures (SPCC) 40 CFR 112.1 or Facility Response Plans (FRP) 40 CFR 112.20? EPA Region III has in place a hotline to answer these and other oil related questions. The hotline is staffed by the very people that will inspect your facility and review your spill plans. The hotline number is **(215) 566-3452.**

### Region III Oil Program Contacts:

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|---|---|
| ***Karen Melvin*** | ***(215) 566-3275*** |
| *-Chief, Removal Enforcement and Oil Section* | |
| ***Cordy Stephens*** | ***(215) 566-3276*** |
| *-Secretary* | |
| ***Steve Jarvela*** | ***(215) 566-3259*** |
| *-On-Scene Coordinator* | |
| *-Inland Area Committee, Chair* | |
| ***Linda Ziegler*** | ***(215) 566-3277*** |
| *-Oil Program Coordinator* | |
| *-Facility Response Plan (FRP) Coordinator* | |
| *-Oil Pollution Act* | |
| *-RRT, Area Committees, Port Area Committee* | |
| *-Spill Response Countermeasure (Dispersants)* | |
| *-Outreach* | |
| ***Jean Starkey*** | ***(215) 566-3292*** |
| *-SPCC Coordinator* | |
| *-OPA Spill Penalty Program* | |
| *-SPCC Enforcement* | |
| *-Multi-Media Enforcement* | |
| *-Outreach* | |
| ***Paula Curtin*** | ***(304) 234-0256*** |
| *-Oil Enforcement Coordinator* | |
| *-OPA Spill Penalty Program* | |
| *-Spill Investigations* | |
| *-Oil Program Activities Newsletter* | |
| *-Outreach* | |
| ***Mike Welsh*** | ***(215) 566-3285*** |
| *-SPCC/FRP Inspector & Plan Reviews* | |
| *-Outreach* | |
| ***Rob Sanchez*** | ***(215) 566-3451*** |
| *-SPCC/FRP Inspector & Plan Reviews* | |
| *-Outreach* | |
| ***Bernie Stepanski*** | ***(215) 566-3288*** |
| *-Spill Investigations* | |
| ***Frank Cosgrove*** | ***(215) 566-3284*** |
| *-SPCC/FRP Inspections and Plan Review* | |
| *-SPCC Enforcement Support* | |