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FERNALD REPORT - DECEMBER 1996

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DOE-FEMP PUBLIC
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FACT SHEET

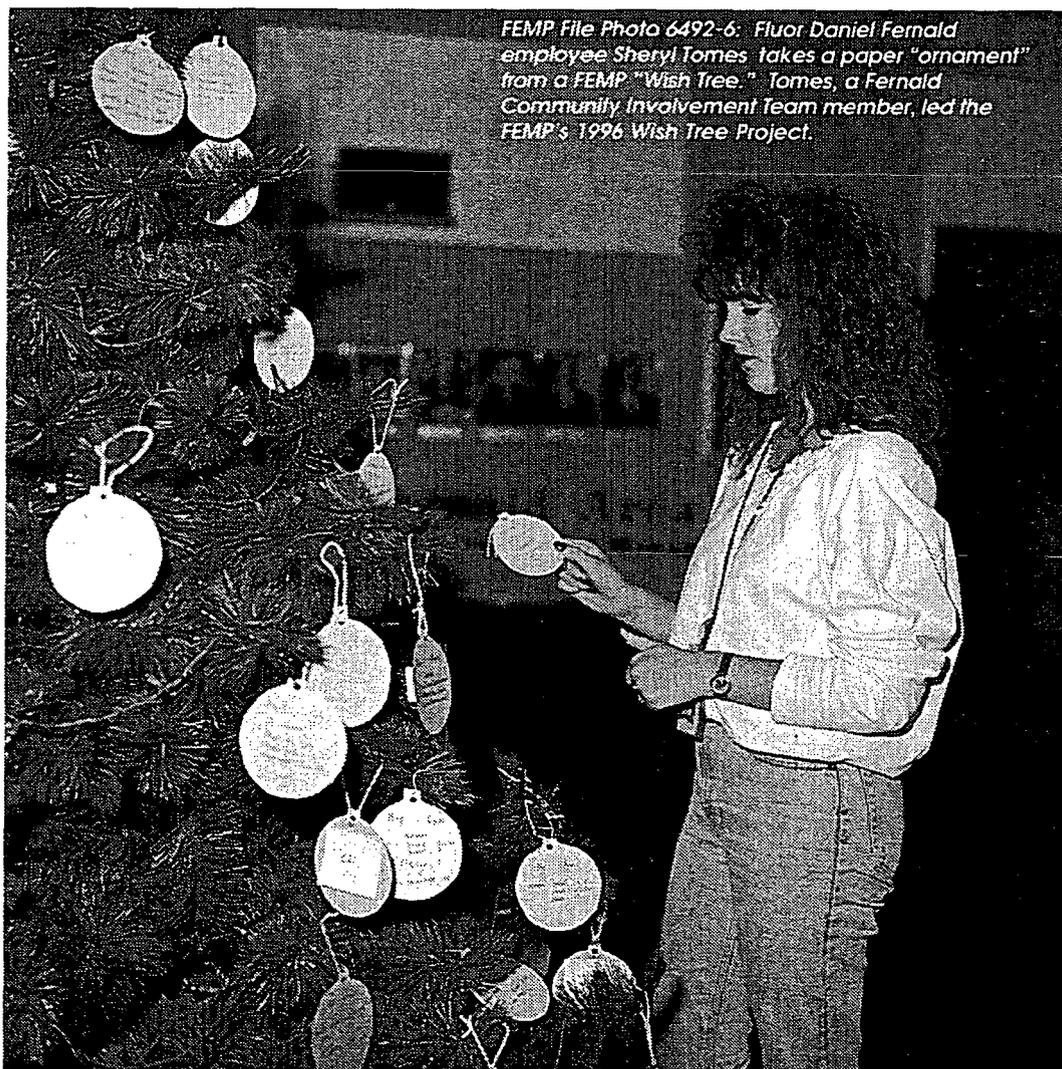
Fernald Report

December 1996

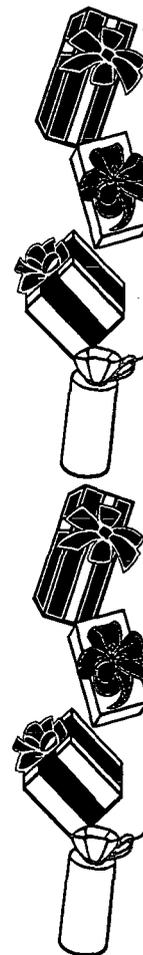
FEMP Employees Help Children's Holiday Wishes Come True

FEMP employees helped bring joy to hundreds of children in the area by purchasing Christmas gifts. "Wish Trees" were located at the FEMP in the Administration Building, cafeteria and at Springdale. The trees were decorated with paper ornaments which contained gift suggestions and children's clothing sizes. FEMP employees chose ornaments on the tree, purchased the gifts, wrapped them and returned them to a drop-off point. During the week of Dec. 16, the gifts were delivered to the children's homes.

This was the second year for the FEMP's Wish Tree project. Last year, about 100 children from Ross Local Schools and Southwest School District received gifts through this program. This year the program was extended to include Fairfield Schools, Hamilton City Schools, and Northwest School District, reaching 200 children. When FEMP employees were asked why they wanted to help with the project, the overwhelming response was "to share the holiday spirit."



FEMP File Photo 6492-6: Fluor Daniel Fernald employee Sheryl Tomes takes a paper "ornament" from a FEMP "Wish Tree." Tomes, a Fernald Community Involvement Team member, led the FEMP's 1996 Wish Tree Project.



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FEMP File Photo 6171-177: DOE-FEMP Director Jack Craig

Message from Jack Craig:

Good Neighbors Give During the Holidays

We at the FEMP take our responsibility as citizens of Greater Cincinnati very seriously, providing much needed help to organizations and groups in our communities, and the spirit of giving during the holiday season is especially important.

This year, the 60 federal employees in the DOE-FEMP Office have surpassed our fund-raising goal by contributing more than \$8,500 to charitable organizations, including the United Way, as part of the Combined Federal Campaign. Additionally, the United Way has received across-the-board support from Fluor Daniel Fernald and its parent Fluor Corp., which matches 50 cents on every dollar donated by employees. In fact, Fluor Daniel Fernald just recently surpassed its 1996 campaign goal of raising \$112,000 for the United Way.

Our "Wish Tree" program is receiving widespread support from FEMP employees. Each ornament on our tree has the name of a child and a gift from his or her wish list. Under this program, employees take an ornament, purchase the gift, wrap it and take it to a central drop-off point. We've been working with school administrators on this project to identify needy kids in the Hamilton, Fairfield, Ross, Northwest and Southwest school districts. The gifts were hand-delivered to each home by volunteer employees the week before Christmas.

In addition to the United Way, Fluor Daniel Fernald donates locally to the American Red Cross, Junior Achievement, Boy Scouts of America, the African American Forum and charitable organizations such as the Open Door Fund Pantry, FreeStore/FoodBank and the Ruth Lyons Children's Fund.

We at the FEMP are committed to community service through diverse and numerous programs. A special contributions program offers financial aid to townships, groups and schools located in communities near the site. We participate in a wide range of other activities that include fund raisers and employee volunteer programs that benefit, to name only a few, the Adopt-A-Family gift-giving program, Adopt-A-Park, Adopt-A-Highway and Walktoberfest.

Beyond the investment of time and money, the people at the FEMP have a long history of being partners with the community. Area residents even helped design the cleanup plans, as they were empowered early on to make choices that ensure their protection. They will continue to be actively involved throughout the duration of the FEMP cleanup.

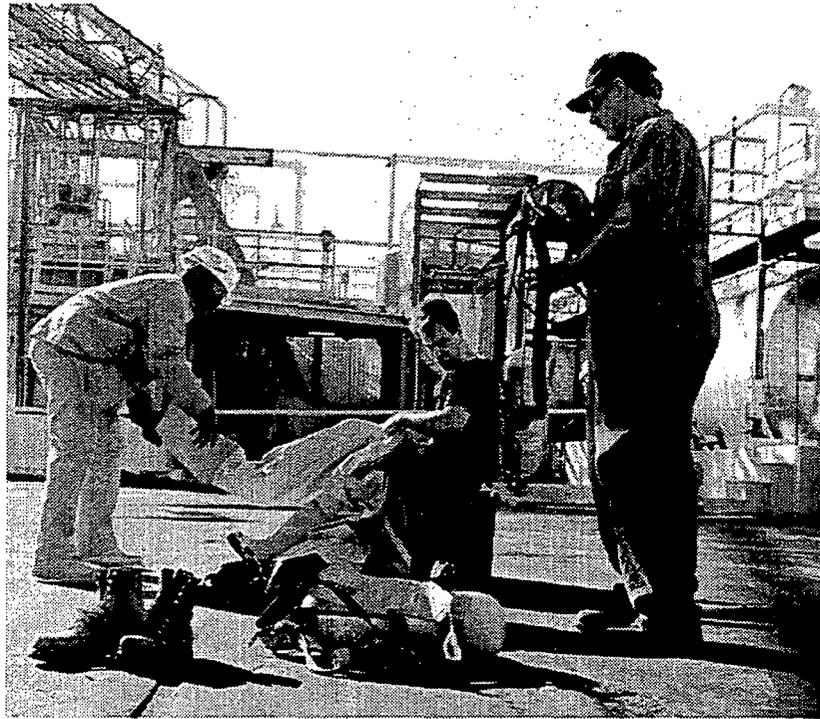
We work closely with groups like the Fernald Residents for Environmental Safety and Health (FRESH), the Fernald Community Reuse Organization and the Fernald Citizens Task Force to get their input as new issues emerge.

FEMP personnel are working hard to do what's best for public safety, while investing resources into the community.

Sincerely,

Jack Craig,
Director, DOE-FEMP





FEMP File Photo 6467-18: Fluor Daniel Fernald employee Gary Blanton, right, and an Albright & Wilson employee assist Fluor Daniel Fernald Emergency Response Team member Greg Lastoria, center, into a level A suit during an emergency response drill at Albright & Wilson, located on Paddys Run Road.

FEMP Participates in "Neighborhood" Drill

On Oct. 24, Fluor Daniel Fernald employees participated with neighbors from Albright & Wilson, Rutgers Nease, the Hamilton County Sheriff's Office and Crosby Township Fire Department in a simulated mutual aid drill.

Workers from these agencies simulated a chemical spill from one of the tanks on the property of Albright & Wilson Co., which handles phosphates.

The purpose of the drill was to identify areas of improvement for emergency response and safety procedures.

Independent Review Team Studying Silos Project At Fernald

During the next several months, an independent review team of nine environmental remediation, vitrification and solidification/stabilization experts will evaluate the proposed vitrification technology (transforming waste into glass), as it pertains to the FEMP Silos Project. The team's evaluations will be used to develop an appropriate path forward in the spring of 1997. Working with FEMP officials, regulators and stakeholders, the team will identify and define objectives, alternatives, risks and uncertainties associated with vitrification and will estimate the consequences, evaluate the alternatives and give advice regarding a path forward.

"The independent review team will help us evaluate the technical, stakeholder, regulatory, cost and schedule issues we are likely to encounter, and help us develop and recommend an appropriate path forward to FEMP stakeholders," said DOE-FEMP Office Director Jack Craig.

The Vitrification Pilot Plant (VitPP), a 1-ton-per-day output test facility designed to develop project-specific data required to apply the vitrification technology to final remediation of the silo wastes, has been operating. The VitPP is providing data needed for the design, construction and operation of final vitrification facilities for the silo wastes. Several batches of nonradioactive, surrogate materials were successfully vitrified into 22.5 tons of glass during initial operation of the VitPP earlier this year. However, technical difficulties have been encountered during efforts to demonstrate continuous, 24-hour reliable operation of the vitrification process, resulting in schedule delays and increased costs. As a result, concerns about the technology, cost and schedule have prompted further examination.

"Our current path forward for vitrification is to continue to operate the VitPP, work out the technical problems to improve the reliability of the vitrification technology, and allow the facility to provide the necessary data related to implementation of full-scale remediation of the silo wastes," Craig said.

(Continued on page 4)

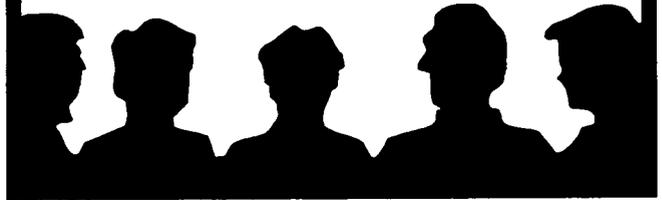
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Between now and next spring the independent review team — along with DOE, Fluor Daniel Fernald, U.S. EPA, Ohio EPA and FEMP stakeholders — will be evaluating all data including VitPP information not yet available but expected by February 1997. The decision process involves a series of meetings to review project data, review and analyze alternative path forward scenarios, and develop recommendations in support of a path forward decision.

“Through a combined effort of all parties involved, we will reach a consensus on the most appropriate path forward in the Spring of 1997 and proceed accordingly,” Craig said. “The DOE and Fluor Daniel Fernald team remain committed to the safe and final remediation of the FEMP silos.”

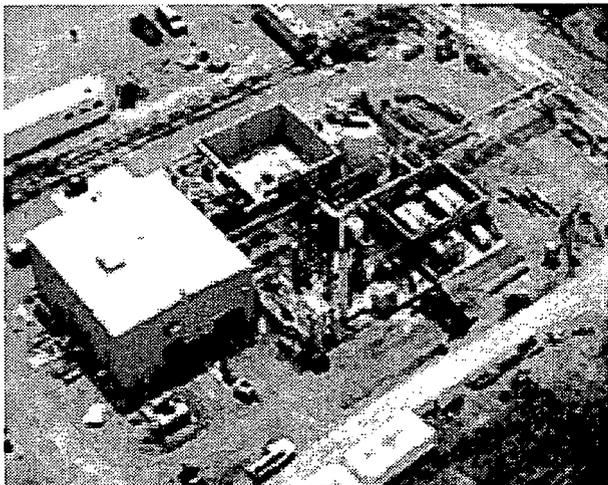
Vitrification Independent Review Team Members

Gail E. Bingham, consultant;
Gilles Chevrier, NUMATEC;
F. Robert Cook, consultant;
James N. Edmondson, consultant;
Robert Lawrence, West Valley Nuclear Services;
Todd Martin, Hanford Education Action League;
John Plodinec, Westinghouse Savannah River Co.;
Robert Roal, consultant; and
Benjamin L. Smith, consultant.



Regulators Delay Formal Dispute Resolution Until May 1997

U.S. EPA and Ohio EPA have agreed to delay formal dispute resolution regarding the FEMP Silos Project until May 15, 1997. This will allow the DOE-FEMP Office and Fluor Daniel Fernald to finalize a path forward for the Silos Project with input from FEMP stakeholders, regulators and an independent review team of technical experts.



FEMP File Photo 6150-94: A malfunction resulting in the leakage of nonradioactive materials from the melter has prompted suspension of FEMP Vitrification Pilot Plant operations while an evaluation is being conducted to determine the cause of the incident.

Vitrification Pilot Plant Operations Suspended After Incident

DOE and Fluor Daniel Fernald have suspended VitPP operations while they investigate an incident that resulted in a small stream of nonradioactive molten glass leaking from the bottom of the melter unit.

A small stream of nonradioactive molten glass leaked from the bottom of the melter unit, emptying its contents into a secondary container designed to capture it. The molten glass was, for the most part, contained. However, a small amount which leaked onto the floor and ignited the epoxy floor paint was quickly extinguished. The incident occurred Dec. 26. Nonradioactive, surrogate materials simulating FEMP waste were being vitrified in the facility at the time of the incident.

DOE and Fluor Daniel Fernald have initiated an evaluation to determine why it happened and what impact it may have on the project's path forward. Fluor Daniel Fernald has contacted the equipment supplier and intend to fully involve them in the evaluation, which is expected to require at least four weeks to complete. Results will be shared with FEMP stakeholders as soon as they are available.

Workers Prepare for Cold Weather Demolition of Plant 1

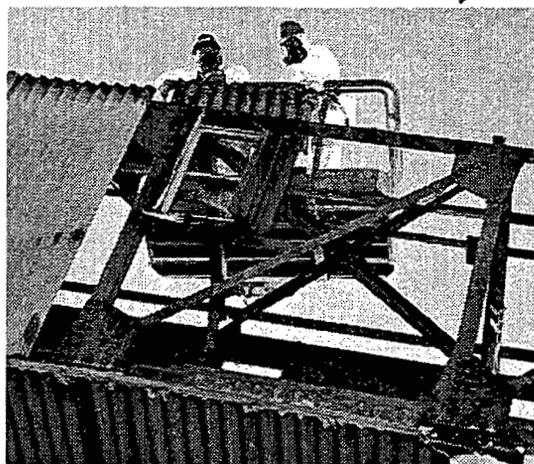
Plant 1 decontamination and dismantling (D&D) subcontractor Babcock and Wilcox (B&W) is completing interior D&D activities in Plant 1, the former incoming materials sampling plant, and began exterior transite removal in December.

"Assuming weather conditions remain stable enough to perform exterior D&D work, B&W and specialty demolition contractor Controlled Demolition Inc. (CDI) are planning to implode the Plant 1 steel superstructure using explosive charges in February," said Fluor Daniel Fernald Construction Manager Terry Borgman. He noted that severe weather may impact field work and delay the implosion several weeks. CDI imploded the FEMP's Plant 4 last August.



Plant 1 will be the third major production building demolished at the FEMP since 1994, although smaller-scale D&D projects continue. To clear the area around the Plant 1 perimeter, B&W demolished two smaller buildings near the plant in November.

FEMP File Photo 6385-230: Ore concentrates and recycled materials were weighed, sampled and milled in Plant 1. Several other supporting operations were also performed in Plant 1, including: drum sampling and washing, solvent recovery, repackaging and waste water treatment.



FEMP File Photo 6080-407: B&W workers remove transite from a Plant 1 exterior conveyor. The conveyor was used to transport drums from the ground to the fourth floor of Plant 1.

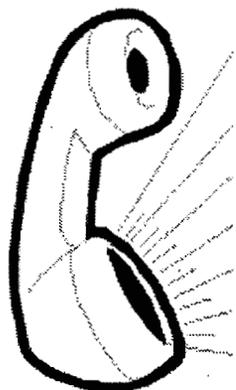
Fernald Community Group Discusses Strategic Planning

The Fernald Community Reuse Organization (CRO) met Dec. 10, from 7 p.m. to 9 p.m., at Ross High School. The community group discussed the strategic planning process; contractual and legal issues; and operational/membership affairs.

**Fernald
Community
Reuse
Organization**

CRO Chair David McWilliams distributed copies of a draft report from the National Council for Urban Economic Development (CUED), a national economic development organization retained by DOE to assist communities that have been or may be adversely affected by downsizing or site closures. The draft report reflects CUED's recommendations to the Fernald CRO on planning and organizational development issues. In October, a CUED technical assistance team met with CRO members, economic developers, community residents, site workers, local lenders, elected officials and others to collect background information for the report. Issues discussed included the CRO's goals; the regional economic development climate; available services for local businesses; and opportunities for technology transfer.

The CRO has agreed to meet the first Tuesday of every month, beginning Jan. 7.



513-
648-
4168

Fernald Community Reuse Organization
P. O. Box 38
Ross, OH 45061

O'Leary's Resignation Effective Jan. 20, 1997

On Nov. 13, after four years of service, Secretary of Energy Hazel R. O'Leary submitted her resignation to President Bill Clinton. She met with President Clinton to discuss DOE's accomplishments, as well as the remaining challenges for the administration's second term. President Clinton recognized DOE's many successes, including the difficult chore of changing culture while accepting significant new responsibilities. Under O'Leary's leadership, the Clinton administration has addressed critical national issues and made clear progress for the American people.

DOE Accomplishments During O'Leary's Tenure as Secretary

During O'Leary's service, DOE has:

- √ Worked to enhance national security in the post-Cold-war era. It provided the technical foundation and path-breaking science to end nuclear weapons testing, achieve a comprehensive test ban treaty and ensure the safety and reliability of the remaining weapons arsenal.
- √ Become more open and more accountable to the public. DOE made significant progress on cleaning up weapons sites and introduce corporate business practices to the DOE.
- √ Contributed to President Clinton's plan to eliminate the federal budget deficit by the year 2002.
- √ DOE radically reformed the way it does business. DOE adopted performance-based, oncontracting practices, privatized functions, realigned its workforce and undertook the first comprehensive review of the national laboratories. These changes will save taxpayers \$10.5 billion over a five-year period.
- √ Since 1993, DOE's budget has declined from \$19.3 billion to \$16.5 billion in 1997.
- √ Turned the corner on remediation of the environmental legacy of the Cold War. Nationwide, DOE has moved from study to cleanup of 744 waste sites at former nuclear weapons facilities, compared with the 68 that were cleaned up during the previous administration.
- √ Worked to increase the diversity of the nation's energy supplies, improve energy efficiency and advance the development of renewable sources of energy. In partnership with industry, DOE won more "Research and Development 100" award than all other government agencies ombined and more than twice as many as the top industrial winner.
- √ Helped improve the position of the United States in the global economic marketplace by promoting clean energy and advanced technologies. DOE has worked for American companies to secure business and jobs internationally, where energy infrastructure growth is estimated at \$4 trillion.
- √ Continued to be recognized for outstanding achievements in basic science by its national laboratories and scientists. Four of five 1995 Nobel Prizes in chemistry and physics, and two of three 1996 Nobel Prizes in physics were awarded for DOE-supported research.

Peña Nominated to Succeed O'Leary as DOE Secretary

During a press conference on Dec. 20, President Clinton presented nominees for his cabinet. Among the nominees was Federico Peña, who is currently serving as Secretary of Transportation, to replace DOE Secretary Hazel O'Leary, whose resignation becomes effective Jan. 20. Succeeding Pena at the Department of Transportation will be Rodney Slater, the Federal Highway Administrator. Clinton's nominees must be confirmed by the Senate.



Current Department of Transportation Secretary Federico Peña has been nominated by President Bill Clinton to succeed Hazel O'Leary as the DOE secretary.

"The Department of Energy has many missions, ranging from producing nuclear fuels and managing nuclear wastes to widening the frontiers of science at our national laboratories, to promoting energy efficiently and environmental technology," Clinton said. "Hazel O'Leary has made huge strides with that department and has done this while bringing unprecedented openness to the agency."

"As Secretary of Transportation, Federico Peña has proven himself a talented leader of a large and complex government agency," Clinton said. "He found ways to encourage new technologies, promote safety, protect the environment. I am happy to announce today that I will nominate him to be our new secretary of Energy. He will continue to streamline and reinvent the Energy Department. He will build on its unprecedented commitment to openness. He will oversee the urgent cleanup of our nuclear stockpiles and he will work with the energy industry to create economic opportunity by using energy in a way that does not hurt our environment."

Regarding his nomination, Peña said, "I am very honored that the President has asked me to take on a new challenge. I will be following a very tough act. Secretary O'Leary ushered in a new era at the Department of Energy. She pulled back the shroud of secrecy and made the government take responsibility for its actions."



Fernald Envoy Program Is Largest in DOE Complex

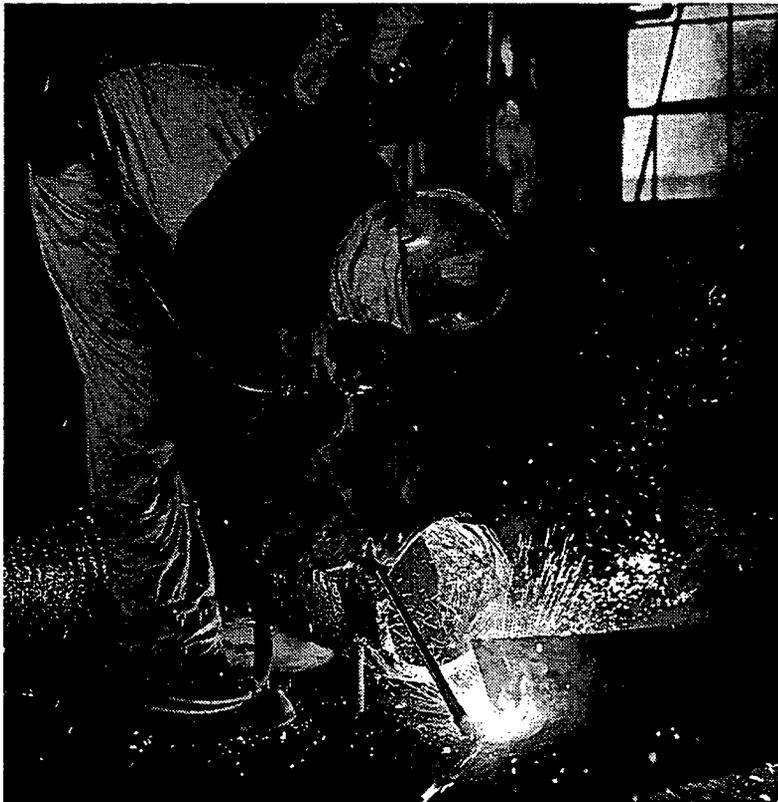
The Fernald Envoy Program, established in February 1994, through the collaborative efforts of DOE and Fluor Daniel Fernald, was initiated to promote one-on-one communication between FEMP personnel and local stakeholder groups. Employees of both DOE and Fluor Daniel Fernald are serving as envoys. These envoys have established relationships with a wide range of stakeholders including: adjacent property owners; business leaders; schools, environmental groups and agencies; and local elected officials.

The Fernald Envoy Program is designed to facilitate two-way communication and improve the decision-making process at the FEMP by increasing stakeholder involvement. Envoys provide detailed information about the FEMP to stakeholders and then listen to the suggestions and questions of the stakeholders. Envoys provide stakeholder feedback to FEMP decision-makers to use in making decisions regarding FEMP activities.

The Fernald Envoy Program is currently the largest and most diverse stakeholder involvement group in the DOE complex and has been used as a model for other sites. The program has been recognized by the DOE as an innovative way to inform and listen to stakeholders.

The Envoy Program is coordinated through Fluor Daniel Fernald Public Affairs. Questions about the Fernald Envoy program can be directed to DOE Public Information Director Gary Stegner, 513-648-3153, or Fluor Daniel Fernald Envoy Program Manager Julie Doering, 513-648-4069.

Fernald Report December 1996



FEMP File Photo 6429-203: The oxy-gasoline torch's superior performance is attributed to higher cutting temperature (5,000 degrees Fahrenheit versus 1,500 degrees Fahrenheit) and total oxidation of the metal while cutting.

Oxy-Gasoline Torch Technology Successfully Demonstrated at FEMP

DOE's Office of Science and Technology (EM50) is conducting the Large-Scale Technology Demonstration (LSTD) at the FEMP to support the remediation side of DOE (EM40). The LSTD is a partnership between EM50, EM40, the FEMP, and the D&D subcontractor.

The Oxy-Gasoline Torch Technology Demonstration was completed in October. Although the oxy-gasoline cutting technique has been around for many years, it was not considered a safe method because of the potential for a backflash that could cause an explosion. However, the oxy-gasoline torch used in the FEMP demonstration and developed by Petrogen, is designed to make backflash virtually impossible.

The areas where this technology proved most successful were as follows:

- o On thick metal, the oxy-gasoline torch cut significantly faster, requiring only 13 minutes to cut a 2-inch-thick steel plate. The acetylene torch required 27 minutes to make the same-length cut in a 2-inch-thick steel plate. The oxy-gasoline torch also makes a "cleaner cut." When cutting thick metal with an acetylene torch, the molten metal has a tendency to flow back together, reconnecting the pieces.

- o The oxy-gasoline torch was superior when cutting tanks/components that had significant quantities of rust on the interior surfaces. When cutting such metal with acetylene, the rust acted similar to cast iron making cutting difficult. The oxy-gasoline torch cut through the rust.

- o The economics of this technology also appears superior, but must be verified through a detailed cost-benefit analysis. The oxy-gasoline torch system costs about \$800 more than an acetylene torch system. However, there are significant fuel cost savings. When cutting thick steel, about \$3 worth of fuel lasted all day. About \$50 worth of acetylene would be required to last the same length of time.



FEMP File Photo 6429-150: The D&D subcontractor has purchased an oxy-gasoline torch for its own use in Plant 1 D&D work at the FEMP.



Can You Dig It?

The entire sixth grade class at Ross Middle School had a chance to answer that question as they set about "digging" into the past.

On Nov. 8, students, teachers and parents made a trip to Governor Bebb Preserve in Morgan Township which served as a culminating event of an archaeology unit. The teachers and Joe Schomaker, Fluor Daniel Fernald cultural resources coordinator, have been working on a school-to-work project that involves students in learning about the early settlers and indians that inhabited the area. By examining "clues" and carefully studying signs left behind, students can reconstruct what the area looked like hundreds -- even millions -- of years ago. This is one of several FEMP Education Outreach programs with Ross Schools.



FEMP File Photo 6481-60: "Observing current earth processes helps us understand geological changes that took place millions of years ago," Thea Layne, Fluor Daniel Fernald geologist, (left) tells students at Governor Park Preserve.

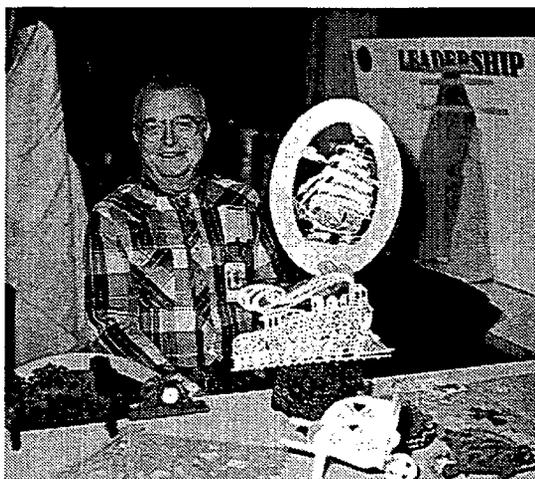
During their excursion, the students rotated through different stations where they hunted for fossils, dug for artifacts, and learned about pioneer life. Robin Plowman, sixth grade teacher said, "The kids were fascinated with the fossils. The whole day piqued their curiosity, and they are anxious to go back for another day. Actually getting your hands into history brings the lessons alive."

The learning didn't stop there; the students have identified their fossils and created a display back at school. Participants also received certificate recognizing them as "Cultural Resource Preservationists."

FEMP Hosts Cultural Awareness Plus Day

Who would have imagined that on a day in November at the FEMP one could find displays about sailboats, African instruments, fretwork, cross stitch, primitive archery, quilts and much more? One could also pick up recipes and food samples including German Christmas cookies, HOT salsa and sweet potato pie. A person could also get information about adoption, genealogy and family heritage.

On Nov. 22, the Fluor Daniel Fernald Diversity Council hosted the first Cultural Awareness Plus Day, when employees exhibited highlights of their heritages/cultures in a day of education and appreciation. Employees also showed hobbies, skills or special interests.



It is important to recognize that everyone has special talents and abilities which make the FEMP a model facility. From these varied backgrounds, innovative ideas and perspectives develop. The Fluor Daniel Fernald Diversity Council hopes to hold the event annually. Christa Scott, a member of the organizing committee, felt the event was a success and "gave people an opportunity to better understand and appreciate the different heritage and culture each individual brings to the FEMP."

FEMP File Photo 6489-8: DOE-FEMP employee Dert Harper displays one of his an elaborate wooden creations during Cultural Awareness Plus Day. Harper's hobby is a fine wood-working art called "fretwork."



FEMP File Photo 6489-13: Kathy Nickel, DOE-FEMP employee, and son Nathaniel bring awareness regarding international adoption.

Fernald Community Involvement Team "Adopts" New Activity

Adopt-A-Highway

The Ohio Department of Highways' Adopt-A-Highway Program is one of the Fernald Community Involvement Team's (FCIT) newest activities. On Nov. 16, 10 FCIT volunteers met to "pick up trash" along the stretch of State Route 128 from mile marker 12 to mile marker 13.2 — Fluor Daniel Fernald's "adopted" section of highway. The cleanup crew picked up about 40 bags of trash. The next cleanup day is planned for February or March.



FEMP File Photo 6484-16: From left, Ted Spradlin, Carla Fultz, Sherry Webb and D. Q. Benedikt take a break from picking up trash along State Route 128 to pose.



FEMP File Photo 6484-21: Fluor Daniel Fernald employees Ted Spradlin, left, Carla Fultz and D. Q. Benedikt, far right, pick up trash beside a section of State Route 128, the location of Fluor Daniel Fernald's "adopted" highway.



FreeStore/FoodBank Food Drive

From Nov. 11 through Nov. 22, the FCIT conducted a food drive, with contributions going to the FreeStore/FoodBank. The FCIT drive yielded seven barrels of non-perishable food items.

Hoxworth Blood Drive

On Nov. 25 and 26, the FCIT sponsored the Hoxworth Blood Drive in which 65 FEMP employees gave the "gift of life." FEMP employees have been donating blood for 10 years. Several employees are members of the "Gallon or More" donation club. Hoxworth Blood Center will conduct the next FEMP blood drive May 23 and May 27.



Thorium Overpacking Project Continues Ahead of Schedule

Overpacking of thorium-containing drums continues ahead of schedule. As of Nov. 29, a total of 2,127 drums had been packaged into 358 thorium overpacking containers since the project began May 6, 1996. During November, 72 thorium overpacking containers were shipped to the Nevada Test Site (NTS).

FEMP Waste Shipping Report

The volume, in cubic feet (cf), of low-level radioactive waste shipped to the NTS for November 1996 was 15,027 (external). As of Nov. 29, 1996, the FEMP had shipped 34,845 cf (external) of low-level radioactive waste to NTS for fiscal year 1997.

Low-level radioactive waste volume reduction includes approximately 405 containers of legacy low-level uranium residue and 891 containers of thorium oxalates/hydroxides identified in *FY 1996 Inventory Reduction Plan for Legacy Wastes at the FEMP*.

Efforts for fiscal year 1997 will be directed towards complete reduction of legacy uranium residue and asbestos inventories, as well as a majority of the thorium oxalate/hydroxide inventory in Building 65.

The volume of low-level radioactive waste materials shipped to NTS in November 1996 per waste stream is as follows:

Waste Stream	External Vol. (cf)
Process Area Scrap	997
Thorium Residues	5,791
Contaminated Trash	2,940
Construction	2,522
	2,777

The volume of low-level radioactive waste materials shipped to NTS in fiscal year 1997 (as of Nov. 29, 1996) per waste stream is as follows:

Waste Stream	External Vol. (cf)
Process Area Scrap	1,109
Thorium Residues	19,288
Contaminated Trash	6,539
Construction	3,784
	4,126



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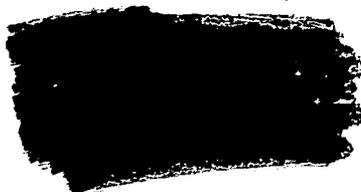
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