



Oil Spill

Program Update

The U.S. EPA's Oil Program Center Report

ABOUT THE UPDATE

EPA's *Oil Spill Program Update* is produced quarterly, using information provided by EPA Regional staff, and in accordance with Regions' information needs. The goal of the Update is to provide straight-forward information to keep EPA Regional staff, other federal agencies and departments, industries and businesses, and the regulated community current with the latest developments. The Update is distributed in hard copy and is available on the Oil Program homepage at www.epa.gov/oilspill.

Region 3 Oil Program Activities

EPA Region 3 covers the States of Pennsylvania, Maryland, Virginia, West Virginia, and Delaware, and the District of Columbia. The Regional office is located in Philadelphia, Pennsylvania, with field offices located in Wheeling, West Virginia, and Annapolis, Maryland. The Chesapeake Bay is one of Region 3's most significant environmental resources and the focus of a great deal of protection and restoration efforts.

The Region's Oil Program is part of the Removal Branch of the Hazardous Site Cleanup Division. There are nine employees dedicated to the Oil Program within the removal branch as well as dedicated staff in the Office of Regional Counsel. Oil Program staff perform a variety of functions including reviewing and approving Facility Response Plans; supporting area planning activities, conducting

SPCC inspections, training, and exercises; enforcement activities; and most importantly, oil spill response. In recognition of their efforts pursuing Oil Pollution Act enforcement actions several Region 3 staff received Bronze Medals for Commendable Service, the highest Regional honor that can be awarded.

Oil Spill Response

In addition to responding to the kinds of oil spills that are common throughout the country, Region 3 faces the unique problem of responding to chronic oil spills from abandoned oil wells in the well fields of northwestern Pennsylvania. Plugging the wells and excavating and disposing of contaminated soils has been an expensive option, so the On-Scene Coordinator (OSC) assigned to this area developed an innovative bioremediation approach that in most cases does not require soil excavation, transportation, disposal, and replacement with clean soil. The virtual elimination of transportation and disposal saves the removal program a great deal of both time and money.

In conjunction with plugging the leaking wells, the OSC has developed a procedure for dealing economically with the oil-soaked soils surrounding the wells. The procedure builds on the success of using bioremediation to restoring oil contaminated soils around oil production wells in McKean County, Pennsylvania, just outside of the Allegheny National Forest. It uses fertilizers and natural organic materials (locally available leaf detritus or peat moss) to boost the nitrogen content of the soils, along with aeration by rototilling. The bioremediation protocol has been remarkably successful in reducing total petroleum hydrocarbons (TPH) in soils surrounding crude oil production wells in northeastern

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Pennsylvania. This warm-season remedy results in TPH that are evident in a matter of weeks-- revegetation with an optimized grass seed can be completely successful in one growing season.

Outreach

Region 3 takes great pride in its outreach activities. It publishes a Regional Quarterly Newsletter that is distributed to more than 2500 recipients, mostly industrial or facility representatives. It can also be accessed through the Headquarters Internet web site at www.epa.gov/oilspill/index.htm. The Newsletter features stories about response organizations from governmental as well as industry organizations. The newsletter reports on regulatory changes, planning and response activities, and planned drills and exercises, as well as information related to special events such as Regional Response Team meetings, training opportunities and seminars. Articles

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that have received very favorable reactions include those that facilities can apply to their own situations including "What to Expect During an EPA Inspection," "Is Your Facility Subject to the Facility Response Plan Requirements," and "A Single Plan Approach to Satisfy Multiple Regulations."

Also a part of its outreach activities, Region 3 maintains a hotline to respond to questions about Spill Prevention, Control & Countermeasures (SPCC) 40 CFR 112.1 and Facility Response Plans (FRP) 40 CFR 112.20. The hotline is staffed by the same people that inspect facilities and review spill response plans. The hotline number is (215) 814-3452. Region 3 handles approximately 250 phone calls for information through the hotline.

Sub-Area Planning: Outreach to Local Responders

Region 3 participates in planning efforts to ensure that when oil spills occur, responders can react quickly and efficiently to address the threat. Effective planning for emergencies involving oil and hazardous materials requires the involvement of federal, state, and local government, as well as public organizations, and private industry. The National Response System now mandates national, regional, local, and facility plans. The Emergency Planning and Community Right-to-Know Act requires local governments to develop LEPCs and LEPC plans, the Oil Pollution Act of 1990 (OPA90) requires the EPA and the United States Coast Guard (USCG) to establish Area Committees--consisting of federal,

state, and local government representatives--to prepare for worst case discharges of oil. In the years since OPA90 was passed, EPA Region 3 has appointed an Inland Area Committee, chaired by EPA OSC Steve Jarvela, and has developed an Inland Area Contingency Plan (IACP) for the entire area covered by Region 3.

Since it completed the IACP the Region has expanded its Inland Area Planning effort, using smaller geographic areas called "sub-areas." Planning at the sub-area level increases coordination among local, state, and federal planning efforts, and increases the involvement of local officials, industry, and other interested public and private organizations in Area Planning. An EPA OSC has been tasked with establishing and leading a committee for each subarea.

Although Area Committees were established to plan for responses to discharges of oil, subarea plans typically address both hazardous materials and oil, since the same people respond to both types of incidents at the federal, state, and local levels. Subarea plans, like the IACP and the Regional Contingency Plans created before them, are intended to be used in conjunction with existing state and local plans, rather than replacing them. The sub-area planning process facilitates timely and effective response to and recovery from incidents involving releases of hazardous substances and oil.

In Region 3, several EPA OSCs have been assigned subareas that include portions of Virginia. Each OSC, and each subarea committee, has taken its own approach to

developing a subarea plan. More important than the development of plans, the subareas provide a forum for conversation and discussion among federal, state, and local responders.

More information on the Inland Area Committee and its activities is available on the Internet at www.epa.gov/reg3hwmd/iacr3iacp.htm. You may also contact Steve Jarvela at (215) 814-3259 or Colby Stanton at (215) 814-3299 if you have any questions about subarea planning or would like to get in touch with the OSC assigned to your area.

Inspection Activities

Region 3 sets its facility inspection priorities using a system that includes specific criteria. Facilities that have had spills, or have been subject to emergency response action are scheduled for inspection to ensure compliance with SPCC or FRP requirements. Referrals or requests from local or state organizations to inspect certain facilities are also honored by regional inspectors. Currently, the Region is concentrating on inspecting all "significant and substantial harm" facilities for FRP approval, while concurrently assuring compliance with SPCC requirements. The Region also selects specific geographic areas on which to focus inspection activities by targeting a certain zip code.

Typically, inspections are performed by a two-person team, and are unannounced. One individual is responsible for observing the physical characteristics of the facility, while the other performs the plan review. If they do not warrant

enforcement action areas of non-compliance are cited in a Notice of Non-compliance.

Enforcement Activities

Region 3 filed a Clean Water Act Penalty case against Carlos R. Leffler, Inc. because the company operated seven large oil storage and distribution facilities for three years without preparing or implementing FRPs, and operated five other oil storage and distribution facilities for seven years without preparing required SPCC plans. The company settled the case for nearly \$500,000 under a consent decree. The settlement includes a cash penalty payment of \$435,000, which will go into the Oil Spill Liability Trust Fund for use in cleaning up oil spills. In addition, Leffler will perform a Supplemental Environmental Project in which it will enhance 14-acre property owned by the company in Walker Township, Pennsylvania, and donate it to the Central Pennsylvania Conservancy for management as a permanent wetlands refuge. The property consists of both wetlands and uplands. Leffler will enhance the existing wetlands and uplands, and create an additional 2/3 acre of wetlands.

As the result of another enforcement action, Bayway Refining Co. emptied a 3.3-million-gallon gas tank at its 35-acre oil terminal on Curtis Bay in Baltimore, Maryland. The EPA ordered Bayway to empty the tank to prevent a major spill that could have resulted from dangerous corrosion at critical stress points in the tank's floor. The corrosion was discovered during a January 26 EPA inspection. EPA found that the exterior bottom plate on a 3.3

million gallon tank had corroded to less than one inch from the shell of the tank at three separate locations and impaired the integrity of the tank at critical stress points.

The Bayway terminal is east of Baltimore on the northern portion of Curtis Bay, and the tank in question is just 400 feet from the water's edge. The facility has 13 above-ground storage tanks with a total storage capacity of nearly 31.5 million gallons of oil.

Region 3 Spill Penalty Program

Although Region 3 has developed a comprehensive "penalty program," its goal is to help facilities achieve and maintain compliance with spill prevention and preparedness regulations. Region 3 has worked with hundreds of oil facilities over the years to assist them in understanding and implementing the oil regulations. EPA Region 3 has investigated over 3,000 spills in the past 7 years with only a small percentage, often the most serious and repeat offenders, receiving a penalty. Since 1992, EPA Region 3 has taken approximately 155 administrative and/or judicial cases for spill violations.

The number of spills affecting navigable waters has significantly decreased in EPA Region 3, particularly in the State of West Virginia. The improved performance of Eureka Pipeline Company offers one example. Eureka Pipeline Company (Eureka), operating in West Virginia was responsible for more than 300 spills over three years. These spills resulted in hundreds of miles of stream pollution, stressed vegetation, and

fish kills. The West Virginia Department of Environmental Protection requested EPA Region 3's assistance in prompting Eureka to develop a program to reduce spills and upgrade their facilities and operations. EPA Region 3 prepared a judicial referral and enforcement order requiring Eureka to institute a program to reduce their spills and remove hundreds of miles of abandoned pipelines throughout West Virginia. Eureka currently continues to remove abandoned pipeline. Soon after the order was issued, Eureka sold its main pipeline to West Virginia Oil Gathering (WVOGA). EPA Region 3 immediately began informal negotiations with WVOGA to assist them in bringing the pipeline operation into compliance without issuing penalties while WVOGA was attempting to bring the spills under control. After approximately one year of operation and after instituting a very aggressive corrosion reduction program and pipeline replacement program, the pipeline was brought into compliance. WVOGA has experienced only three spills in the past several years and continues to work closely with EPA in complying with OPA.

For more information on EPA Region 3's oil program activities, please contact the hotline at (215) 814-3452 or write 1650 Arch Street (3HS32), Philadelphia, PA 19103.



Coastline Resources to Build Oily Bilgewater Reclamation Facility

As part of the settlement of an Oil Pollution Act administrative penalty case, Coastline Resources agreed to construct and operate an oily bilgewater reclamation facility at a site to be selected by the Texas General Land Office in the Coon Brown Harbor area in Aransas Pass. The facility is an oil/water separation system designed to receive bilge liquids discharged from marine vessels. The facility will provide a place for shrimper and recreational boats to dispose of their oily bilge water without cost. The company will construct the facility under the direction of the Texas General Land Office. The facility will be completed in accordance with design drawings and specifications to be furnished by the Texas General Land Office and will be operated and maintained by the company.

The Texas General Land Office established an identical facility in Port Isabel, Texas which has proven to be an outstanding success in the prevention of oil spills in the harbor. The number and volume of spills in the Port Isabel harbor area have dropped dramatically since the facility in Port Isabel opened.

Coastline Resources agreed to a settlement consisting of \$4,300 in cash penalty payment and \$55,000 for the reclamation facility. For

further information, please contact Jimmy Graham at (215) 665-2272 or Roger Hartung at (215) 665-8561.

New Rules Proposed by EPA and U.S. Coast Guard

EPA and the U.S. Coast Guard (USCG) are proposing to amend their Facility Response Plan (FRP) rules. These rules were promulgated under the Clean Water Act (CWA) as amended by the Oil Pollution Act (OPA). EPA's FRP rule applies to high-risk non-transportation-related facilities that transfer large volumes of oil over water or store one million gallons or more of oil. The proposed rule would modify the existing regulation as it applies to the small number of FRP facilities that handle, store, or transport vegetable oils and animal fats. Because worst case oil discharges from these facilities could cause substantial harm to the environment, facility owners and operators are required to prepare and implement response plans.

EPA has thoroughly evaluated the properties and environmental effects of vegetable oils and animal fats. This is discussed more thoroughly in a Federal Register notice (62 CFR 54508-54543, October 20, 1997). The Agency found that vegetable oils and animal fats share common properties with petroleum oils and produced similar harmful environmental effects.

Examples of real-world spills demonstrate that spills of vegetable oils and animal fats kill or injure

fish, birds, mammals, and other species and produce other undesirable effects.

The EPA proposed rule would include:

- definitions of vegetable oils, animal fats, and non-petroleum oils in definitions section;
- separate sections for small, medium, and worst case discharges of vegetable oils and animal fats;
- elimination of the use of persistence to determine groups of vegetable oils and animal fats;
- establishment of new groups (A,B,C) for vegetable oils and animal fats based on specific gravity; and
- establishment of a new methodology for determining response equipment requirements for worst case discharges of animal fats and vegetable oils.

USCG's proposed rule (33 CFR 154) would modify the regulation for vegetable oil and animal fat facilities that are marine transportation related. The proposed rule would change the initial classification of these facilities from "significant and substantial harm" to "substantial harm." In doing this the Coast Guard is adopting the approach that EPA now uses.

The proposed rule would also clarify and amend planning and equipment requirements (33 CFR 154). It would formalize average most probable discharge (AMPD) planning in addition to worst case discharge (WCD) planning and

establish minimum equipment requirements.

EPA and USCG have worked closely together to insure consistency between the two agencies. Rules for both agencies are being proposed in response to requirements of FY 1999 appropriations. The appropriations require the agencies to issue regulations amending their FRP rules to comply with the Edible Oil Regulatory Reform Act (EORRA). EORRA requires agencies to differentiate between vegetable oils and animal fats and other classes of oils, based on properties and effects, in issuing regulations. The proposed rule reflects similarities and differences in properties and environmental effects of animal fats and vegetable oils and other classes of oils. For more information, on EPA's rule, contact Barbara Davis at (703) 603-8823 and for additional information on the USCG's proposed rule, contact Mark Meza at (202) 267-0304.

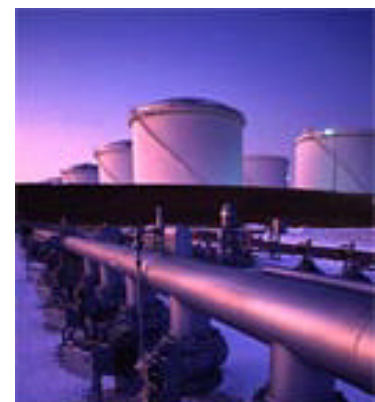
DOT Issues New Breakout Tank Regulations

The U.S. Department of Transportation (DOT) has established regulations for the design, construction, and testing of new breakout tanks. The new rule, contained in Title 49 Code of Federal Regulations part 195, also regulates the repair, alteration, maintenance, inspection and replacement of existing breakout tanks. The new rule went into effect May 3, 1999 and most of its provisions will be required by

October 2, 2000. The rule is a product of DOT's Research and Special Programs Administration (RSPA), Office of Pipeline Safety. It adopts several existing standards, recommended practices, codes, and specifications for breakout tanks. The final rule was published April 2, 1999 in the Federal Register (64 FR 15926).

Although it remains to be seen how the rule will be implemented, there is some concern the new breakout tank rule will overlap EPA's Spill Prevention, Control, and Countermeasures (SPCC) regulations. The concern stems from the definition of a breakout tank. Breakout tanks are used in conjunction with pipelines to relieve surges and to provide temporary storage during the transportation of petroleum, petroleum products, and anhydrous ammonia (anhydrous ammonia tanks are regulated differently from petroleum tanks).

At some facilities, breakout tanks are configured to serve as storage tanks which hold petroleum products before they are transferred to railcars, tank trucks, tank vessels, or processed at the facility. According to a recent federal court decision these tanks can be regulated both as



“transportation-related” breakout tanks subject to RSPA Office of Pipeline Safety regulations and as “non-transportation related facilities” subject to EPA’s SPCC regulations. A 1971 memorandum of understanding (MOU) between DOT and EPA defines a transportation-related facility to include a breakout tank needed for the continuous operation of a pipeline system. The MOU also defines a non-transportation-related facility to include fixed bulk plant storage and terminal oil storage facilities used for the storage of oil.

In their comments to DOT prior to finalization of the rule, both EPA and the Independent Liquid Terminals Association (ILTA) suggested that the rule be amended to exclude tanks that serve non-pipeline modes of transportation. The rule as written, EPA and ILTA held, would cause some tanks to be subject to EPA’s SPCC regulations and would lead to an overlap of EPA and DOT authority. EPA also suggested that, in order to enhance environmental protection afforded by secondary containment, DOT should adopt the SPCC regulations rather than the National Fire Protection Association’s *Flammable and Combustible Liquids Code* which serve primarily as a fire prevention code. RSPA reviewed and considered these comments but finalized the rule as proposed. With respect to SPCC regulations, RSPA noted that their new rule was enacted to only address breakout tanks while the EPA SPCC rules address entire facilities and their operations.

RSPA acknowledged that the tank industry is confronted with overlapping tank regulations and vowed to work with EPA to clarify

each agency’s jurisdiction. EPA and RSPA are drafting a joint letter clarifying each agency’s jurisdiction. One goal is for the agencies to minimize the number of facilities subject to joint jurisdiction while recognizing that some facilities will be subject to both regulations.

EPA has expressed concerns that the promulgated standards would lock operators into present-day technologies and discourage them from using more innovative future technologies. Another EPA concern is that the standards do not adequately protect the environment against potential discharges from tanks, nor do the regulations address operator error, a source of many pipeline spills.

RSPA has promulgated this final rule to promote pipeline safety. RSPA has taken existing industry breakout tank standards and incorporated them into agency regulations expecting to improve the safety and cost savings of transporting petroleum and petroleum products.

For more information, contact Jim Taylor, U.S. DOT Office of Pipeline Safety, at (202) 366-4566 or Bud Hunt, EPA Oil Program, at (703) 603-8736.

Independence Creek Diesel Oil Spill: Atchison, Kansas

Up to 231,000 gallons of diesel fuel were released into Independence Creek on May 10, 1999, when a pipeline transporting fuel from El

Dorado, Kansas, to Des Moines, Iowa, ruptured. Fuel was passed downstream into the Missouri River, and was subsequently detected at the City of Atchison water treatment plant. In addition to the threat to the municipal water supply, public officials fear that the spill may have damaged populations of several endangered species.

The spill occurred 4-5 miles upstream of the Missouri River in a rural agricultural area approximately 4 miles north of Atchison, Kansas. Residential areas and the Benedictine Bottoms state wildlife refuge are in close proximity to the spill. Potential impacts of the spill include damage to the fish and wildlife of Independence Creek and the Missouri River and disruption of recreational and fishing activities.

The Williams Pipeline Company (WPC) is responsible for the pipeline. WPC noticed a pressure drop in the pipeline early in the afternoon of May 10, 1999, and began air and land reconnaissance to locate the spill. After a farmer located the source of the leak, WPC mobilized Enviro Kleen to contain the spill with booms and begin recovery of the spilled fuel. WPC stated that EPA recovery resources were not needed at that time, although the location and availability of tanker transport trucks was limiting the storage of recovered material.

The Region 7 EPA Emergency Response and Removal (ER&R) branch determined later that evening that EPA response resources were





Containment booms were set up on the mouth of Independence Creek to prevent further contamination of the Missouri River.

needed to contain and remove the spill. An inspection by Scott Hayes, the EPA on-scene coordinator (OSC), confirmed that fuel had escaped the containment measures established by WPC and was entering the Missouri River. Containment booms were set up on the mouth of Independence Creek to prevent further contamination of the Missouri River, although the volume and velocity of the river precluded the use of containment booms on the river itself.

Although vacuum trucks were employed to recover fuel from the containment areas the number of trucks was inadequate for the size of the spill. The six vacuum trucks used at the spill could not remove fuel at the same rate that it was leaking from the pipe. One of the trucks was entirely devoted to removing spilled fuel from a containment trench dug to divert the flow of diesel fuel escaping from the ruptured pipe. Rainy weather conditions made entrainment of fuel beyond the containment booms more difficult. In-situ burning was considered at the spill, but was ruled out due to the potential risks

involved and because more recovery resources became available. Inspection by the OSC and Superfund Technical Assistance and Response Team (START) contractor revealed that containment had been achieved at only one of the three containment areas by the morning of May 12, 1999. Although backup booms were deployed at the other containment sites, nightly storms and inadequate removal equipment resulted in an undetermined amount of fuel escaping from the containment booms. City officials ordered the shut down of industrial operations within the city of Atchison, as hydrocarbons were detected at the water treatment plant.

WPC estimates that 4,565 barrels of diesel were discharged during the incident. Response efforts recovered approximately 2,800 barrels—about 61 percent of the estimated spill amount.

For more information, please contact Scott Hayes, OSC EPA Region 7 at (913) 551-7670.

Olympic Pipeline Spill and Fire

Three people were killed and 10 injured when a pipeline carrying automotive and jet fuel ruptured, leading to an explosion and fire along Whatcom Creek in Bellingham, Washington, on June 10, 1999. The three fatalities included a fisherman that was apparently overcome by fumes and drowned and two 10-year old boys who died from extensive burns in a Seattle hospital the following morning. Witnesses report that the fuel ignited as the two boys were playing with a cigarette lighter along the creek.

Olympic Pipe Line Company (OPL), the responsible party, estimated that nearly 277,000 gallons of gasoline escaped into Whatcom Creek during the leak. The fuel created a 15-foot thick vapor cloud as it spread downstream. The explosion occurred next to the Bellingham city water treatment facility and disrupted the local water supply. Fires quickly spread about 1.5 miles downstream, destroying one home and damaging a second. Officials report that most of the fuel released from the pipeline was consumed during the intense fires. Local police, fire and OPL employees responded to reports of a gasoline odor just minutes before the explosion occurred.

A *Seattle Times* report of the preliminary investigation describes a series of events that led to the release and explosion. The problem began when computer in a pipeline



A 10,000-foot smoke cloud was created by the explosion on Whatcom Creek.

control room crashed. As a result of the computer crash, control of the pipeline switched to a backup computer. The switch to the backup caused a valve to close at a pumping station 20 miles south of Bellingham. The valve closure led to a dramatic increase in pipeline pressure because product was still being pumped toward the closed valve—normal pressure is 200 pounds per square inch (psi) but at the time of the rupture it was approximately 1500 psi. The pressure caused a rupture at an area of the pipe that was weakened by metal defects. The pressure surge was detected by computers and the pumps were automatically shut down—but not before the damage had been done. Apparently unaware of the rupture, pipeline operators resumed pumping gasoline into the broken pipeline and continued to do so for approximately 15 minutes before they realized the line was leaking and sealed off the affected section.

The initial spill occurred at the confluence of Hanna and Whatcom Creeks near Whatcom Falls Park. Officials report that damage to the city of Bellingham, located 90 miles north of Seattle with a population of 90,000, was minimized by the intensity of the fires—they consumed the fuel before it could pass through more densely populated areas. Witnesses said that the explosion created a cloud of smoke that reached 10,000 feet into the air and darkened the skies. Fires continued to re-ignite intermittently for several days after the spill.

Officials responded to the incident by establishing a Unified Command that included EPA Region 10, the Washington State Department of Ecology, the Bellingham Fire Department, and OPL. At the height of response, responders numbered nearly 150 people. Response activities began with fire rescue and evacuation of the impacted homes and the surrounding area. The site

was continuously monitored for the risk of explosion. Thermal scanning was also conducted to pinpoint the remaining isolated pockets of burning fuel along Whatcom Creek. Isolated pockets of fuel on the creek are being removed through skimming or with sorbent pads. OPL provided pumps and other equipment for a temporary water pumping station to restore water service to areas affected by the incident.

Restoration planning and damage assessments began as the response shifted from emergency response to investigation, assessment and clean-up. Assessment of damage to ecological resources is being conducted by the National Oceanic and Atmospheric Administration (NOAA), Natural Resource Damage Assessment (NRDA) teams, and the Washington State Department of Ecology. Assessors will be working with OPL to establish a restoration plan at Whatcom Creek and to conduct bird of prey surveys indicating the potential impact to several endangered species.

Other planned site activities includes the replacement of the damaged water pipes from the Bellingham water treatment facility. The ruptured pipeline was cut and capped but will not be replaced until after reliable water systems have been installed for areas north of the site.

For more information on the spill contact Thor Cutler (206) 553-1673, Anthony Barber (206) 553-2136, or Carl Kitz (206) 553-1671 at EPA Region 10. Information is also available on the Whatcom County Internet web site at www.co.whatcom.wa.us.

Y2K: the Federal Government and the U.S. Oil Industry

As the year 2000 (Y2K) approaches, the Federal government and the U.S. oil and gas industry are preparing for potential problems that may arise from Y2K. This article highlights the preparedness activities underway at federal agencies outside of EPA which have responsibility for preventing, preparing for or responding to oil spills. For more information on how the Y2K problem may impact the oil industry and EPA's preparedness efforts see "Oil Spill Prevention and the Millennium Bug" in the April 1999 issue of the *Oil Spill Program Update*.

The Y2K problem is the result of cost- and space-saving computer programming practices that originated more than 20 years ago when computer memory was very expensive. To conserve memory when developing software, databases and microchips, programmers often used two digits rather than four to identify a specific year (e.g., 99 rather than 1999). Unfortunately computers and microchips may mistakenly interpret a two-digit date code of "00" as the year 1900 rather than 2000. This may cause the computer, device, or system to shut down or behave unpredictably or erratically when clocks roll over from 1999 to 2000 or when programs encounter other error-prone dates.

U.S. Department of Transportation

The Department of Transportation (DOT) regulates the nation's 1.4 million miles of pipeline. Because pipelines use computers and automated microprocessor controls to monitor and regulate the flow within the pipeline they may be vulnerable to Y2K problems. DOT's Office of Pipeline Safety has issued an advisory bulletin regarding Y2K alerting industry of the problem. The bulletin provides background information on the Y2K problem; notifies readers that the American Petroleum Institute, the Natural Gas Council, and Gas Industry Standards Board are serving as coordinating bodies for Y2K preparedness in the oil and gas industries; and provides contact phone numbers and web site addresses for further information.

In addition to the advisory bulletin, the office offers assistance by coordinating outreach activities, identifying points of contact within trade associations, and developing a forum for sharing information. Additionally, they have a Y2K brochure available on-line that outlines steps for Y2K preparedness and lists contact names, and phone numbers. The brochure can be found at www.ops.dot.gov/y2ktest.htm.

The office is working collaboratively with the President's Council on Y2K Conversion, Energy Sector Oil and Gas Working Group to address Y2K problems. Y2K Oil and Gas Working Group information is posted on a web site at www.ferc.fed.us/y2k/index.html.

The President's Council on Y2K Conversion

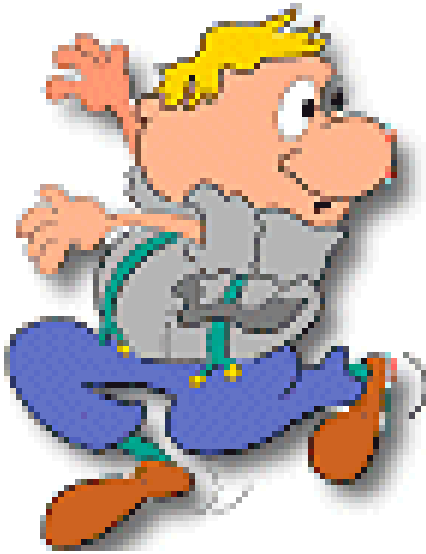
The President's Council on Y2K Conversion has sent surveys to the Oil and Gas Industry to assess Y2K progress. The results of the December 1998 survey (the most recent results available) showed the following:

- Comprehensive Y2K plans are in place and being executed;
- 86% of respondents are in the final stages (remediation and validation) with respect to business systems;
- 78% of respondents are in the final stages with respect to embedded systems;
- 67% of respondents are in the final stages with respect to supply chain issues;
- Embedded chips are less of an operational risk than originally perceived; and
- Significant improvement has been made in the industry response rate since the September 1998 survey (88% versus 66%).

The Council is also engaged in outreach activities to private and public organizations. It maintains a web site to provide an information resource for Oil and Gas companies (and their customers) who are concerned about the Year 2000 problem. The web site is located at www.ferc.fed.us/y2k/index.html.

The U.S. Coast Guard

To prepare for Y2K, the U.S. Coast Guard (USCG) has established a Y2K Plan, a Y2K Incident



Management Team, and a web site (www.uscg.mil/hq/g-m/y2k.htm). The web site contains information on Y2K, key Y2K dates and a Y2K Issues Tracker database.

The U.S. Coast Guard offices that address oil spills are: the National Response Center, the National Pollution Funds Center, and the Commandant Office of Response.

The USCG Y2K plan consists of five phases:

- Awareness Phase – Raise awareness. Establish a central Y2K project team. Partner with other maritime organizations and share information to resolve this problem. Inventory current computer and control systems. Prepare a Y2K budget.
- Assessment Phase – Inventory information systems and control systems. Determine Y2K compliance of equipment from equipment manufacturers. Test computer & control systems for Y2K problems. Prepare contingency plans.
- Repair Phase – Prioritize

systems for repair. Every system may not be able to be fixed by 2000. Terminate systems no longer needed.

- Validation Phase – Test repaired systems for Y2K compliance. Obtain Y2K certification from vendor/manufacturer.
- Implementation Phase – Return repaired systems back into production. Monitor systems for any problems.

The Oil And Gas Industry

The companies that produce, and distribute oil and petroleum products bear the largest responsibility for assuring that Y2K problems are identified and corrected before they can cause spills or create threats to the environment. A few examples of industry preparedness efforts are presented below.

ARCO is addressing Y2K issues in three major areas:

- Computing Integrity - defined as the functionality of information technology owned or controlled by ARCO at all of its facilities

- Asset Integrity - defined as the functionality of operations (exploration, refining, distribution) which use embedded systems and automated equipment
- Commercial Integrity - defined as the functionality of non-ARCO operated systems (third party systems and joint ventures) which may impact ARCO operations

In these three areas ARCO has identified critical items and prioritized their remediation based on the likelihood that failure attributable to Y2K issues would have a material adverse effect on company operations (i.e. pose a risk to the health or safety of ARCO employees or other persons, damage property or the environment, or damage business relationships).

ARCO states that computing integrity activities were 70% complete as of December 31, 1998 and were expected to be 100% complete as of March 1999. Asset integrity activities were 50% complete as of December 31, 1998 and are expected to be 100% complete as of June 1999.

Commercial integrity activities were 25% complete as of December 31, 1998 and are also expected to be 100% complete as of June 1999. ARCO believes that the impact of any Y2K failure will most likely be localized. However, as a result of the general uncertainty inherent in the Y2K problem, particularly the possible failure of critical third parties to successfully address their Y2K problems, ARCO is unable to assess the likelihood of significant business disruptions in one or more of its locations.

Marathon Oil has developed a Y2K Action Plan with the following elements:

- Prioritizing computer and automated systems that are critical to operational safety, environmental safety, and financial performance
- Developing contingency plans for priority issues and systems
- Communicating with suppliers of goods and services to ensure their readiness
- Testing systems
- Participation in industry-wide working groups

As of March 31, 1999, Marathon Oil's state of readiness was as follows:

Information technology systems - 89% of known systems have been inventoried, assessed, and made Y2K compliant if necessary. Efforts continue to identify systems and problems that may have escaped prior notice.

Non-information technology systems - 98% inventoried, of these 86% have been assessed for compliance. All non-information technology systems are scheduled to be ready by September 30, 1999 except a small number of systems that will be corrected during scheduled plant maintenance shutdowns in the 4th quarter of 1999.

Marathon Oil believes the largest remaining risks are to be from third party supplier failures (communications, transport, etc.). Automation and process control systems may also present a risk because some suppliers of these

systems have not provided complete or adequate information regarding Y2K compliance.

Chevron has addressed the Y2K problem in three phases:

- In Phase I, Chevron identified and assessed all critical equipment, software systems and business relationships that may require modification or replacement prior to 2000.
- In Phase II, the company is testing modifying or replacing critical items.
- During the Phase III, Chevron will develop contingency and business continuation plans to mitigate any disruptions to the company's operations.

Phase I of the Chevron Y2K Project is essentially complete; the work for the second and third phases are under way and is expected to be completed by the third quarter of 1999.

Although Y2K may cause very serious problems for the oil industry, the federal government and industry are working to mitigate the impacts of Y2K. More Y2K information can be found at www.epa.gov/year2000/index.htm.

Upcoming Events

Third Biennial Freshwater Spills Symposium

Several EPA Regions, along with Oil Program Center Headquarters, will host the third biennial Freshwater Spills Symposium at the Radisson Hotel and Conference

Center in Albuquerque, New Mexico, March 6-8, 2000.

The symposium will encourage the transfer of technology, promote the exchange of new ideas, and provide a forum for discussion of freshwater oil spill response issues. It also offers an opportunity for local, state, federal, and industry responders to engage in an informative dialogue on the unique problems of freshwater oil spills. Preliminary session topics include:

- Response and Removal Techniques;
- Outreach and Enforcement;
- Infrastructure Issues;
- Fuel Oxygenates; and
- Emerging Issues in Inland and Freshwater Response.

The design committee for the symposium includes personnel from the U.S. Coast Guard Gulf Strike Team, the U.S. Fish and Wildlife Service, the California Office of Oil Spill Prevention and Response, the Michigan Department of Environmental Quality, BP Amoco, and NOAA's scientific support coordinator for the Great Lakes and inland rivers.

Symposium announcements will be mailed shortly. Mark the dates on your calendars and look for more information on the symposium in future issues of the *Update*.

Compliance Assistance Seminars for Marina and Boat Owners

In order to help marina owners and operators comply with federal, state, and local regulations, EPA Region 5 will conduct compliance assistance seminars this fall. The seminars will help marina owners/operators

understand EPA's Oil Spill Prevention regulation, the Coast Guard's pollution prevention regulations, and other pollution reduction and prevention practices.

Registration is free to those that register in advance. Dates, times, location and registration forms will be available in September 1999 by calling (319) 886-5605.

Call for Papers: Sixth International Conference on the Effects of Oil on Wildlife

Tri-State Bird Rescue and Research, Inc. will be hosting the sixth International Conference on the Effects of Oil on Wildlife in Myrtle Beach, South Carolina, in March 2000. Abstracts and papers for technical and scientific papers and

poster presentations on any subject relevant to wildlife and oil spills are now being accepted through October 1, 1999. For additional information, contact Dr. Virginia Pierce at (302) 737-7241 or EOW2000@aol.com.

Inland Oil Spill Response Training

ERT recently announced two new courses for inland oil spill response. The first is a hands-on, practical training on boom deployment and oil recovery in fast water rivers. It will be held August 10-12 on the Payette River north west of Boise, Idaho near the black canyon dam. The

course has minimal classroom instruction with strenuous field activity.

The second course is hands-on practical training in slow water and marsh environments. Emphasis is placed on product recovery techniques in the subsurface to prevent discharges to waterways. The course will cover safe boat handling techniques, deployment of booms and recovery techniques. It will be held September 12-17 in Vicksburg, Mississippi.

ERT's Inland Oil Spills course is a prerequisite for both courses. For more information contact Royal Nadeau at (732) 321-6740 or Greg Powell at (513) 569-7537.

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