

Partners *In Progress*

EPA Update on Federal Facility Cleanup and Reuse

4

Federal Facilities Forum
Members Meet

5

Rocky Mountain Arsenal
Bids Farewell to Western
Tier

6

Modern Technology
Speeds Cleanup at Rocky
Flats

8



2002 National
Achievement Awards:
Cleanups Prove to Be
Win-Win Situations

Stakeholder Efforts Earn Anacostia An Urban River Pilot Project

On April 21, 2003, the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers announced the selection of the Anacostia River as the first of eight urban river restoration pilot projects under the Urban Rivers Restoration Initiative. Through a competitive process, reviewers selected the Anacostia project based on its comprehensive restoration plan, which includes restoring neighboring wetlands, expanding forest coverage, redeveloping underused brownfields properties along the banks, and expanding public and stakeholder involvement.

The Anacostia, which flows through the District of Columbia and Maryland, is often referred to as the region's "Forgotten River." While not as well-known as the Potomac, it was never forgotten by the members of the Anacostia Watershed Toxics Alliance (AWTA), who have quietly worked to improve the river's prognosis since 1999.

<Continued on Page 3>

From the Director

From the Director



Welcome to our 8th edition of *Partners in Progress (PIP)*. This issue marks the debut of several firsts for the newsletter. Beginning with this issue, *PIP* will be available via online distribution in addition to the printed newsletter. This will allow us to save valuable resources as well as help streamline delivery. When each issue is published, subscribers will receive an e-mail message that contains highlights of the new *PIP* and links to the online document. For those who prefer the paper edition, printed copies will remain available.

OSWER Assistant Administrator Marianne Lamont Horinko has announced five major initiatives, including the Resource Conservation Challenge (RCC). In support of the RCC initiative, we are bringing you *Partners in Progress* in a more environmentally-friendly, efficient way.

By coincidence, two articles in this issue focus on the two "Rockies," as we call them. No, we are not talking about Colorado's Major League Baseball team, but about two major federal facility sites: the Department of Energy's (DOE) Rocky Flats Environmental Technology Site and the Army's Rocky Mountain Arsenal.

The Rocky Flats article represents the first installment of a new *PIP* feature—the "RPM's Corner." We will use this space to explore the technical side of federal facilities restoration, with an eye toward providing particularly useful information for remedial project managers (RPMs). In this inaugural installment of the RPM's Corner, we examine the technology that has helped to accelerate and improve the cleanup of Rocky Flats, a DOE site near Denver, Colorado that manufactured nuclear weapons components for nearly 40 years. By embracing new technology, the Rocky Flats cleanup is now ahead of schedule. By 2006, we anticipate that the bulk of the 6,500 acre site will be transferred

<Continued on Page 2>

From the Director

<Continued From Page 1>

to the U.S. Fish and Wildlife Service for use as a wildlife refuge, while another portion will be used to complete a beltway around Denver.

Community involvement has played a key role at Rocky Mountain Arsenal in Colorado, also profiled in this issue. As with nearby Rocky Flats, much of the former Army installation's acreage will be converted to a wildlife refuge. However, the 940-acre Western Tier of the property is scheduled to be transferred to neighboring Commerce City for redevelopment. When the Western Tier was originally scheduled to be deleted from the National Priority List (NPL), the community intervened to request additional soil testing at the site. In response to community concerns, EPA worked with the Colorado Department of Public Health to conduct additional tests on the Western Tier. Based on the results, which confirmed that the parcel was safe for its intended reuse, the property was deleted from the NPL on January 21, 2003.

Whether on paper or online, *PIP* continues to relate the key happenings within EPA's Federal Facility cleanup program and report on accomplishments and activities with its many partners. A prime example of such partnerships paying environmental benefits is the formation of the Anacostia Watershed Toxics Alliance (AWTA), a group of public and private partners, including EPA, who have combined efforts to clean up Washington, DC's Anacostia River. AWTA's efforts recently contributed to the selection of the Anacostia by EPA and the U.S. Army Corps of Engineers as one of eight urban river restoration pilot programs. You can read more about the Anacostia's selection on page 1.

Finally, this issue highlights the deserving winners of the 2002 Office of Solid Waste and Emergency Response Notable Achievement Awards for Federal Facilities. The awards recognized the achievements of Region 5's Fernald Team and Region 9's John Chesnutt. The Fernald Team was responsible for overseeing the cleanup of the Fernald Superfund site—a former DOE site near Cincinnati, Ohio which formerly refined uranium for defense purposes. Faced with the challenge of remediating a site with extensive uranium and radium contamination, the Fernald Team strengthened the relationship between EPA and the Ohio EPA, and reached out to the surrounding community to put the cleanup an estimated 4 years ahead of schedule. John Chesnutt was recognized for his efforts as the RPM at Fort Ord, an NPL site near Monterey, California. John arranged significant outreach programs to promote understanding in the community prior to signing of the Interim Action Record of Decision (ROD) at the former military base and took a leadership role in addressing issues surrounding clearance.

Fundamental keys to success in federal facilities restoration—at Rocky Flats, Rocky Mountain Arsenal, Fernald, Anacostia, Fort Ord, and around the country—have been stakeholder involvement and cooperation among agencies, individuals, and communities. With that always in mind, we welcome your comments, questions, and suggestions. For more information, visit us on the Web at <www.epa.gov/swefrrr>. If you would like to receive *PIP* electronically, please let us know by sending an email to <newsletter_ffrro@epa.gov>. Please be sure to let us know if you wish to continue to receive the printed version, the electronic version, or both by sending in the attached response card. **PIP**

—James Woolford, FFRRO Director



Acronyms Explained

AWTA	Anacostia Watershed Toxics Alliance
CAB	Citizens Advisory Board
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ESD	Explanation of Significant Differences
FFRRO	Federal Facilities Restoration and Reuse Office
FOST	Findings of Suitability for Transfer
FWS	U.S. Fish and Wildlife Service
NAS	National Academies of Science
NPL	National Priorities List
OSC	On-Scene Coordinator
OSHA	Occupational Health and Safety Administration
RMA	Rocky Mountain Arsenal
ROD	Record of Decision
RPM	Remedial Project Manager
TCLP	Toxicity Characteristic Leaching Procedure
TIO	Technology Information Office
TSP	Technical Support Project
UXO	Unexploded Ordnance

Partners In Progress Philosophy

Stakeholders involved in federal facility cleanups are diverse, with differing backgrounds, interests, and perspectives. All of these stakeholders, however, share a single common goal—progress. *Partners in Progress (PIP)* provides a forum for stakeholders to exchange information, offer solutions, and share stories about what works and what doesn't. We encourage you—our readers—to write to us about your activities that foster teamwork, promote innovation, and strengthen community involvement. Only by working together can we achieve our goal of “federal cleanups that put citizens first.”

Office of Solid Waste and
Emergency Response
(5106G)
November 2003
www.epa.gov/swefrrr/

Stakeholder Efforts

<Continued From Page 1>

Along with efforts to revitalize the river's waterfront community and a \$1.3 billion plan to improve the city's environmentally unsound combined sewer system, AWTA was cited as one of the keys to the project's selection as a pilot project by EPA. The volunteer group is a partnership of over 25 public and private organizations which seek to address the dangerous concentrations of toxins in the sediments of the Anacostia Watershed (see sidebar). To address the sediment problem, AWTA has systematically developed and implemented a three phase plan, funded by a combination of public and private funds from AWTA members.

AWTA's first phase created a baseline ecological and human health risk assessment using available existing data and information. Within its first year, AWTA had compiled the available data into its *Phase 1 Interpretive Summary Report*, and identified major gaps in the information required to take further actions to address the river's toxics problems.

During the Phase 2 of its plan, completed in January 2001, AWTA members conducted primary research to fill in information that was lacking in Phase 1, performed risk

assessments, developed hydrodynamic models and identified potential remedies for the Anacostia's toxic sediments.

Now in Phase 3, AWTA is in the process of implementing several remedial actions to clean up the river. The first major component of this final phase is the placement of a reactive cap on key areas of the river bottom. This permanent measure, composed of a dense clay cap, will filter and contain contaminants already present and entering the river. Construction of the cap is scheduled to begin in November. Additionally, spring and summer of 2003 saw the implementation of several developed low-impact development projects, including measures to reduce the amount of pavement near the river in order to allow for more natural ground filtering of water and sediment bound for the river.

As one of the nation's 10 most polluted rivers, the Anacostia continues to face contamination from polychlorinated biphenyls (PCBs), pesticides, heavy metals, and raw sewage discharges from combined sewer overflows. While AWTA's three-phase project may be close to completion, its selection as an Urban River Pilot by EPA and USACE is sure to increase public awareness of the problems facing the Anacostia, and guarantee that it will never again be called the capital's "Forgotten River." **PIP**

“To work together in good faith as partners to evaluate the presence, sources and impacts of toxic contaminants in the Anacostia River with all stakeholders, both public and private, and other interested parties and to evaluate and take actions to enhance the restoration of the Anacostia watershed to its beneficial use to the community and ecosystem as a whole.”

—AWTA Mission

AWTA Members

- The Academy of Natural Sciences, Patrick Center
- Anacostia Watershed Society
- Atlantic Division, Naval Facilities Engineering Command
- ATSDR
- Bolling Air Force Base
- Chesapeake Bay Program Office
- District of Columbia Department of Health
- District of Columbia Water and Sewer Authority
- Interstate Commission Water and Sewer Authority
- Interstate Commission on the Potomac River Basin
- LANTDIV
- Maryland Department of the Environment
- Metropolitan Council of Governments
- Montgomery County
- National Oceanic and Atmospheric Administration
- National Park Service
- Naval District Washington
- Naval Research Laboratory
- Potomac Power and Electric Company
- Prince George's County
- River Keepers
- University of the District of Columbia
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service

Federal Facilities Forum Members Meet Face to Face

Federal Facilities Forum members usually know each other as voices on the other end of a speaker phone during the forum's monthly teleconference, but April 21–25 in Seattle, Washington, the forum strayed from its usual format as members met face-to-face during the Technical Support Project (TSP) annual conference.

The TSP, which also includes the similarly-structured Engineering and Ground Water Forums, was created in 1987 to provide technical assistance to remedial project managers (RPMs), corrective action staff and On-Scene Coordinators (OCSs). The conference provided a valuable opportunity for forum members to meet and discuss federal facilities issues. Through the annual conference and its monthly teleconferences, the Federal Facilities Forum helps to improve communication between the Regions and Headquarters by providing a regular, structured format for sharing information on current FFRRO policies and areas of concern.

Forum members, who are appointed by regional management, are typically senior remedial project managers, scientists, technicians or section chiefs. During the TSP conference, they discussed a number of issues, including:

- National Association of Remedial Project Managers (NARPM) involvement and coordination
- Technical Information Management

Systems (TIMS)

- Formerly Used Defense Sites (FUDS) inventory
- Dense Nonaqueous Phase Liquid (DNAPL) characterization
- Privatization of DoD cleanups
- Sediment response strategies
- Asbestos cleanup
- Perchlorate contamination and response strategies

Both at the conference and in the monthly teleconferences, perchlorate contamination issues have been at the fore of the Federal Facilities Forum. Perchlorate is produced primarily for use as a component of solid rocket propellant used in government munitions. It is also used in fireworks. Soil and water contamination caused by the

manufacture and improper disposal of perchlorate chemicals is known to affect some 25 states. Currently, EPA is evaluating the risks posed by perchlorate contamination, having completed a risk assessment for perchlorate. Because of issues related to the science underlying the risk assessment, several questions have been recently referred to the National Academy of Science (NAS) for review. The review is expected to take a year to 18 months to complete.

Federal Facilities Forum teleconferences are held from 1:30–3:00 pm Eastern Time on the second Thursday of each month. For additional information about Federal Facilities Forum calls, please contact your local forum member. A list of forum members is available online at <www.epa.gov/tio/tsp/ffmember.htm>. **PIP**

Online Perchlorate Resources

EPA Technology Innovation Program

In furthering its mission to advocate more effective, less costly approaches to site cleanups, EPA's Technology Innovation Program has compiled some of the most relevant information on cleaning up perchlorate-contaminated groundwater. <www.clu-in.org/contaminantfocus/default.focus/sec/perchlorate/cat/Overview/>

Interim Assessment Guidance for Perchlorate

<www.epa.gov/swerffir/pdf/interim_guid_perchlorate_6-99.pdf>

Perchlorate Questions and Answers

This Q & A document serves to clarify the January 22, 2003 Status of EPA's Interim Assessment Guidance for Perchlorate, issued by Marianne Lamont Horinko. <www.epa.gov/swerffir/documents/perchlorate_qa.htm>

Office of Solid Waste and Emergency Response Five Priorities

OSWER Assistant Administrator Marianne Lamont Horinko has set forth "Five Priorities" for EPA's Office of Solid Waste and Emergency Response.

"My five priorities form the foundation of OSWER's commitment to protect human health and the environment, encourage greater environmental stewardship, and promote environmental justice in all programs and policies," said Horinko.

OSWER's Five Priorities are:

Emergency Response and Homeland Security

Every year, OSWER's Emergency Response Program conducts or oversees hundreds of emergency responses to clean up oil spills and hazardous substance releases.

OSWER ensures that the cleanup is appropriate, timely, and minimizes human and environmental risks. OSWER's Emergency Response Program provides the people and skills necessary to respond to national security threats faced by this country. The possibility of future terrorist attacks or other large-scale disasters necessitate a national response that is immediate, protective, and preventive.

One Cleanup Program

The One Cleanup Program (OCP) is OSWER's vision for how different cleanup programs at all levels of government can work together to improve the coordination, speed, and effectiveness of cleanups at the nation's contaminated sites. OCP encourages improved collaboration among EPA cleanup programs with state, tribal, local and other federal agency pro-

Rocky Mountain Arsenal Bids Farewell to Western Tier

The Western Tier parcel of the Rocky Mountain Arsenal (RMA) was deleted from the National Priorities List (NPL) on January 21, 2003, making a positive step for the former defense site. The 940-acre Western Tier parcel of RMA was first announced for partial deletion in October 1998, but deletion was delayed after the comments received during the review period revealed substantial public concern regarding the potential for dioxin contamination in the soil.

Between the initial 1998 deletion announcement and the actual 2003 deletion, EPA and the Colorado Department of Public Health conducted further tests on the Western Tier soil. After examining results, authorities determined that the soil indeed did not pose a threat to redevelopment. The intent to delete the Western Tier of RMA was announced again in the September 23, 2002 *Federal Register*, with the public comment period ending November 22, 2002. Comments received during this comment period focused principally on how contamination or munitions discovered during redevelopment would be addressed.

Fears regarding dioxin are rooted in the site's remediation history. Prior to the 1998 attempt at deletion, the Western Tier was not subject to soil remediation. A remedial investigation completed in 1992 examined RMA's soil, water, structures, air, and biota, and determined that the Western Tier was exposed to minimal contamination during the Arsenal's 60-year history. Four years later, the On-Post Record of Decision (ROD) specified that the Western Tier would not require soil remediation since exposure to the soil did not pose a risk to humans or biota.

The determination that the soil posed no risk to humans was brought under scrutiny when neighboring Commerce City, which has the right of first refusal for the reuse of the Western Tier parcel, listed a daycare center among its list of

possible future commercial uses for the site. Facing a public concerned with the possibility of potentially exposing infants and children to hazardous chemicals, EPA chose to take a cautious route, and withdrew the request for deletion until further tests could be conducted.

The Army established RMA in 1942 to manufacture conventional and chemical munitions during World War II, and leased portions of the facility to private industrial and agricultural chemical producers in the post-war period. During that same period, the Army continued to use the facility for its own chemical development activities. The industrial and waste disposal practices of the post-war years led to the first complaints of groundwater contamination in the land surrounding the site in 1954. As a result of contamination caused by the Arsenal's long history of chemical production, the whole of RMA was eventually placed on the NPL in October 1984. It was among the first federal facilities placed on the NPL, and remedial investigation culminated in a Record of Decision (ROD) in 1996. Remedial work is expected to cost the Army more than \$4 billion by the time it is completed.

The deletion of the Western Tier parcel was another positive step in the remediation of RMA. While the remediation of the relatively small Western Tier portion has been completed and the parcel deleted from the NPL, the remainder of the 5000+ acre RMA continues to undergo remediation. Cleanup of this facility will be one of the most expensive conducted by the U.S. military. Upon completion, it will be turned over to the U.S. Fish and Wildlife Service for use as a wildlife refuge, as mandated by Congress. Currently, the General Services Administration is assessing the value of the deleted Western Tier lands. Discussions between government entities and Commerce City regarding the potential for land purchase and transfer to Commerce City will follow. **PIP**

grams and stakeholders. You can find information on the One Cleanup Program, on the Web at www.epa.gov/oswer/onecleanupprogram.

Land Revitalization

The Land Revitalization Agenda (LRA) promotes the reuse of once-contaminated sites in order to revitalize America's communities. Because cleanup and reuse are mutually supportive goals, property reuse should be an integral part of the way OSWER does business. To learn more about OSWER's Land Revitalization Initiative, go to www.epa.gov/oswer/landrevitalization.

Energy Recovery, Recycling & Waste Minimization

The Resource Conservation Challenge (RCC) is a major cross-Agency initiative that identifies innovative, flexible, and

more protective ways to conserve natural resources through (1) material pollution prevention, recycling, and reuse; (2) reducing chemicals in all their uses; and (3) conserving energy and materials. The RCC also includes a retail component that educates consumers about resource conservation opportunities. For more information about the Resource Conservation Challenge, go to www.epa.gov/epaoswer/osw/conserves/.

Workforce Development

OSWER is committed to developing the full potential of its workforce by encouraging creativity and innovation, providing career development opportunities, and assuring that a diverse pool of qualified candidates is available for all OSWER job opportunities. If you would like more information about OSWER's workforce development, contact Laurie May at (202) 566-1918. **PIP**

Modern Technology Speeds Cleanup at Rocky Flats

RPM's Corner

During its heyday in the 1950s and 60s, the 6,500 acre Rocky Flats site was one of the cornerstones of the United States' ever expanding nuclear deterrence program—the state of the art in weapons technology. While Rocky Flats has

been inoperative since it was closed for safety reasons in 1989, state of the art technology is again playing an important part in the site's history by speeding the \$7 billion cleanup of the former Department of Energy (DOE) site.

Water to the Rescue (Again) at Building 776/777

Located just 17 miles northwest of metropolitan Denver, the nature of the work conducted at Rocky Flats was always a potential danger to city. Never was the danger more obvious than in 1969, when Building 776/777, the facility's primary location for plutonium weapons construction, caught fire. Contemporary wisdom dictated that using water to douse a plutonium fire would release a radioactive flash and cloud, but firefighters, facing the potential ignition of the building's 3.5 tons of plutonium, had only minutes to decide to give the water a try. No calamity ensued, and sprinkler systems were soon installed in Rocky Flats buildings.

Though the building was extinguished by firefighters before the radioactive smoke could affect downtown Denver, the fire has continued to have a profound effect on the site and on the current cleanup process. Due to the volatile nature of the materials used in fabricating the cores

of atomic weapons, Building 776/777 was constructed of steel slats rather than the concrete that was used in many of the site's peripheral buildings. While workers constructed plutonium weapons components within the confines of sealed glove boxes to limit contamination of the surrounding building, the 1969 fire compromised the containment precautions. Contaminated smoke filled the facility, spreading radiation over and between the building's steel slat construction.

Over 30 years later, the metal slat construction that was designed to contain radiation complicates the radiological cleanup. Unlike concrete, on which contractors can use skabblers to blast off and collect as much surface material as necessary before demolishing the structure, the metal building cannot be cleaned sufficiently to reach free-release standards. Therefore, the entire structure must be disassembled and disposed of off-site—no small task for the 224,000 square foot building.

Fortunately, new technology has accelerated what would otherwise be a time-consuming element of cleanup at Building 776. Originally, metal structures at Rocky Flats were deconstructed with reciprocating saws, which are commonly used to disassemble metal components such as storage tanks and glove boxes. However, mechanical cutting tools exposed workers to cutting related hazards, including breach of protective equipment, and the release of contaminants from the surface material during the cutting process. In some cases, thermal plasma-arc cutting torches are used for in-situ cutting of metal structures, but require specialized containment and ventilation structures to control dust and fumes and to protect workers from contaminants that are disturbed in the process.

Rocky Flats Over Time

1950—Congress authorizes expansion of the United States' nuclear weapons program.

1951—The Atomic Energy Commission, a predecessor to the Department of Energy, selects Rocky Flats, Colorado as a nuclear weapons production site.

1952—Production begins at Rocky Flats.

1953—First nuclear components are completed.

1957—Fire in Building 771 contaminates the structure.

1967—Storage barrels leak plutonium contaminated chemicals into ground at the future site of Pad 903.

1969—Fire in Building 776/777, the main site for component construction, threatens Denver with radioactive smoke. Damage is estimated at \$26.5 million.

1972—"Buffer zone" of 4,600 acres is created around Rocky Flats.

June 1989—FBI and EPA inspect Rocky Flats for environmental violations.

The High Pressure Water-Jet, or the “Super Squirt Gun” as it is known to Rocky Flats remediation staff, is eliminating some of the problems associated with other cutting methods. Like a giant dental tool, the Water-Jet uses a 55,000 pounds per square inch stream of abrasive water that can cut through 1/4 inch stainless steel at two feet per minute, all while only emitting one gallon of wastewater. The small amount of water acts as a fixative to contain the contamination that would otherwise escape during mechanical or thermal cutting, and is easily collected for safe disposal. The Water-Jet is a potential boon to the Building 776/777 project, and should allow contractors to more easily disassemble the building’s metal slats for offsite disposal, as well as allowing them to easily collect wastewater for safe disposal.

New Cans for Plutonium

One of the Rocky Flats site’s biggest cleanup problems—large and unstable stores of weapons grade plutonium—is also being brought under control with the help of new technology. In the past, poor protocols for storage of plutonium and plutonium waste resulted in situations like the Pad 903 incident, where plutonium-tainted liquids were poured into oil barrels and left to the elements until 1967 and resulted in much of Rocky Flats’ soil contamination. The site’s weapons grade plutonium has always been stored in stainless steel containers in on-site vaults, but newer technology is again providing an added safety margin.

With the modern cleanup of Rocky Flats, the facility’s remaining plutonium stores are being repackaged for shipping to their permanent resting place at Savannah River, South Carolina. Rocky Flats’ plutonium must first be heated to restabilize the matter and reduce the effects of oxidation. Plutonium is then placed in modern “50 year cans”—dual wall, stainless steel containers that nestle the radioactive plutonium in a stabilized, vacuum packed environment.

In August 2003, Rocky Flats shipped its final container of weapons grade plutonium off site.

The Radioactive Handi-Wipe

During nearly four decades of active use, Rocky Flats relied heavily on sealed glove boxes to protect workers and the environment from the harmful radiation produced in forming plutonium into atomic weapons components. Filled with inert gas to protect against fire and with the contents accessible only through shoulder deep gloves, the glove boxes helped define the look of 1950s nuclear science. While Rocky Flats’ army of these boxes protected its workers during the site’s lifetime, they pose a challenge to remediation efforts.

Until recently, glove boxes needed to be deconstructed with either Zallsaws or arc torches, packaged, and shipped off site as true waste due to unremovable plutonium contamination. However, according to EPA project manager Tim Rehder, cerium nitrate decontamination has speeded the disposal of contaminated glove boxes. The new method is similar to cleaning a kitchen—simply spray the contaminated surface with the cerium nitrate solution, wait 20-30 minutes, and wipe away radiation. Plutonium contamination is contained on the wipe, which must be properly disposed of, but the glove box surface is reduced from true waste to low level waste, facilitating easier and less costly disposal. In Building 776/777, use of new decontamination technology has saved an estimated \$22 million, based on a rate of \$10,000 saved for each cubic meter of glove box cleaned.

These new technologies, combined with reassessments of several areas of the site, have combined to put the Rocky Flats cleanup ahead of schedule—administrators currently expect the project to be completed in December 2006. This is good news not only for the wildlife that will inhabit the U.S. Fish and Wildlife Service (FWS) refuge scheduled for the site, but also for the burgeoning Denver population, which anxiously awaits the missing segment of the beltway scheduled to be built on the edge of the site. **PIP**

October 1989—Rocky Flats placed on National Priorities List.

December 1989—Plutonium operations halted on a temporary basis for safety reasons. Operations never resume.

1992—President George H.W. Bush announces the cancellation of the W-88 Trident Warhead Program. Production at Rocky Flats is rendered unnecessary.

1993—Secretary of Energy formally announces the end of nuclear production at Rocky Flats.

1994—Last defense-related shipment leaves Rocky Flats as non-nuclear work ceases.

1996—Rocky Flats Cleanup Agreement is signed by the Department of Energy, EPA, and the Colorado Department of Public Health and Environment.

1997—2006 is targeted for cleanup completion.

December 2001—Congress votes to turn the remediated Rocky Flats site into a wildlife refuge operated by the Fish and Wildlife Service.

2002 OSWER National Achievement Awards: Cleanups Prove to Be Win-Win Situations

EPA Office of Solid Waste and Emergency Response (OSWER) recently honored the Region 5's Fernald Team and John Chesnutt of Region 9 with Federal Facility Response Notable Achievement Awards. The awards recognize leadership, innovation, progress, community outreach, and multiple-agency partnership during federal facility cleanup efforts in 2002.

Fernald Team Award—Region 5

Brian Barwick, James Saric, and Eugene Jablonowski make up the Fernald Team—the EPA entity responsible for overseeing the cleanup of the Fernald Superfund site, the first environmental cleanup facility in the Department of Energy (DOE) complex. The Fernald site is a 1,050-acre facility, located approximately 18 miles northwest of Cincinnati, Ohio. The facility was in operation by DOE from 1951–1991, where high purity uranium metal was produced in support of national defense programs.

The Fernald cleanup project, which is expected to cost an estimated \$4 billion at the time of completion in 2006, poses a great challenge due to its size, expense, level of contamination, and technical complexity. Over two-thirds of the site contains uranium contaminated soil, and a uranium groundwater plume measuring one half-mile long and one eighth-mile wide exists on and off site. In addition, there are two radium-bearing waste silos, representing the single largest source of radium and radon gas generation within the entire DOE complex. The DOE complex includes more than 120 facilities nationwide.

Region 5's Fernald Team assumed a substantial leadership role, working extensively with DOE to develop and implement various strategies to expedite cleanup activities. The two agencies cooperatively developed an efficient and cost-effective Explanation of Significant Differences (ESD) document that allowed for the utilization of existing thermal dryers to treat materials from multiple Operable Units within the facility. In addition, as a result of revised waste acceptance criteria at the offsite disposal facility, EPA has been working with DOE to amend a Record of Decision (ROD) to eliminate the requirement that materials be treated to meet the toxicity characteristic leaching procedure (TCLP) prior to offsite disposal. These efforts, among others, have significantly contributed to the facility's expected closure date being accelerated from 2010 to 2006.

The Fernald team faced a monumental challenge in disposing of 8,900 cubic yards of radon-generating material, all of which was contained in two silos that were well past

their constructed life span and in danger of collapsing. To avoid the potential hazards of workers treating waste material in unstable structures, EPA and DOE decided to construct an interim storage unit next to the two dilapidated silos. The completion of this interim unit was a crucial step in the safe remediation of the waste material, as it facilitated remote extraction and transfer of the material into a more structurally sound facility for eventual treatment. The team expects that all material from the two silos will be successfully transferred to the interim unit by 2004, greatly reducing the principal hazard on the site.

During 2002, the Fernald team also helped oversee the completion of a Radon Control System, which siphons radon gas from the two silos and the interim storage unit, providing additional safety measures to workers performing waste treatment. These innovative procedures contributed to Fernald workers setting a new safety record for the site, with 10 million consecutive safe work hours and 1,000 consecutive days without a lost time injury or accident. This record helped the Fernald site earn the lowest OSHA recordable injury rate within the DOE complex.

Outreach to the Community

Through extensive community involvement, sponsored educational outreach programs, and significant charity donations, the Fernald Citizens Advisory Board (CAB) has become recognized as a model for community based decision-making, both within the DOE complex and internationally. At routine committee and board meetings, the CAB works diligently with EPA and DOE project managers, regulators, and citizens to discuss controversial social and economic issues. As a result, the CAB has provided balanced solutions that form the foundation of Fernald's cleanup program, cutting years off the original project schedule and saving taxpayers billions of dollars.

The Fernald Team also invited 13,000 teachers and students to their sponsored educational outreach programs. To further demonstrate their commitment to the community, Fernald employees and contractors donated a combined total of \$516,000 during 2002 to charity, scholarship funds, and civic, education, arts, and health and human services programs.

Partnering Pays Off

Throughout the course of this especially challenging cleanup effort, the Fernald Team has worked to strengthen its relationship with DOE and the Ohio EPA. Through its

<Continued on Page 10>

In-Depth with the Fernald Team, Region 5

The Fernald Team, recently honored with the 2002 Federal Facility Response Outstanding Achievement-Team Award (see page 8), shares their Remediation Project Manager experiences during the Fernald Cleanup Project with PIP...

Fernald Site Highlights

Acres: 1,050

Estimated Total Cost Upon Completion:
Approximately \$4 billion

Number of Completed RODs: Five (one for each Operable Unit)

Number of Completed Removal Actions: 27

Technical Issues Involved:

- Uranium contaminated soil covering more than 2/3 of site.
- Substantial uranium contamination of the Great Miami Aquifer—one of the nation's largest drinking water aquifers.
- Two silos containing radium-bearing waste.
- Structurally unsound silos increasing threat of dome collapse and material release.

Innovative Approaches to Cleanup:

- Remote extraction of waste materials from Silos 1 and 2.
- Installation of Radon Control System—siphons radon gas from Silos and interim storage unit.

One-on-One with the Fernald Team (FT):

PIP: What has been the greatest challenge thus far during the Fernald site cleanup?

FT: When managing a project of this size, cost, and technical complexity, the biggest hurdle is trying to keep things moving. With a large Department of Energy (DOE) site, it is often easy to get caught up in all of the details. It is important to take a holistic approach on a project like this and maintain an end vision of how all of the pieces of the puzzle will fit together. At the same time, it is important to challenge the traditional timeline and constantly ask yourself and others, "How can we accelerate this project?"

PIP: What has been the most important action that the Fernald team has taken to overcome this challenge?

FT: Without a doubt—our dedication to cooperation and open communication with DOE and other agencies involved in the cleanup. Clear and consistent communication is the key to maintaining progress. When an issue of debate arises, it is also extremely important to keep personal agendas out of the conversation and realize that all parties are working to achieve a common end result.

PIP: How much value do you place on community outreach and involvement during a federal facility cleanup effort?

FT: It ultimately depends on the location of the facility and the level of interest demonstrated by the community. In almost all cleanup projects, having the community involved is extremely important. The community's involvement often lends a different perspective and provides valuable feedback on important issues. Public confidence and support also help to move things along and can often beneficially influence budgetary decisions.

PIP: What is the most valuable thing you have learned thus far while managing the Fernald cleanup for EPA?

FT: We often obsess on trying to understand all of the complexities of every single step of every process. This technically complex project has taught me that it is more important to be a project manager, not a technical expert. My time has been made more valuable by coordinating the efforts of those who do their job best.

PIP: What is some advice that you would give to another RPM taking on a similar project?

FT: Establish and maintain open lines of communications with all participating parties and be completely upfront with all stakeholders. This facilitates honesty and cooperation by all parties and contributes to project acceleration. It is also important to have an ongoing vision of the project's end state. This helps drive you along the course and keep things moving.

For more information on the Fernald cleanup, visit <www.fernaldd.gov> or contact James Saric at (312) 886-0992 or <saric.james@epa.gov>, Eugene Jablonowski at (312) 886-4591 or <jablonowski.eugene@epa.gov>, or Brian Barwick at (312) 886-6620 or <barwick.brian@epa.gov>.

National Achievement Awards

<Continued From Page 8>

understanding of and commitment to a cooperative approach to the cleanup, the Fernald Team and its partners learned to identify and implement several opportunities for both cost and time savings. In addition, the agencies has continuously worked together to obtain and maintain the support of citizens that is so critical to the project's success.

Proven Progress

During 2002, the Fernald Team made extensive progress towards the beneficial redevelopment and reuse of the project site. Over 50 percent of the Fernald site is now certified as clean as a result of the following remedial actions completed in FY02:

- Excavation and restoration of the South Field.
- Demolition of 112 structures with waste placed into the OSDF.
- Construction of Radon Control System.
- Construction of interim storage unit.
- Completion of uranium shipments to DOE's Portsmouth facility.
- Four natural resource restoration projects.

John Chesnutt, Region 9, 2002 Individual Federal Facility Notable Achievement Award Winner



Individual Award—John Chesnutt, Region 9

For seven years, John Chesnutt served as EPA's Remedial Project Manager at Fort Ord, a closed National Priorities List (NPL) military base of approximately 27,000 acres located near Monterey, CA. Cleanup efforts and property transfer at Fort Ord are extremely complicated due to large quantities of unexploded ordnance (UXO). Due to the environmental setting and potential hazards related to munitions, the cleanup at Fort Ord has been embroiled in controversy. As a result of several lawsuits against Fort Ord, the Army was precluded from performing ordnance cleanup as part of the Removal Actions, and as a result, an Interim Action ROD was proposed for ordnance clearance at only the highest risk former ordnance sites.

As the EPA RPM, Chesnutt assumed a major leadership role in resolving the critical issues involved in the Interim Action ROD. In addition to the technical issues, such as ordnance detection technology, depth of clearance, and disposal alternatives, Fort Ord was faced with an extremely volatile issue with the local community regarding how to remove the dense vegetation prior to the ordnance removal. While prescribed burning is the most effective and safe method for vegetation clearance, several community members strongly objected due to concerns about the associated health risks of smoke exposure and the risks of the fires burning out of control.

Recognized as a technical expert in the UXO area, Chesnutt was the coordinator of the Strategic Management Analysis and Requirements and Technology (SMART)

team—part of an agreement that established a partnership between the Army and regulators, focusing on UXO issues at Fort Ord. Over the past year, Chesnutt demonstrated a remarkable ability to balance several sensitive and complex issues, ultimately culminating in the signature of the Interim Action ROD, which was a critical step in allowing the Army to initiate ordnance cleanup.

With an understanding of the complex issues associated with UXO cleanup and a desire to address all of the concerns of the community, Chesnutt was instrumental in convincing the Army that significant outreach efforts were necessary before EPA could

Detonation Using Innovation

As part of the SMART team's efforts, Chesnutt helped develop and implement a technology matrix used to evaluate various UXO detonation methodologies. The team also developed other innovative processes and criteria to reduce the hazards and expedite the UXO clearing process, including:

- Methodology for establishing a safe buffer zone for areas adjacent to UXO
- More stringent UXO clearance requirements that allow for early property transfer, while still assuring its safe reuse
- Alternatives to open detonation, minimizing noise, frag, and potential emissions.

sign the Interim Action ROD and initiate ordnance clearing. In addition to monthly meetings on the Proposed Plan, EPA and the Army sponsored a series of comprehensive symposia on the specific issues of ordnance clearing and prescribed burning, in which Chesnutt presented EPA's official position. Also included in Chesnutt's outreach strategy was an Army-funded voluntary relocation program for community members concerned about the potential health effects during the burn. This unprecedented initiative, along with the other extensive outreach culminated in community acceptance that vegetative burning was necessary to adequately prepare the ordnance areas for clearance.

A critical factor that has contributed to the overwhelming progress and success at Fort Ord is the amount of interagency communication and cooperation. As the RPM, Chesnutt participated in all of the meetings and negotiations with the multiple agencies involved in the cleanup and was often relied upon to present controversial positions. Using his technical expertise and leadership, Chesnutt was instrumental in convincing the various agencies that the alternatives proposed in the Interim Action ROD were most effective for safe and efficient ordnance clearing while maintaining community support. **PIP**

Fort Ord—A Year of Accomplishments

During FY 02, Chesnutt's leadership and innovation culminated in:

- Completion of two Remedial Actions
- Finalization of two Findings of Suitability for Transfer (FOSTs)
- Completion of first Five-Year Review at Installation
- Signature of Interim Action ROD for Ordnance Clearing
- Transfer of 7,000 acres for use by the Fort Ord Reuse Agency and California State University—Monterey Bay

Write To Us

We encourage your questions, comments, and contributions. Please send your input to Dianna Young by mail at U.S. EPA/FFRRO, Mailcode: 5106G, 1200 Pennsylvania Ave., N.W., Washington, DC 20460; e-mail at <young.dianna@epa.gov>; or fax at 703 603-0043.

Join Our Mailing List And/Or Sign Up to Receive PIP Electronically

Beginning with this issue, *PIP* will be available in both print and online electronic formats. If you wish to receive e-mail notification of new online *PIP* issues, please send an email to <newsletter_ffro@epa.gov>. If you would like to be on the FFRRO mailing list to receive future printed issues of *Partners In Progress*, please fill out and return this form to the address above.



Name: _____

Agency/Organization: _____

Street Address: _____

City: _____

State: _____ Zip Code: _____

Phone Number: _____

E-mail: _____

I wish to receive PIP electronically.

I wish to receive PIP in printed form.

I wish to receive PIP both electronically and via mail.




United States
Environmental Protection Agency
(5106G)
Washington, DC 20460

First Class Mail
Postage and Fees Paid
EPA
G-35

Official Business
Penalty for Private Use \$300



Federal Facilities
Restoration and Reuse Office

 Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper.