



# ES&H SYNERGY

DOE/EH-0487-5

## DOE-VPP Workshop in Idaho Focuses on Employee Safety and Health

Idaho Operations Office and Lockheed Martin Idaho Technologies Company (LMITCO) co-hosted a 2-day workshop in Idaho Falls on November 13-14, 1996, whose theme was "Managing Safety Through Change." The workshop provided a working forum for key DOE and contractor Voluntary Protection Program (VPP) participants to learn from companies that have received recognition for world-class safety performance and to share experiences.

Dr. Tara J. O'Toole presented the keynote address. Other speakers included John M. Wilcynski, Manager, Idaho Operations Office; W. John Denson, LMITCO President and CEO; and Joseph E. Fitzgerald, Jr.,

Deputy Assistant Secretary for Worker Health and Safety. An Industry Panel on "Maintaining Emphasis on Safety During Downsizing" was presented by Robert Brant, Mobil Chemical; Stephen Brown, Potlatch Corporation; Daniel Hoyt, Rohm & Haas, Philadelphia Plant; and Conrad Watkins, Monsanto Chemical. Breakout session speakers and moderators represented the Albuquerque Operations Office; AlliedSignal/FM&T; American Ref-Fuel; Bechtel Petroleum Operations; Fluor Daniel, Fernald; Fluor Daniel, Hanford; Kansas City Area Office; LMITCO; Voluntary Protection Program Participants' Association; and Westinghouse at WIPP.

Attended by over 500 participants, the workshop offered 7 breakout sessions: Employee Involvement, Downsizing Issues, Managing Safety Through Change, Contractual Incentives, What is DOE-VPP?, DOE Area and Operations Offices and DOE-VPP, and Line Management Review of VPP Submissions and a DOE-VPP Participant's Caucus. The breakout sessions showcased the benefits of implementing the tenets of DOE-VPP at sites, managing employee safety at a site in transition, and DOE-VPP perspectives from representatives of STAR sites. The caucus was facilitated by Jayne Davis, Safety Manager, Waste Isolation Pilot Plant (WIPP); and Don Fitzpatrick, Safety and Health Manager, AlliedSignal/Federal Manufacturing and Technologies (FM&T).

To view the workshop plenary sessions or receive a proceedings packet with workshop handouts and overheads, contact Shane Bush (LMITCO) at (208) 526-7976.



Joseph E. Fitzgerald, Jr., Deputy Assistant Secretary for Worker Health and Safety, responds to a question for the Senior Management Panel as W. John Denson, President and CEO, LMITCO; John Wilcynski, Manager, DOE Idaho Operations Office; and Kat O'Donnell, Director of Safety and Health, LMITCO, look on. (L-R)

## Award-Winning Information Technology

Congratulations to the U.S. Department of Energy's Office of Environmental Policy and Assistance

(OEPA) for developing two award-winning information technology products—the RQ•CALCULATOR and EnviroText. These innovative products help government agencies, businesses, and the general public comply with environmental laws. Both are accessible via the Internet.



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*ES&H Synergy* is a quarterly newsletter published by DOE's Office of Environment, Safety and Health (EH) to promote awareness and information exchange of all environment, safety, and health issues impacting DOE personnel and contractors. Each issue highlights Headquarters and field initiatives in environment, health physics, nuclear and facility safety, occupational medicine, and occupational safety and health. To be added to the distribution list or to receive a copy of this publication, call 1-800-473-4375. *Synergy* is also available electronically through Technical Information Services at <http://tis-hq.eh.doe.gov/docs/synergy/synergy.html>.

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## Award-Winning Information Technology continued from page 1

The developers of RQ•CALCULATOR and EnviroText received a 1996 Federal Technology Leadership Award at the Open Systems World/FedUNIX Networking Summit in Washington, DC, on November 6, 1996. The annual award, sponsored by *Government Executive*, honors Federal projects that have made exceptional contributions to mission-effectiveness, cost-effectiveness, and service to the public through the use of automated information systems. A panel of judges selected 24 winners from a field of 157 nominees.

# RQ•Calculator

RQ•CALCULATOR is a user-friendly computer program that provides a rapid, easy method to determine whether a Reportable Quantity (RQ) of hazardous substance has been released into the environment.

The program prompts the user for information, then automatically and seamlessly compares the results with the RQ values to determine whether an RQ has been exceeded. To access the RQ•CALCULATOR, go to <http://tis-nt.eh.doe.gov/oepe> (then click on the TOOLS button).

EnviroText, located at <http://tamora.cs.umass.edu/info/envirotext>, is a comprehensive electronic library of Federal environmental and Native American information. This resource has enabled Federal agencies and the public to access Federal environmental laws and regulations. OEPA developed EnviroText with assistance from the Assistant Secretary for Environment, Safety and Health's Office of Information Management, and in partnership with the U.S. Environmental Protection Agency and the U.S. Departments of Interior, Justice, and Defense. EnviroText can also be accessed through the ES&H Web Site at <http://tis.eh.doe.gov> and through the Vice President's U.S. Business Advisor (<http://www.business.gov>).

For additional information on either of these award-winning products, please contact Jerry DiCerbo, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, at (202) 586-5047 or e-mail [jerry.dicerbo@eh.doe.gov](mailto:jerry.dicerbo@eh.doe.gov).

## Sturdivant Outlines Achievements and Future Challenges of the Department Standards Committee at Office of Energy Research Semiannual Environment, Safety, and Health Coordination Meeting

Ms. Margaret Sturdivant, Office of Environment, Safety and Health, told attendees of the November 13-15, 1996, Office of Energy Research (ER) 10th Semiannual Environment, Safety, and Health Coordination Meeting that ER has brought to the Department Standards Committee (DSC) "an outstanding degree of leadership based upon a partnership between those at Headquarters and contractor and DOE representatives in the field." Ms. Sturdivant, who is Executive Secretary of the DSC, stated that the Committee is especially successful because of the personal leadership of Dr. Tara O'Toole and Dr. Martha Krebs and the active participation of ER representatives. Ms. Sturdivant's comments were followed by a presentation by Dennis Parzyck, Argonne National Laboratory. Mr. Parzyck summarized the roles the ER community has played in developing Work Smart Standards and the Integrated Safety Management System.

Officials and managers from Headquarters, operations offices, area offices, and contractors attended the 2½-day meeting in Gaithersburg, Maryland, to exchange ideas, discuss problems, and look for solutions to environment, safety, and health (ES&H) issues. Attendees came together for two plenary sessions and participated in eight workshops to work in a collective, collaborative manner to gain a corporate understanding of new ES&H management and an appreciation of the mechanisms available to achieve success.

These semiannual sessions have focused on the many new directions that are being taken by DOE, such as the Work Smart Standards, assumption of waste management responsibilities by the program organizations, consideration of the impacts of external regulations, performance-based contracting, waste minimization, pollution prevention initiatives, and the integrated ES&H management system. Ms. Sturdivant's presentation focused on the many achievements of the DSC and the challenges still facing the Committee in the area of standards management. She noted that the DSC has gone through an extraordinary learning experience in establishing a performance-based approach to standards management based upon the knowledge and skills of those performing the work. She praised the implementation of the DSC's work-focused approach through Work Smart Standards and indicated that DSC has several



challenges to face in the future. These challenges include developing an integrated approach to safety management, an effective performance-based assessment program, and integrated safety management techniques for privatization activities.

Ms. Sturdivant displayed Vice President Gore's National Performance Review Golden Hammer Award, which was presented to the DSC in October 1996 for its development of Work Smart Standards. She also presented Mr. Joseph Maher with a "Golden Hammer" lapel pin in recognition of his contribution to DSC efforts. Mr. Maher was Director of ER's Office of Environment, Safety and Health Technical Support from its inception in January 1990 until he retired in May 1995.



## Homing in on Enhanced Work Planning

An Enhanced Work Planning (EWP) Home Page has been developed by the Department of Energy's (DOE) Office of Environment, Safety and Health (EH) in an effort to inform field operations about the EWP initiative. EWP is a voluntary program designed to help DOE field operations achieve greater efficiency while improving awareness of safety and health issues. Located on the Internet at <http://tis-nt.eh.doe.gov/wpphm/ewp/ewp2.htm>, the home page provides general EWP information, documents, points-of-contact, success stories, and the products and tools of EWP demonstration projects.

The Internet came of age during the 1990s with a reported 50 million Web sites increasing at a rate of 5 percent a month. Ideally, Web sites should offer comprehensive information about a subject of interest, contact points, and frequent updates. EWP's Home Page fulfills these goals and keeps the field aware of the status of EWP's initiative, demonstration projects, and current topics of interest.

A variety of links offer assistance to field operations by providing updated information on EWP. Sites presently engaged in demonstrating EWP can also be found on this page. At a click of a button, a site map lists the DOE sites implementing EWP and displays site descriptions, the nature of the operations, points-of-contact, and step-by-step procedures on site-specific execution of EWP.

In addition to this map, six option categories are available for a more streamlined search. The "Successes" option contains key accomplishments at the demonstration sites; the "Products/Tools" option provides the framework for implementing EWP; and the "More Information" option offers publication materials, points-of-contact, and a briefing package. The "Other Links," "Overview," and "FAQ" options provide additional EWP information.

EWP uses the Internet as an electronic communication tool to relay information at the click of a button. Bookmark the site and revisit it to see how the EWP initiative is progressing at a specific site or how to plan for it at your site. For more information about the EWP Home Page, contact George Schlossnagle at (301) 903-9418 or e-mail at [george.schlossnagle@eh.doe.gov](mailto:george.schlossnagle@eh.doe.gov).

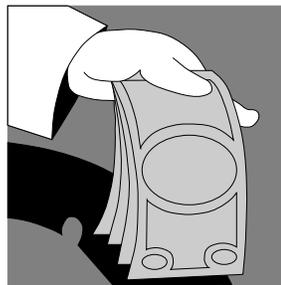
## Department of Energy/General Services Administration Collaborate on Efficient, Environmentally Friendly Procurement Process

Saving energy, money, and time while preventing pollution are the goals of an improved and streamlined process for Federal agencies to procure chillers for comfort and process cooling. The Department's Office of Defense Programs (DP), the Federal Energy Management Program (FEMP), and the General Services Administration (GSA) created this process to encourage replacement of chillers using chlorofluorocarbon (CFC) refrigerants harmful to the Earth's stratospheric ozone layer. The affirmative procurement process uses a Basic Ordering Agreement (BOA) linked with a DOE-developed equipment specification for 100- to 2,000-ton commercially available centrifugal and rotary screw water-chilling packages. The specification is crafted broadly enough to address about 90 percent of the Federal water-cooled chiller procurements and addresses a multitude of operating conditions and chiller loads.



The BOA process significantly reduces redundant design, procurement, and other costs associated with Federal purchases of chillers because it cuts the "red tape" associated with buying industrial equipment. Completing the paperwork to order a chiller takes about 1 hour, with the entire ordering process taking about 45 days. Total procurement costs are expected to be less than 2 percent under this process.

While serving to mitigate the use of ozone-depleting substances (about 6 million tons of CFCs), installing more energy-efficient chillers also promotes environmental stewardship because reduced energy consumption translates into reduced emissions of noxious gases from the generation of electricity. Using the BOA to purchase chillers consistent with FEMP energy efficiency standards will contribute to reductions throughout the Federal government of almost 1 million tons annually of nitrous oxides, sulfur dioxide, and other pollutants from power plant emissions. Electricity consumption will be reduced approximately 1.5 billion kilowatt hours per year by switching to more efficient chillers. This equates to an annual savings of \$75 million.



The reductions discussed above will contribute to an estimated savings to the taxpayer of approximately \$2 billion over a 25-year period. The BOA stipulates selecting the chiller with the lowest lifecycle cost that meets an agency's site-specific requirements. Procurements based on lowest lifecycle cost not only

ensure the best economic decisions over a chiller's effective operating life but correlate highly with energy conservation and pollution prevention objectives. Because of this, the BOA procurement process has been recognized with a DOE Pollution Prevention Award.

The BOA has been in place since November 15, 1996. Copies of the BOA can be requested by fax at (817) 334-5227, or by e-mail ([cmis.gsa@gsa.gov](mailto:cmis.gsa@gsa.gov)). Inquiries on the BOA's terms and conditions can be made to Ms. Jane Parman, the GSA Contracting Officer, at (817) 978-2929, or by e-mail ([jane.parmen@gsa.gov](mailto:jane.parmen@gsa.gov)). Technical questions regarding the DOE-developed chiller specification itself can be addressed to Mr. Roger Snyder, Office of Defense Programs, at (301) 903-4047, or by e-mail ([roger.snyder@dp.doe.gov](mailto:roger.snyder@dp.doe.gov)).

# Office of Fossil Energy Announces Recipients of the Environment, Safety, and Health Achievement Award for 1996

In 1995, Assistant Secretary Patricia Godley established an annual Office of Fossil Energy (FE) Achievement Award to encourage, honor, and publicize innovation in the environment, safety, and health area. A selection committee reviews nominations from across the FE organization for benefits, originality, cost savings, and potential for broader application before selecting the annual recipient. Two organizations shared the 1996 award. The Naval Petroleum and Oil Shale Reserve—Colorado, Utah, and Wyoming (NPOSR-CUW) received the award for its Bioremediation Facility and the Strategic Petroleum Reserves Project Management Office (SPRPMO) for its Behavioral Safety Process (BSP).

The NPOSR-CUW facility uses algae, bacteria, and plant life in an organic process that cleans “produced” water of hydrocarbons and reduces chemical oxygen demand. The process allows the treated water to be discharged rather than injected to underground reservoirs for storage. The Biotreatment facility created a wetland for native plants and animals and provides a continuing water supply to the arid surroundings. Before the facility was developed, NPOSR-CUW injected 10,000 barrels per day of untreated water into underground storage at an annual cost of \$185,000. Cost savings will be \$3.4 million over the 20-year lifecycle of the project.

The BSP initiated by SPRPMO established a safety process that incorporates the principles of Total Quality Management into the safety program and encourages employee involvement and participation. Frontline employees review accident reports and compile a list of site-specific unsafe actions. Trained observers then measure employee behavior against this list. The result is immediate, positive feedback to reinforce correct behaviors. The list of unsafe actions is continuously updated. The BSP was a contributing factor to an overall site rebate of almost \$400,000 in workers' compensation insurance premiums in 1996. The program also has indirect cost-saving benefits in terms of reducing medical expenses, accident costs, and time spent responding to accidents and injuries.

In addition to the recipients, other noteworthy nominations were submitted by SPRPMO and the Federal Energy Technology Center at Morgantown and at Pittsburgh. Assistant Secretary Godley presented the awards in a ceremony held at the Forrestal Building on January 15, 1997. Representatives from NPOSR-CUW and SPRPMO were present to receive the award, and the ceremony was linked to the FE field sites to permit all recipients to share the honor. For more information on the awards, please contact Trudy Transtrum in the Office of Self-Assessment at (202) 586-7253.



From left to right: Patricia Fry Godley, Assistant Secretary for Fossil Energy, Salvador Boscareno, Kirkland Jones, and Susan Broussard of SPRPMO, and David Miles of NPOSR-CUW.

## Oversight and the Guiding Principles for Integrated Safety Management

Since its establishment in late 1994, the Office of Oversight has, through its oversight activities, promoted the concept of formal safety management as an integral part of the Department's operations. Early on, the Office developed a Safety Management Template based upon the applicable guiding principles of safety management delineated by the Secretary of Energy in her October 1994 letter to the Defense Nuclear Facilities Safety Board (DNFSB). The Office of Oversight expanded the guiding principles into supporting criteria to clarify the essential structural requirements for safety management within the Department. The Office sought to serve two purposes by applying this simplified template. First, the Office intended to establish and promulgate a new basis for evaluating environment, safety, and health programs—one oriented toward management principles and responsibilities rather than program functional elements. The Office's second goal was to provide the Department with a “blueprint” for structuring a practical, workable safety management program.

In April 1996, in response to DNFSB Recommendation 95-2, the Department developed and published a plan to establish an Integrated Safety Management system across all DOE operations. The plan has six major components:

- (1) Objectives—safety systematically integrated into work practices at all levels
- (2) Principles—criteria to guide the development of safety directives for performing work
- (3) Functions—structure to perform work with rigor commensurate with the hazards
- (4) Mechanisms—documents defining how functions are performed
- (5) Responsibilities—defined and documented responsibilities and approval process commensurate with hazards
- (6) Implementation—actual planning, performance, and assessment of work

The second of these components describes seven guiding principles for Integrated Safety Management. These principles, which already have been formally incorporated into Departmental policy by DOE P 450.4, *Safety Management System Policy*, include:

- line management responsibility for safety
- clear roles and responsibilities
- competence commensurate with responsibilities
- balanced priorities
- identification of safety standards and requirements
- hazard controls tailored to work being performed
- operations authorization

While these seven guiding principles are conceptually similar to the guiding principles and criteria contained in the original Oversight Safety Management Template, their organization and the details are different. To be consistent with the newly established policy, the Office of Oversight has initiated efforts to refine its Safety Management Template and, as necessary, its internal evaluation guidance, methods, and procedures. The new Safety Management Template will be distributed to Departmental elements when finalized, and the Office of Oversight will begin using it for oversight activities in 1997.

# Using Portable HEPA Filtration Units with Prefabricated Radiological Containment Structures Results in Additional Cost Savings

The spring 1995 issue of the *Safety and Health Connection* reported that the Savannah River Site (SRS) was cutting costs and improving waste management by using prefabricated radiological containment structures known as "rad huts." The new, prefabricated rad huts are much less expensive than those built "by hand" at the worksite. Unlike the old-style, hand-built structures, they can be used several times when properly cleaned and maintained. For example, when used outside, the old-style structures had a very short lifecycle because of a construction technique that rendered them unusable under adverse conditions such as wind and rain. The result was high maintenance costs and the possibility of radionuclide contamination. Before FY 1994, the average lifecycle of a rad hut was less than 1 month or the duration of one task. With the advent of the prefabricated rad hut, the lifecycle has increased to a usage rate of 2.5 times. Training and proper cleaning techniques increase the lifecycle to approximately 5.5 times the original usage rate.

The prefabricated, vendor-manufactured rad huts are constructed with the latest in materials. Manufacturers use a wide range of fastening systems, such as Velcro, zippers, and welded plastic seams, and provide standardized external support framing that can be screened for radionuclides. The superior fastening systems and support framing allow the rad huts to withstand most weather conditions experienced at SRS and substantially reduce wind and water damage. Adding roof slopes and rain caps over the zippered exits in the roof line greatly extends the reliability of the rad huts. Because construction practices for the old-style rad huts did not permit anything to be salvaged, no effort was made to reuse any portion of the old structures. The new, reusable units are extremely durable and require less maintenance, which has nearly eliminated loss of containment.

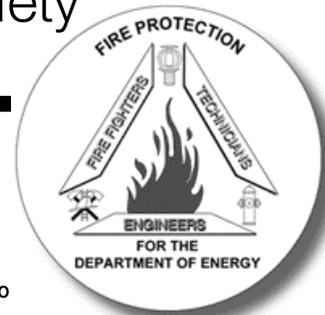
In FY-94 and FY-95, SRS used the prefabricated rad huts in a pilot program at the H-Area and F-Area Tank Farms, the In-Tank Precipitation Facility, and the Environmental Restoration Project. Over \$7 million was saved in FY-94 and more than \$20 million in FY-95. Including projected future savings of approximately \$26 million that can be directly related to using prefabricated rad huts instead of the old-style huts, the program saved a little over \$53 million in the 2-year period.

Westinghouse Savannah River Company also found that using a compact, portable high-efficiency particulate air (HEPA) filtration unit, in lieu of the large, hand-built units attached to cumbersome copious blowers that were used in the old-style rad huts, resulted in added usability of the rad huts and a greater savings. The hand-built HEPA filtration units were more expensive than the portable units and were not sized for use with the virtually airtight prefabricated rad huts. In addition, the portable HEPA filtration units are relatively inexpensive and can be transported much more easily than those used previously.

Portable HEPA filtration units were designed by the vendor and SRS RADCON to be purchased and used without modification. In fact, these units are the first vendor-manufactured portable HEPA filtration units that meet all DOE requirements. The portable units are designed in a modular fashion for easy replacement of the prefilters and HEPA filters. This is an important design feature because replacing prefilters increases filter life. The commercial nuclear industry has found that prefilter replacement increases the life of HEPA filters by a factor of about 8 to 10 times that of the old units. Use of the portable filtration units along with the new rad huts at SRS will result in an estimated additional savings of \$809,377 per year.

For more information on the SRS program, contact Ken Reams, Gerald Blount, or Tom Boykin at (803) 952-6075; fax (803) 952-6095.

# 1997 Fire Safety Conference



The Annual Department of Energy (DOE)/Contractor Fire Safety Conference is scheduled for April 28-May 1, 1997, in Livermore, California. The Conference provides a forum for DOE's fire safety professionals to discuss common issues such as program management, emergency response, testing and maintenance, and technological developments. Topics will include new DOE environment, safety, and health initiatives; recent fire research; fire protection technological developments; the Work Smart Standards process; fire department master planning; fire hazards analysis and assessment techniques; and other related issues. In addition, there will be "open" sessions and meetings of the DOE Fire Safety Committee and Subcommittees. Additional information is available from Dennis Kubicki at (301) 903-4794 or e-mail at [dennis.kubicki@eh.doe.gov](mailto:dennis.kubicki@eh.doe.gov).

# DOE "Basic" Fire Protection Course

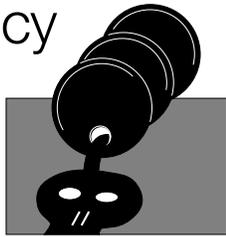
Department of Energy (DOE) personnel, contractors, and other interested individuals are invited to attend a 2-week Basic Fire Protection Course in Norwood, Massachusetts from May 5-16, 1997. Presented by Factory Mutual Research Corporation, course topics include nature of fire, building construction, DOE requirements, special hazards, fire modeling, fire department operations, fire research, and other related issues. Additional information on this Basic Fire Protection Course is available from Dennis Kubicki at (301)903-4794 or e-mail at [dennis.kubicki@eh.doe.gov](mailto:dennis.kubicki@eh.doe.gov).

# Joint ORPS Users' Workshop/TRADE OR SIG and QM SIG Spring Meetings to be Held In April

The 1997 Occurrence Reporting and Processing System (ORPS) Users' Workshop will be held April 21-25, 1997, at the Columbia Basin College Workforce Training Center in Pasco, Washington. The Training Resources and Data Exchange (TRADE) Occurrence Reporting Special Interest Group (OR SIG) and Quality Management Special Interest Group (QM SIG) will hold their spring meetings in conjunction with the workshop.

The workshop/meeting registration packet is available from the OR SIG Home Page at <http://www.orau.gov/tmsd/trade/signfo/or/or97spr.htm> or the ORPS Training hyperlink on the EH-33 Home Page (<http://tis.eh.doe.gov/web/oeaf/orps/orps.html>). Registration packets should be returned as soon as possible to Leesa Arowood by Internet ([arowood@orau.gov](mailto:arowood@orau.gov)), phone (423) 576-0595, or fax (423) 241-4380. Questions can be directed to Leesa Arowood or to Eugenia Boyle, DOE Headquarters Occurrence Reporting Program Manager, at (301) 903-3393, or Internet ([eugenia.boyle@eh.doe.gov](mailto:eugenia.boyle@eh.doe.gov)).

# Environmental Protection Agency's New Hazardous Waste Cleanup Policy Integrates RCRA/CERCLA Requirements



The U.S. Environmental Protection Agency (EPA), Office of Enforcement and Compliance Assurance (OECA), and Office of Solid Waste and Emergency Response (OSWER), have finalized a new hazardous waste cleanup policy. The new policy, known as the "parity cleanup policy," integrates requirements under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Cleanup and Liability Act (CERCLA, or "Superfund"). EPA delineated the new policy in a September 24, 1996, memorandum to EPA regional RCRA/CERCLA National Policy Managers. The policy memorandum is entitled "Coordination between RCRA Corrective Action and Closure and CERCLA Site Activities." The memorandum stated that the intent of the new policy is to eliminate duplication between RCRA and CERCLA to speed cleanup activities. The parity policy also calls for a risk-based approach to closing RCRA facilities. This may ease the usually strict requirements for "clean closure" under the statute.

The new policy will address some remaining difficulties in the general coordination of site cleanup activities among RCRA, CERCLA, and state/tribal cleanup programs. Primarily, the policy addresses three main issues:

- acceptance of decisions made by other remedial programs
- deferral of activities and coordination among RCRA, CERCLA, and state/tribal cleanup programs
- coordination of the specific standards and administrative requirements for closure of RCRA regulated units with other cleanup activities

The new policy should assist DOE in its continuing efforts to eliminate duplication of effort and streamline cleanup processes.

## Acceptance of Decisions Made by Other Remedial Programs

Generally, cleanups under a RCRA corrective action or under CERCLA substantively satisfy the requirements of both programs. For example, when investigations or studies are completed under one program, there should be no need to review or repeat those investigations or studies under another program. Similarly, a remedy that is acceptable under one program should be presumed to meet the standards of the other. Program implementors are encouraged to focus on whether the end results of the remedial activities are substantially similar when making deferral decisions (as discussed below). They are also encouraged to make every effort to resolve differences in professional judgement to avoid imposing two regulatory programs.

The EPA developed a number of joint RCRA/CERCLA guidance documents to support the principle of parity between the RCRA corrective action and CERCLA programs. A partial list of these documents is included in the September 24, 1996, policy memorandum.

## Program Deferral and Coordination Between Programs

The concept of deferral from one program to another is already in general use at the EPA. For example, it has long been EPA's policy to defer facilities that may be eligible for inclusion on the CERCLA National Priorities List to the RCRA program if they are subject to RCRA corrective action (unless they fall within certain exceptions, such as

being classified as a Federal facility). Deferral from one program to another is typically the most efficient and desirable way to address overlapping cleanup requirements. However, in some cases, full deferral will not be appropriate, and coordination between programs will be required.

The goal of any approach to coordinating remedial requirements should be to avoid duplication of effort (including oversight) and second-guessing of remedial decisions. Several approaches for coordination between programs at facilities subject to both RCRA and CERCLA are currently in use. Two of these are (1) dividing RCRA and CERCLA cleanup responsibilities and (2) establishing timing sequences in RCRA and CERCLA decision documents. It is important to note that options for coordination at Federal facilities subject to CERCLA Section 120 may differ from those at non-Federal facilities because of certain prescriptive requirements under Section 120.

## Closure and Post-Closure

Some of the most significant RCRA/CERCLA integration issues are associated with coordinating requirements for closure of RCRA-regulated units with other cleanup activities. These units are defined in 40 C *Federal Register* 264.90(a)(2) as "a surface impoundment, waste pile, land treatment unit, or landfill that receives hazardous waste after July 26, 1982 . . ." EPA has requested comments on an approach that would reduce or eliminate the regulatory distinction between cleanup of releases from closed or closing regulated units and cleanup of nonregulated unit releases under a RCRA corrective action.

OSWER will address this issue further in the final post-closure rule. (See "Standards Applicable to Owners/Operators of Closed and Closing Hazardous Waste Management Facilities; Post-Closure Permit Requirements; Closure Process; State Corrective Action Authority," proposed rule, 59 *Federal Register* 55778, November 8, 1994). The issue will also be addressed in future corrective action (i.e., subpart S) rulemaking activities. The dual regulatory structure for RCRA closure and other cleanup activities still remains in place. Program implementors should focus on approaches for coordination between cleanup programs that reduce inconsistency and duplication of effort.

The parity policy calls for a new risk-based approach to facility closure that should ease the conventional practice of cleaning up facilities to background levels. Some sites have applied inconsistent cleanup levels for removal and decontamination ("clean closure") of regulated units and for site-wide remediation under RCRA and CERCLA. In these cases, clean closure levels generally have been set at background levels, while cleanup levels have been set at higher, risk-based concentrations. To avoid this inconsistency and better coordinate between different regulatory programs, site managers should use risk-based levels when developing clean closure standards.

## Other Ongoing Initiatives

Two other EPA initiatives are also in progress: formation of a new workgroup, and a request for comment on RCRA/CERCLA integration issues. EPA is coordinating formation of a new interagency and state workgroup, the Lead Regulator Workgroup. The workgroup will provide guidance when overlapping cleanup authorities are applicable to Federal facilities. They will also identify options for coordinating oversight and deferring cleanup from one program to another.

EPA also has requested comment on the RCRA/CERCLA integration issues identified in the May 1, 1996, "Advanced Notice of Proposed Rulemaking (ANPRM)—Corrective Action for Releases from Solid Waste Management Units at Hazardous Waste Management Facilities" (61 *Federal Register* 19432).

To obtain a copy of the new policy memorandum, contact the EPA's RCRA, EPCRA and Superfund Hotline, (800) 424-9346. To contact the Hotline's Fax-on-Demand Service, telephone, (202) 651-2060. The document number of the new policy is #11959. For further information, contact Katherine Nakata, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, (EH-413) at (202) 586-0801; fax (202) 586-3915; or e-mail ([katherine.nakata@eh.doe.gov](mailto:katherine.nakata@eh.doe.gov)).

# DOE Participates In Pollution Prevention Program

The Department of Energy (DOE) has successfully participated in a pollution prevention program where it pledged to achieve a goal of reducing reportable releases and off-site transfers of 17 toxic chemicals by 50 percent by Calendar Year 1995. As a participant in the Environmental Protection Agency's (EPA) voluntary 33/50 Program, the Department far exceeded the 50 percent reduction goal by reporting an overall 95 percent reduction—from a 1988 baseline of 1.4 million pounds—to 73,000 pounds. A large portion of the reduction was due to ceased production at DOE sites; however, several sites made significant source-reduction contributions, including the Kansas City Plant and the Oak Ridge Y-12 Plant.

The Department's participation was ground-breaking. As the only Federal agency to participate in the reduction program, DOE set the stage for Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements." This Executive

Order directs all Federal agencies to report releases of toxic chemicals under the Emergency Planning and Community Right-to-Know Act.

The 33/50 Program is noted for its success. In early 1996, McGraw Hill and the EPA presented an Environmental Champions Award to DOE and 20 participating companies as top achievers in reducing pollutants. In late 1996, the Department also received a National Performance Review Award ("Hammer") for its pollution prevention achievements under the 33/50 Program.

For more information on DOE's 33/50 Program, please contact Jane Powers, Office Environmental Policy and Assistance, RCRA/CERCLA Division, at (202)-586-7301 or e-mail ([jane.powers@eh.doe.gov](mailto:jane.powers@eh.doe.gov)).

## Environmental Protection Agency Reassesses Dose-Response Of Polychlorinated Biphenyls (PCB) Mixtures

Under the direction of Congress, the U.S. Environmental Protection Agency (EPA) has reassessed the carcinogenic potential of PCB mixtures (e.g., Aroclors) and proposed a methodology to evaluate the carcinogenic risk of environmental PCBs. In January 1996, the EPA issued a draft report entitled, *PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures* (EPA, 1996a). A panel of experts conducted an external peer review and proposed two ranges of cancer potency factors, or "slope factors" (SFs), for PCBs. The proposed SF value ranges are 0.1 to 0.9 (mg/kg-day)<sup>-1</sup> for the average or most likely estimates and 0.3 to 2.0 (mg/kg-day)<sup>-1</sup> for the upperbound estimates. These values are lower than the current SF of 7.7 (mg/kg/day)<sup>-1</sup> listed in the EPA's Integrated Risk Information System.

At an EPA-sponsored peer review workshop, held in Bethesda, Maryland, on May 21 and 22, 1996, the review panel agreed with EPA's concerns about uncertainties associated with PCB risk assessment. The EPA concerns were based on compositional differences between the commercial mixtures of PCBs used in animal testing (mixtures from which the SFs were derived) and the PCB mixtures found in the environment. The environmental mixtures are likely to differ because of processes such as partitioning, transformation, and bioaccumulation (EPA, 1996b). The review panel endorsed EPA's proposed approach of using chemical-specific (congener) data and exposure pathways to select SFs in the ranges for risk assessment. In the absence of such data, the review panel affirmed the default approach proposed by EPA, namely that the upper end of the SF range will be used to quantify risk associated with soil/sediment ingestion and food intake exposures. The lower end of the range will be used for dermal contact, water ingestion, and inhalation exposures (volatilized and water-soluble PCBs tend to have lower health concerns).

The panel recommended that both congener-specific analysis and Aroclor analyses may be needed to assess risks at PCB-contaminated facilities where the environmental form of PCBs that may best be represented by specific commercial PCB mixtures tested in animal cancer studies need to be identified. The panel recommended additional research including:

- developing protocols and a database to document congener-specific chemical analyses from common environmental matrices
- developing mechanism-oriented dose-response data for PCB environmental mixtures
- quantifying SFs for PCBs in commercial and environmental mixtures
- determining sensitivities of fetuses and early neonates to carcinogenic effects and the risks for cancer of PCB environmental mixtures

EPA will revise the external review draft document based on comments and consideration of issues raised at the workshop. The revised document will then become the interagency review document. Based on this additional round of review and comment, the document will be finalized and submitted to Congress. The final assessment report is likely to present opportunities for revising risk-based concentrations and medium regulatory levels of PCBs or developing additional guidance regarding their uses.

DOE remedial project managers and/or risk assessment task managers should keep in mind that risk assessment results based on the current SF of 7.7 (mg/kg-day)<sup>-1</sup> may be affected by this final PCB assessment document. For additional information, please contact John Bascietto, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, at (202) 586-7917, or e-mail ([john.bascietto@eh.doe.gov](mailto:john.bascietto@eh.doe.gov)).

### REFERENCES

1. Agency for Toxic Substances and Disease Registry. 1995. *Toxicological Profile for Polychlorinated Biphenyls*. ATSDR: Atlanta, Georgia. Draft for Public Comment.
2. U.S. Environmental Protection Agency. 1990. *A Guide to Remedial Action at Superfund Sites with PCB Contamination*. OSWER Directive 9355.4-01 FS. Office of Emergency and Remedial Response, EPA: Washington, DC.
3. U.S. Environmental Protection Agency. 1996a. *PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures*. NCEA-W-059. National Center for Environmental Assessment, Office of Research and Development, EPA: Washington, DC.
4. U.S. Environmental Protection Agency. 1996b. *Report on Peer Review Workshop on PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures*. National Center for Environmental Assessment, Office of Research and Development, EPA Washington, DC.

# Office of International Health Programs Institutes Operations Review Cycle

The Office of International Health Programs has instituted an Operations Review Cycle to ensure the effectiveness of its programs, maintain its customer focus, and establish its priorities and resource needs. The Operations Review Cycle consists of five processes: full solicitation for specific proposals, external review, customer/supplier focus, internal planning, and alignment.

From October 1 through January 31, the Office conducts Full Solicitation for Specific Proposals. During this period, the Office reviews preproposals that have been solicited during the Alignment Process (see below) and requests full proposals from those whose preproposals are accepted.

The External Review begins February 1 and continues through March 15 of every other year. During this period, outside experts review proposals and ongoing programs supported by the Office, develop specific recommendations regarding program direction for the upcoming year, and make general recommendations for the following 2 years.

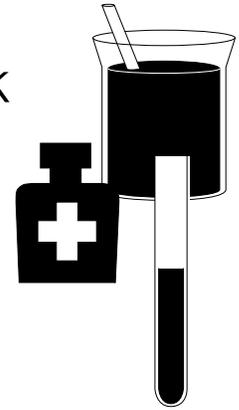
The third process is Customer/Supplier Focus. It is conducted annually from March 15 through April 30. During this time, the Office works with its customers and suppliers to determine the most efficient and effective ways to meet customer needs. The Office solicits input from customers and suppliers through a customer satisfaction survey, telephone interviews, and face-to-face meetings. Additionally, the Office works with customers and suppliers to review its performance indicators and to modify them, as necessary, to ensure they provide valid measures of the Office's work status and progress. As part of this process, suppliers receiving funding from the Office submit semiannual progress reports for the current year, preliminary budget requests, and any recommendations for funding strategies for the upcoming year.

On May 1 of each year, the Office begins Internal Planning. During this 3-month process, the results of the External Review and Customer/Supplier Focus processes, along with information from benchmarking exercises that are conducted throughout the year, are evaluated. This begins an intensive self-assessment period, during which the Office's plans and priorities for the upcoming year are developed. It is during this period that demands on the Office are balanced with the available human, financial, and material resources for the year. Internal performance indicators are also reviewed and modified, as necessary.

From August 1 through September 30 of each year, the Office carries out the Alignment process. During this time, the Office communicates its direction and resource capabilities for the upcoming year and works with suppliers to finalize funding and work plans. The annual Operating Plan is also completed and distributed, laying out specific goals for the upcoming year. Finally, the Office estimates out-year funding, projects the types of work it intends to support, and solicits preproposals from laboratories and private industry for projects beginning 1 year out.

More information on the Operations Review Cycle can be obtained by contacting Ann Ecton, International Health Studies, at (301) 903-3889; e-mail ([ann.ecton@eh.doe.gov](mailto:ann.ecton@eh.doe.gov)). Comments and suggestions are also welcome.

# Occupational Medicine Meeting Helps Lay Groundwork for Measuring Performance of DOE's Occupational Medicine Clinics



Members of the Department of Energy (DOE) occupational health community convened in Denver, Colorado, last summer to discuss the latest developments in occupational medicine as they relate to the Department's workforce. Approximately 75 doctors, nurses, health professionals, and subject area experts, representing most of the DOE facilities, attended the meeting. Highlights of the conference included discussions by DOE Headquarters and contractor occupational medical professionals on Enhanced Work Planning, Work Smart Standards, contract reform initiatives, and approaches to cost containment at DOE occupational medicine clinics. Additional topics discussed ranged from hazard-based medical surveillance to substance-abuse testing.

One of the major areas of interest at the conference involved developing methods to help assess the value of ongoing preventive and occupational medicine programs to DOE laboratories and production facilities. This need to measure performance comes from both an internal desire on the part of DOE's occupational medicine clinics to improve performance wherever possible and from site management's requests to justify program expenditures. The need to develop performance measures was followed up after the conference at a meeting hosted by the Nevada Operations Office in October 1996. Both DOE and contractor occupational health professionals and performance indicator specialists from the Office of Operating Experience Analysis and Feedback attended the October meeting.

Candidate performance indicators are currently being critiqued by the field elements in anticipation of pilot studies. A business and management approach is also being evaluated as a possible index of clinic value. Here, a comparison is made of costs for the itemized, current medical services rendered by the onsite clinic versus the costs if services had been provided by alternate, outside providers. Other factors, such as the time savings for workers with doctor's appointments; care of incidental, nonwork-related illness and injury; and earlier return to work for workers' compensation injuries will also be taken into account as part of this approach.

Being able to assign a value to the services provided by DOE's occupational medicine clinics and to measure their performance over time will become increasingly important as the missions of DOE laboratories and production facilities change and the advent of Management and Integrating Contractors adds new dimensions to the practice of occupational medicine at DOE sites. For more information on the development of performance indicators for DOE's occupational medicine program, contact Dr. George Gebus, Occupational Medicine and Medical Surveillance, at (301) 903-7385; e-mail ([george.gebus@eh.doe.gov](mailto:george.gebus@eh.doe.gov)).

# Prospective/Current Federal Contractors Must Report Toxic Chemical Releases

The Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council have jointly issued a final rule [61 *Federal Register* 41473, "Federal Acquisition Regulation; Federal Acquisition and Community Right-To-Know, August 8, 1996"] amending the Federal Acquisition Regulation, Parts 23 and 52, to implement Executive Order 12969 (*Federal Acquisition and Community Right-To-Know*). This Executive Order requires Federal agency contractors, such as DOE's management and operating contractors, to provide the public with information about toxic chemicals that have been released to the environment. Contractors must provide certification of compliance with the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and the Pollution Prevention Act of 1990 (PPA). Also, contracts must contain a clause that incorporates the reporting requirements of both Acts.

## EPCRA and PPA

Under EPCRA and PPA, manufacturers must submit annual reports on their toxic chemical releases and waste management activities to the U.S. Environmental Protection Agency (EPA) and to the states in which such releases occurred. The deadline for submitting data is July 1 of each year for the previous calendar year. Releases are reported on the Toxic Chemical Release Inventory Form (Form R).

In passing EPCRA, Congress established a list of 320 chemicals and chemical categories for which reporting is required. They developed the list by combining the Maryland Chemical Inventory Report's List of Toxic or Hazardous Substances and the New Jersey Environmental Hazardous Substance List. Congress authorized EPA to add (or delete) a chemical or category through rulemaking at any time if the chemical meets (or does not meet) the statutory criteria listed in EPCRA. EPA expanded the list of EPCRA 313 chemicals to add 286 additional chemicals on November 30, 1994 (59 *Federal Register* 1788, "Addition of Certain Chemicals; Toxic Chemical Release Reporting; Community Right-To-Know").

Based on the statutory listing criteria, EPA believes that all toxic chemicals and chemical categories—both those currently on the list and those added to the list—potentially affect human health or the environment. Since the inception of the Toxic Release Inventory Program, reported releases to the environment have decreased significantly. EPA's "Toxic Chemical Release Inventory Reporting

Form R and Instructions" documents and further clarifies the statutory and regulatory definitions. The form is available from the EPCRA Hotline (1-800-535-0202).

## Executive Order 12969

President Clinton signed Executive Order 12969 on August 8, 1995. This Executive Order requires each Federal agency to implement its procurement policy in competitive acquisition solicitations for contract awards expected to exceed \$100,000. The policy mandates that Federal contractors must ensure that facilities subject to EPCRA and PPA reporting requirements file a Form R for covered activities for the life of the contract. Once a contract is awarded, failure to comply with the terms of the certification, which will become a part of the contract, may result in termination of the Federal contract or other appropriate action.

The certification requirement applies only to those prospective and current prime contractors and first-tier subcontractors who (1) own or operate facilities to be used in performance of the contract and (2) have Standard Industrial Classification Code (SIC) designations in major groups 20 through 39. These SIC designations represent the manufacturing sector and include establishments engaged in the mechanical or chemical transformation of materials or substances into new products. Such establishments are usually described as plants, factories, and mills. It is important to note that assembly plants are normally included within SIC designations 20 through 39. Facilities are considered exempt from this certification requirement if (1) the facility does not manufacture, process, or otherwise use toxic chemicals; (2) the facility does not have 10 or more full-time employees; (3) the facility does not meet the reporting thresholds or the alternate reporting thresholds; (4) the facility does not fall within SIC designations 20 through 39; or (5) the facility is located outside the United States.

Alternate threshold criteria were established in 1994. Facilities that meet the alternate threshold criteria can submit a much shorter form to EPA. Facilities that exceed the threshold for manufacture, process, or other use established under EPCRA can use the form if they (1) manufacture, process, or use 1 million pounds or less per year of the toxic chemical; and (2) estimate that their total reportable amount of the toxic chemical in waste streams is 500 pounds or less.

Information in this article is derived from the following *Federal Register* entries: 60 *Federal Register* 40989, August 10, 1995; 60 *Federal Register* 50738, September 29, 1995; 60 *Federal Register* 55306, October 30, 1995; and 61 *Federal Register* 41473, August 8, 1996. For more information, contact Jane Powers, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, at (202) 586-7301 or e-mail ([jane.powers@eh.doe.gov](mailto:jane.powers@eh.doe.gov)).

# Response Line Home Page Online

The Department of Energy (DOE) Worker Health and Safety Standards Response Line is now online at <http://tis-nt.eh.doe.gov/rl>. This service responds to questions from DOE, DOE contractor, and DOE subcontractor employees regarding applicability of worker safety and health standards and directives. Users may search precedented (existing policy documentation) questions and answers that are online from July 1, 1995, and unprecedented (no existing policy documentation) questions and answers that are online from July 1, 1993. Visit the site and submit your question to the Line, subscribe to the Line's mailing list for weekly questions and answers, and provide comments on how the Home Page can be improved to meet your needs. If you have questions, please contact Eleanor Crampton, EH-51, at (301)903-3732 or e-mail at [eleanor.crampton@eh.doe.gov](mailto:eleanor.crampton@eh.doe.gov).



# Environmental Protection Agency Announces Integrated Contingency Plan Guidance

On June 5, 1996, the Environmental Protection Agency (EPA) announced the availability of the National Response Team's (NRT) Integrated Contingency Plan (ICP). The ICP offers new guidance to address Federal requirements for facility emergency response plans (61 *Federal Register* 28641) and is also known as the "one-plan" guidance. NRT developed the ICP to provide assistance to those who prepare facility emergency response plans and must address multiple and, often overlapping, Federal requirements for emergency response plans.

The guidance in the new ICP can be used to consolidate the multiple facility emergency response plans that had to be prepared in the past to comply with various regulations. Using the ICP, all of these plans can be combined into one functional emergency response plan. Two *Federal Register* notices (61 *Federal Register* 28641, June 5, 1996; Correction, 61 *Federal Register* 31103, June 19, 1996) contain the suggested ICP outline and the full text of its guidance. These notices also describe how to develop an ICP and how to demonstrate compliance with various regulatory requirements.

Numerous NRT agencies, state and local officials, and industry and community representatives joined together in the effort to develop this "one-plan" guidance. NRT anticipates that the ICP guidance will be incorporated into all future Federal regulations addressing emergency response planning.

## Applicable Regulations

A number of statutes and regulations, administered by several Federal agencies, include requirements for emergency response planning. A particular DOE facility may be subject to one or more of the following Federal regulations:

- EPA's Oil Pollution Prevention Regulation—40 CFR, parts 112.7(d) and 112.20–21 ("Spill Prevention Control and Countermeasures"; "Facility Response Plan Requirements")
- Minerals Management Service's Facility Response Plan Regulation—30 CFR, part 254
- Research and Special Programs Administration's Pipeline Response Plan Regulation—49 CFR, part 194
- U.S. Coast Guard's Facility Response Plan Regulation—33 CFR, part 154, subpart F
- EPA's Risk Management Programs Regulation—40 CFR, part 68
- Occupational Safety and Health Administration's (OSHA) Emergency Action Plan Regulation—29 CFR 1910.38(a)
- OSHA's Process Safety Standard—29 CFR 1910.119
- OSHA's Hazardous Waste Operations and Emergency Response Regulation—29 CFR 1910.120
- EPA's Resource Conservation and Recovery Act (RCRA) Contingency Planning Requirements—40 CFR, part 264, subpart D; 40 CFR, part 265, subpart D; and 40 CFR 279.52

The ICP contains a sample outline and a series of matrices designed to assist facility owners and operators in consolidating various plans and documenting compliance with these Federal regulatory requirements. The ICP development matrix displays areas of current regulations that align with the suggested elements contained in the guidance. When addressing each element of the ICP outline, those who draft contingency plans can refer to the matrix to identify specific regulatory requirements related to that element. The regulatory cross-comparison matrices display regulatory requirements and indicate where these requirements should be addressed within the ICP.

## Scope

Existing regulatory requirements are not changed by the ICP; rather, the plan provides a format for organizing and presenting material currently required by the regulations. NRT's goal was not the creation of new planning requirements; they simply wanted to provide a mechanism to consolidate existing concepts into a single, functional plan structure. The guidance is designed to yield a highly functional document that can be used in varied emergency situations but will still comply with multiple agency requirements.

This "one-plan" guidance can be used by any facility subject to Federal contingency planning regulations. However, it can also be used at facilities where there is a need to improve emergency preparedness through planning. The guidance is broadly constructed to allow a wide range of risks to be addressed in a manner tailored to specific facility needs. The guidance covers both the physical and chemical hazards associated with events, including chemical releases, oil spills, fires, explosions, and natural disasters.

The ICP does not relieve facilities of their current obligations. Those who draft facility emergency response plans should continue to read and comply with all of the Federal regulations that apply to their facilities. In addition, facilities may be subject to state emergency response planning requirements that the ICP guidance does not specifically address, and these requirements must also be addressed. However, using the ICP should minimize duplication of effort when preparing or using a number of emergency response plans at the same facility. Also, facility expenditures for preparing, maintaining, submitting, and updating a single plan should be much lower than for multiple plans.

## Organizational Concepts

The ICP format provided in the NRT's "one-plan" guidance is organized into three main sections: an introductory section, a core plan, and a series of supporting annexes. The structure of the sample core plan and annexes is based on the structure of the National Interagency Incident Management (NIMS) System Incident Command System (ICS). The ICS provides a commonly understood framework that allows effective interaction among response personnel. The system, which is nationally recognized and used by numerous Federal, state, and local organizations, has been used successfully in a variety of emergency situations, including releases of oil or hazardous substances.

The introductory section of the ICP format calls for a statement of purpose and scope, a table of contents, information on the current revision date of the plan, general facility information, and the key contacts for plan development and maintenance. The ICP core plan is intended to reflect the three essential steps necessary to initiate, conduct, and terminate an emergency response action—recognition, notification, and initial response, including assessment, mobilization, and implementation. The core plan should contain essential response guidance and procedures and should be concise and easy to follow. A rule of thumb is that the core plan should fit in the glovebox of a response vehicle.

Planners should address those regulatory elements that are applicable to their particular facilities. For a small facility with a limited number of hazard scenarios, the core plan may contain most, if not all, of the information necessary to carry out the response. This should eliminate the need for more detailed annexes. Annexes are not meant to duplicate information that is already contained in the core plan but to augment core plan information. Therefore, the annexes should contain only detailed supporting information on specific response management functions.

## More Information

Copies of the new ICP are available from a variety of sources:

- Federal Register (61 *Federal Register* 28641, June 5, 1996; Correction, 61 *Federal Register* 31103, June 19, 1996)
- William Finan, U.S. Environmental Protection Agency, Mail Code 5101, 401 M Street SW, Washington, DC 20460
- EPCRA/RCRA/Superfund Hotline: (800) 424-9346
- EPA's Chemical Emergency Preparedness and Prevention Office Home Page (<http://www.epa.gov/swercepp/>).

For further information, contact Katherine Nakata, Office of Environmental Policy and Assistance, RCRA/CERCLA Division, at (202) 586-0801; fax (202) 586-3915; or e-mail ([katherine.nakata@eh.doe.gov](mailto:katherine.nakata@eh.doe.gov)).

# Office of Fossil Energy Kicks Off a Proactive Wellness Program

Assistant Secretary Patricia Godley has taken a proactive approach to ensure the well-being of Headquarters employees by implementing the Office of Fossil Energy (FE) Headquarters Employees' Safety and Wellness Program. This voluntary program consists of presentations and activities intended to motivate FE employees to lead healthier and safer lives, both on and off the job. The Office of Self-Assessment is coordinating the effort and working with other FE Headquarters organizations to make the program responsive to the needs of the employees. Participants share in the process of selecting future topics and activities.

This innovative program was introduced during an 8-week kick-off period that included a series of presentations and a group physical activity. The first presentation, "Get Fit While You Sit," focused on identifying and eliminating health hazards in the workplace. Attendees also participated in a series of exercises they can do in their offices. The second presentation educated employees on the disease of substance abuse, and the last of the series provided tips on adopting a safe and healthy lifestyle during the holidays.



A group walk, "You Gotta Walk the Walk," encouraged a regular pattern of exercise. FE employees at the Forrestal Building and in Germantown took part in weekly walks of 1 or 2 miles each and covered over 300 miles during the kick-off period. Employees designed the walking courses, and Assistant Secretary Godley and other senior managers led the walks. This activity proved so popular that walks will continue at both locations. On February 13, Assistant Secretary Godley prepared and hosted lunch for the walkers to celebrate their accomplishment.

The kick-off for the Office of Fossil Energy Safety and Wellness Program was a great success, with approximately 30 percent of the employees participating. If you'd like more information on FE's program, contact Trudy Transtrum in the Office of Self-Assessment at (202) 586-7253.

# DOE Workshop on Ozone-Depleting Substances: Addressing Phaseout Challenges

On July 25 and 26, 1996, 53 Department of Energy (DOE) and DOE contractor staff members, most of whom have been involved in managing and implementing the phaseout of ozone-depleting substances (ODS), attended a workshop sponsored by the Office of Environmental Policy and Assistance (EH-41) at the Forrestal Building. DOE historically has used substantial quantities of ODS in its operations and continues to use them for refrigeration and air conditioning, fire protection, and some solvent cleaning applications. Therefore, the Department has an important role to play in protecting global stratospheric ozone. The July 1996, workshop focused on the challenges that DOE facilities face in eliminating the use of ODS.

A key element of the workshop was the development of communication and information exchange avenues to allow DOE and contractor field staff to tap into lessons-learned information across the DOE complex. Among the invited speakers were DOE facility staff who have been involved in ODS phaseout activities and solving related problems. Information presented at the workshop included recent environmental regulatory developments related to ODS and internal DOE activities, including Departmental guidance on ODS phaseout; ODS inventory and tracking systems; and the Office of Defense Program's initiative to promote acquisition of ozone-friendly, energy-efficient refrigeration equipment for all Federal agencies.

Both EH-41 staff and personnel from other EH organizations participated in the workshop presentations. A fire protection specialist from the Office of Occupational Safety and Health Policy provided an overview of DOE's policy on fire extinguishers that use Halon (a major ODS), a status report on the DOE Halon repository (used for storing Halon for applications for which replacement chemicals are not available), and current inventory tracking efforts. One of the highlights of the workshop was the presentation of DOE facility case studies on successful activities related to discontinuing ODS use. An engineer from Fermilab discussed their approach in obtaining funding for chiller replacement by focusing on energy savings benefits, and a staff member from the Y-12 Plant at Oak Ridge discussed their tiered strategy of replacing ozone-depleting solvents with approved alternatives.

Representatives from the Office of Information Management told workshop attendees about the various information services available through their Office and provided a live demonstration of several of the World Wide Web features that were discussed

during the workshop. An EH-41 staff member also provided background on EH-41's ODS Web Site, (located at the EH-41 Home Page under "Policy and Guidance," <http://tis-nt.eh.doe.gov/oepa/>) and reported on its current status and future plans for the site.

DOE still must meet a number of recurring, important challenges related to ODS phaseout. A major concern is the difficulty in disseminating the large expanse of ODS-related information to organizationally and functionally diverse DOE and contractor staff involved with these ubiquitous chemicals. Information such as technical developments in the various ODS use areas, "real-life" phaseout experience at Departmental facilities, the various and complex environmental regulatory drivers, and DOE direction on the phaseout needs to be disseminated DOE-wide. Another major concern is the availability of funding to convert current ODS applications to the use of non-ozone-depleting chemicals. Since there are no current requirements that mandate stopping the use of ODS—even for those chemicals that deplete the ozone layer the most—discontinuing their use may not be such a high priority as some other environmental issues. However, the Department has a large inventory of aging, costly-to-replace chillers containing CFCs, for instance, that must be phased out because of the compelling environmental threat, Executive Order and regulatory directives, and issues related to future replacement refrigerant supply and cost. Thus, although DOE has accomplished much in eliminating the use of ODS, much still remains to be done, especially in the refrigeration and fire protection areas.

For more information and comprehensive meeting minutes from the workshop, contact Ted Koss, Office of Environmental Policy and Assistance, at (202)586-7964 or e-mail ([theodore.koss@eh.doe.gov](mailto:theodore.koss@eh.doe.gov)).

# Pacific Northwest National Laboratory Develops an Award-Winning Text Analysis Process

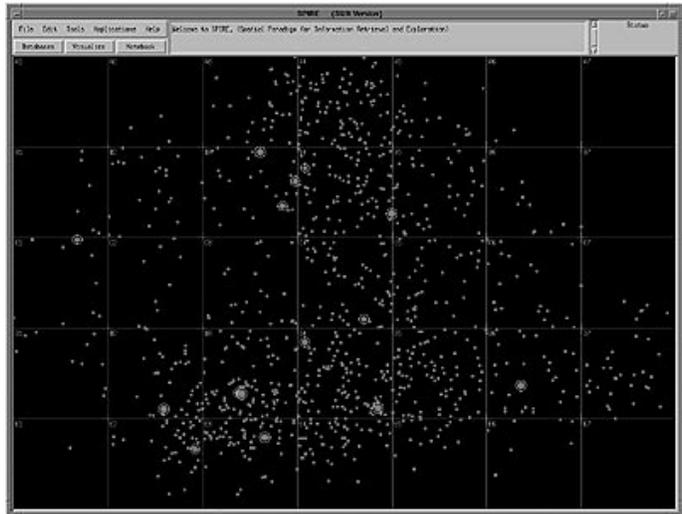
The Pacific Northwest National Laboratory (PNNL) received an R&D 100 Award for 1996 for its newly developed text analysis process, SPIRE (Spatial Paradigm for Information Retrieval and Exploration). The prestigious award honors 100 of the most promising new products, processes, materials, and software developments worldwide. An interdisciplinary team of computer and cognitive scientists at PNNL developed SPIRE, which is a suite of information access and visual analysis tools that fundamentally changes the processes used to analyze large masses of text documents.

Traditional text analysis approaches permit analysts to retrieve documents and analyze them only in predetermined areas of inquiry. Before an analysis can be conducted, the analyst must invest a significant amount of time searching for documents of potential interest and reading through the results of the search to decide which documents are most relevant. SPIRE processes large volumes of text using a collection of visual and interaction tools that graphically display images based on word similarities and themes in the text. The relationships in the text are represented in a visual format that is natural for the human mind, and no prior knowledge of the information or selection of themes or topics is required. This approach enables the human mind to discover the content within large text document sets without a predetermined area of interest and with minimal or no reading of the documents. The capability of visually exploring and discovering relationships between text documents through SPIRE allows users to rapidly discover known and hidden information relationships by reading only the pertinent documents.

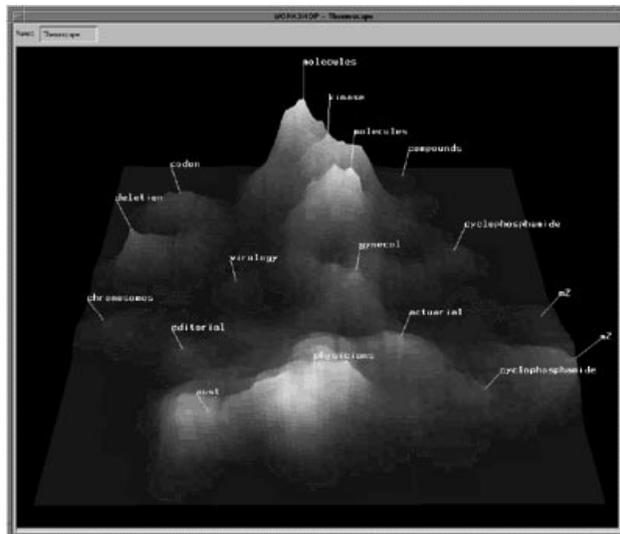
Understanding the extensive data and information collected by DOE on the environment, safety, and health aspects of its day-to-day operations is crucial to the safe conduct of operations. Much of this information is stored as text in a variety of electronic data management systems, such as the Occurrence Reporting and Processing System (ORPS) and the Computerized Accident/Incident Reporting System (CAIRS). The Office of Information Management recently sponsored a demonstration project using SPIRE to explore sections of approximately 1,000 occurrence reports from the ORPS database. The ORPS program manager and other DOE and ORPS staff members spent 2 days in Richland, Washington, with the SPIRE team conducting a joint analysis of the ORPS visualizations. The sessions were spent looking for patterns among documents and finding key content themes.

The joint effort was very productive. The SPIRE development team gained valuable insight into the challenges presented by structured, textual data (forms) that are not present in the unstructured text for which SPIRE was developed. They also had an opportunity to observe the interactions between uninitiated users and the new technologies. The ORPS team had an opportunity to "test drive" the new technology and visually explore the ORPS data using the two visualization technologies, Galaxies and Themescape. These two technologies provide visual metaphors for the similarities and patterns in documents.

Galaxies displays the documents on a computer screen as a universe of "docustars." Closely related documents cluster together in a tight group, and unrelated documents are separated by large spaces. The following Galaxy screen visually represents one set of documents used in the ORPS demonstration.



In Themescape, themes within the document spaces appear on the computer screen as a relief map of natural terrain. The mountains in Themescape indicate where themes are dominant; valleys indicate weak themes. Their shapes—for example, a broad butte or a high pinnacle—reflect how the thematic information is distributed and related across documents. Themes close in content will be close visually, based on the many relationships within the text spaces. The text from one set of ORPS reports searched during the joint sessions is the basis for the Themescape shown below.



After the visualization tools display document content similarities and themes, users can refine their searches using several built-in support functions, including an document and cluster characterization tool, a word search tool, a time analyzer, and an annotation tool. More tools will be added as SPIRE is further developed. A crucial area for advancement of SPIRE capabilities is "scale independence," or the ability to present visualization of very large document sets. During FY-97, EH-72 will be sponsoring research to address this issue. PNNL is seeking other partners to assist in further research and development of the SPIRE technology. For more information, visit the SPIRE Home Page at [http://multimedia.pnl.gov:2080/showcase/?it\\_content/spire.node](http://multimedia.pnl.gov:2080/showcase/?it_content/spire.node).

# Department of Health and Human Services/Department of Energy Renew Health Studies Agreement

On May 14, 1996, the Secretary of Energy renewed the 1990 Memorandum of Understanding (MOU) between the U.S. Department of Energy (DOE) and the U.S. Department of Health and Human Services (HHS) and reiterated the Department's commitment to the studies conducted under this agreement. Under this MOU, the HHS Centers for Disease Control and Prevention (CDC) conduct an independent program to examine potential health effects resulting from DOE operations. Within CDC, the National Center for Environmental Health conducts studies of communities near DOE facilities, as well as dose reconstruction studies of past offsite releases, and the National Institute for Occupational Safety and Health conducts a program of worker health studies. At DOE, the Office of Epidemiologic Studies (EH-62) is responsible for ensuring the successful progress of all studies conducted under this MOU.

The CDC agencies receive technical and program advice from their Federal advisory committee; the National Academy of Sciences; and federally chartered, community-based health effects subcommittees. The health studies are conducted by CDC or through grants or contracts with universities and state health departments. Studies currently being conducted by CDC are listed in the following chart. When a study is about to begin, notices are sent to each DOE Operations Office for distribution to the site workforce, and information about the study is placed in the DOE reading room.

Researchers and EH-62 staff work with DOE sites to plan study activities and facilitate any needed site support, such as access to health-related records. These activities are an essential part of the environment, safety, and health program, and their successful completion requires the full cooperation of all involved. Once a study is complete, EH-62 arranges with CDC to have the findings presented to workers and the communities. Results are summarized in EH-62 Health Bulletins, and copies of the research papers are placed in the DOE reading rooms. For those with Internet access, Health Bulletins will also soon be available on EH-62's Home Page. For further information on this MOU or the studies conducted pursuant to it, please contact Dr. Gerald Petersen, Office of Epidemiologic Studies, (301) 903-2340; or Dr. Youn Shim, Office of Epidemiologic Studies, at (301) 903-1837.

## HEALTH STUDIES UNDERWAY OR RECENTLY COMPLETED AS PART OF THE MEMORANDUM OF UNDERSTANDING (Excluding studies of Naval Nuclear and Uranium Enrichment Corporation operations)

Type of Study	Study Locations
Beryllium Disease	Rocky Flats
Childhood Cancer	Hanford, Idaho National Engineering Lab, Lawrence Livermore National Lab, Oak Ridge, Rocky Flats
Environmental Dose Reconstruction	Fernald, Hanford, Idaho National Engineering Lab, Savannah River
Mortality Among Female Workers	Fernald, Hanford, Linde, Los Alamos National Lab, Mound, Oak Ridge, Pantex, Rocky Flats
Mortality Among Workers	Hanford, Pantex, Idaho National Engineering Lab, Rocky Flats, Savannah River, Oak Ridge
Downsizing	Idaho National Engineering Lab, Los Alamos National Lab, Nevada Test Site, Pantex, Rocky Flats, Savannah River
Heat Stress Among Carpenters	Hanford
Leukemia Mortality	Hanford, Los Alamos National Lab, Oak Ridge, Savannah River
Lung Disease and Plutonium	Rocky Flats
Mercury Exposure and Health	Oak Ridge
Multiple Myeloma Among Workers	Hanford, Los Alamos National Lab, Oak Ridge, Savannah River
Technical Studies of Dosimetry Records	Hanford, Oak Ridge
Thyroid Disease	Hanford, Los Alamos National Lab



## Fernald Wins a Safety Award in 1996

Leaders of various organizations responsible for cleanup activities at the Fernald site accept safety award from Flour Daniel, Inc. Pictured from left to right are Bob Frietch, FERMCO Security Officer; Stu Hinnefeld, Director, FERMCO Safety and Health; Gene Branham, Vice-President, Fernald Atomic Trades and Labor Council; John Bradburne, FERMCO President; Jamie Jameson, FERMCO Vice-President, Facilities Closure and Demolition Projects; and Lou Doll, Fernald Representative, Greater Cincinnati Building and Construction Trades Council.

Assistant Secretary for  
Environment, Safety  
and Health

U.S. Department of Energy  
Washington, D.C. 20585



# ES&H SYNERGY

DOE/EH-0487-5

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