



cleanupnews

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GE to Spend \$200 Million on Cleanup of Housatonic River

General Electric has agreed in principle to spend between \$150 and \$250 million on cleanup of PCBs and other hazardous substances released by its Pittsfield plant into the Housatonic

River in Massachusetts. In announcing the agreement in principle on September 24, 1998, John P. DeVillars, Regional Administrator for EPA Region 1, remarked: "With this agreement, we have moved the cleanup onto the fast track. We have honored our most important responsibility — to protect the health and environment of Pittsfield and Berkshire County."

Under the mediated agreement, GE will remove contaminated sediments from the one-half mile of the Housatonic River nearest the GE plant. Through a cost-sharing agreement, GE will also fund much of the anticipated cost of an additional mile-and-one-half of river cleanup to

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Cleanup News is an occasional newsletter highlighting hazardous waste cleanup cases, policies, settlements, and technologies. Published by EPA's Office of Site Remediation Enforcement, jointly with EPA's Office of Emergency and Remedial Response, Office of Solid Waste, Technology Innovation Office, and Office of Underground Storage Tanks.

welcome

Welcome to the first issue of Cleanup News! Our goal is to keep you up-to-date with the latest happenings in Superfund cleanups, RCRA corrective actions, and other remedial efforts related to underground storage tanks and oil spills. We'll be covering policy developments, case studies, technology advances, new resources and publications, court decisions, and more.

This first issue features articles on the GE cleanup agreement for the Housatonic River, EPA's municipal solid waste policy, supplemental environmental projects at brownfields, and much more. We look forward to bringing you the latest information from the cleanup world. Write to Rick Popino with your comments at *Cleanup News*, U.S. EPA (2271A), 401 M Street SW, Washington, DC 20460.

Cleanup 2000 Underway

EPA's Office of Solid Waste has launched CLEANUP 2000 in an effort to improve the RCRA corrective action program through administrative reforms by December 31, 2000. The goals are to speed up cleanups, enhance the role of state partners, promote innovative but practical approaches, and foster greater public involvement in cleanup decisions. Overall, the intent is to make corrective action more "results-driven" rather than "process-driven." That means moving away from the lock-step process of RCRA facility investigation, corrective measures study, and corrective measures implementation to a more fluid, compressed approach.

Several projects are underway to further the CLEANUP 2000 effort. EPA is developing National Corrective Action Performance Standards which emphasize results, rather than process goals. A new training program will disseminate approaches that have proven their effectiveness at corrective action sites. For more information, contact Robert Hall at 703-308-8432.

Superfund Opens Risk Assessment Web Site

EPA's Office of Emergency and Remedial Response has launched a new Web site to provide stakeholders with a consistent framework to evaluate and communicate the risks posed by hazardous waste sites. The Web site offers "tools of the trade" useful to risk professionals as well as the general public. Introductory material is available for users with a non-technical background, who can learn about the role of risk assessment at each step in the Superfund "pipeline." The "Improving the Science" feature highlights EPA's efforts to improve Superfund and Agency-wide risk assessments. In "Ask Your Question," EPA staff (or other experts) will answer questions on risk assessment within 7-14 days. Links to guidance, policies, databases, software, and other technical tools for conducting risk assessment are provided. Access the site at: <http://www.epa.gov/superfund/programs/risk/index.htm>.



Check out the following Web sites for more information and links to publications:

- <http://es.epa.gov/oeca/polguid/enfdock.html>
OECA Enforcement and Compliance Docket and Information Center
- <http://es.epa.gov/oeca/osre.html>
OSRE home page
- <http://es.epa.gov/oeca/osre/osredoc.html>
OSRE documents
- <http://www.epa.gov/superfund>
Superfund home page
- <http://www.epa.gov/oust>
OUST home page
- <http://clu-in.org>
TIO homepage

ATSDR Looking at Medical Monitoring Sites

The Agency for Toxic Substances and Disease Registry is considering the medical monitoring of populations that face increased health risks as a result of exposure to hazardous substances released from facilities. The medical monitoring program would provide medical evaluations and referrals to treatment specialists. ATSDR's database on hazardous waste sites shows that about 50% of all NPL sites repre-

sent public health hazards, with 5% categorized as urgent.

ATSDR is currently initiating medical monitoring at the Bunker Hill Mine and Metallurgical Site in Idaho, where future screening will be done for hypertension, kidney disease, and other disorders among an eligible population of 8,500 that may have been exposed to lead, cadmium, and arsenic. ATSDR is considering other sites for monitoring as well. For more information, contact Bruce Kulpan, EPA, 202-564-4252, or Dr. Pam Tucker, ATSDR, 404-639-6204.

MSW Policy Aims at Resolving Munis' Liability

EPA's MSW CERCLA Settlement Policy, signed in February 1998, is intended to provide a fair, consistent, and efficient settlement methodology for resolving the liability of parties at co-disposal sites on the National Priorities List. The policy reaffirms EPA's practice of not seeking cleanup costs from generators and transporters of municipal solid waste (MSW) at NPL sites. However, in recognition of the strong public interest in reducing the burden of contribution litigation, EPA has proposed to offer settlements to any MSW generators and transporters who wish to resolve their potential Superfund liability. In addition, the policy sets a presumptive settlement range for municipal owners and operators of co-disposal sites on the NPL who desire to settle their liability.

Currently, about one quarter (approximately 250) of NPL sites are "co-disposal" landfills that accepted both MSW and other wastes, such as industrial wastes, containing hazardous substances. Many of these landfills were or are owned or operated by municipalities to provide sanitation and trash disposal services to residents and businesses. EPA recognizes the differences between MSW and the types of wastes that usually give rise to the environmental problems at NPL sites. Although MSW may contain hazardous substances, they are usually present in only small concentrations. Landfills at which MSW alone was disposed of are not typically serious enough to be designated as NPL sites, and the costs of remediating MSW are generally lower than the cost of remediating hazardous waste. Nevertheless, the presence of small concentrations of hazardous substances in MSW has resulted in contribution claims by private parties against MSW generators/transporters.

Settlement Share for MSW Generators/Transporters

EPA's settlement method involves multiplying the known or estimated quantity of MSW contributed by the generator or transporter by \$5.30 per ton. The unit cost methodology is based on the costs of closure/post-closure activities at a "clean" MSW landfill and increased slightly if certain site conditions exist.

Settlement Offers to Municipal Owner/Operators

Under EPA's proposal, the government will offer settlements to municipal owner/operators of co-disposal facilities

who wish to settle; those municipal owner/operators who do not settle with EPA will remain subject to site claims by EPA and other parties.

In developing a standardized settlement amount for municipal owner/operators, EPA examined the data from past settlements of CERCLA cost recovery and contribution cases with municipal owner/operators at co-disposal sites where there were also PRPs who were potentially liable for the disposal of non-MSW, such as industrial waste. EPA also evaluated public interest considerations relating to municipalities, including their unique public health obligations to provide waste disposal services to their citi-

zens, their non-profit status, and the multi-year fiscal planning cycle that municipalities require.

As a baseline presumption, EPA has proposed that 20% of the total response costs for a site be considered as the settlement amount for an individual municipal owner/operator to resolve its liability at the site. EPA's Regional Offices will have the discretion to deviate from the presumption (but not to exceed 35%), based on the following factors:

(1) whether the municipality performed specific activities that exacerbated environmental contamination or exposure; and

(2) whether the owner/operator received operating revenues in excess of waste system operating costs during ownership or operation of the site that are substantially higher than the owner/operator's presumptive settlement amount pursuant to this policy.

The MSW policy is available electronically at <http://www.epa.gov/oeca/osre.html>. Copies can be ordered from the National Technical Information Service (NTIS), U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161, reference # PB98-118003, tel: 703-487-4650 or 800-553-NTIS. Send e-mail orders to: orders@ntis.fedworld.gov.

EPA recognizes the differences between MSW and the types of wastes that usually give rise to the environmental problems at NPL sites.

EPA'S Office of Site Remediation Enforcement (OSRE) strives to protect human health and quality of the environment by providing direction, evaluation, oversight and assistance for remediation enforcement at non-federally owned sites subject to Superfund, RCRA, the Oil Pollution Act, and the Underground Storage Tank program. We support and provide the means for EPA regions and states to vigorously and effectively enforce these statutes. We advocate for enforcement perspectives in national program policies and regulations. Our goals are to achieve prompt site cleanup and maximum liable party participation in performing and paying for cleanup in ways which promote environmental justice and fairness.

GE Cleanup

continued from page 1

be conducted by EPA. These river cleanups will include contaminated river banks and soils in properties in the floodplain along the river. Later, after a cleanup plan is selected for downstream portions of the river, GE will perform that cleanup as well. In addition, GE will remedy contamination at the Pittsfield plant and other nearby areas, including a school and several commercial properties.

The agreement will also address claims that hazardous substances released from the GE plant caused injuries to natural resources in the Housatonic River downstream of the plant, extending through Massachusetts and into Connecticut. In addition to cleaning up the injured resource, GE has agreed to pay \$15 million in damages and to conduct a number of projects designed to acquire or enhance

Major OSRE Objectives

- **Maximizing private party cleanups.** Currently, approximately 70 percent of long-term cleanup actions are financed by potentially responsible parties (PRPs). The goal of the Superfund enforcement program is to maintain that level by maximizing PRP participation in conducting or funding new remedial work.
- **Enhancing fairness.** Fairness to the different parties involved is enhanced through numerous reforms and policies, including orphan share compensation, de minimis settlements, cash-out, mixed funding, mixed work, alternative dispute resolution, ability-

wildlife habitat. The damages payment will be used by the natural resource trustees — the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, and agencies of Massachusetts and Connecticut — to restore, replace, or acquire the equivalent of the injured natural resources. Finally, the agreement provides for a process to determine whether remediation will be required in an additional 12-mile stretch of the river.

“This settlement will enable the governments and GE to begin restoring the ecological integrity of a truly valuable natural resource — the Housatonic River,” said Jamie Rappaport Clark, Director of the U.S. Fish and Wildlife Service. “We expect restoration to enhance the biological diversity of the Housatonic River Valley, and to create significant recreational and economic benefits for the people of Western Massachusetts and Connecticut.”

to-pay settlements, and interest-bearing special accounts, where applicable.

- **Maximizing cost recovery.** EPA intends to seek cost recovery at all NPL and non-NPL sites with a statute of limitations on total past costs equal to or greater than \$200,000. By recovering costs from PRPs and by getting PRPs to conduct or fund cleanups, EPA is able to focus Superfund resources on sites where PRPs do not exist, or where the known PRPs lack the funds or the capability to conduct the cleanup. Over the life of the Superfund program, PRPs have committed over \$7 for every dollar obligated for Superfund enforcement.

The City of Pittsfield will benefit, too, from the agreement. GE has agreed to a “brownfield” redevelopment project on a portion of the defunct plant, including a multi-million dollar investment in Pittsfield, in conjunction with the new Pittsfield Economic Development Authority (PEDA). PEDA will commit up to \$4 million of anticipated revenues from the redevelopment to further enhancement of natural resources.

GE and the government agencies involved will now turn their attention to negotiating a consent decree that will give legal effect to the agreement in principle. The consent decree will be submitted for public comment and approval to a federal judge before becoming finally effective.

For more information, contact Rich Caragnero, 617-918-1251, or Tim Conway, 617-565-3349, of EPA Region 1.



Hercules and Uniroyal Ordered to Pay \$102.9 Million for Vertac Site

In a major victory that affects the cleanup of hazardous waste sites around the country, the U.S. District Court, Eastern District of Arkansas ruled on October 23, 1998 that Hercules, Inc. and Uniroyal Chemical Ltd. must reimburse the federal government \$102.9 million for past costs incurred in cleaning up the Vertac Superfund site in Jacksonville, Arkansas. Under the Superfund law, the money must be returned to the Superfund Trust Fund, where it can be used to clean up other hazardous waste sites across the country.

The Vertac site was one of the worst dioxin-contaminated sites in the country. Operated as an herbicide manufacturing plant by Hercules and Vertac Chemical Corp. from the 1960s to the 1980s, its products included Agent Orange, a defoliant used in the Vietnam War. The facility's operations caused widespread contamination of soil, groundwater, and surface waters on the site and in surrounding areas, including the yards of neighboring homes. When the facility closed in 1987, more than 28,000 leaking drums of corrosive, ignitable hazardous wastes were left at the site, presenting an imminent danger to the surrounding community.

EPA incurred approximately \$105 million in cleaning up and incinerating the drummed dioxin waste, as well as supervising Hercules' performance of a series of remedial actions ordered by EPA to clean up contaminated soil and groundwater. The state of Arkansas incurred an additional \$10.7 million for incineration of the drum waste, which was paid for by a trust fund created by a prior settlement with Vertac Chemical Corp. Other defendants in the case



(left) View of process area cleanup from atop Mt. Vertac, September 1997.



(right) Demolishing the chlorination plant, September 1997.

also reached earlier settlements with the United States, totaling \$7.6 million.

The two remaining defendants, Hercules and Uniroyal, declined to settle and vigorously challenged the government's right to recover EPA's costs. Hercules and Uniroyal argued to the court that EPA had overestimated the health hazards of dioxin, that a less thorough cleanup should have been done, and that they shouldn't have to pay for the costs of incineration of drummed wastes.

District Judge George Howard overruled the defendants' arguments and awarded the United States summary judgment for the full amount of the costs it has incurred to date plus prejudgment interest. In addition, the court awarded the United States a de-

claratory judgment for future costs, which are estimated at approximately \$5 million. [United States v. Vertac Chemical Corp., et al., CA # 80-109, E.D. Ark.]

"This ruling means we can clean up more hazardous waste sites and make our communities safer and more livable," said Lois J. Schiffer, Assistant Attorney General for Environment and Natural Resources at the Department of Justice. "Companies thinking about fighting their Superfund obligations ought to think again. If you don't settle, we will use the full force of federal law to hold you accountable."

For more information on the case, contact James Turner, EPA Region 6, 214-665-3159.

"Companies thinking about fighting their Superfund obligations ought to think again."



Check Out TechDirect

TechDirect is a free monthly e-mail service that brings you capsule summaries of the latest publications and events related to site assessment and remediation technologies. A service of EPA's Technology Innovation Office, TechDirect is currently delivered to over 5000 subscribers in more than 45 countries.

Once a month, subscribers to TechDirect receive an e-mail message that identifies recent publications, describes their contents, and provides hotlinks to document locations on the Internet or ordering information. For conferences and events, registration and contact information is provided.

To subscribe, go to <http://clu-in.org/membersh.htm>. To catch up on recently highlighted technology publications, check out the TechDirect archive at <http://clu-in.org/techdrct.htm>. If you have any questions, contact Jeff Heimerman at 703-603-7191 or heimerman.jeff@epa.gov.

New from TIO

Information Resources for Innovative Remediation and Site Characterization Technologies (EPA 542-C-98-003, July 1998). TIO's new CD-ROM assembles in one place most of the publications and databases produced by TIO over the last few years. The CD operates on Windows 3.1 and Windows 95 systems. For copies, contact 1-800-490-9198 or 513-489-8190 or fax your request to 513-891-6685.

Site Remediation Technology InfoBase: A Guide to Federal Programs, Information Resources, and Publications on Contaminated Site Cleanup Technologies (EPA #542-B-98-006, August 1998, 70 pages). This document was prepared by member agencies of the Federal Remediation Technologies Roundtable. View

or download it from <http://clu-in.org/techpubs.htm>. For copies, contact 1-800-490-9198 or 513-489-8190 or fax your request to 513-891-6685.

Technology Developers and Vendors Note!!! CLU-IN is beta testing a new Vendor Support area. The idea is to direct technology developers and vendors to funding sources and technical support for all stages of product development, from bench-scale to full implementation and commercialization. We have tried to identify public and private programs and resources to assist vendors with: Market Analysis, Research and Development, Testing and Demonstration, Permitting and Regulatory Assistance, Marketing Assistance, and Contracting Opportunities. Improvements will be made based on your comments, so please visit and let us know what you think: <http://clu-in.org/vendweb/vendrspt.htm>.

New Case Studies on Remediation Technologies

At the November meeting of the Air & Waste Management Association Federal Facilities Compliance Conference, the Federal Remediation Technologies Roundtable announced the avail-

ability of over 80 new cost and performance case studies for remediation technologies. They are available in a searchable database at <http://www.frttr.gov> or in seven volumes available through NCEPI. (Call 1-800-490-9198 or 513-489-8190 or fax your request to 513-891-6685.) The seven reports (all dated September 1998) are as follows:

- Volume 7:** Ex Situ Soil Treatment – Bioremediation, Solvent Extraction, Thermal Desorption (EPA 542-R-98-011, 272 pp.)
- Volume 8:** Soil Vapor Extraction (EPA 542-R-98-012, 298 pp.)
- Volume 9:** Groundwater Pump and Treat - Chlorinated Solvents (EPA 542-R-98-013, 251 pp.)
- Volume 10:** Groundwater Pump and Treat - Nonchlorinated Contaminants (EPA542-R-98-014, 256 pp.)
- Volume 11:** Innovative Groundwater Treatment Technologies (EPA 542-R-98-015, 281 pp.)
- Volume 12:** On-Site Incineration (EPA 542-R-98-016, 272 pp.)
- Volume 13:** Debris and Surface Cleaning Technologies, and other Miscellaneous Technologies (EPA 542-R-98-017, 196 pp.)

About TIO

The U.S. EPA Technology Innovation Office (TIO) acts as an advocate for furthering new technologies for site assessment and cleanup. TIO produces numerous publications to help cleanup professionals understand advances in new technologies. TIO strives to provide information that is relevant to technology developers, academics, consulting engineers, technology users, and state and federal regulators.

Most of TIO's information is available on the Clean-Up Information (CLU-IN) home page at <http://clu-in.org>. CLU-IN contains information on policies, programs, organizations, publications, and databases useful to regulators, consulting engineers, technology developers, researchers, and remediation contractors. The site contains technology descriptions and reports as well as current news on business aspects of waste site remediation, as well as links to other sites important to managers interested in site characterization and soil and groundwater remediation technologies.

EPA Celebrates 5,000 Removal Actions

On September 15, 1998, EPA's Office of Emergency and Remedial Response celebrated the 5000th removal action conducted by the Superfund program since it began in 1980. The occasion was marked by a typical quick-response removal action at the Great Lakes Container Corporation in St. Louis, Missouri.

The Superfund removal program averages about 340 removal actions per year, handling fires, explosions, contaminated drinking water, toxic fumes, and other immediate and time-critical threats from hazardous substances. In addition to protecting people from immediate health threats, the program also reduces chronic and acute health risks, curtails environmental damage, and returns land to beneficial use.



Michael J. Sanderson, Superfund Division Director, EPA Region 7; Timothy Fields, Acting Assistant Administrator, OSWER; Nathaniel Scurry, Assistant Regional Administrator, EPA Region 7; and Dennis Grans, Regional Administrator, EPA Region 7.

EPA usually takes the lead on removal actions, but often encourages responsible parties to shoulder the effort. Of the 5,000 removal actions started since 1980, about 3,600 have been led by the Superfund program; about 1,200 have been undertaken by the responsible party under EPA's oversight, and the remainder have been managed by the U.S. Coast Guard, states, and other

federal agencies.

By moving quickly to prevent or clean up an emergency, lives are protected, the environment is protected AND there is greater opportunity for sites to be returned to a community for redevelopment. In marking the occasion, Timothy Fields, Jr., Acting Assistant Administrator for EPA's Office of Solid Waste and Emergency Response, commended the staff on federal, state, and local removal response teams, noting: "Being part of an emergency response team means sacrificing family time, and holiday time. It can mean putting your own lives on hold and in danger to protect others. All of you should be very proud of the work you do to make the Superfund program stronger and to make the lives of citizens safer and the environment healthier."

First National EPA Community Involvement Conference Held

Nothing is more central to the success of the Superfund program than active, engaged communities. That fact was the impetus behind the first annual National EPA Community Involvement Conference, held in Boston, Massachusetts on August 3-7, 1998. The purpose of the conference was to provide training and networking opportunities for public participation experts at EPA in order to serve communities better. More than 250 participants attended, including state, other federal agencies and citizen representatives.

Among the presentations were three keynote addresses highlighting the importance of working with communities to achieve better environmental decisions. Susan Seacrest, President of the Groundwater Foundation, focused on the "P's": Promise, Process, Partnerships and Products. Greg Watson of the Dudley Street Neighborhood Initiative in Boston spoke about an environmental renewal project that was realized by "tapping into the wisdom of the community." And Ernie Barnett, with the Florida Department of Environmental Protection, spoke about Florida's Ecosystem Management Initiative which focuses on the importance of developing partnerships with communities.

Among the most popular sessions at the conference was "Talking with and Learning from Our Critics." This session provided an opportunity for government and citizens to engage in a dialogue about community involvement. The goal was to challenge traditional assumptions about citizen inclusion and to stimulate ideas that may help EPA move toward ensuring the public a more genuine voice in environmental decision-making.

Among the training sessions offered, "Community Involvement and Collaborative Problem Solving with a Cross-Cultural Focus," was particularly well attended. The training focused on developing community involvement skills to use in cross-cultural settings. Through understanding differences, collaborative problem solving, and interest-based negotiation skills, attendees took away skills they can be applied in the field.

The 1999 National Community Involvement Conference will be held in Kansas City, Missouri on May 24-27. For more information about the conference, please contact Helen DuTeau, EPA/OERR, 703-603-8761.

EPA Recognizes 1998 National Notable Achievement Award Winners

The 1998 National Notable Achievement Awards ceremony was held in Arlington, Virginia, on May 7, 1998. Created in the late 1980s to recognize exemplary performance in Regional Superfund programs, the awards were expanded in 1998 to include the RCRA and Enforcement components of waste management and remediation. At this year's ceremony, 52 award recipients received honorary plaques and cash awards for outstanding accomplishments. Congratulations to all of the award recipients for contributions to the Agency and its mission, and to communities across the country!

Superfund

On-Scene Coordinators of the Year: Don

Rigger, Region 4; Terry Stilman, Region 4; and Greg Fife, Region 6 — for handling EPA's largest removal action—the evacuation of 1,700 people due to methyl parathion in Jackson County, Mississippi.

Site Assessment Manager of the Year: Mark Ader, Region 10 — for the listing of approximately 70 federal facility sites on the 1997 Federal Facilities Docket Update.

Remedial Project Manager of the Year: Arturo Palomares, Region 8 — for work on the F.E. Warren Air Force Base in Wyoming.

Community Involvement Coordinator of the Year: Cynthia B. Peurifoy, Region 4 — for coordinating the operation of the Community Coordination Center, and other activities.

Leader/Mentor of the Year Award: David

Williams, Region 7 — for training new On-Scene Coordinators and managing some of the most complex sites in Region 7.

Technical Support Award: Marian Olsen, Region 2 — for her chemical expertise and technical support in Region 2 and across the nation.

Superfund Team of the Year Award: Ohio River Valley Flood Team, Kevin Koob, Dennis Matlock, William Steuteville, Region 3; Charles Eger, Gordon Goff, Bill Joyner, John Nolen, Fred Stroud, Region 4; Stavros Emmanouil, Steven Renninger, Kenneth Theisen, Kevin Turner, Sonia Vega, Region 5; Jim Kudlinski, Region 7; ERT: John Gilbert and Greg Powell — for a two-month response effort to floods in 13 southern Indiana counties, and 23 counties and 25 towns in Ohio and Kentucky, covering more than 750 miles of waterways. (See box.)

Superfund Team of the Year: Jackson County Methyl Parathion Site Team, Region 4 (Elmer Akin, Tony Best, Warren Dixon, Frank Garcia, Carol Monell, Cynthia B. Peurifoy, Don Rigger, Robert Rosen, Paul Schwartz, Steve Spurlin, Terry Stilman, Matt Taylor, Samantha Urquhart-Foster) — for responding to the illegal application of methyl parathion (MP) in homes along the Gulf Coast of Mississippi, including sampling more than 2,500 structures, cleaning up more than 450 residences, and relocating more than 1,700 people.

Superfund Enforcement

Legal Enforcer of the Year: James Doyle, Region 2 — for simultaneous negotiation of Superfund consent decrees for three separate National Priority List

Superfund

Superfund Team of the Year Award: *Ohio River Valley Flood Team*



An exceptional team effort of four Regions and the Environmental Response Team was mobilized in response to the federally declared natural disaster. In some areas water rose more than 50 feet in 12 hours. During a two-month period, crews maintained a continuous presence with resources to identify, recover, and dispose of approximately 6,000 drums, cylinders, tanks, and containers.

The Ohio River Valley cleanup totaled \$1.9 million— making it the most significant effort in Region 4 Federal Response Plan activation to date.

This massive emergency effort entailed developing innovative approaches for land-based and floating operations and establishing complex coordination among federal, state, and contractor personnel. Adverse conditions during the effort varied from difficult terrain, cold and wet weather, continuous demand for movement of base stations, and physical communication problems.

The Team established open relationships by thoroughly informing community residents and officials of removal plans and ideas, and encouraging feedback and involvement in the process. By assessing the needs of each disaster area on an individual basis and managing the allocation of resources cooperatively, the Team was able to simultaneously run multiple recovery operations in geographically distinct areas. Their efforts were enhanced by the development and implementation of continuous data collection efforts, and an extensive planning/tracking topographic map system.

Superfund Enforcement

Technical Enforcer of the Year: Greg Armstrong, Region 4

In 1997, Greg Armstrong used a number of administrative reform tools and techniques to achieve several site settlements. Mr. Armstrong maximized cost recovery, addressed fairness issues, and reduced transaction costs at three sites in Florida. His ability to interpret and implement the reforms resulted in settlements without the need for litigation, and addressed more than \$35 million of future work and \$10 million in past costs. Mr. Armstrong also represents Region 4 on national workgroups to develop and interpret policy and procedures on administrative reforms.

Mr. Armstrong maximized cost recovery on CERCLA sites by developing an oversight tracking and billing system to recover \$27 million in unbilled costs at the beginning of FY 1997. To reduce transaction costs and increase protection of de minimis and de minimis parties, Mr. Armstrong developed a “de minimis cost matrix,” which was used initially to determine a fair allocation for a very complex de minimis settlement with input from all parties. The matrix is now widely used in Region 4, among the PRP community, and at EPA Headquarters.

sites: Barceloneta Landfill, Kentucky Avenue Wellfield, and Sealand Restoration, without the need for litigation.

Technical Enforcer of the Year: Greg Armstrong, Region 4.

Enforcement Team of the Year: Bennington Landfill Case Team, Region 1, Ed Hathaway, Marilyn Goldberg, and Hugh Martinez — for a settlement at the Bennington Landfill Superfund site in Vermont that incorporated the orphan share initiative.

RCRA Corrective Action

Outstanding Friend of the State: Donna Wilkinson, Region 4 — technical assistance resulting in the first Subpart X permit applications issued in Florida and Georgia.

Outstanding Stakeholder Involvement: Andrew Fan, Region 3 — for achieving full community buy-in on the risk assessment and proposed remedy for the Pickett Road Tank Farm site in Fairfax, Virginia.

Outstanding Administrative Innovation: Ernest R. P. Waterman, Region 1.

Outstanding Stabilization and Environmental Indicator: Wesley S. Hardegree, Region 4 (for control of contamination at the Dames & Moore/Brookhill Facility) and Kenneth Scott Ritchey, Region 7 (for efforts to stabilize Farmland’s Coffeyville, Kansas refinery and control of contamination at Farmland’s Phillipsburg, Kansas refinery).

Outstanding Team of the Year: Environmental Indicators/Performance Partnership Grant, Region 2, OSW, and NJDEP (Anthony Kahaly, Richard Krauser, Agathe Nadai, Barry Tornick, Henry Schuver, OSW, Janine MacGregor, NJDEP Site, Remediation PPG Lead, John DeFina, NJDEP, Technical/GIS Lead) — for development of Quantitative Environmental Indicators of Contamination (QEICs), an environmental media-measuring and decision-making tool vital to project managers.

RCRA Corrective Action

Outstanding Administrative Innovation: Ernest R. P. Waterman, Region 1

Ernest Waterman initiated Region 1’s first voluntary Corrective Action Agreement and then took this innovation a step further with multisite agreements that have resulted in significant cost savings to the government. The agreements offer better schedule control, are more focused on achieving real goals than on procedural questions, typically do not require attorney support, give facilities incentives to initiate cleanup actions, and can be implemented in as little as one to two months, rather than the typical six to 12 months associated with permits and orders.

The voluntary agreements also shift EPA’s oversight burden from detailed compliance evaluation to an evaluation of actual data gaps at completion of the RCRA facility investigation (RFI). The agreements focus the efforts of the facilities on achieving specific goals and answering the important questions about the site, rather than merely meeting specific terms and conditions of a permit or order. This approach enhances the quality of the work EPA reviews and ultimately produces better environmental results.

Call for 1999 Nominations!

The nomination process has begun for the 1999 National Notable Achievement Awards. For more information, contact Ann Eleanor at 703-603-7199.

Tackling Brownfields

In settling environmental enforcement cases, EPA encourages defendants and respondents to include Supplemental Environmental Projects (SEPs) in their settlements. SEPs are environmentally beneficial projects that parties agree to undertake in settling a civil penalty action, but which they are not otherwise legally required to perform. In return, a percentage of the SEP's cost is considered as a factor in establishing the final cash penalty. SEPs enhance the environmental quality of communities that have been put at risk due to the violation of an environmental law.

Because of their connection to the community, EPA is encouraging SEPs that facilitate the reuse of "brownfield" properties. "Brownfields" are abandoned pieces of land — usually in inner city areas — that are lightly contaminated from previous industrial use. These sites do not qualify as NPL sites because they do not pose serious public health risks. However, because of the stigma of contamination and

legal barriers to redevelopment, businesses do not buy the land and sites remain roped off, unproductive and vacant.

SEPs at brownfields may involve investigating or monitoring the environmental media at the property, removing or remediating contamination, or creating conservation land. If you are considering undertaking a SEP at a nearby brownfield property, here are some of the considerations you should keep in mind. First, SEPs at brownfields cannot include action that the defendant/respondent is otherwise legally required to perform under federal, state, or local law or regulation. As a general rule, if a party owns a brownfield or is responsible for the primary environmental degradation at a site, assessment or cleanup activities cannot constitute a SEP.

Second, the SEP must be within the same ecosystem or within a 50-mile radius of the site from which the violation occurred, and the environment where the brownfield is located

must be affected or potentially threatened by the violation.

Third, SEPs at brownfields cannot include action that the federal government is likely to undertake or compel another to undertake. Thus, for example, because of EPA's statutory obligations, SEPs are inappropriate for NPL sites or other sites where the federal government is planning or conducting a removal action.

Fourth, SEPs may be performed at brownfields involuntarily acquired by municipalities, but they are not likely to be approved if they provide additional funds to a municipality, state, or other entity to perform tasks for which they have received a federal Brownfields Assessment Demonstration Pilot or other federal brownfields grant.

Finally, local communities should be afforded an opportunity to comment on and contribute to the design of a proposed SEP at a brownfield site.

For more information, contact David Gordon at 202-564-5147 or go to www.epa.gov/brownfields.

Alternative Dispute Resolution

One of the unheralded successes of the GE settlement (see story on page 1) has been the role of alternative dispute resolution (ADR) in achieving a long-sought agreement among the nine government agencies involved and GE.

ADR is a short-hand term encompassing a wide range of techniques involving the use of neutral parties to resolve disputes and to facilitate a more meaningful community role in environmental decision-making. ADR can play many roles in dispute resolution, including mediation, arbitration, fact-finding, and allocation of relative

responsibilities. It is EPA policy to consider the use of ADR in every dispute and to use ADR whenever it may result in a more efficient or equitable resolution. ADR has been used in over 150 cases, with 30 cases currently underway. All EPA regions have ADR specialists who offer a wide range of consultation and support services on the use of ADR.

In the GE case, mediators Howard Bellman and Greg Sobel were brought in after negotiations reached an impasse on the cleanup of the river. The mediators were jointly selected by the parties after an extensive search. In

addition to helping the parties negotiate the settlement, the mediators facilitated an unusual one-day public input session at which representatives of citizen, environmental, and business groups were invited to present their concerns to the negotiators. ADR is continuing to be used in finalizing a consent decree and in the launching of a Citizens Coordinating Council which will serve as a focal point for community participation in the cleanup.

For more information on ADR, contact David Batson, EPA Headquarters, 202-564-5103, or Ellie Tonkin, Region 1, 617-565-1154.



Superfund Effort to Enhance the Role of the States and Tribes

In March 1998, OERR issued the Plan to Enhance the Role of States and Tribes in the Superfund Program (EPA 540-R-98-012, PB98-963221) with recommendations that came out of a collaborative effort with states and tribes. As state and tribal roles and capabilities have grown over the last decade, the goal of the plan was to allow for an equitable sharing of Superfund program responsibilities with interested states and tribes, to enable quicker cleanup of more sites. The plan delineates a series of principles — including maintaining EPA’s “enforcement first” policy and the importance of public involvement — to ensure consistency, fairness, and flexibility. The basic framework for enhancing state and tribal roles in Superfund includes the following points:

- **Communication:** EPA should hold general discussions with state and tribal Superfund program managers to explore their interest in an enhanced role in the Superfund program.
- **Readiness:** When a state or a tribe expresses interest in an en-

hanced role in the Superfund program, EPA and the state or tribe should meet to discuss the full range of program activities that it would like to implement. The EPA region works with the state or tribe to identify the program criteria by which to evaluate the state or tribal program, and works with that state or tribe to gauge the level of readiness to assume program responsibilities.

- **Assistance:** The state or tribe and region should identify and discuss the technical and financial assistance needed for the state or tribe to perform the negotiated activities. Assistance needs are identified for activities the state or tribe can begin conducting in the near term (i.e., when the state or tribe meets the readiness criteria), as well as activities that the state or tribe hopes to implement in the long term (i.e., developing capacity to meet the readiness criteria in specific program areas).
- **Agreements:** The region and state or tribe should negotiate and

sign a program agreement to formally establish and document their roles and responsibilities in an enhanced partnership to implement Superfund.

- **Tribal Programs:** EPA has learned that there are different concerns and priorities when working with Indian tribes rather than states. Ways to address these differences will be incorporated into the implementation process to ensure that tribes, as well as states, are fully involved in developing and implementing Superfund programs.

The report may be obtained by contacting the National Technical Information Service at 703-487-4650 or from the Internet at http://www.epa.gov/superfund/oerr/ini_pro/stat_tri/toc.htm.

The next step is to pilot this initiative. EPA has been discussing pilot options with states and tribes. Once pilots are selected, readiness assessments will be conducted and agreements delineating roles and responsibilities for EPA and the states or tribes will be signed.

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Sponsor: Region 3 Pollution Prevention Roundtable. Contact: Michele Russo, National Pollution Prevention Roundtable, Tel: 202-466-P2P2, Fax: 202-466-7964, E-mail: michelerusso@compuserve.com

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6th International Forum on Environmental Technologies: Entering the Global Remediation Marketplace

Dallas, TX

Sponsors: US Dept of Commerce and EPA. Contact: 1-800-783-3870

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Sponsor: EPA Region 5. Contact: Lisa C. Morrison, Waste Management and Research Center, Tel: 217-244-6061; Fax: 217-333-8944; E-mail: morrison@wmrc.hazard.uiuc.edu

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Sponsors: EPA, Coast Guard, API, IPIECA, IMO Contact: David Lopez, 703-603-8707 or http://www.iosc.org

March 29-31, 1998

Probabilistic Risk Assessment Workshop

Sarasota, FL

Sponsors: EPA, National Institute for Environmental Health (NIEHS), University of Florida. Contact: 352-392-4700, ext.5500

Glossary

CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act (Superfund law)
EPCRA	Emergency Planning and Community Right-To-Know Act of 1986
MSW	Municipal Solid Waste
NPL	National Priorities List (Superfund)
OERR	Office of Emergency Response and Remediation (EPA)
OPA	Oil Pollution Act
OSRE	Office of Site Remediation Enforcement (EPA)
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act (hazardous waste)
SDWA	Safe Drinking Water Act
SEP	Supplemental Environmental Project
TIO	Technology and Innovation Office (EPA)

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