PADUCAH GASEOUS DIFFUSION PLANT
SITE SPECIFIC ADVISORY BOARD

padssab@apex.net www.oro.doe.gov/pgdpssab/

2000 McCracken Boulevard • Paducah, Kentucky 42001 • (270) 744-9010

Co-Chairs

Mark Donham
Vicki Jones

Board Members

Kit Atkinson
Nola Courtney
Edward Duff
Angela Farmer
David Fuller
Judy Ingram
Merryman Kemp
Ronald Lamb
Linda Long
Douglas Raper
Craig Rhodes
Rosa Scott
Jim Smart, Ph.D.
Pat Stephenson
Bill Tanner
Rev. Gregory Waldrop

***Ex Officio* Members**

Carl Froede, Jr.
Environmental Protection Agency

Wayne L. Davis
Fish and Wildlife Resources
(Kentucky)

Tuss Taylor
Division of Waste Management
(Kentucky)

John A. Volpe, Ph.D.
Radiation Control Branch
(Kentucky)

Jimmie C. Hodges
Department of Energy

DOE Federal Coordinator

John D. Sheppard

Additional information about contacting board members directly can be obtained from the SSAB web site or by contacting Shirley Speer at (270) 462-2550.

Agenda for the September 16, 1999, meeting:

- Call to order/Discussions
- Minutes
- Public Comments and Questions
- Update on DOE EH investigation of environmental, health and safety concerns
- Information Handouts
- Program Status Updates
  - EM&EF Projects
  - Vortec—Draft Environmental Assessment
  - Depleted UF_6
  - Scrap Metal
- Sitewide Cumulative Effects
- Programmatic Presentations
  - Surface Water Operable Unit Discussion
  - Land Use Control Assurance Plan (LUCAP)
  - Innovative Treatment Remediation Demonstration (ITRD)
  - WAG 6—Gregory Waldrop
  - Response to requests for clarification of *Paths to Closure*
- SSAB Subcommittee Reports
  - Community Relations—Judy Ingram
  - Consultant—Bill Tanner
  - Membership—Nola Courtney
- Action Items from August Meeting
- SSAB Recommendations Status—Jimmie Hodges
- Administrative Issues for the Board
  - Notification of members regarding news items
  - Co-chair Status/vote on proposed by-laws change
  - Review of the SSAB Draft Workplan
  - Future Tours
  - Financial Update
  - Chairs Meeting Agenda
  - Stewardship Conference in Oak Ridge

Paducah Gaseous Diffusion Plant
Site Specific Advisory Board
Consensus Recommendation

DATE: September 1, 1999

NUMBER: 99-1

RESPONSE REQUESTED BY: September 30, 1999

REGARDING: Free release of metals from scrapyards

TO: Jimmie Hodges, DOE

CC: SSAB members, ex-officio members

At a regular meeting of the Site Specific Advisory Board (SSAB) held Aug. 19, 1999, the board discussed the proposal to recycle materials present in the scrapyards of the Paducah Gaseous Diffusion Plant and passed the following:

RECOMMENDATION:

"The Paducah SSAB opposes any plan for 'free release' of and/or unrestricted end use of radioactively contaminated metals into commerce, absent federal regulations on this issue."

CO-CHAIRS

Mark Donham
Route 1
Brookport, IL 62910
Markkris@earthlink.net

Vicki Jones
1131 Hamburg Road
Kevil, KY 42053
jonesvw@ornl.gov

PADUCAH GASEOUS DIFFUSION PLANT (PGDP)
SITE SPECIFIC ADVISORY BOARD
ENVIRONMENTAL MANAGEMENT PROJECT UPDATES
September 16, 1999

1. PROJECT: Waste Area Groups 3, 8, 28 and Data Gaps

Summary: Current work on Waste Area Groups 3, 8, and 28 has been combined into one project. Remedial Investigations will be done on WAGs 3 and 28. A Site Evaluation will be done on WAG 8. In addition, this project includes a 'Data Gaps' investigation to collect groundwater and subsurface soil samples to supplement existing data.

WAG 3 includes three burial grounds within the plant security fence, in the western section: C-747 Contaminated Burial Yard (Solid Waste Management Unit/SWMU 4), C-746-F Classified Burial Yard (SWMU 5) and C-747-B Burial Yard (SWMU 6). The concern at WAG 3 is potential contributions to groundwater contamination from the content of the burial grounds: natural and slightly depleted uranium, technetium-99 (Tc-99), magnesium fluoride, uranium-contaminated solid waste, security-classified weapons components, radionuclide-contaminated scrap metal, and slag from nickel and aluminum smelters.

WAG 8 includes: SWMUs 82-85, which are the plant electrical switchyards (C-531, C-533, C-535, and C-537), as well as the C-340 Reduction and Metals Facility, which is inactive and is part of the Decontamination and Decommissioning program. The concern at WAG 8 is similar to WAG 28, but the Site Evaluation will first determine whether contaminants have been released.

WAG 28 includes SWMUs 99, 183, 193, 194, which are locations related to the 1950s construction of the plant, including the C-745 Kellogg Building Site, the McGraw Underground Storage Tank, McGraw Construction Facilities, as well as Area of Concern 204 (potential construction debris area). The concern being addressed at WAG 28 is potential contributions to groundwater contamination.

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Status:

- Remedial Investigation and Site Evaluation field work for WAGs 8 and 28 have been completed. Field work on WAG 3 and the Data Gaps are continuing.
- Upcoming regulatory documents will be: the Draft (D1) Remedial Investigation Report for WAG 28, scheduled to be issued to regulatory agencies in January 2000; the D1 Site Evaluation Report for WAG 8, June 2000; and D1 Remedial Investigation Report for WAG 3, August 2000.

2. PROJECT: Waste Area Group 22, SWMU 2

Summary: SWMU 2 is the C-749 Uranium Burial Ground in the west-central portion of the plant.

The SWMU 2 Feasibility Study (September 1998) presented four potential remedial alternatives: 1) No further action other than: continued groundwater monitoring, current institutional controls, and implementation of deed restrictions; 2) In-situ containment with soil cap and subsurface barriers; 3) In-situ containment using low-pressure grout injection with a cap; and 4) Excavation of waste and soils. The preferred remedy, for DOE, in the D1 Proposed Plan (October 1998) for SWMU 2 is the 'No further action' option. The Kentucky Department for Environmental Protection considers excavation to be the only acceptable remedy.

Status:

- KDEP has directed DOE to issue the (D2) Proposed Plan by 9/30/99 reflecting excavation as the preferred remedy. EPA has not yet commented on the D1.
- A final (D3) Proposed Plan and D1 Record of Decision are tentatively scheduled for mid-2000.

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3. PROJECT: Waste Area Group 22, SWMUs 7&30

Summary: This project includes the investigation of the C-747-A Uranium Burial Ground and C-747-A Burn Area in the northwest corner of the plant.

The D2 Feasibility Study for SWMUs 7 & 30 was issued to regulatory agencies for review in November 1998 and proposed four remedial alternatives: 1) No action; 2) Limited action (installation of additional monitoring wells and long-term groundwater monitoring); 3) Soil cover and groundwater monitoring with additional monitoring wells; and 4) Surface soil removal and groundwater monitoring with additional monitoring wells.

Status:

- The Environmental Protection Agency Region 4 has given conditional approval of the D2 Feasibility Study.
- The Kentucky Department for Environmental Protection approved the D2 Feasibility Study on May 3, 1999.
- Information from this Feasibility Study will be incorporated into the Burial Grounds Operable Unit project.

4. PROJECT: Northwest/Northeast Plume Groundwater Systems

Summary: Approximately 404 million gallons of groundwater water have been treated through August 1999 at the Northwest Plume Groundwater Treatment Facility since operations began in September 1995. The facility operates under a 1993 Record of Decision to contain a high contamination zone of TCE and Tc-99. Approximately 213 million gallons of groundwater have been treated through June 1999 via the Northeast Plume system since the facility began operations under a Record of Decision in February 1997. The facility operates under a 1994 Record of Decision to contain a high contamination zone of TCE.

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Status:

- 9.6 million gallons groundwater were treated at the Northwest System during August 1999, with the facility operational 98.6% percent of the time.
- No groundwater was treated at the Northeast System during August 1999.
- The Northeast Plume system was shut down on June 25 to enable USEC to conduct maintenance on the C-637-2A cooling tower lines. Maintenance is still underway and is scheduled for completion by September 30, 1999.

5. PROJECT: Lasagna™ Soil Remediation at SWMU

Summary: Lasagna™ is a soil remediation technology already demonstrated at PGDP by DOE and industry partners (Monsanto, DuPont, General Electric), and then selected to reduce TCE levels in soil at SWMU 91 under a 1998 Record of Decision. SWMU 91 is an area of approximately one acre on the west side of the plant once used to drop test empty DUF6 cylinders. Lasagna™ is an in-situ technology that uses buried electrodes to move water through soil, picking up contaminants. The water passes through buried treatment zones that degrade the TCE.

Status:

- Bechtel Jacobs Company awarded a subcontract February 12, 1999, to CDM Federal for the design, construction, and operation of the Lasagna™ treatment system at SWMU 91. D1 Remedial Design Report, Remedial Action Work Plan, and Construction/Quality Control Plan were issued to regulators on May 18, 1999. The state has approved these documents.
- The D1 Operation and Maintenance Plan was issued June 3, 1999.
- Construction of the treatment system began the first of August, with operations scheduled to begin in October 1999.
- The system is expected to operate for approximately 2 years in order to achieve targeted clean-up levels.

PROJECT: Groundwater Operable Unit/WAG 6

Summary: WAG 6 includes five SWMUs near the C-400 Chemical Cleaning Facility, which is still in operation, and leased by DOE to USEC, Inc. Past operations at the facility resulted in TCE and Tc-99 groundwater contamination. Use of TCE for cleaning equipment was ended in 1993. Following the completion of the WAG 6, 27 and 28 Remedial Investigations, all data will be used to develop a Feasibility Study for the Groundwater Operable Unit, which includes the groundwater plumes themselves as well as the primary sources of TCE and Tc-99 groundwater contamination. Following this Feasibility Study, a Proposed Plan and Record of Decision for the selected remedial action will be developed. The selected remedial action will be designed and implemented after the ROD is signed.

Status:

- The D2 WAG 6 Remedial Investigation Report was submitted to the U. S. Environmental Protection Agency Region 4, State of Kentucky and stakeholders on May 7, 1999.
- Comments from the State of Kentucky were received from their review of the Feasibility Study Workplan for the Groundwater Operable Unit at the Paducah Gaseous Diffusion Plant. Resolution of the comments received and submission of a D2 version of the work plan is pending.
- The WAG 6 Treatability Studies reports, which evaluate Surfactant Flushing and Chemical Oxidation of the Regional Gravel Aquifer, were issued in February 1999. The information obtained from these studies will be incorporated in the Groundwater Operable Unit Feasibility Study.
- Discussions were held this week with the state concerning their request for a D3 Wag 6 Remedial Investigation Report.
- Comment response summary for comments received from state on D2 WAG 6 RI Report is under development, with an Oct. 2, 1999 target for submission.
- The Innovative Treatment Remediation Demonstration process for the Groundwater Operable Unit Feasibility Study continued with a meeting at Kevil August 19-20, 1999. The scope of the ITRD process

includes a cooperative public-private partnership developed to reduce remediation schedules and costs by accelerating acceptance and use of new technologies. The program coordinates DOE, EPA, industry, and regulatory agencies in evaluating, implementing and validating innovative remediation technologies at selected DOE sites.

PROJECT: Waste Area Groups 9 & 11

Summary: WAGs 9 and 11 include seven in-ground tanks, vaults and pits at the PGDP. A Site Evaluation was conducted in Fiscal Year 1998 to determine whether any releases of contaminants had occurred. WAG 9 consists of the C-722 acid neutralization tank, off the northeast corner of the C-720 maintenance facility; the C-712 acid neutralization tank, off the southwest corner of the C-710 laboratory; the C-616-L Pipeline and vault soil contamination area; and the C-729 Acetylene building drain pits, just east of C-720. WAG 11 consists of the C-410-B hydrofluoric acid (HF) neutralization sludge lagoon; the C-410-E HF emergency holding pond; and the C-410-C HF neutralization tank.

Status:

- The D1 Site Evaluation Report was issued December 23, 1998.
- Any actions beyond these recommendations would be deferred to the Surface Soils Operable Unit project.
- The Kentucky Department for Environmental Protection provided comments on the D1 Site Evaluation Report on March 26, 1999, and these comments are being addressed.
- The D2 Site Evaluation Report for WAGs 9 & 11, was issued to KDEP on June 24, 1999. The report includes results of the Site Evaluation conducted on the seven SWMUs in 1998, and makes recommendations for each SWMU. No action was recommended for three SWMUs. Any additional work on the remaining SWMUs is expected to be addressed by the Surface Soils Operable Unit Remedial Investigation Work Plan, scheduled to begin development in November 1999.

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8. PROJECT: Waste Area Group 23/PCB spill sites

Summary: WAG 23 consists of eight SWMUs inside the PGDP security fence, and one outside the fence, located near the C-611 Water Treatment Facility fence on DOE property. Past use of PCBs and subsequent accidental spills and leaks of oils that contain PCBs caused the surface soil contamination at these SWMUs. Excavation of approximately 175 cubic yards of contaminated soil at several PCB sites was completed in late 1997 and early 1998.

Status:

- A D1 Proposed Remedial Action Plan recommending No Further Action was submitted to regulators November 6, 1998. EPA provided comments, dated December 17, 1998.
- A Residual Risk document and explanation of average concentrations calculations were provided to the State of Kentucky on February 18, 1999.
- State comments on the D1 Proposed Remedial Action Plan were received April 16, 1999.
- At the request of the Kentucky Department for Environmental Protection, supplemental samples have been collected from the drainage area south and east of SWMUs 56 and 80.
- The D2 Proposed Remedial Action Plan was issued to regulators May 26, 1999.
- The Kentucky Department for Environmental Protection rejected the no action preferred option in the D2 Proposed Remedial Action Plan in a letter dated June 29, 1999. The letter requested a resolution meeting by July 29, 1999. DOE's no action proposal was based on promulgated EPA action levels for PCB-contaminated soils.
- On July 27, DOE wrote a letter officially invoking the informal dispute resolution process.
- On August 27 DOE extended the informal dispute resolution process by 15 days; informal dispute resolution will end on 9/13/99. If the dispute has not been resolved at that time issue will be elevated to the formal dispute level.

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9. PROJECT: Waste Area Group 27

Summary: WAG 27 consists of potential or known sources of TCE on the west side of PGDP suspected of contributing to groundwater contamination. WAG 27 includes the C-747-C Oil Land Farm, SWMU 91 (the cylinder drop test area), SWMU 196 (C-746-A warehouse septic systems) and the C-720 maintenance facility.

Status:

- Issued D1 WAG 27 Remedial Investigation Report December 23, 1998.
- EPA comments were received March 31, 1999.
- State comments were received on April 5, 1999.
- The D2 Remedial Investigation Report was issued to regulators June 3. The state conditionally approved the D2 on July 13, 1999, with the provision that an errata page would be completed within 45 days. That response was submitted on August 27, 1999, completing all requirements for the development of the WAG 27 RI Report. Feasibility Study activities have been incorporated into the Groundwater Operable Unit.

10. PROJECT: Surface Water Operable Unit

Summary: The Surface Water Operable Unit includes the Big and Little Bayou Creeks, all Kentucky Pollutant Discharge Elimination System (KPDES) outfall ditches, and the primary source areas potentially contributing to contamination in these locations, including: past releases from C-333A and C-337 vaporizers and the switchyards, and sediment from plant storm sewer systems. Primary contaminants of concern are PCBs and radionuclides with metals as a secondary concern.

Status:

- Issued the D1 Scoping Document March 29, 1999.
- Data Quality Objective meetings were conducted April 14-15, 1999, with regulators and representatives of the Kentucky Fish and Wildlife Resources Department, and U.S. Fish and Wildlife Services.

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- The Risk Assessment for the SWOU is scheduled to include baseline risk assessments for human health and the environment.
- The D0 Remedial Investigation Work Plan was sent to SWOU team members for comment on July 16, 1999. The D1 plan is scheduled to be transmitted to regulators September 30, 1999.

11. PROJECT: Waste Treatment, Storage and Disposal

Summary: Waste Treatment and Disposal involves materials classified as low-level mixed waste and mixed waste stored at the Paducah Gaseous Diffusion Plant. These wastes include both hazardous materials and those containing low levels of radioactivity. There are more than 50,000 55-gallon drum equivalent of waste stored at the PGDP. In addition, there are an estimated more than 60,000 tons of scrap metal stored at the plant.

Status:

- On July 12, a Request for Proposals was issued by Bechtel Jacobs Company LLC to eight pre-qualified bidders for a multi-year Waste Operations subcontract. The contract includes waste storage operations, waste characterization, compliance, data tracking and related tasks.
- The Kentucky Division of Waste Management conducted its annual inspection of the C-404 Hazardous Waste Landfill on July 21. The three representatives did not note any findings, but commented the landfill activities were performed well and within compliance of the permit and procedures. A final reported will be submitted to DOE within the next few months.
- About 2,900 gallons of PCB/RCRA liquid waste were shipped to the TSCA Incinerator in Oak Ridge on August 31, 1999, in accordance with the Site Treatment Plan. It was the first shipment to the TSCA incinerator for the year. A second shipment is scheduled later this month.

-END-

PLEASE SIGN IN

Paducah Gaseous Diffusion Plant
Site Specific Advisory Board

Name	Affiliation
Norm Jetta	Vortec Corp.
ERNEST R. WHITEHEAD	CHC
CORINNE WHITEHEAD	CHC
Vivian Puckett	CHC
Al Puckett	IEN
Charlene Brown	
Jim Malone	courier - journal
Craig Rhodes	SSAB
Susan Stanford	
David Dollins	DOE
Bob Gresham	
DAVID FULLER	PACE
Donald Bennett	Retired
Mike Turner	USEC
JC Freeman	Sen Jim Bunning
Doug Thompson	USEC
Todd Adams	State Rad Environmental Mont. Sec.
Eric Scott	State Rad/Env. Mont. Sec.
Myrna Espinosa Redfield	DOE
Kristi Hanson	
VW Jones	SSAB
Jackie Kittnell	AEHSP, Knoxville, TN
Clara Harding	Paducah
Martha Alls	Paducah

September 16, 1999

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Paducah Gaseous Diffusion Plant
Site Specific Advisory Board

Name	Affiliation
✓ Ed Duff	SSAB
✓ Bill Tanner	SSAB
✓ J/M SMART	SSAB
✓ Doug Raker	SSAB
✓ Del Pratt	Paducah
✓ Jim Lane	KDFWR
✓ Ronald Lauch	SSAB
✓ John Shepard	DOE
✓ Rosa M. Scott	SSAB
✓ Cindy Humphreys	Southern Illinoisan
✓ GEORGE Tillson	SSAB
✓ Jerryman Kemper	SSAB
✓ Judy Ingram	SSAB
✓ David Michaels	DOE
✓ Walter Perry	DOE
✓ David Hutcheson	LAN-CON, Inc
✓ Jo Kelly Jortch	citizen
✓ [illegible]	citizen
✓ Lou Coots	CITIZEN
✓ Ben Bagley	Kentucky Div Waste Management
✓ Chris Marshall	citizen
✓ Kit [illegible]	SSAB
✓ Mark Donham	SSAB
SS Pat Stephenson	SSAB

September 16, 1999

PLEASE SIGN IN

Paducah Gaseous Diffusion Plant
Site Specific Advisory Board

Name	Affiliation
✓ Shirley Speer	JACOBS
✓ Bruce Gardner	DIC
✓ Tom Taylor	KDWM
✓ Debbie Wettier	Bechtel
✓ Jimmy Massey	Bechtel
✓ Joe Walker	Paducah Sun
✓ John Tillson	
✓ David Tidwell	DOE
✓ Sam Leone	
✓ Dave Massey	

September 16, 1999

TO: Community Outreach Subcommittee, Craig Rhodes, Greg Waldrop, Judy Ingram, Jim Smart, Bill Tanner, Merryman Kemp
FROM: Bruce Gardner
RE: Logo creation

Attached are recommendations for hiring a design firm to create a logo and theme for the SSAB. Judy will contact you soon to arrange for a meeting to discuss these.

Options for creation of logo/theme for SSAB

BACKGROUND

The Paducah Site Specific Advisory Board desires to create a logo and develop a theme to enhance public awareness of its role and work relating to the cleanup of the Paducah Gaseous Diffusion Plant. Although the SSAB name must be officially retained, the board's logo can incorporate the name Citizens' Advisory Board.

Design Integration Group (D.i.G.) has been awarded a subcontract from Bechtel Jacobs Company LLC to provide administrative and design/writing services for the board and its role is being phased in.

OPTIONS

1. *Retain D.i.G. to design the logo and develop the theme under its contract, which takes effect Oct. 1, 1999.* D.i.G. would work with the Community Relations Subcommittee to develop ideas for presentation to the entire board.

2. *Solicit proposals from outside advertising/public relations firms.* Under this proposal, D.i.G. would act as the board's agent in obtaining and coordinating the services of an outside design firm. Again, working with the Community Relations Subcommittee, ideas would be developed for consideration by the entire board.

3. *Solicit proposals from both internal and external sources.* Under this option, the Community Relations Subcommittee would solicit, identify and work with a design firm to create a logo and theme before presentation to the full board for approval. Requests for Proposal would be sent to D.i.G., firms in Paducah and interested design firms in the region.

ADVERTISING/PR/DESIGN FIRMS WORKING IN THE PADUCAH AREA

Bibb & Lott, Clarksville, TN – Advertising, design
CommunityNet, Paducah – Internet service, design, advertising
Focus Communications Group, Paducah – Design, advertising, photography
Horizon Graphics, Paducah – Graphic Design, printing
T Hursts & Associates, Bowling Green – Advertising, design
Mazzone Communications, Paducah – Publishing
Keith Todd & Associates – Advertising, public relations
Lyles Advertising, Paducah – Advertising, design

In addition, there are a number of firms working in the Knoxville/Oak Ridge market with experience within the DOE system or with SSABs.

COST ANALYSIS

Creating a logo/theme can be a very expensive proposition. Unless firms are willing to give the board a break because of its public role – unlikely because of the number of non-profits already getting low- or no-cost services from area advertising/PR firms – the board is looking at spending at least several thousand dollars. Fees for qualified design firms range from $60-$75/hr. in the Paducah area to $150 and up in larger markets. Logo creation is a process that can take anywhere from a couple of days to a couple of weeks, depending on complexity and the number of layers of review it must go through – the more people who have to sign off on it, the more it will cost.

The board can take steps to avoid large hourly fees. It can:

1) Set a budget for the logo/theme and tell the design firm(s) at contract award or the issuance of a Request for Proposals. This holds down costs, but can also limit creativity because it guarantees the designer will spend no more than a set number of hours on the project.

2) Set a "not to exceed value." This places a "stop" on billing, while giving a designer greater freedom in creating the product than a defined price does.

3) Authorize the Community Relations Committee, with the approval of the co-chairs, to work with the design firm. This reduces revisions and meeting presentations by the designer, and should hold costs down.

At a minimum, the board should count on spending $2500, more likely $3500 because of the theme development that goes along with the logo creation.

Option II is the most expensive of the options presented because it would require paying a design firm to create the logo and theme and D.i.G. to administer the work. Option III would be less expensive because of the elimination of administrative overhead. Option I would cost no more than Option III and should cost less because of D.i.G.'s familiarity with the SSAB.

DOE NEWS

September 16, 1999

News Media Advisory

Update on Energy Secretary Bill Richardson's Media Availability Sessions While in Paducah

(Note a correction and an addition)

WHO: Secretary of Energy Bill Richardson.

WHAT: There will be three media opportunities during Secretary Richardson's visit to Paducah today and tomorrow (all times CST).

WHEN/WHERE:

- **Thursday, September 16 – 8:30 p.m.** -- The Secretary will hold a 10-minute press availability session following the 7:30-8:30 p.m. Community meeting at the Paducah Information Age Park, 2000 McCracken Blvd., Paducah.

- **Friday, September 17 - 10:30 a.m. –** The news media will have an opportunity to obtain photographs and video of Secretary Richardson during his meeting with DOE and contractor employees. To cover this event, news media representatives must be present at the Bechtel Jacobs Company LLC office building, 761 Veterans Avenue, Kevil, ***by no later than 10:30 a.m.*** After badging and access arrangements are completed, there will be a photo and video opportunity only (no sound, please) during the last five minutes of the employee meeting.

- **Friday, September 17 – 11:05 a.m. –** Media availability at the Bechtel Jacobs Company LLC office building, 761 Veterans Ave., Kevil.

CONTACT: For more information, please contact Steven Wyatt, DOE Public Affairs, at the Paducah Site Office (270) 441-6830.

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DOE NEWS

NEWS MEDIA CONTACTS:
Steven Wyatt, 270/441-6830
Jeff Sherwood, 202/586-5806

FOR IMMEDIATE RELEASE
September 16, 1999

Richardson Announces Health Initiative for Paducah Workers

$21.8 Million Supplemental Budget Amendment for Paducah, Portsmouth and Oak Ridge

Secretary of Energy Bill Richardson announced today that the Clinton Administration will propose legislation to establish a pilot program for compensating current and former Department of Energy (DOE) contract workers at the Paducah Gaseous Diffusion Plant in Kentucky for cancers caused by job exposure to radioactive contaminants. Secretary Richardson also announced a $21.8 million supplemental budget amendment to pay for expanded worker medical monitoring, radiation exposure assessments and accelerated cleanup at the gaseous diffusion plants in Kentucky, Ohio and Tennessee.

"The compensation proposal and the budget amendment follow through on my August commitment to address concerns about environment, safety and health issues at the gaseous diffusion plants," said Secretary Richardson. "The budget amendment provides a realistic strategy to immediately improve health and safety conditions at the plants and I trust that Congress will act favorably on the measure."

Secretary Richardson is visiting Paducah tonight and Friday, September 17. He will meet with residents, civic leaders, employees, labor representatives and former workers to provide an update on the department's work to date and to hear from the Paducah community firsthand.

Under the proposed pilot compensation program, DOE contractor workers at the Paducah site with cancer caused by their work-related exposure to materials contaminated by plutonium could receive lost wages and health benefits. Details of the program will be provided in the proposed legislation. In addition to this very targeted pilot health program, the Energy Department is also conducting an interagency investigation into whether exposures may have caused disease among workers at other DOE sites like Portsmouth and Oak Ridge. The pilot program will help evaluate the need for similar programs at these other sites.

(MORE)

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On July 15, Secretary Richardson announced a similar proposal to help current and former Department of Energy contract workers who are ill because of exposure to beryllium at DOE nuclear facilities. The beryllium proposal and today's announced pilot project are modeled after the Federal Employees' Compensation Act program and will provide similar benefits. The health initiative was designed to fill in gaps in the current system for DOE contract workers. Unlike federal employees who are covered by a federal workers' compensation system, employees of DOE contractors have historically been covered by the various state workers' compensation programs, where it is more difficult to prove occupational illness.

The legislative proposals for beryllium and the pilot project for Paducah Gaseous Diffusion Plant workers are expected to be submitted to the Congress in the next few weeks. An interagency review focusing on whether there are other illnesses that warrant inclusion in this program is ongoing. Recommendations are expected in March 2000.

Contractor workers at the Paducah uranium enrichment facility were potentially exposed to plutonium and other radioactive contaminants as a result of the Atomic Energy Commission's reuse of uranium previously used in the production of plutonium. The use of these recycled reactor tailings began in the 1950s and, although their use was discontinued in the 1970s, plutonium and other radioactive residues are still present in small quantities at the facility. However, concerns have been expressed that, until 1990, workers may not have been adequately informed about the contamination or trained in work practices designed to protect them from the possible health impacts of such potential exposures.

Secretary Richardson also announced details about a Fiscal Year 2000 budget amendment to ensure that all important health and safety issues at the gaseous diffusion plants are addressed. The funds will accelerate health, safety and cleanup activities at the plants. Secretary Richardson said he expects the Office of Management and Budget to transmit the amendment to Congress shortly. The proposed $21.8 million amendment will support the following activities at Paducah, Kentucky; the Portsmouth plant in Piketon, Ohio; and Oak Ridge, Tennessee:

- $7 million for environment, safety and health programs to:

  -- provide technical expertise on radiological issues, including: identifying and analyzing worker health and safety risks and exposures at the plants; assessing the plants' radiation and contamination control programs and waste practices; and reviewing the historical generation and flow of recycled uranium throughout the DOE complex; and

  -- substantially increase medical monitoring to detect potential health hazards to former and current workers at the plants. Medical monitoring is currently provided for 1,200 former workers per year at the gaseous diffusion plants, including Paducah. The program will now be expanded to include 600 additional former workers as well as approximately 900 current workers at each site. The program will provide an objective, independent and expert evaluation of the workers' health status.

- $10.7 million to accelerate environmental cleanup activities at Paducah and Portsmouth, especially where there is potential radioactive contamination of groundwater, surface water, on-site burial grounds and surface soil, as well as decontamination and decommissioning of facilities to protect on-site workers. These funds would be added to the Environmental Management program's uranium enrichment decontamination and decommissioning activities.

- $4.1 million for nuclear energy programs to accelerate clean-up of inactive DOE facilities at Paducah and Portsmouth; reduce or eliminate chemical hazards, radiologically contaminated material and exposure to workers; and support test-sampling for potential impurities, and repackaging or disposal, as appropriate, of old depleted uranium hexafluoride containers stored at the sites.

R-99-250 **-DOE-**

DOE NEWS

NEWS MEDIA CONTACT:
Walter Perry (270) 441-6800

For Immediate Release
September 14, 1999

Paducah Site Manager Announces Retirement

Paducah, KY -- Jimmie Hodges, the Department of Energy's (DOE) Paducah Site Manager, announced today his retirement from the Department of Energy. After 36 years in the federal service, Hodges will retire on October 1 to pursue opportunities in the private sector.

"Although my departure is in the midst of heightened attention to the Paducah Site, I have to do what is best for me and my family. I really am enthusiastically looking forward to some opportunities I have available to me and have to make an immediate choice. Working for the Department of Energy has been very rewarding and challenging -- I will miss the good people who work at the Paducah Site. They are a great team," Hodges said.

"We will miss Jimmie Hodges' experience and commitment," said Leah Dever, Manager of the Oak Ridge Operations Office (ORO). "We greatly appreciate his role in leading the effort at Paducah to implement Secretary Richardson's action plan to address the health and safety issues associated with past operations."

Hodges has served at the Department of Energy's Paducah Site since 1990 and as Site Manager since 1994. A native of Paducah, KY, he received a B.S. in Chemistry and Biology from Murray State University and a M.S. in Health Physics from the University of North Carolina, Chapel Hill.

J. Dale Jackson, Director of the ORO Uranium Management Division, will serve as Acting Paducah Site Manager until a permanent Site Manager is named.

-DOE-

R-99-P12

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DOE NEWS

NEWS MEDIA CONTACTS:
Jeff Sherwood, 202/586-5806
Walter Perry, 270/441-6800

FOR IMMEDIATE RELEASE
September 14, 1999

NOTE TO EDITORS:

MEDIA ADVISORY

Paducah Site Corrective Actions to be Announced Tuesday Morning

In a tele-conference Tuesday morning, Department of Energy officials will describe the preliminary observations from the investigation team after its visit to the Paducah Gaseous Diffusion Plant in Paducah, Kentucky as well as corrective actions that will be taken at the site.

WHO: David Michaels, Assistant Secretary for Environment, Safety and Health
Robert Poe, Assistant Manager for Environment Safety and Health,
DOE Oak Ridge Operations Office

WHAT: Press Briefing

WHEN: Tuesday, September 14, 11:30 EST

Reporters should call the DOE press office at 202/586-5806 or the Paducah site at 270/441-6800 for information on how to participate in the briefing.

-DOE-

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DOE NEWS

NEWS MEDIA CONTACTS:
Jeff Sherwood, 202/586-5806
Walter Perry, 270/441-6830

FOR IMMEDIATE RELEASE
September 14, 1999

Preliminary Observations and Corrective Actions on Paducah Site Announced

Secretary of Energy Bill Richardson today announced the initial observations of the Department of Energy (DOE) team investigating environmental, safety and health issues at the Paducah Gaseous Diffusion Plant in Paducah, Kentucky. A summary of the team's observations and the corrective actions ordered by Secretary Richardson in response are attached.

"The team identified areas that need improvement but found no imminent hazards to the workers or the public and confirmed that the general radiation hazards are low and that radiation protection programs at Paducah have improved over the past decade," said Secretary Richardson. "At the same time, we don't have to wait for their final report to start work on corrective actions in the areas where the team has identified room for improvement."

The team's observations include:

o Confirming that the present health risk from low-enriched uranium is relatively small, but more attention by site management is needed to ensure that radiation exposures are limited to levels as low as can be reasonably achieved.

o While considerably improved from the past, radiation-contamination control practices need to be further tightened, including providing additional necessary worker training, improved onsite and offsite posting and adherance to specified work-control procedures.

o Regarding an existing cleanup agreement between the Department of Energy, the Commonwealth of Kentucky and the Environmental Protection Agency, the team identified opportunities for revising the agreement to accelerate cleanup schedules and other milestones.

o The level of DOE and contractor oversight of environment, safety and health performance needs to be upgraded so as to ensure increased management accountability.

(MORE)

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Based on the preliminary observations and to address employee questions regarding ongoing operations, Secretary Richardson on September 8 ordered a one-day stand down of operations at the site to refocus management and worker attention on conduct of operations and environment, safety and health requirements and procedures. The stand down served to direct overall attention to the weaknesses identified by the investigative team regarding operating controls, the posting of hazards and the need for increased training. The stand down also provided an opportunity to address workers' questions and have discussions on both individual concerns as well as departmental expectations for worker safety.

In response to both the investigative team's observations and the stand down, Secretary Richardson directed a series of corrective actions that will be taken immediately. These corrective actions include:

o Initiating an independent review of the contractor radiation protection program and its implementation at Paducah with an eye toward any needed upgrades.

o Examining existing Commonwealth of Kentucky and U.S. Enrichment Corporation site air monitoring systems to confirm that these systems would record any significant DOE contribution to overall site emissions. Additional environmental sampling and analysis both onsite and offsite will be conducted.

o Expanding worker training programs at the site to include more comprehensive treatment of radiation protection practices and environmental protection, particularly for those who supervise subcontractors.

o Strengthening the federal resources at the site by stationing two full-time DOE facility representatives at Paducah who will provide regular surveillance of operations and safety practices.

The investigation currently being completed is the first phase of a two-phase review ordered by Secretary Richardson on August 8. The first phase of the onsite investigation is focusing on issues and concerns from the past 10 years. The second phase will involve examining longer-term legacy environment, safety and health issues prior to 1990 and will draw upon other ongoing reviews in response to the Secretary's Action Plan (see attachment).

The 23-member independent investigation team completed their initial data collection phase on September 3. Team members reviewed documents, conducted numerous interviews with officials and workers, inspected the site, conducted radiological surveys and collected extensive environmental samples. The samples collected are being analyzed by an independent laboratory. Following an assessment of the data collected, the team will return to Paducah later this month to validate the accuracy of their findings. It is expected that the phase-one report will be submitted to Secretary Richardson by early October.

The investigation team has also identified key records from past operations at Paducah. The records detail historic management of certain environment, safety and health concerns at the site, including those associated with processing of contaminated recycled uranium feed material. The team will pursue its investigation of these issues in the course of its phase-two review.

CROSSWALK OF PRELIMINARY OBSERVATIONS FROM PADUCAH PHASE I OVERSIGHT INVESTIGATION TO PROPOSED CORRECTIVE ACTIONS

ENVIRONMENTAL PROTECTION

The Paducah site is being cleaned up under an enforceable agreement established with the Commonwealth of Kentucky and the Environmental Protection Agency (EPA) under requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The site is in general compliance with this Federal Facilities Agreement (FFA) for site remediation and has taken compensatory actions to protect the public from offsite radiological and chemical contamination. Examples include hooking up homes in the path of offsite contamination plumes to public water supply, surface water runoff barriers, limited pump and treat systems, and limited posted warnings. The investigation team, however, questioned the rate of progress toward actual cleanup of the legacy hazards at the Paducah site, and the priorities and funding assigned under the cleanup agreement. These legacy hazards are sources of continuing onsite or offsite contamination of surface water and groundwater. Target level funding will take the site cleanup beyond the milestone for completing cleanup.

Observations

- Since the discovery of the contamination of offsite wells in 1988, the two groundwater plumes containing technetium 99 and trichloroethylene (TCE), as well as trace amounts of transuranic materials, continue to propagate at one foot per day and now extend for over two miles.

- Drum Mountain, contaminated scrap piles, burial grounds, and other legacy hazards continue to contribute to the contamination of Big and Little Bayou Creeks via surface water runoff.

- The site air monitoring programs have not assessed potential legacy "fugitive" emissions from scrap piles, contaminated ground, and rooftops of contaminated facilities.

- Over 30,000 drums of low level waste remain stored onsite, many in degrading 55-gallon drums and on open ground versus cement pads. While there is a regular inspection program and some drums have been overpacked, there is a lack of plans and funding for offsite shipments and only limited onsite facilities are available for inside storage.

Corrective Actions

- Execute a study of existing Commonwealth of Kentucky and United States Enrichment Corporation (USEC) site air monitoring systems to confirm that these systems would record any significant Department of Energy (DOE) contribution to the overall site emissions. Also, based on these studies, evaluate the calculations contained in the Bechtel Jacobs Company Annual Report on National Elimination System Hazardous Air Pollutants (NESHAPS).

- Sample the roofs of several shutdown contaminated buildings. This action will be taken to support fugitive emissions calculations. (Safety evaluations are now underway regarding the structural competence of these roofs. Personnel will be tied to safety ropes in some fashion at all times while on these roofs. Only if a substantial level of safety can be demonstrated will sampling be attempted.)

- The Engineering Evaluation and Cost Analysis (EECA) developed under the CERCLA/FFA for the scrap metal piles and Drum Mountain is now under review by the cognizant regulators. Pending approval, characterization of these materials is scheduled to begin late in the summer of 2000. To

promote efficiency, DOE will propose that characterization be followed by immediate disposal of this material. This activity is currently severely constrained by funding.

- Additional sampling and analysis of Paducah off-site areas will be carried out.

RADIATION PROTECTION PROGRAM

Significant improvements were initiated in the Paducah radiological protection program in response to inspection findings and concerns with transuranic material in the early 1990s. At Paducah, current external radiation hazards are low, in comparison to other DOE facilities. Bechtel Jacob Company workers do not appear to be receiving radiation doses that approach current limits. Although legacy contamination has the potential to cause internal radiation doses, bioassay results indicated that internal uptakes of radioactive materials are presently not occurring. A number of specific deficiencies identified during the investigation, however, indicate a need for improvement in the level of discipline, formality and oversight to ensure exposure to legacy radiological hazards is limited to levels that are as low as reasonably achievable.

Observations

The radiation protection program was subject to significant upgrades in the early 1990s and is generally functional, but a lack of discipline, formality, and oversight is creating deficiencies which impact the ability to ensure that worker exposure to legacy radiological hazards is maintained as low as reasonably achievable (ALARA), as required by DOE's radiation protection policy.

- The investigation determined that 25 subcontractor employees working on a project in the UF_6 cylinder yard since May 1999 could be subject to radiological exposure of greater than 100 millirem in 1 year (one-fiftieth of the occupational dose standard) and should wear personal dosimetry (thermo-luminescent dosimeters--TLDs). The contractor stopped work, conducted training, and is issuing TLDs.

- A number of radiologically contaminated areas were identified onsite and offsite on DOE property that were not adequately posted or barriered in accordance with DOE requirements.

- Training on transuranics was last conducted in 1992 and is not yet incorporated into site safety training courses.

- Drums of uncharacterized waste and concentrated Tc-99 have contributed to worker hazards, including Tc-99 personnel contamination from ruptured containers, the sampling of pressurized drums without containment, and instances of lids blowing off.

- There are weaknesses in the controls essential to radiological protection including radiation work permits, procedures and procedure adherence and air monitoring.

Corrective Actions

- Consistent with discussions during the "stand down" on September 9, 1999, DOE will provide employees with updated information on the management of transuranic waste, and information on TLD and air-emission monitoring.

- An independent detailed review of the Bechtel Jacobs Company radiation protection program and its implementation at Paducah will be initiated.

- A dialogue between DOE, the Commonwealth of Kentucky, and EPA Region IV will be initiated regarding the adequacy of site postings of contaminated areas called for in approved CERCLA or RCRA decision documents, or other agreements.

CONTROL OF LEGACY HAZARDS AND PROTECTION OF WORKERS

This investigation did not reveal any immediate threats to the health and safety of workers, but the Paducah legacy hazards from the Cold War continue to constitute a challenge to worker safety and health. The site has accomplished some characterization of the legacy hazards and has increased the use of personnel protective equipment to protect workers.

Observations

While some characterization of hazardous facilities and materials has been accomplished, significant amounts of onsite hazardous legacy materials and waste have not been reduced or mitigated.

- The DOE material storage areas contain significant volumes of uncharacterized scrap equipment and materials returned by USEC, that have been stored since at least 1996, and that may constitute potential hazards to the workers.

- Approximately 30,000 55-gallon drums of waste are stored onsite. Many are stored outside in the elements over open ground. Very little low-level waste has been shipped offsite, and a lack of funding and priority has resulted in extending the planned disposal date from 2006 to 2012.

- Process buildings shutdown for over 20 years contain significant amounts of uncharacterized hazardous materials including uranium in the ventilation ducts, receiver ash, and transuranics contamination. Shutdown buildings have been allowed to deteriorate and are subject to animal infestation, broken windows, and leaking roofs, are not included in the 2010 cleanup schedule, and are increasing in risk and cost to decommission.

- The nearly 37,000 uranium hexafluoride (UF_6) cylinders stored onsite in the open at Paducah constitute a radiological exposure hazard and a potential threat to worker and public health in the event of fire and rupture, but the Defense Nuclear Facilities Safety Board recommendation to upgrade the condition and convert the UF_6 to a more stable form has been impacted by the cancellation of painting 1,400 cylinders due to funding constraints and lack of appropriated funds for a UF_6 conversion facility.

- Fluorine cells were transferred to industry in 1997 and 1998 using uranium release criteria rather than more restrictive transuranic release criteria as committed to in 1990. Sample results indicated that the cells contained small but detectable quantities of plutonium, americium, and neptunium. Had the more restrictive criteria been applied, the transfer may not have been approved.

Corrective Actions

- A strategy is being developed to address the DOE Material Storage Areas. The initial focus will be to proceed with material characterization and improved storage of containers with uranium-bearing materials.

OVERSIGHT OF ENVIRONMENT, SAFETY AND HEALTH

DOE established a site office in 1989 to provide program direction and day-to-day oversight. However, the level and effectiveness of line management oversight of environment, safety, and health and assurance of compliance with DOE requirements is a matter of concern.

Observations

DOE and contractor management oversight of site activities and environment, safety, and health performance has several weaknesses and needs improvement.

- The DOE Oak Ridge Operations Office has not routinely performed oversight at the Paducah Site unless requested by the site office.

- The DOE Paducah Site Office consists of only 10 personnel who are focused primarily on project management. None of these personnel routinely perform ES&H field oversight and the office is not staffed in key technical areas such as facility representatives and health physics professionals.

- Contractor management has performed only limited management oversight of field activities and ES&H performance and is losing the technical capabilities to do so, including a significant loss of industrial hygienists, safety engineers, and hydrogeologists.

- Despite a shift to an M&I contract and increased reliance on subcontractors, the contractor oversight of subcontractor ES&H performance and adherence to applicable DOE requirements is weak.

- Community outreach efforts and activities that are designed to develop and disseminate information on site operations and on environmental protection could be strengthened.

Corrective Actions

- Bechtel Jacobs Company will develop and present a detailed radiation safety and environmental protection program training module to all Subcontract Safety Advocates. (These are Bechtel Jacobs' personnel who oversee the safety performance of specific subcontractors.)

- The Department of Energy will station two new Facility Representatives at Paducah.

ACTIONS IN RESPONSE TO SECRETARY RICHARDSON'S AUGUST 8, 1999 ACTION PLAN FOR PADUCAH

In addition to the ongoing DOE investigation at Paducah, a number of other departmental responses are underway in response to the Secretary's action plan announced on August 8. In addition to an ongoing Institute of Medicine review of health effects for workers at Paducah and other DOE sites, an ongoing review of needed resources to support near-term actions at Paducah, and a legal assessment of contractual responsibilities of contractors, departmental actions underway include the following.

Review of Flow of Recycled Materials Throughout DOE Complex

This project will address the flow and characteristics of recycled uranium over the last fifty years. The specific goals are to:

1. Identify the mass flow of recycled uranium throughout the DOE-complex from early production to mid-1999. Create an unclassified inter-site flowsheet.

2. Identify the characteristics and contaminants in the major uranium streams, specifically, the technetium, neptunium, plutonium or other isotopic content of concern to worker or public health and safety.

3. Conduct site mass balance activities sufficiently thorough to identify a significant concern for potential personnel exposure or environmental contamination.

DOE expects this work to be complete by June, 2000.

Exposure Assessment Project

This goal of this project, managed by the DOE Office of Environment, Safety and Health and conducted by a team from the University of Utah, is to establish the potential ranges of worker radiation exposures and identify, document and communicate the radiological issues that may have affected worker health at the Paducah site since its opening. This work will inform Paducah workers of their potential radiation exposure and will help determine whether there may be any potential for adverse worker health impacts from occupational radiation exposure.

The project began the week of September 13, 1999 when the University of Utah team began to interview workers and conduct an onsite records search. It is expected to take six months and consists of the following subtasks:

1. Mapping the various processes conducted at Paducah and identifying the associated potential radiological hazards, over time. This will include identification of any events, process changes, or other developments that may have presented potential radiological hazards.

2. Identifying, retrieving and evaluating radiological and worker exposure records to determine

what the available records inform us about radiological conditions and worker exposures.

3. Determining the feasibility of conducting a bioassay program for workers that would measure actual individual radiation dose due to radioactive material taken in the person.

4. Determining the feasibility of a radioassay of residual materials that would determine the radiological content of residual materials at Paducah and be useful in determining workers' potential exposure to hazards

5. Developing occupational exposure profiles. This subtask will compile all information gained in previous subtasks to develop "bounds" or ranges of possible radiation exposures of workers at Paducah.

6. Instituting a worker communication program to ensure that workers understand and act on results.

This project is expected to be completed by April 2000.

Medical Monitoring for Current and Former Workers

Under an ongoing DOE pilot program, medical monitoring is currently provided for 1,200 former workers per year, 300 at each of the gaseous diffusion plants. As part of the Secretary's action plan, the program will be expanded to include additional former employees at each site as well as current workers at each site. The program will provide an objective, independent and expert evaluation of the health status of workers. The medical monitoring program will be implemented by an organization or consortium of organizations staffed by highly qualified physicians and other health professionals specializing in the field of occupational health. The accompanying educational program will help workers' understanding of prior exposures and current health risks.

As in the current program, medical screening will be conducted for health hazards associated with exposure to silica, beryllium, ionizing radiation, solvents and other hazards related to a participant's work at the facility. The actual screening tests conducted will be tailored to a worker's exposure history and will generally include a physical examination, blood tests, and chest x-rays. Where warranted by a worker's exposure history, specialized tests and other specialized screenings will be conducted. Physicians will review individual test results from the screening program and communicate results to program participants. They will call patients to communicate urgent findings based on examinations and the need for follow-up of abnormal test results. Project personnel will also advise participants who need medical follow up about possible sources of health care. Where appropriate, assistance will also be provided in helping participants file claims for workers compensation.

The program will be independently conducted by the Paper Allied-Industrial, Chemical & Energy Workers Union with support from medical experts from the Queens College of the City University of New York.

DOE NEWS

September 10, 1999

News Media Advisory

Congressman Ed Whitfield to Visit Paducah Gaseous Diffusion Plant

WHO: Rep. Ed Whitfield, R-Ky., representing Kentucky's 1st Congressional District. Whitfield is a member of the House Commerce Committee's Oversight and Investigations Subcommittee that will hold hearings on activities at the Paducah Gaseous Diffusion Plant Sept. 16.

WHAT: There will be two media opportunities following Rep. Whitfield's tour of the Plant on Sunday, Sept. 12.

WHEN: 3:30 –3:45 p.m. – A photo opportunity at the U.S. Department of Energy (DOE) Landfill.

4-4:30 p.m. – A news conference at the DOE Site Office.

WHERE: Directions to the DOE Landfill (photo opportunity). From Paducah, travel west on U.S. Highway 60 about 12 miles to traffic signals. Turn right at Hobbs Road and proceed about 2 miles through caution lights to Dikes Road (the first blacktop road). Turn right and proceed about 1 mile to a 3-way stop. Continue straight about 1 mile to a dead end and turn right. Go ½ mile to a stop sign. Proceed straight (crossing Highway 358) about ½ mile to the landfill entrance.

Directions to the DOE Site Office (news conference). From Paducah, travel west on U.S. Highway 60 about 12 miles to traffic signals at Hobbs Road. Turn right and proceed to the plant. The DOE Site Office is well marked, on the left side of the road.

CONTACT: For more information, please contact Steven Wyatt, DOE spokesman at the Paducah Site Office (270) 441-6830.

DOE NEWS

NEWS MEDIA CONTACTS:
Steven Wyatt, 270/441-6830
Jeff Sherwood, 202/586-5806

FOR IMMEDIATE RELEASE
September 10, 1999

DOE Completes Safety Stand Down at Paducah Site

PADUCAH, KY– Workers at the U.S. Department of Energy's (DOE) Paducah Site have completed a one-day safety stand down of all environmental management activities at the Western Kentucky uranium enrichment facility. The stand down found no imminent hazards to the health and safety of DOE and contractor workers.

"I ordered the stand down as part of my commitment to environment, safety and health at all our facilities," said Secretary of Energy Bill Richardson. "The stand down served to refocus attention on safety, to ensure that established procedures are well understood and are being followed and to give employees an opportunity to ask questions and raise concerns." The stand down, ordered by Secretary Richardson Wednesday and held yesterday, involved about 400 DOE and Bechtel Jacobs Company LLC employees and subcontractors.

"The stand down has been a useful experience for the DOE and contractor workers associated with our environmental management and safety programs at the Paducah site," said George Benedict, Assistant Manager for Uranium and Engineering Services. "We found areas for improvement, but also learned that employees appreciate and understand their key role in safety."

As a part of the stand down, Energy Department and Bechtel Jacobs managers inspected DOE-related areas at the Paducah Site to ensure that potential hazards were correctly identified and properly posted. The stand down also focused on ensuring that work controls were in place and appropriate for work being done.

Workers at the site were also reminded of the presence of plutonium and other transuranics onsite and measures to protect workers from these hazards.

During the course of the stand down Energy Department and Bechtel Jacobs managers noted deficiencies in the condition of postings in some areas containing known sources of radiological and chemical contamination. Also, managers noted that employees were interested in more communications and feedback on radiation monitoring programs, including air sampling programs and the use of personal dosimeters for various types of work.

R-92-242

(MORE)

"One of the key positives that we learned as a part of this process was the employees clearly understand that they have the authority to stop work and to immediately raise concerns about any work activity," said Benedict. "This tells us that employees at all levels are getting the message about the importance of safety in everything that we do."

DOE activities at Paducah resumed on Friday, September 10. Some activities associated with the stand down will continue early next week. These will include additional meetings with employees, addressing the concerns raised and making necessary improvements to correct deficiencies noted during the stand down.

-DOE-

R-99-242

DOE NEWS

NEWS MEDIA CONTACTS:
Steven Wyatt, 270/441-6830
Jeff Sherwood, 202/586-5806

FOR IMMEDIATE RELEASE
September 8, 1999

SECRETARY RICHARDSON ORDERS SAFETY STAND DOWN AT PADUCAH

PADUCAH, KY--Secretary of Energy Bill Richardson today ordered a one-day safety stand down at the Department of Energy's Paducah Site to strengthen and enhance safety programs at the site.

"While significant improvements have been made over the last several years, this stand down affords us the opportunity to further build upon existing safety programs," Secretary Richardson said. "We also want to give employees and managers an opportunity to raise any concerns they may have, get questions answered and make suggestions for improved operations.

Secretary Richardson's action follows the completion last week of the initial visit by the DOE Environment, Safety and Health team to Paducah. The team did not uncover any imminent hazards to the workers or the public but did make some preliminary observations related to opportunities for improvement in radiological protection, procedures and conduct of operations.

All DOE-related operations, except emergency-related activities, will be suspended while DOE and contractor employees and managers review safety procedures. Managers will complete walk-downs of DOE-related areas at the Paducah Site and will ensure that all potential hazards are correctly identified and properly posted before work resumes. The stand down will affect all DOE related activities performed by Bechtel Jacobs LLC at the site. The stand down will not directly affect operations of the U.S. Enrichment Corporation, which enriches uranium for use as fuel for nuclear power reactors and is regulated by the Nuclear Regulatory Commission.

"Our goal is to ensure that all radiological controls and conduct of operations are properly used," said Jimmie Hodges, DOE Site Manager at Paducah. "The stand down will focus on ensuring that work controls are correctly tailored to the work being done. Our safety staff will ensure that all areas of known onsite radiological and chemical contamination are properly posted and that barriers and procedures are in place to prevent inadvertent entry. We will also remind workers of the presence of plutonium and other transuranics onsite and measures in place to protect workers from these hazards."

(MORE)

Currently, the DOE Environment, Safety and Health team is reviewing and validating information gathered during their recent visit to Paducah. During their visit, which began on August 17, the 14-member team reviewed documents, conducted interviews, inspected the site, and collected environmental samples. The final phase one report will be submitted to Secretary Richardson by the end of September.

-DOE-

R-99-236

DOE NEWS

NEWS MEDIA CONTACTS:
Steven Wyatt, 423/576-0885
Jeff Sherwood, 202/586-5806

FOR IMMEDIATE RELEASE
September 3, 1999

DOE Investigation Team Completes Initial Visit to Paducah Site

PADUCAH, KY - A team of Department of Energy (DOE) investigators has completed the initial data collection phase of its comprehensive investigation of environment, safety and health concerns at the Paducah Gaseous Diffusion Plant. Responding to concerns raised about worker safety and environmental contamination at Paducah, Secretary of Energy Bill Richardson announced immediate actions including the full investigation.

"Our team has gathered a tremendous amount of information during their onsite investigation at Paducah," said David Stadler, Senior Manager of the DOE Investigation Team. "This information will help us determine what actually occurred and what must be done to protect workers, the public and the environment. We will continue to do whatever is necessary to resolve the public and workers' concerns."

DOE's two-phase onsite investigation is focusing first on issues and concerns from the past 10 years. The second phase, also underway, involves the examination of the longer-term legacy environment, safety and health issues prior to 1990. These legacy issues are also being evaluated in ongoing reviews of plant records to ascertain use of recycled feed material and worker radiation exposures.

The 14-person team of investigators arrived at the Paducah site on August 17 to examine information on health and safety programs. Team members have reviewed documents, conducted numerous interviews with officials and workers, inspected the site and collected extensive environmental samples.

The environmental sampling has involved the collection of samples from both onsite and offsite groundwater, surface water, and soil and sediment. Samples have also been collected from buildings onsite. The samples will be analyzed by an independent laboratory to determine the full range of chemicals and radionuclides released into the environment as a result of site operations.

(MORE)

R-99-232

The efforts of the oversight investigation team are being closely coordinated with the Commonwealth of Kentucky, the Nuclear Regulatory Commission, the Environmental Protection Agency and the Occupational Safety and Health Administration. Team members have also been in contact with area stakeholders and the Paducah Site Specific Advisory Board.

Following an assessment of the data collected, the team will return to Paducah later this month to validate the accuracy of their findings. It is expected that the phase one report will be submitted to Secretary Richardson by early October.

-DOE-

R-99-232

Department of Energy
Washington, DC 20585

September 10, 1999

Message from: Carolyn Huntoon
Assistant Secretary for Environmental Management

To: Interested Individuals

Subject: Environmental Management Headquarters Reorganization

Because of your interest in the work of the Environmental Management program of the Department of Energy, I am sending to you the preliminary information that has been developed about the reorganization of EM Headquarters elements.

I hope to have the new organization in place by Thanksgiving. It is important to me, and I trust you share the same sentiment, that we have a permanent organizational structure as soon as possible to support the critical clean up efforts we are all working towards.

I have shared this information with representatives of the National Treasury Employees Union and the Environmental Management Headquarters bargaining unit employees. We are committed to working collaboratively on this reorganization.

Members of the EM team that you normally deal with are available to you to answer your questions and take your comments. Please share your thoughts with us.

I encourage you to share this information with other appropriate individuals or groups.

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DR. CAROLYN HUNTOON
VISION FOR NEW EM HEADQUARTERS ORGANIZATION

General

- Purpose of the meeting was to announce the vision and goals for the program and the new EM HQ organization.
- The new organization will improve the program's management taking advantage of a competent, diverse workforce.
- It will be consistent with and complementary of the Secretary's recently announced changes to the Department of Energy's management structure.

Broad Vision

- Reiterated her commitment to key current program goals such as:
  - meeting EM's legal obligations;
  - closing as many sites as possible, including Rocky Flats, Mound and Fernald, and completing as much cleanup as possible by 2006;
  - reducing EM's operational costs and increasing efficiency;
  - integrating waste management and other activities to the extent practicable;
  - making decision-making processes more transparent and inclusive of stakeholders; and
  - reducing risk.
- Announced principles that will govern program implementation:
  - Safety of workers and public is paramount;
  - Apply the best science and technology to solving problems and reducing costs;
  - Strengthen project management;
  - Build public confidence and involve stakeholders;
  - Develop effective long-term stewardship program;
  - Establish stable management structure.

New HQ Organization

- Goal is to provide organizational stability and certainty.
- The organizational changes will put into place permanent managers and permanent staffs.
- These changes will not cause anyone to lose their jobs or be involuntarily downgraded.
- The EM organization will have five major offices:
  - Planning and Budget (Dan Berkovitz) – will integrate planning and budget functions in one office; will include intergovernmental and public outreach as well as Congressional, regulatory, and legislative responsibilities;
  - Integration and Disposition (Dave Huizenga) – will integrate complex-wide cross-cutting issues and will include responsibility for WIPP ;
  - Project Completion (Mark Frei) – focuses on post-2006 site and project completion which includes responsibility for the Hanford, Office of River Protection, Savannah River Site, and Idaho National Engineeering and Environmental Laboratory;

- Project Closure (Jim Fiore) – focuses on pre-2006 closure of sites and project completion which includes responsibility for Rocky Flats, Ohio sites, Oak Ridge, Albuquerque, Nevada Test Site, Chicago Operations Office sites, and Oakland Operations Office sites; and

- Science and Technology (Gerald Boyd) – focuses on developing and deploying the science and technology to make cleanup faster, cheaper, safer, and better and on developing an effective long-term stewardship program.

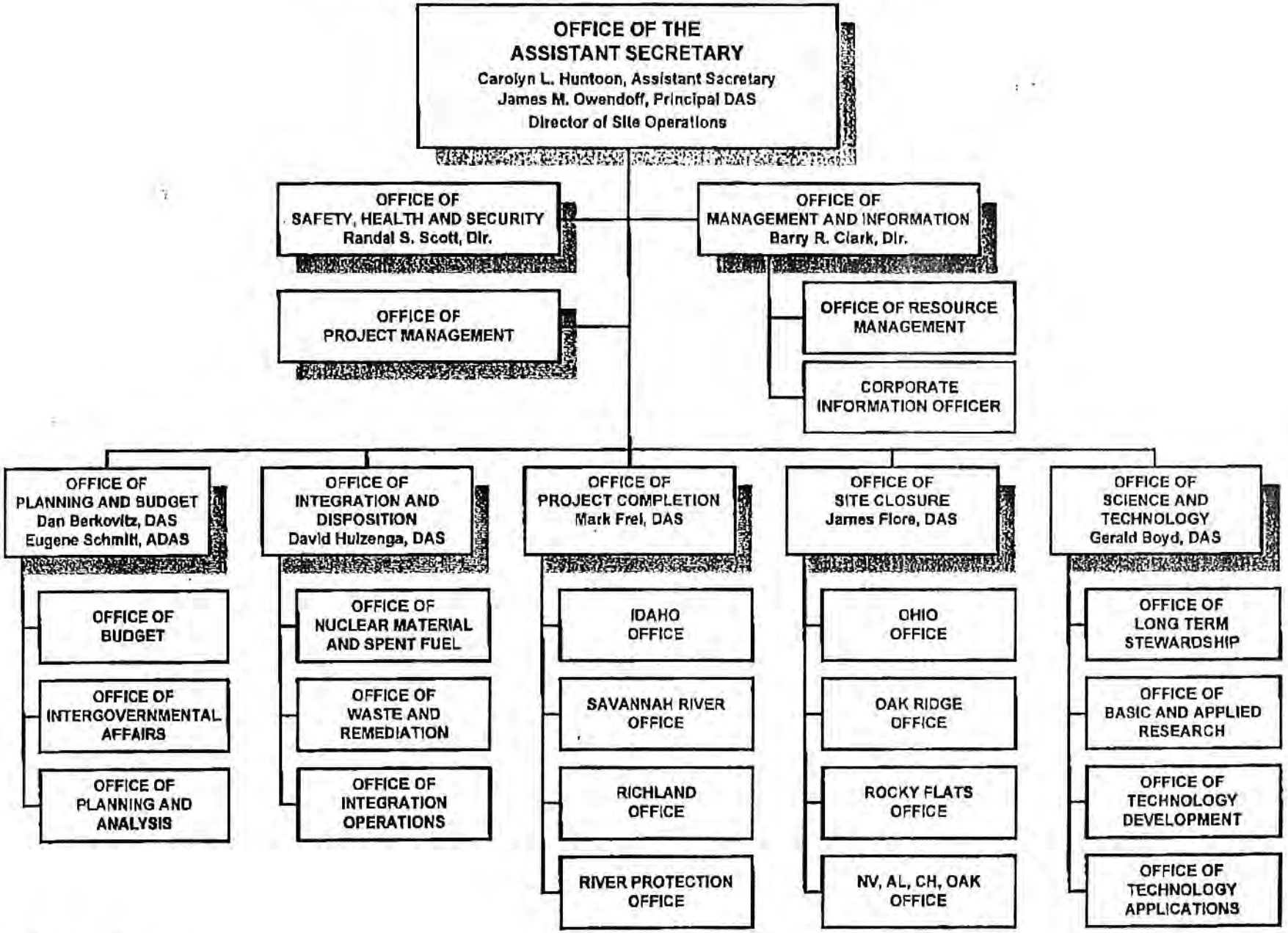
- There will also be three staff offices: Safety, Health, and Security; Management and Information; and Project Management.

- In accordance with the Secretary's recent changes to the Department's organization and management structure emphasizing improved field management, a director for the new Site Operations position will be named.

- EM will be working cooperatively with the NTEU and will provide them with a draft organizational structure next week for informal review and comment. Other information will be shared with the NTEU as the process progresses.

- Goal is to implement the new organization before Thanksgiving.

OFFICE OF ENVIRONMENTAL MANAGEMENT



Draft

SEPTEMBER 9, 1999

DRAFT FUNCTIONS ANALYSIS

EM-1	Safety, Health and Security	Project Management	Management and Information	Planning and Budget	Integration and Disposition	Project Completion	Site Closure	Science and Technology
– Management and direction – Corporate goals	– Integrated Safety Management – Safety Analysis – Safety and Health Risk – Package Certification – Safeguards and Security – Price Anderson – Quality Assurance (including interface with the Office of Civilian Radioactive Waste Management) – DNFSB Liaison – Emergency Management – Conduct of Operations – Analytical services	– Independent reviews – Project tracking (watch list, other project lists) – Interface with Chief Financial Officer – Project Management policy – Change control	– NTEU relations – Human Resource Management – Training and Education – Support services – Contracting strategies – Grants – Logistics – Corporate Information Officer – Information technology and infrastructure – Integrated Planning, Accountability and Budget Information System	– Budget – Privitization policy – Congressional – Intergovernmental – Site labor issues – Regulatory analysis – NEPA compliance – Compliance Agreements – Hazardous Waste Integration Rule (HWIR) – Strategic planning and analysis, including Paths to Closure – Metrics – Integrated Planning, Accountability and Budget Coordination	– Cross-cutting waste streams (e.g., mixed, low level, high level) Waste Management Programmatic EIS – Records of Decision – Waste Management engineering – Foreign Spent Fuel – Material disposition – 10-1, 94-2 – Environmental restoration policy (cleanup standards groundwater, CERCLA remedy review) – IM Integration – Transportation – Waste Isolation Pilot Project, including pipeline issues – Commercial Low-level Waste Technical Assistance – Recycling – Sealed source policy – Facility pipeline policy – Pollution Prevention	– Idaho – Savannah River – Richland – Tank Waste Remediation System Project	– Rocky Flats – Ohio – Oak Ridge – Albuquerque – Nevada – Chicago – Oakland – Closure policies (pensions, property transfer)	– Science – Technology Development – Laboratory Management – Long-term stewardship
Director of Site Operations – Resolution of Field policy issues – Field Management Council activities								

9/9/99

Bechtel Jacobs Company LLC
Paducah Project

Site Specific Advisory Board

Actual Costs to Date *(Including Prior Year)* **thru**
August, 1999: $ 109,003

Participant	Prior Year	Actual OCT	Actual NOV	Actual DEC	Actual JAN	Actual FEB	Actual MAR	Actual APR	Actual MAY	Actual JUNE	Actual JULY	Actual AUG	Actual SEPT	TOTAL FY 99
Bechtel Jacobs Company LLC	11,487	190	(86)	966	288	701	1,727	1,061	(1,099)	650	1,488	2,836	0	8,724
BJC Sub. - Roberts & Kay, Inc.	15,570	0	1,292	1,186	0	4,277	496	2,008	(3,561)	2,323	1,173	1,216	0	10,413
BJC Sub. - Jacobs Engineering Group	19,713	0	0	10,171	2,996	3,204	19,669	9,627	(12,458)	4,528	3,248	2,111	0	43,096
Total Project	46,770	190	1,207	12,323	3,284	8,183	21,892	12,697	(17,118)	7,501	5,910	6,163	0	62,232

NOTES: *Cost Corrections were made in May to move cost for the SSAB to a single charge code.*
Accruals for Roberts & Kay, Inc. and Jacobs Engineering were overstated in March & April. Corrections have been made in May's Report.

Budget for FY99: $ 92,484
FY99 CTD: $ 62,232
Remaining Funding: $ 30,252

Participant	Description	Prior Year	Actual OCT	Actual NOV	Actual DEC	Actual JAN	Actual FEB	Actual MAR	Actual APR	Actual MAY	Actual JUNE	Actual JULY	Actual AUG	Actual SEPT	TOTAL FY 99
BJC Engineering Cost Center	OR - Ron Wells - Task Support	858	84	(84)	42	42	88	87	48	83	88	44	795	0	1,318
BJC Procurement	Contract Work	982	92	(92)	0	0	0	0	0	0	0	0	0	0	0
BJC Project Controls	Project Analyst/Finance Officer Support	829	0	0	0	0	0	0	0	0	0	0	0	0	0
SSAB - Misc Expenses	Rents, Food, Sound Recording, Public Notice, etc.	840	0	0	0	0	0	0	61	101	0	1,001	1,554	0	2,717
Support Activities Distributable	Telecommunications, Computing Support, etc	7,979	14	90	923	246	613	1,640	951	(1,283)	562	443	488	0	4,689
Total Project		11,487	190	(86)	966	288	701	1,727	1,061	(1,099)	650	1,488	2,836	0	8,724

NOTES: *Labor Cost Corrections were made in August to move hours previously charged in error to an incorrect charge code. In addition, Charles Jenkins, Public Affairs at ETTP, provided assistance to the Paducah Site for SSAB.*

"SSAB Misc Expenses" includes the following

$ 364.43	Advertising Expense
321.11	Business Travel - Commercial Lease Meeting with T. Simmons
388.00	GPEC - Room Rental
480.00	SC-CA018U Design Integration Group
$ 1,553.54	

Roberts & Kay, Inc.
Paducah Project

10-Sep-99
11:20 AM

Material Charge Number
54 / P / JEC04

Participant	Type of Service	Prior Year	Actual OCT	Actual NOV	Actual DEC	Actual JAN	Actual FEB	Actual MAR	Actual APR	Actual MAY	Actual JUNE	Actual JULY	Actual AUG	Actual SEPT	TOTAL FY 99
BJC Sub. - Roberts & Kay, Inc. (Payments)	Subcontractor Independent	13,033	0	1,292	1,186	0	1,202	1,015	1,108	1,063	1,155	1,173	0	0	9,196
BJC Sub. - Roberts & Kay, Inc. (Accruals)	Facilitator to the SSAB	2,537	0	0	0	0	3,075	(519)	900	(4,624)	1,168	0	1,216	0	1,216
Total Project		15,570	0	1,292	1,186	0	4,277	496	2,008	(3,561)	2,323	1,173	1,216	0	10,413

NOTES: *Non - Labor Cost Correction was made in August to transfer a reversing entry from a Liability Account that had been previously charged in error to an incorrect charge code. The original entry was made to correct an accrual made at FY98's yearend by Accounts Pay - DR*

Jacobs Engineering Group, Inc.
Paducah Project

TASK NUMBER:
35 - 11831 - 48

Participant	Prior Year	Actual OCT	Actual NOV	Actual DEC	Actual JAN	Actual FEB	Actual MAR	Actual APR	Actual MAY	Actual JUNE	Actual JULY	Actual AUG	Actual SEPT	TOTAL FY 99
BJC Sub. - Jacobs Engineering (Payments)	8,381	0	0	1,402	3,836	3,694	3,161	5,920	4,636	3,796	3,804	4,104	0	34,354
BJC Sub. - Jacobs Engineering (Accruals)	11,332	0	0	8,769	(840)	(490)	16,507	3,707	(17,094)	732	(556)	(1,993)	0	8,742
Total Project	19,713	0	0	10,171	2,996	3,204	19,669	9,627	(12,458)	4,528	3,248	2,111	0	43,096

INVOICES

35-11831-48 Statement of Cost - Voucher Number: N/A
Total Amount Due $ 107.00 PAID - JUNE

35-11831-48 Statement of Cost	Voucher Number: 59	Voucher Number: 60	Voucher Number: 61	Voucher Number: 62	Voucher Number: 63	Voucher Number: 64	Voucher Number: 65	Voucher Number: 66	Voucher Number: 67	Voucher Number: 68	Voucher Number: 69	Voucher Number: 70	Voucher Number: 71
LABOR @ Office	95.63	107.58	234.49	46.26	439.87	495.27	386.97	286.59	245.64	532.24	163.77	163.76	147.66
LABOR @ Site	182.28	130.21	294.94	286.75	477.19	870.92	1,468.86	763.57	1,206.48	676.09	554.96	521.62	534.65
Teaming Subcontractors: PAI Corporation	258.03	680.28	1102.53	950.04	0.00	1570.63	1,013.77	754.99	1,138.10	2,433.13	2,046.82	2,052.19	2,317.05
Other Direct Costs	1,195.00	16.21	2706.46	94.80	485.07	899.24	824.41	1,356.22	3,330.10	994.37	1,030.21	1,066.47	1,104.65
Amounts Previously Invoiced	(137.76)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Amount Due	$ 1,593.18	$934.28	$4,338.42	$1,377.85	$1,402.13	$3,836.06	$3,694.01	$3,161.37	$5,920.32	$4,635.83	$3,795.76	$3,804.04	$4,104.01
	PAID - JULY	PAID - SEPT	PAID - SEPT	PAID - SEPT	PAID - DEC	PAID - JAN	PAID - FEB	PAID - MAR	PAID - APR	PAID - MAY	PAID - JUN	PAID - JUL	PAID - AUG

White papers to be presented at the National SSAB Meeting on Stewardship October 25-27, 1999 in Oak Ridge, Tenn.

SSAB NATIONAL CONFERENCE ON STEWARDSHIP
Issue Paper 1 of 5

What Is Stewardship?

No single definition of stewardship will work for all sites in the DOE complex. There are too many site-specific conditions and issues to consider. Instead, we need to generate a general understanding of the types of issues and activities that fit under the stewardship umbrella. In its 1998 report, a group of stakeholders from Oak Ridge defined stewardship as:

"Acceptance of the responsibility and the implementation of activities necessary to maintain long-term protection of human health and of the environment from hazards posed by residual radioactive and chemically hazardous materials."

For the purposes of the SSAB Stewardship Conference, we propose to start with this general definition and consider stewardship as all of the activities that must take place to ensure the continued protection of human health and the environment at sites where residual contamination will be present. As a term, stewardship has often been used to apply to institutional controls, or to markers that will be understood by as-yet unknown civilizations. While it is those things, it is also much more.

Stewardship in the general sense is not a new concept. Since the dawn of civilization, whenever people gather to organize societies, systems of stewardship develop. For example, governments preserv the rights of property use and ownership for centuries through the use of titles on real property. In a current example for federal lands, the National Park Service practices stewardship by purchasing and managing lands with unique natural and cultural histories for the benefit of current and future generations.

Why is Stewardship Important?

Almost all DOE facilities have radioactive and chemically toxic contamination resulting from more than 50 years of nuclear research and weapons production. This contamination is present in a wide variety of configurations that, if left uncontrolled, would present potentially significant hazards to human health and the environment. These contaminated areas require management for the lifetime of the hazard, essentially forever in some cases. Returning contaminated areas to pristine conditions is often risky for excavation and transportation workers; is impractical for cost, technical, and logistical reasons; and does not always result in overall risk reduction. Furthermore, citizens and governments often oppose the transport and off-site disposal of contaminated materials. Even if off-site disposal is implemented, the responsibility

for stewardship is merely transferred from the waste-shipping facility to the waste-receiving facility.

It is becoming increasingly clear that few, if any, DOE sites can afford to ignore stewardship. Whether they are closure sites like Fernald or sites with a long-term mission like INEEL, management of residual contamination requires perpetual stewardship.

It is not enough to say that these properties will stay in federal hands and therefore adequate stewardship is ensured. We all know that the government is fallible, and that long-term stewardship plans are mostly undeveloped.

Why Should We Care About Stewardship Now?

At first glance, stewardship may appear to be an issue that does not require much consideration until after remediation is complete--an important, but not a pressing issue. However, the effectiveness of remediation depends on stewardship. Caps will fail and fences will fall without maintenance, land use controls are meaningless without enforcement, monitoring programs cannot be conducted without adequate resources, and future decisions cannot be made without adequate and accurate information of what was done during remediation.

Once we recognize how important a stewardship program is to the effectiveness of remediation, it becomes obvious that planning for stewardship must accompany planning for remediation. Such planning is important to ensure that:

1. Future generations fully understand the nature of the problem that has been left behind;
2. The proper level of physical maintenance is conducted so that engineering structures maintain their integrity for the life of the hazard;
3. Legal measures are in place to limit improper use of contaminated property;
4. Resources will be made available to conduct stewardship activities or to respond to emergency situations;
5. Appropriate information is available for future generations.

To make good decisions, these issues must be addressed during remediation planning. Stewardship requirements must put in place by the time remediation of contaminated areas is completed. Stakeholders will find it increasingly difficult to support decisions which leave contamination in place without sufficient assurance that the mechanisms for effective stewardship exist and will be implemented successfully.

SSAB NATIONAL CONFERENCE ON STEWARDSHIP
Issue Paper 2 of 5

What Needs to be Done?

The nature and level of stewardship is a site-specific decision; however, there are a number of attributes and elements of stewardship that will likely apply in all cases.

1. Attributes of Successful Stewardship

Responsibility for Stewardship Must Be Identified

Stewardship of contaminated sites requires that society be willing to accept responsibility for providing a healthy and safe environment for current and future generations. For federal facilities, this responsibility rests with the federal government. However, the specific roles and the allocation of adequate resources are far from certain. Stakeholders, local governments, regulators, and other decision-makers must accept that they need to work together to develop and implement a stewardship program that works for the community. A legal basis for stewardship can be ensured by specifying stewardship requirements in formal decision documents and agreements.

Long-Term Effectiveness Must Be Assured

Stewardship programs must be designed to protect human health and the environment for the lifetime of the contaminants. Just as the type of contaminant determines the type of remediation system, the life of the contaminant determines the length of stewardship. If stewardship fails, so does remediation. To be effective over the long term, stewardship requires redundant systems and controls, and appropriate contingency plans for possible adverse events. In addition, resources for conducting stewardship must be assured and stewardship requirements must be enforceable.

Stewardship Must Be Adaptable

We do not know what society will be like hundreds and thousands of years from now when many wastes will still be hazardous. Stewardship programs must be able to adapt to changing physical conditions and political demands in order to provide effective ongoing protection of human health and the environment. Advances in technology, changes in contaminant and environmental conditions, failure of remediation systems, and changing demographics necessitate periodic reevaluation and refinement of stewardship activities. Stewardship programs must accommodate such adjustments.

2. Elements of Successful Stewardship

Authority and Funding

At the beginning of any stewardship program, clear authority and responsibility must be established to ensure implementation of programs to protect human health and the environment. At federal facilities, this authority originates in the Congress and is delegated to an appropriate federal entity. Reliable long-term funding is critical to the success of stewardship because competent sustainable stewardship is impossible without financial support. The annual appropriation process used for funding most government programs will be used to fund stewardship in the near term but may not provide the best source of funding over the long term.

Stewards

Stewards are the individuals or groups responsible for conducting specific stewardship activities. Stewardship functions can be carried out by existing organizations or new organizations can be developed. When more than one steward is involved, coordination among stewards is essential to avoid unnecessary conflict and duplication of effort, however some redundancy of responsibilities may be desirable. Stewards generally fit into one of three primary categories: the principal steward, implementation stewards, or oversight stewards.

- **The principal steward** has legal responsibility for contaminated land and facilities including the financial obligation to ensure adequate funding for stewardship, and to take corrective action if the stewardship program becomes ineffective.
- **Implementation stewards** conduct the actual stewardship activities such as monitoring, maintenance, and record keeping.
- **Oversight stewards** are outside organizations (e.g. regulators) or stakeholders who ensure that the goals and requirements of a stewardship program are met.

Operations

The success of stewardship is dependent upon the numerous operations that must be conducted in perpetuity to ensure that remediation retains its effectiveness and that stewardship systems are working, such as:

1. **Monitoring**: the regular sampling of all contaminated and potentially contaminated media to identify the failure of physical controls and to provide continuous understanding of the nature and extent of contamination.
2. **Maintenance**: upkeep of remediation systems to ensure long-term effectiveness.
3. **Surveillance**: the regular oversight of remediation and institutional systems to ensure that all necessary activities occur.
4. **Enforcement**: the legal implementation of the constraints required to maintain the protection of human health and the environment.
5. **Inspection and Reevaluation**: the periodic review of existing systems and activities to ensure their continued need and/or effectiveness.

6. **Public Participation**: the continuous involvement of the public to ensure citizens= concerns are addressed and relevant public information is provided.

Physical Controls

Physical controls are barriers to limit public access to contaminants and exposure to hazards; physical controls need to be considered within the context of stewardship because their effectiveness depends on proper maintenance. Examples are:

1. **Barriers to Entry**: fencing, natural barriers, buffer zones, and associated signs and markers which isolate and limit access to contamination.
2. **Barriers to Exposure**: remediation measures to control contaminants and/or prevent human contact (e.g. caps, water supplies, and erosion and runoff control).

Institutional Controls

Institutional controls are legally binding provisions designed to control future uses of land or resources by limiting development and/or restricting public access to a site. Institutional controls can be divided into governmental controls and proprietary controls.

1. **Governmental Controls**: use the power vested in a national, state, or local government to impose restrictions on lands under its jurisdiction. Local governmental controls enforced through permitting and inspection processes include zoning ordinances, which can regulate activities such as business development in specific areas, the size of land parcels, the types and sizes of structures, and activities permitted on the land.
2. **Proprietary Controls**: allow owners to control the use of or limit access to property. Include advisories, easements, deed notices or restrictions, and site registries.

Stewardship Information

Stewardship information provides present and future stakeholders with records of residual contamination. Complete information regarding the type, volume, concentration, and location of contaminants, contamination risks, and stewardship requirements must be available. The information essential for a working stewardship program must be accurate, clear, concise, and of appropriate scope and detail. It must be easily accessible to those who need to use it, including stakeholders, and it must be durable so that it lasts over the lifetime of the stewardship program.

Research

When remediation activities are completed, significant data gaps and uncertainties often exist about current and long-term hazards. Present-day regulations are based on current understanding of the hazards posed by

exposure to contaminants. Over time, new data may provide better assessments of contamination, risks, appropriate remedial technologies, management of wastes, information for decision making, and stewardship requirements. Much of what we are implementing today to remediate waste problems has never been done before and little is known about the potential long-term impacts of our actions. Long-term research at both the site and national levels is essential to improving our knowledge and the management of residual contamination.

Questions to Consider for this Core Topic

1. What are the next steps for DOE to make sure that appropriate stewardship activities are planned and conducted at individual sites?
2. To what degree are stewardship activities site-specific and to what degree should stewardship activities be identified by complex-wide guidance?
3. Given the long-term nature of stewardship activities, how should they be approached relative to other remediation activities?
4. What is the appropriate level of public involvement in identifying stewardship activities at sites?
5. When is the right time for stewardship activities to begin and how can we ensure that appropriate steps are taken to implement stewardship in a timely manner?

SSAB NATIONAL CONFERENCE ON STEWARDSHIP
Issue Paper 3 of 5

Who Should Do What?

In Issue Paper #2, we introduced three main types of stewards likely to be needed at any given site:

- **The principal steward** has legal responsibility for contaminated land and facilities including the financial obligation to ensure adequate funding for stewardship, and to take corrective action if the stewardship program becomes ineffective.
- **Implementation stewards** conduct the actual stewardship activities such as monitoring, maintenance, and record keeping.
- **Oversight stewards** are outside organizations or stakeholders who ensure that the goals and requirements of a stewardship program are met.

The Roles of the Federal Government

Because contamination at DOE facilities results from federal government activities and because the federal government is legally responsible for cleanup, the federal government is most likely to be considered as the principal steward for DOE sites. However, depending on the nature of the site=s future missions, DOE may not always be the best agency to conduct these activities.

The Roles of State Governments

States may play roles as both implementation stewards and oversight stewards. In some circumstances, states may serve as a principal steward.

The Roles of Local Governments

Local entities such as planning commissions and registers of deeds are important implementation stewards, as are schools and libraries for education and information purposes. Local governments may also fulfill an oversight role in working with other stakeholders to ensure that stewardship activities are conducted.

The Roles of the Public

Public stakeholders may serve one of the most important oversight roles by helping to ensure that stewardship programs and activities continue to be conducted and appropriate to the risks at hand. Continued public knowledge and awareness of stewardship needs and activities is important to the overall success of stewardship.

Determining which stewardship organizations conduct what stewardship activities are very site-specific decisions and will have a great deal of influence on the ultimate success of stewardship. The following are some of the main activities that must be conducted in any stewardship program.

Stewardship Operations
Monitoring of residual contamination and environmental media
Maintenance of physical controls and signage
Surveillance and security of contaminated sites

Institutional Controls
Parcel mapping and public access
Preservation of deeds, easements, parcel maps and Geographic Information Systems
Zoning and use approvals, building permits, and enforcement
Annotated tax records (to include contamination data)
Real estate information systems

Stewardship Information and Public Involvement
Report literature, indexing and abstracting
Working report repository
Long-term archiving
Education
Public involvement and awareness
Permanent stewardship exhibits, public outreach
Public access to CERCLA and other remediation documents

Questions to Consider for this Core Topic Group

1. **What is the appropriate role of the federal, state and local governments in the stewardship process and in conducting the specific activities of stewardship?**
2. **What are the most important stewardship roles and how should they be assinged to an appropriate steward?**
3. **How should overall stewardship roles be determined?**
4. **What is the level of public involvement that is appropriate in identifying stewardship roles?**
5. **How should continued public involvement be assured?**

6. To what degree should stewardship roles be identified by complex-wide guidance?

SSAB NATIONAL CONFERENCE ON STEWARDSHIP
Issue Paper 4 of 5

How Should We Deal With Stewardship Information?

One of the most important Stewardship activities is the generation and preservation of information. Already at most sites, it is difficult to find accurate information regarding materials that have been left behind. Missing information is generally the result of lesser standards for record keeping during World War II and thereafter. The advent of the environmental laws and requirements for remediation led to lengthy and expensive efforts to characterize contaminated areas prior to remediation. Although the remediation systems we put in place today are the best we can engineer, future generations will have to maintain, repair, and replace these systems. Thus, we must ensure that accurate and accessible information regarding the nature and extent of contamination and our efforts at remediation are available.

What Information is Needed for Stewardship?

Effective stewardship requires a wide variety of information. The public and those responsible for environmental monitoring and land use controls all require detailed information about the nature of residual contamination, the installation of remediation systems, and the expectations regarding the performance of those systems. Information needs to guide us as to what to expect over time and the appropriate actions to take should results differ from those expectations.

How Should Stewardship Information Be Developed?

The information essential for a working stewardship program must be accurate, clear, concise, and of appropriate scope and detail to serve stewardship needs. For example, a CERCLA Remedial Investigation/Feasibility Study contains vast amounts of information that must be condensed to be useful for stewardship activities. Other CERCLA documents prepared during and after remediation also contain important information and must be organized in a manner that is useful to stewardship. Data are meaningless to the user if they are not organized in an understandable and relevant format. A coordinated link should be established between collectors, interpreters, and users of data. The most efficient and accurate way to develop this information is to ensure that the information needs of stewardship are known at the time that the information is originally generated.

How Should Stewardship Information Be Maintained?

Stewardship information must be kept up to date and be retrievable for the lifetime of a stewardship program. However, over time, the scope and detail will likely require re-evaluation. Since stewardship may be necessary for thousands of years, stewardship

information must be maintained with carefully chosen storage technology. As a safeguard against loss, information should be stored in multiple forms and by multiple stewards. The types of information needed and requirements for maintaining that information are best identified at the time of the remediation decision.

How Should Stewardship Information Be Made Accessible?

Basic stewardship-related information should always be stored to be accessible to necessary users of the information and the public. Stakeholders might access stewardship information at a public document room, a neighborhood library, a local oversight board=s archives, or an Internet Web Site.

Questions to Consider for this Core Topic Group

1. **When should stewardship information be assembled?**
2. **How should stewardship information be coordinated with the existing administrative records required under CERCLA or other environmental laws, are these records necessary and/or sufficient for stewardship purposes?**
3. **Who should be responsible for the identification and preservation of stewardship information and how should this be done?**
4. **What is the public=s role in the identification and preservation of stewardship information?**

SSAB NATIONAL CONFERENCE ON STEWARDSHIP
Issue Paper 5 of 5

How Should Stewardship Be Funded?

Sustainable stewardship is impossible without reliable long-term funding. The annual appropriation process used for funding most government programs will be used to fund stewardship in the near term but may not provide the best source of funding over the long term.

Stewards responsible for operations (i.e., implementation stewards) must have access to funds, and support must be provided for oversight. A number of potential options for long-term funding may be considered. Most of them would require an act of Congress or other significant government action to implement. These options are briefly discussed below.

Designated Agency: The Congress could designate a government agency or a public-private partnership that would be funded by Congress to conduct stewardship activities at federal facilities throughout the country. Either of these options would offer great visibility to the operation, and the funding for stewardship would be independent of other agency missions. However, it would still be subject to the constraints of government agencies and to the annual appropriation cycle. A stable long-term budget would not be guaranteed.

Entitlement: The federal government could designate stewardship funding as an entitlement similar to the social security fund. Changes in funding or policy would then require congressional action. Although the level of funding would be more stable, entitlements can be abandoned.

Federal Trust Fund: Typical federal trust funds receive money from a tax or fee source, such as social security taxes, gasoline taxes, or severance taxes, and the money is dedicated to specific purposes, such as pensions, transportation needs, or strip-mine reclamation, respectively. The disbursement can be as an entitlement, as in social security, or can be subject to congressional appropriations. There is no obvious tax source for stewardship, but an up-front set-aside of a fund drawing enough entitled income to support stewardship over the coming years is a possibility. A state or a non-profit stewardship corporation could hold the trust fund. Two ways for obtaining the principal are suggested.

Lump Sum Trust Fund. Congress could authorize DOE to purchase a treasury

security and/or a conservative equity issue on a one-time basis. The investment would have to generate sufficient income to fund stewardship. For example, $200 million at 5 percent yields $10 million per year. The impacts of inflation must be considered. The investment could be managed locally by the principal steward or another responsible party to ensure appropriate use of the interest income. In the event of a major stewardship failure requiring large unanticipated expenses, federal intervention would still be required.

Incremental Accumulation Trust Fund. An endowment fund could be set up with a nominal contribution, perhaps by a state. Then remediation decisions would include estimates of annual stewardship costs, and funds would be deposited to cover the costs of future stewardship needs. Once the fund is established, its operation would be the same as if it originated from a lump sum, but incremental attainment of an adequate endowment might be politically easier than obtaining a lump sum.

The Present System: The agency responsible for the contamination, DOE in this case, retains financial responsibility for funding the stewardship program. The present system has the advantage of continuity and the legal responsibility for remediation; however, is forever subject to the pressures of the annual appropriations system.

Questions to Consider for this Core Topic Group

1. **What is the appropriate role of the federal, state and local governments in assuring stewardship funding?**
2. **What is the appropriate role of the public in assuring stewardship funding?**
3. **To what degree should stewardship funding be assured by a complex-wide system as opposed to site-specific sources?**

Informal Note

Date: September 13, 1999

From: Fred Butterfield, Deputy Designated Federal Officer, Environmental Management Site-Specific Advisory Board (EM SSAB)

To: **EM SSAB Administrators**

Subj: **DRAFT REVISED EM SITE-SPECIFIC ADVISORY BOARD GUIDANCE**

Enclosed for each of you are four (4) copies of the **draft revised EM Site-Specific Advisory Board (SSAB) guidance**, reflecting the review comments of Field SSAB Federal Coordinators. This is the version (Revision 2) which will be discussed during the EM SSAB Chairs Meeting in Richland, WA on September 22 and 23. *Please provide a copy of this draft guidance to the Chair (or Chairs) of your local SSAB, and the DOE Federal Coordinator, as soon as practicable in advance of next week's meeting.*

Per the disclaimer on the first page of the document, this draft is a *pre-decisional* document, intended for review by EM SSAB Chairs, Administrators, Federal Coordinators, and associated DOE Headquarters and Field Staff only. This draft has not yet been reviewed by the DOE-Headquarters' Office of General Counsel (GC-80), nor has it been concurred in by other Departmental offices such as the Advisory Committee Management Office (MA-7). Formal review of this draft will be requested from GC and MA once your comments have been incorporated. *Accordingly, please do not quote or cite from this document.*

Final review comments on this draft are requested by September 30, 1999. Please forward your comments to Michael Purkey and Naomi Wiegler of the DOE-HQ Office of Intergovernmental and Public Accountability (EM-22), as follows:

Michael Purkey
Phone: 202/586-0040
Fax:: 202/586-0293
E-mail: *michael.purkey@em.doe.gov*

Naomi Wiegler
Phone: 202/586-7926
Fax:: 202/586-0293
E-mail: *naomi.wiegler@em.doe.gov*

Thanks very much. Please feel free contact Mike, Naomi or me if you have any questions or comments. I look forward to seeing you next week in Richland.

Sincerely,

Fred Butterfield

DOE-HQ EM-22
Phone: 202/586-5542
E-mail: *fred.butterfield@hq.doe.gov*

Enclosure

cc:
Martha Crosland

EM SITE-SPECIFIC ADVISORY BOARD GUIDANCE

DISCLAIMER

This Draft Revised EM Site-Specific Advisory Board Guidance (Guidance) is a pre-decisional document, intended for review by EM SSAB Chairs, Administrators, Federal Coordinators, and associated DOE Headquarters and Field Staff only. Do not quote, cite or forward. This document has not been reviewed by the Department's Office of General Counsel, nor has it been concurred on by other Departmental offices. As such, it is not a statement of official Department of Energy policy. Therefore, it cannot be used: as a reference, legal or otherwise; for purposes of binding the Department to any specific promises or policies; or as statements against DOE in the course of litigation or otherwise.

The purpose of this document is to provide assistance to individuals and organizations on the basic principles for the **Environmental Management (EM) Site-Specific Advisory Board (SSAB or Board)**. This revised guidance supersedes the *Site-Specific Advisory Board Guidance (Final)* issued in January 1996. It supplements the requirements of the 1972 Federal Advisory Committee Act (FACA), the General Services Administration (GSA) implementing regulations, and the *DOE Advisory Management Program Manual* (DOE M 510.1-1, dated September 30, 1996), hereinafter referred to as the Manual.

I. Introduction

The Department has various means of involving the public in its decision-making process; the EM SSAB is only one component of a successful overall program, and is not an exclusive means of public participation. Chartered under the Federal Advisory Committee Act (FACA), the goal of the SSAB is to involve stakeholders more directly in DOE's planning and decision-making process on cleanup of the nuclear weapons complex. In accordance with the Board's charter, the EM SSAB exists to provide the Assistant Secretary for Environmental Management, and other DOE officials such as Field managers, with policy information, advice and recommendations concerning EM environmental restoration, waste management, nuclear material and facility stabilization, and science and technology activities. Additionally, the EM SSAB provides input and recommendations on strategic decisions that impact future use, risk management, economic development, and budget prioritization activities. Finally, the Board may be asked to provide advice and recommendations on any other EM related projects or issues.

On June 16, 1994, the Office of Management and Budget (OMB) and the General Services Administration (GSA) approved the charter that established one EM SSAB. That charter was renewed in May 1996 and in May 1998. While only *one* FACA-chartered EM SSAB exists, twelve local site-specific boards have been organized under the EM SSAB umbrella charter

between 1993 and 1996. Local EM SSABs, known in some locations as Community- or Citizen Advisory Boards (CABs), draw on the full diversity of community viewpoints to provide advice and recommendations to DOE on issues of environmental remediation and waste management.

II Roles and Responsibilities

II.a. DOE Headquarters

The DOE Headquarters has the following specific FACA-related responsibilities:

- Renew or terminate the EM SSAB charter as appropriate. 5 U.S.C.A. App. II § 9(b)(2).
- Officially appoint Board members, except in limited cases where this authority has been delegated to the Field. Advisory Committee Management Office. Office of Human Resources and Administration, U.S. Department of Energy (DOE), Pub. No. DOE M 510.1-1, *Advisory Committee Management Program* at IV – 1 (1996).
- Process and obtain approval of SSAB new/renewal membership packages (for more details, see Section III.c.4 of this Guidance). Id. IV – 4.
- Ensure compliance with FACA requirements, including provisions regarding membership, specified in section IIIc of this guidance. 41 CFR § 101 – 6.1009(j).
- Manage and maintain a library of EM SSAB documentation, including SSAB annual reports, work plans, recommendations and responses, meeting minutes, and membership information. 5 U.S.C.A. App. II § 12(a).
- Process Federal Register notices for local EM SSAB public meetings. DOE M 510.1-1 at V-3.
- Provide copies of Board reports to DOE's Advisory Committee Management Officer for forwarding to the Library of Congress. 5 U.S.C.A. App. II § 13.

In addition, DOE Headquarters has the following non-FACA-related responsibilities:

- Respond promptly in writing to EM SSAB recommendations, as appropriate
- Inform the SSAB members of Departmental processes, programs, projects, and activities directly affecting the Board's mission and purpose
- Conduct periodic evaluations, including site visits and surveys, of local Board operations and activities.
- Establish a means for Board members to obtain information about other local Boards
- Formally recognize and thank Board members for their service

II.b. DOE Operations, Field and Area Office

The DOE Operations, Field and Area Office (the Field) has a dual role. First, it must ensure that processes and procedures related to the Board are consistent with applicable regulations and Departmental policy. Second, it must provide support and assistance to the Board. In addition to ensuring compliance with FACA regulations, the DOE Operations, Field and Area Office is responsible for the following:

- Ensuring that the Department's diversity goals are met through adequate outreach efforts for membership.
- Providing adequate resources (e.g., for funding, facilities, administrative staff and facilitation support, technical information, orientation, and education and training) to enable the Board to carry out its functions. 5 U.S.C.A. App. II § 12(b).
- Designate, to the Director of the Office of Intergovernmental and Public Accountability, senior DOE official (or officials) to serve as Deputy Designated Federal Officer(s) for the local Board.
- Providing information and advice to the local SSAB on the Board's relationship to DOE and developing agreement on the scope of the Board's work.
- Approving local Board bylaws and/or operating procedures to ensure that they are in compliance with FACA.
- Encourage the Board to listen carefully to all points of view and to work toward consensus.
- Work closely and cooperatively with local SSABs to develop the Board's annual work plan, and, as applicable, the annual operating budget for the Board.
- Provide adequate resources to ensure administrative issues are addressed, such as advertising upcoming meetings, networking with the community, and seeking travel reimbursements.
- Ensure that member appointment packages are sent to DOE Headquarters, with the exception of instances when the Board can appoint members. (Limited authority has been delegated to DOE Field Offices to appoint new local Board members to serve-out the remainder of the term of those members who have resigned, up to five appointments per calendar year.)
- Providing timely written responses, as appropriate, to Board recommendations.
- Review local annual work plans (and budgets, as applicable), and incorporate into the EM budget development process.
- Coordinate with DOE Headquarters on EM SSAB issues and processes.

II.c. Designated Federal Officer (DFO)/Deputy Designated Federal Officer (DDFO)

Under FACA, each Federal advisory Board is required to have a Designated Federal Officer (DFO), in this case a DOE employee who works closely with the Board. 5 U.S.C.A. App. II §10(e). The DFO for the EM SSAB is the Director of the Office of Intergovernmental and Public Accountability (EM-22). For local Boards, which are formally part of the EM SSAB, local DOE employees are appointed by the DFO to serve as on-site Deputy Designated Federal Officers (DDFOs) (a site may have more than one DDFO). DDFOs are responsible for performing the following FACA-mandated actions:

- Call for, attend, and adjourn Board meetings. Id.
- Approve agendas. Id.
- Ensure that conflict-of-interest regulations are followed. DOE M 510.1-1 at IV-8.
- Ensure required records on Board costs and membership are maintained. 5 U.S.C.A. App. II § 12(a).
- Make records available to interested members of the public. Id. § 11.

In addition to the FACA-related responsibilities, the DDFO has the following role:

- Ensure that senior DOE managers responsible for environmental cleanup and, as appropriate, their

Environmental Management contractor staff attend and participate in the Board meetings

- Ensure that the local SSAB has the opportunity to offer advice and recommendations that may affect EM decision-making process. As such, the DDFO must ensure that DOE's decision-making process is clearly communicated; suggest site activities and policy issues on which the Board's input would be useful; inform the local SSAB of Departmental programs, projects, and activities directly affecting the Board's mission and purpose; work closely and cooperatively with the Board to prioritize issues and develop an annual work plan that includes goals for the coming year; and approve the Board's annual work plan.

III. Operating a Local Site-Specific Advisory Board

III.a. Public Participation and Record Keeping

FACA requires the Department to be responsible for ensuring that the public is allowed to participate in local EM SSAB meetings; that notification of all Board meetings are published in the Federal Register; that "detailed" minutes ("containing a record of the persons present, a complete and accurate description of matters discussed and conclusions reached, and copies of all reports received, issued, or approved by the committee") are kept; and that records are available to the public. 5 U.S.C.A. App. II § 10(a)(1) - (c).

III.a.1 Public Participation

Board meetings are open to the public. Id. § 10(a). As such, FACA regulations require that the time and location of the Board meetings be reasonably convenient and accessible to allow for public participation. 41 CFR § 101 – 6.1021.

During the meetings, the public can submit written statements to the DDFO five days prior to the meeting. Each individual wishing to make public comment will be provided a maximum of 5 minutes to present their comment at the end of the meeting.

Although not required by FACA regulations, DOE requests that all media coverage be coordinated with the local DOE Operations, Field or Area Office public affairs office. Meetings are open, the press is welcome, and each Board should establish their protocols regarding equipment and interviews. (To minimize disruption to participants, media personnel are further requested to position and remove equipment only while the meeting is not in session. In turn, the equipment should not interfere with the orderly conduct of the meeting.) DOE M 510.1-1 at V-2.

III.a.2 Public Notification: The Federal Register

Ensure that a notice of a meeting appears in the Federal Register at least 15 calendar days prior to the meeting. Therefore, Federal Register notices should be sent electronically to EM-22 at least 20 calendar days in advance and must include: (*see generally*: 41 CFR § 101 – 6.1015.)

- The exact name of the advisory committee as chartered (i.e., EM-SSAB [site name])

- The date, time, and place of the meeting
- The name, address, and telephone number of the individual to be contacted for further information relative to the meeting
- The purpose of the Board
- A summary of the agenda
- A statement that the meeting is open to the public
- The name, address, and telephone number of a contact for citizens who wish to make oral presentations before the Board or submit a written statement
- The location(s) where meeting minutes will be made available to the public and the individual to contact to acquire copies of the minutes
- Information on the public comment period.

III.a.3 Minutes and Records

The local site board chair, or DDFO if no chair or vice-chair is present, must certify (i.e., vouch for the truth of) the minutes. The minutes must include the following elements: (*see generally:* 5 U.S.C.A. App. II § 10(c) and 41 CFR § 101 – 6.1025)

- Name of Board
- Meeting time, date, and place
- A list of meeting attendees to include local SSAB members and staff, DOE employees, members of the public presenting oral or written statements, and an estimated number of other members of the public present
- Names of any members who may have recused themselves from the meeting or a portion thereof, and their reasons for doing so
- An accurate description of each matter discussed and the resolution, if any, made the local site Board of such matter
- Copies of each recommendation used, or approved by the local SSAB

The Board and DOE must maintain copies of records, reports, minutes, transcripts, memoranda, and other documents for public inspection and copying (for the actual cost of duplication). Local SSAB records should be maintained and distributed as follows:

- One copy of all local Board reports, minutes, transcripts (where applicable), recommendations and responses, self-evaluations, and SSAB work plans should be forwarded by the DDFO or local SSAB Federal coordinator to the local reading room or other appropriate information resource center(s)
- One copy of the materials described above should be sent to the DOE Freedom of Information Public Reading Room (1000 Independence Ave., S.W., Forrestal Building, Room 1E-190, Washington, D.C. 20585) for public use.

Two copies of Board minutes or transcripts and ten copies of each annual report should be sent to the Deputy Advisory Committee Management Officer at the following address: Department of Energy, 1000 Independence Avenue, S.W., HR-7/Room 7E-028, Washington, D.C. 20585. From these

materials, the Deputy ACMO will forward one copy of the minutes and eight copies of annual reports to the Library of Congress.

One copy of Board minutes, transcripts (where applicable), annual reports, SSAB recommendations, DOE responses, annual self-evaluations, and local Board annual work plans should be sent to EM-22 for its files.

III.b. Board Recommendations and DOE Responses

The Department is responsible for providing information to local SSABs and for responding to Board recommendations in a timely fashion. In general, DOE Operations, Field and Area Offices are responsible for reply to site-specific recommendations, while EM Headquarters should reply to Board recommendations about national or cross-site issues. All DOE written responses should include the following:

- A clear statement of acceptance or rejection of the recommendation, in whole or in part
- If the recommendation is accepted in whole or in part, a statement about how the changes will be implemented and in what time frame
- If the recommendation is rejected in whole or in part, a substantive reason for the decision as well as possible alternatives for addressing the concerns or issues raised in the recommendation
- If unresolved issues still remain, DOE should indicate this in written correspondence to the local SSAB with the goal of establishing (or continuing) a near-term mutual dialogue to work through area(s) of disagreement.

III.c. SSAB Membership

III.c.1 SSAB Membership Composition

The membership of local EM SSABs is composed primarily of those in the local community who are interested and affected by site cleanup activities. FACA requires that the Board be "fairly balanced in terms of points of view represented and functions to be performed." In addition, Secretary Richardson's memorandum of November 6, 1998 requests the Board to ensure that "adequate outreach efforts are made when selecting members for departmental advisory committees," and that "it is critical that the individuals selected are representative of the American population and in particular are representative of ethnic and gender diversity." Board members may include, but are not limited to stakeholders from:

- Local governments
- Tribal Nations
- Environmental and civic groups
- Labor organizations
- Universities
- Industry
- DOE contractors (Note: These members will require a letter of exception, per section IV, below.)

Officials from the DOE, Environmental Protection Agency, and State governments serve as *ex officio* members on the local Boards. On some Boards, Tribal Nations and Local Governments have chosen to serve as *ex officio* members.

III.c.2 SSAB Members' Expected Responsibilities

The success and effectiveness of local SSABs depends largely upon the interest, commitment, input, and integrity of its members. To assist the members in understanding their responsibilities, a list of expectations follows. In general, local Board members are expected to:

- Attend meetings
- Participate in an open, constructive and respectful manner
- Provide advice and recommendations to DOE decision-makers at the Field and Headquarters levels on relevant Environmental Management issues
- Act as a conduit for the exchange of information between the community, the Department, and environmental oversight agencies on relevant issues
- Review, evaluate, and comment on environmental management documents and other materials.

III.c.3 New Member Appointment

The Secretary of Energy has delegated authority for SSAB member appointments to the Assistant Secretary for EM. The standard term for Board members is for two years, and members typically serve no more than three consecutive two-year terms. In addition, their appointments are usually staggered so that at least one-third of the membership is retained for continuity.

The DOE, Operations, Field or Area Offices should provide, no less than six weeks in advance of the desired appointment date for new members or re-appointments, an information package in either electronic or hard copy to the Office of Intergovernmental and Public Accountability (EM-22). It is critical that sites submit packages in sufficient time for DOE Headquarters to conduct its review and concurrence process.

The General Counsel and the DOE Federal Advisory Committee Management Officer (MA-71) will review Board nominations to ensure compliance with FACA requirements, as well as General Services Administration and Departmental requirements. Sites must include the following information in their member appointment packages: (*see generally:* DOE M 510.1-1 at V-2.)

- Names and addresses of all proposed members (i.e., both new appointments and re-appointees), including *ex officio* members (plus telephone and fax numbers, and e-mail addresses, if available).

- Biographies for all proposed members, including *ex officio* members.

- Completed membership criteria matrices for proposed and current members. *Ex officio* members need not be included (See Appendix A for sample matrices)

- Names and companies of contractors requiring letters of exception to serve on the Board
- Outreach efforts conducted to attract new members
- A brief account of the local SSAB's history

In addition, the SSAB appointments should reflect the Department's policy of promoting diversity in its decision-making, as affirmed in a November 6, 1998, memorandum from Secretary Richardson on advisory committee membership. In this memorandum, the Secretary acknowledges the invaluable role of the Department's various advisory Boards and encourages DOE Operations, Field, or Area Offices to select members are representative of ethnic and gender diversity.

All DDFOs and Federal Coordinators should note, in particular, the requirement in the Secretary's memo that "all future advisory committee membership packages must include information detailing specific outreach efforts made to achieve proper diversity." Therefore, a write-up detailing these specific community outreach efforts (including solicitation efforts, and the nomination and selection process) made by the DOE Operations, Field or Area Office to achieve proper diversity on the local Board must also be included in the membership package.

III.c.4 Delegated Authority to the Field for EM SSAB Member Appointment

Guidance from DOE Headquarters dated June 1996 and reaffirmed in February 1999 clarified the extent of authority to the Field to appoint SSAB members. Headquarters has the authority to appoint members under the following circumstances:

- Appointment and re-appointment of members to SSABs
- Initial appointments for positions which were established in the SSAB's bylaws, operating procedures, or charter, but which have, to date, remained unfilled.

These type of appointments require concurrence from the Headquarters' Office of Intergovernmental and Public Accountability (EM-22), the Office of General Counsel (GC-80), and the Office of Management and Administration (MA-7).

The Field has been delegated the authority to appoint SSAB members *only* under the following terms and conditions:

- Appointments can be made *only* to replace members who have resigned (i.e., those with time remaining in their membership terms)
- The appointments can be made *only* for the remainder of the previous member's term
- No more than five total replacement appointments can be made by the sites in any given calendar year
- When appointing new members under this delegated authority, DOE Field managers must comply with FACA, GSA, and DOE regulations, including appropriate conflict-of-interest

restrictions

III.c.5 Removal and Resignation of SSAB Members

In accordance with local EM SSAB by-laws and/or operating procedures, DOE Operations, Field and Area Offices may recommend to DOE Headquarters (EM-22) that local Board members be removed from the SSAB due to chronic non-attendance at regularly-scheduled Board meetings, for example, missing either three consecutive EM SSAB meetings, or having three unexcused absences in a given calendar year. The DOE retains ultimate appointment and removal authority. In addition, the Assistant Secretary for Environmental Management has the authority to remove Board members without cause. DOE M 510.1-1 at IV-2.

Members who wish to resign from the Board should submit a letter to the Assistant Secretary for Environmental Management, with copies to the DDFO and the local EM SSAB Chair and Secretary.

III.d Outreach

DOE staff should work with local SSAB members to ensure that the community is aware of and engaged in Board activities. EM SSAB Federal Coordinators should ensure that Board outreach activities are appropriately coordinated with other DOE Operations, Field and Area Office public involvement activities. DOE Operations, Field, or Area Offices may choose to provide supplemental resources for local Boards to establish and maintain their outreach activities.

IV. Conflict-Of-Interest

A conflict-of-interest occurs where a local SSAB member has either a direct or indirect financial interest in the outcome of an issue before the Board. Consequently, a person proposed for Board membership that might have a conflict-of-interest (such as a DOE contractor employee) cannot be appointed if he or she has a conflict-of-interest, unless the Headquarters Advisory Committee Management Officer issues a letter of exception. (See Appendix for a sample letter of exception.)

An individual's expertise, knowledge, or access to a constituency under-represented on the Board, can outweigh a potential conflict-of-interest. In such a circumstance, DOE may choose to issue a letter of exception, allowing the person to join the Board. Typical language of a letter of exception states that "special care will be taken to ensure the appointment of this employee will not result in a conflict of interest. In the event of any conflict or potential conflict-of-interest, a statement will be included in the local site Board report or study detailing such potential conflict-of-interest and the action taken to remove it."

New member qualifications are reviewed by the Assistant General Counsel for General Law for conflict-of interest issues, while midterm replacements are handled by the Field Counsel. If a proposed midterm appointment exhibits a conflict-of-interest the local DDFO must provide the Assistant General Counsel for General Law at the field with copies of the proposed members'

financial disclosure forms, as well as any other relevant materials.

Local SSAB members are required to recuse themselves from participating in any meeting, study, recommendation or other Board activity which might present a conflict-of-interest. Should a conflict-of-interest prove unavoidable, a Board should inform all affected members and allow them time to disqualify themselves from participating in that matter. In addition, members should take care to comply with the following requirements:

- Members will refrain from any use of their membership that is, or gives the appearance of being, motivated by the desire for private or corporate/organizational gain.
- Members will not use for private gain, either directly or indirectly, any inside information obtained as a result of Board service.
- Members will not use their positions in any way to coerce, or give the appearance of coercing, another person to provide a financial benefit to the member or any person with whom he or she has family, business, or financial ties.
- Members will follow the prohibitions on accepting gifts codified in 5 CFR § 2635.201 et seq.

(*see generally:* DOE M 510.1-1 IV - 8)

V. Funding and Other Support

In 1997, the funding of local SSABs became the responsibility of DOE Operations, Field and Area Offices. Accordingly, DOE Operations, Field, and Area Office managers should provide adequate funding to local SSABs to enable them to operate efficiently and effectively.

DOE Operations, Field, and Area Office managers, through the DDFO and SSAB Federal Coordinator, must work closely and cooperatively with the local EM SSAB to develop a budget that is consistent with the Board's mission, scope, and annual work plan. To ensure that funding for local SSABs is consistent across the complex, Field managers should report the level of funding to DOE Headquarters annually. After the work plan is approved by the Board and DDFO, the DOE Operations, Field or Area Office should provide sufficient funding to carry out the work plan.

FACA requires DOE to provide administrative and technical support, including:

- Daily administrative and meeting-related tasks such as distributing information, arranging meeting logistics and notes, and performing various types of record keeping. 5 U.S.C.A. App. II § 12(b).

- Additional types of support, including coordination of meetings and agendas, coaching members and presenters, and monitoring emerging issues and activities.

In addition, local Boards are encouraged to use an independent facilitator to ensure that Board members set and reach meeting objectives, maintain focus, work as a team, strive for consensus,

and operate at maximum efficiency.

Boards may also request that DOE fund independent technical reviews of key issues or provide ongoing technical assistance to the Board. Field Offices and Headquarters should ensure that technical assistance funding is used to complement, rather than duplicate, the technical programs of both DOE and its regulating agencies.

VI. Reimbursement of Expenses and Compensation for Board Members

VI.a Compensation for Board Members

Local SSAB members are not compensated by the Department for their service, except when their participation is required to ensure a balanced Board, in accordance with FACA regulations. If a board needs a particular member so that it meets the diversity requirements, then this member must provide proof that he or she is not compensated for participating in advisory Board matters. Such proof may be either a statement from an employer or an earning statement indicating that the applicant is not being compensated for participating in local EM SSAB matters. Salary and personal information may be removed from any materials submitted.

In certain cases, however, FACA regulations provide for compensation of an individual whose presence is deemed necessary is unable to join a Board because of financial considerations. To compensate an individual, the Department must determine that he or she:

- Represents a constituency, demographic group, or geographic region whose input is needed to ensure a balance of diverse backgrounds and viewpoints on the Board; or is representative of minority, economically disadvantaged, or ethnic communities whose participation is necessary for a balanced Board

- Is unable to serve on the Board unless compensated for his or her services and that he/she will not receive compensation from any source.

Candidates who must be compensated to participate in SSAB matters, and whose presence is deemed essential for Board balance, will be paid at the daily rate for a GS-6 Federal employee for services performed for and at the request of the Department. The daily rate will be payable for service of eight hours or more in a calendar day, including Saturdays, Sundays or holidays. The hourly rate is one-eighth of the daily rate.

No additional pay should be provided for service, including travel time, in excess of eight hours in any calendar day. No member will be given holidays off with pay, paid a premium rate for work on a holiday, or otherwise compensated at an overtime rate. No member will be compensated for more than 1,040 hours in a fiscal year.

Local EM SSAB members receiving compensation for their services will be considered special government employees, as defined in 18 U.S.C. 9202, and will be subject to conflict-of-interest

statutes and Federal regulations governing their conduct, including the requirement to disclose financial interests. (*see generally*: 41 CFR § 101 – 6.1033 and DOE M 510.1-1 IV – 3 - 4)

VI.b. Travel Reimbursements

Advisory Board members will be reimbursed for travel expenses accrued on EM SSAB business conducted away from their residence or business establishment on a per diem or subsistence method. If a member lives or works within commuting distance of the official Departmental work place, he or she will be ineligible for commuting costs, per diem, or other subsistence payments.

Reimbursement for travel is as follows:

- *Tickets*: Generally, DOE will provide local SSAB members with a government fare common carrier ticket. If DOE is unable to provide a member with a common carrier ticket, the member may purchase it directly. When transportation costs exceed $100.00, a senior DOE official must review and approve the purchase before the traveler can be reimbursed. Ticket costs may not exceed the Government-authorized fare. Unused tickets should be returned promptly to the appropriate DOE Operations, Field or Area Office.

- *Travel Methods*: The Department will reimburse SSAB members for the least costly reasonable form of transportation.

- *Air Travel*: Airfare is limited to regular, round-trip, coach-class fare or, when available, Government contract airline fare between the member's residence or business establishment and the meeting site. When travel is between certain cities served by a Government contract airline, that airline must be used. A non-contract airline may be used only when a contract airline is unavailable. The Department will provide air passengers with an open, round-trip, coach-class or contract fare ticket, if available. Since different airlines may charge different fares for travel between identical locations, DOE will seek to purchase the lowest cost airfare. If the travel can be accomplished through the Government contract airline program, DOE will provide an airline ticket.

- *Privately Owned Vehicle*: The Department will reimburse the member at the mileage allowance rate and for actual bridge, turnpike, ferry, and parking fees. (Total travel expenses by privately owned vehicle generally shall not exceed the usual cost by common carrier.) DOE will not reimburse a member for rental car charges unless its use has been justified and previously approved. In addition, DOE will reimburse members for charges for buses, limousines, and subways; and taxi fees (when they are the most appropriate means of transportation).

- *Lodging, Meals, and Incidental Subsistence Expenses*: The Department will reimburse members for lodging, meals, and incidental expenses via a per diem allowance. Per diem rates include a maximum amount for lodging expenses. A member will be reimbursed for

actual lodging costs up to this amount supported by receipts. Travelers receive a fixed allowance for meals and incidental subsistence rate is and need not submit expenses or receipts. If a member is authorized to travel on an actual expense basis rather than a per diem basis, the Department will reimburse him her for actual lodging and subsistence expenses. Reimbursement may not to exceed the maximum daily amounts allowed for these expenses.

With respect to lodging, a member is responsible for: making, confirming, changing or guaranteeing his/her own hotel reservations. DOE will reimburse actual lodging cost, not to exceed the maximum daily rate specified for lodging.

- *Travel Expense Reimbursement Vouchers*: Information on completing travel expense reimbursement vouchers can be found in DOE Order 1500.2A, "Travel Policy and Procedures." Members with questions on travel requirements or reimbursements should consult with their local DOE Operation, Field or Area Office prior to commencing travel or completing the reimbursement voucher.

- *Unallowable Expenses*: As a general rule, Federal agencies may not use appropriated funds to pay for food at meetings. However, the Department of Energy Act does provide specific authority to provide per diem expenses to Federal advisory Board members who must travel to attend meetings or otherwise serve at the request of the Secretary of Energy (see 42 U.S.C. 97234). In addition, some General Accounting Office decisions do provide some very narrow exceptions to the general rule and may authorize food allowances for local SSAB members who are not on travel. Accordingly, the Office of Chief Counsel at each DOE Site should review individual situations on a case-by-case basis to ensure compliance with Federal appropriations laws.

(*see generally:* DOE M 510.1-1 Chapter IV.)

VII. Evaluation and Team Building

The DOE Operations, Field, and Area Office managers should coordinate and assist the Board and DOE Headquarters in performing periodic (e.g., annual) evaluations. These evaluations may consist of: a formal survey of selected individuals, including Board members, *ex officio* members and members of the general public; site visits and discussions with local SSAB members and others; a review of recommendations, reports and meeting minutes submitted by local site boards; and/or a more systematic, qualitative assessment.

In addition, toward the end of each fiscal year, local Boards are requested to conduct a self-evaluation (either formal or informal) of their operations and progress made during the previous year, in order to assist members in gaining insight into their Board's strengths and weaknesses, with the aim of improving the Boards' overall effectiveness. Finally, Board members are also encouraged to hold periodic retreats in order both to evaluate their goals and processes and to

engage in team-building activities. These should be provided for in the annual work plan.

VIII. Board Termination

All local SSABs operate under the charter of the national EM SSAB, which is renewed biennially. If that charter is not renewed, all SSABs will terminate automatically.

Once the chartered purpose for a local Board no longer exists, the DDFO, in consultation with DOE Headquarters, members of the local EM SSAB and with *ex officio* members, should begin establishing a time table for disestablishing the local Board.

Applicable Law, Regulations and Policy

Statutes:

Federal Advisory Committee Act (FACA), 5 U.S.C.A. App. II §§ 1 - 15 (1997) (original version at Pub. L. No. 92-463, 86 Stat. 770 (1972))

Regulations:

Federal Advisory Committee Management, 41 CFR § 101-6.10. (1998).
see also: 52 Fed. Reg. 45926 (1987).

Specific Agency Regulations:

Office of Human Resources and Administration, U.S. Department of Energy (DOE), Pub. No. DOE M 510.1-1, *Advisory Committee Management Program* (1996).

Charter:

Office of Environmental Management, Office of Intergovernmental and Public Accountability, U.S. Department of Energy *Amended Charter: Environmental Management Site Specific Advisory Board* (1994).

Memoranda:

Memorandum from Martha Crosland, Acting Director for the Office of Intergovernmental and Public Accountability, U.S. Department of Energy, entitled, "Authority to Appoint EM Site-Specific Advisory Board (SSAB) Members" (February 3, 1999)

Memorandum from James M. Owendoff, Acting Assistant Secretary for Environmental Management, U.S. Department of Energy, entitled, "Environmental Management Site-Specific Advisory Board" (March 5, 1998)

Memorandum from William Richardson, Secretary of Energy, entitled, "Membership of Departmental Advisory Committees" (November 6, 1998)

Historical Documents:

Office of Environmental Management, U.S. Department of Energy *Site-Specific Advisory Board Guidance (Final)* (January 1996).

Surveys and Studies:

Judith Bradbury, Ph.D., and Kristi Branch, Pacific Northwest National Laboratory (PNNL), *An Evaluation of the Effectiveness of Local Site-Specific Advisory Boards for U.S. Department of Energy Environmental Restoration Programs* (February 1999).

Federal Facilities Environmental Restoration Dialogue Committee (FFERDC), Keystone Center, Keystone, CO, *Consensus Principles and Recommendations for Improving Federal Facilities Cleanup* (1996).

List of Appendices [forthcoming]

Appendix I
An example of a matrix.

Proposed Board Members for XXXX 1999
MEMBERSHIP CRITERIA FOR DOE ADVISORY COMMITTEES

NAME OF COMMITTEE: Environmental Management Site-Specific Advisory Board,
DATE:

Are the candidates representative(s) of the following categories?

Candidates	State/Local Governments	Indian Tribes	Civic Groups	Environmental Groups	Labor Organizations	Universities	Waste Management/ Environmental Restoration Firms

** Indicates that the member is a re-appointee
Note: ***Ex officio*** **members are not shown on the matrix because they do not have a vote on decisions.**

U.S. senators plan gas plant hearings

■ **Jim Bunning** *will chair one Monday at PCC to get at the truth, and Mitch McConnell will chair one Oct. 19 in Washington regarding contamination levels.*

By Bill Bartleman
The Paducah Sun

Getting the attention of the U.S. Department of Energy and making it more accountable will be one goal of the second of three scheduled congressional hearings regarding the Paducah Gaseous Diffusion Plant.

U.S. Sen. Jim Bunning said Monday that the Senate Energy Committee's Subcommittee on Energy Research and Development will conduct a hearing from 9 a.m. to 1 p.m. next Monday in the Fine Arts Theatre at Paducah Community College.

Bunning, a member of the subcommittee, will chair the meeting since he probably will be the only member attending.

"The Department of Energy had muddled the whole controversy over the plant," Bunning said in a telephone interview. "Instead of finding out the truth and what has happened at the plant, they have brushed it under the rug. We want to make sure it gets out from under the rug and cleaned up."

He said it is important to get the cleanup of contamination moving forward and ensure that production is safe. He said he wants to make sure that the controversy doesn't threaten the future of the plant because "the plant is too big of an employer and has too great of an economic impact on Paducah to let it fail."

Bunning said the hearing also will focus on local views of the Department of Energy and the plant.

"What we want to do is get on-site people and local elected officials to give us insight as to how bad they perceive the problem to be at the plant," Bunning said. Mayor Albert Jones, state Sen. Bob Leeper, state Rep. Charles Geveden and other local officials are being asked to appear. "The staff is still making contacts, and we don't have a confirmed list of witnesses yet," Bunning said.

Also on Monday, U.S. Sen. Mitch McConnell announced that he will chair an Oct. 19 hearing in Washington to investigate the extent of contamination in and around the plant, focus on DOE's cleanup priorities and determine if sufficient funding is available for cleanup and worker health testing.

The hearing will be before the Energy and Water Subcommittee of the Appropriations Committee, McConnell said, adding that the witness list and time are not complete.

"Our hearing will focus on the problems and Mitch's hearing will focus on the solution and the cost," Bunning said. "We are working in conjunction with each other."

The two hearings are being scheduled as U.S. Rep. Ed Whitfield makes final preparations for a House hearing Thursday in Washington. The Oversight and Investigations Subcommittee of the House Commerce Committee will take a comprehensive look at allegations that contamination at the plant is worse than has been reported and that workers were unknowingly exposed to uranium contaminated with plutonium.

Whitfield was scheduled to meet today with U.S. Rep. Fred Upton, R-Mich., chairman of the subcommittee, to make final plans. Whitfield is expected to receive a second briefing from top DOE officials either today or Wednesday regarding findings of a special investigative team that was in Paducah in late August and earlier this month.

Also, spokesmen for Energy Secretary Bill Richardson said that no decision has been made on when Richardson will visit Paducah. Some workers at the Paducah Gaseous Diffusion Plant were informed during the weekend that Richardson could make his visit Friday.

A spokesman said Richardson's schedule for Friday hasn't been finalized.

The Courier-Journal
Kentucky
www.courier-journal.com

Tuesday, September 14, 1999

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Regional briefs B2
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Deaths B7

Editor: Gideon Gil
Phone: 582-4657 / Fax: 582-4200

3 congressional panels probe uranium plant

Subcommittee to hold hearing in Paducah

By JAMES R. CARROLL
The Courier-Journal

WASHINGTON — A U.S. Senate panel will be in Paducah Monday to investigate safety conditions at the Paducah Gaseous Diffusion Plant.

The field hearing by a Senate Energy and Natural Resources subcommittee will follow a separate House hearing Thursday in Washington on the Paducah facility.

Sen. Jim Bunning, R-Ky., a member of the Senate energy panel, announced the Paducah hearing yesterday.

Sen. Mitch McConnell, R-Ky., also announced yesterday that there will be an Oct. 19 hearing on Capitol Hill by the Senate Appropriations Committee's energy and water development subcommittee. McConnell is chairman of the energy subcommittee.

The two senators met yesterday to coordinate the two Senate subcommittees' areas of inquiry.

The hearings stem from a whistle-blower lawsuit filed against former plant operators alleging that employees were not told they were exposed to dangerous levels of radiation at the Department of Energy facility.

On Thursday, the House Commerce Committee's oversight and investigations subcommittee is scheduled to hold an all-day hearing in Washington on conditions at the plant and on how federal and state regulators are overseeing operations.

All of the hearings have been set within days of the return of Congress from a summer break, during which published reports detailed decades of worker exposure to plutonium, uranium dust and other radioactive materials at Paducah.

Besides the whistle-blower suit, 14 former employees and their families have filed a $10 billion lawsuit against companies connected with the plant, alleging that the firms did not tell workers of the dangers there.

The Energy Department last week ordered a one-day halt of some operations at Paducah to allow a review of safety practices after federal investigators found problems at the sprawling complex.

The Senate energy panel's subcommittee wants to examine past and present worker safety issues at Energy Department facilities.

The Senate appropriations subcommittee will explore the extent of contamination in and around the plant and look into the department's cleanup priorities to determine whether federal spending is adequate for cleanup efforts and health testing for workers.

No witnesses were announced yesterday for either Senate hearing.

The Paducah hearing on Monday will be held from 9 a.m. to 1 p.m. in Paducah Community College's Fine Arts Auditorium.

Safety lapses led to plant stand-down

Saturday, September 11, 1999 The Paducah Sun

■ Although investigators *said the problems didn't place workers in imminent danger, they said a potential existed for problems because of a lapse in some safety procedures.*

By Bill Bartleman
The Paducah Sun

Lapses in training workers about protecting themselves from radiation exposure and problems with the management of contaminated areas were the primary reasons that Energy Secretary Bill Richardson ordered a one-day shutdown of routine environmental operations at the Paducah Gaseous Diffusion Plant.

Whitfield

U.S. Rep. Ed Whitfield, R-Hopkinsville, said members of a 14-member U.S. Department of Energy investigative team that spent two weeks at the plant "were concerned about the overall management process" of environmental operations.

Although investigators said the problems didn't place workers in imminent danger, they said a potential existed for problems because of a lapse in some safety procedures.

Whitfield discussed the investigation Friday with David Stadler, the senior manager of the investigative team, and Dr. David Michaels, DOE's assistant secretary of environment, safety and health.

Until the briefing with Whitfield, DOE officials would say only that the one-day work halt was ordered because preliminary observations of the investigators indicated a need for improvement in radiological protection and procedures. They would not discuss any specifics.

The stand-down affected operations Thursday and was ordered so that Bechtel Jacobs Co., the private contractor hired to oversee environmental management, could review safety procedures with workers and survey the plant to make sure that the proper warning signs were posted in contaminated areas. Normal operations resumed Friday.

Whitfield said he was told that investigators also were concerned when testing that they had ordered in a cylinder storage yard revealed higher levels of radioactivity than had previously been detected by Bechtel Jacobs. The cylinders are used to store depleted uranium hexafluoride.

The new tests revealed levels of radioactivity that require workers in the area to wear devices that measure their levels of radiological contamination. About 25 workers, however, were not wearing them because of inaccurate readings from earlier tests. No workers' health was in danger because of the higher levels, officials said.

"They were concerned with the overall management process, training regarding radiation protection and that markings of contaminated areas was not as clear as it should have been," Whitfield said.

Whitfield met with officials as part of his preparation for a congressional hearing Thursday regarding allegations of widespread contamination at the plant.

Officials with the Department of Energy and Bechtel Jacobs said the stand-down went well.

"The stand-down has been a useful experience for the DOE and contractor workers associated with our environmental management and safety programs at the Paducah site," said George Benedict, DOE's assistant manager for uranium and engineering service. "We found areas for improvement but also learned that employees appreciate and understand their key role in safety."

Richardson, in a prepared statement, said his order accomplished its purpose. "The stand-down served to refocus attention on safety, to ensure that established procedures are well understood and are being followed, and to give employees and opportunity to ask questions and raise concerns," he said.

DOE and Bechtel Jacobs officials will hold additional meetings with workers next week to respond to their concerns and give them additional information about safety procedures. The greatest concern was a need to improve communications regarding radiological and chemical testing that is done at the plant, DOE said.

LEFT IN THE DARK

'Stand-down' feeds uncertainty

It's difficult to know what to make of the one-day "safety stand-down" federal Energy Secretary Bill Richardson ordered at the Paducah Gaseous Diffusion Plant Thursday.

This unprecedented action, which brought environmental management operations involving 400 workers to a screeching halt, certainly was dramatic. Officials working at the site were given less than 24 hours to prepare for the safety review. The order, coming in the wake of well-publicized allegations that workers were exposed to serious radioactive contamination at the plant, heightened the anxiety of plant employees, their families and the community at large. Beyond that, however, it's not at all clear what the one-day pause in the environmental cleanup and waste storage operations accomplished.

Initial reports, which proved to be inaccurate, indicated Richardson was shutting down the entire plant. The production of enriched uranium for nuclear reactors was unaffected by the decree. Richardson's action did affect the employees of Bechtel Jacobs Co., the contractor hired by the Department of Energy to oversee the environmental program. The environmental workers stopped their routine tasks to fill out questionnaires asking about their safety concerns and to hear talks from managers about safety procedures.

Although DOE officials continue to insist there is no immediate danger to plant workers and area residents, the order created more uncertainty and skepticism, especially since it followed an inspection by a DOE team that found lapses in protecting plant employees from radiation.

In June the DOE conducted a special investigation that did not turn up any problems at the uranium enrichment facility. For the past month, the agency has been scrambling in response to press reports of claims made in a lawsuit against two former plant operators. The lawsuit alleges that the health of workers was endangered and the environment surrounding the plant poisoned by radioactive materials.

The truth remains elusive. Secretary Richardson and DOE officials haven't clarified the situation; in fact, they've added to the confusion of plant workers and the public.

For instance, many McCracken County residents are wondering how it is possible to square the results of the June investigation with the recent DOE probe and the headline-grabbing shutdown of environmental operations that followed. First District Congressman Ed Whitfield hopes to get some answers next week when a House subcommittee begins examining the issue of contamination at the plant.

The Department of Energy isn't saying much about the stand-down. This reticent posture tends to feed the suspicions of those inclined to believe the government is hiding something.

A different view is that Secretary Richardson is engaging in a little grandstanding for the benefit of the Washington reporters who cover the energy beat. Decisive action — or at least the appearance of decisive action — on a matter related to safety in the nuclear industry serves the political interests of the Clinton-Gore administration.

We hope the energy secretary is motivated purely by concern for the health and safety of plant workers and the people of McCracken County. But it's difficult to understand why a "stand-down" was necessary to convey obvious concerns about safety to workers caught in the middle of the controversy over the presence of plutonium and other highly radioactive metals at the plant site.

The DOE's new emphasis on the health of workers definitely is welcome and long overdue. Still, there's a danger in overdramatizing even legitimate concerns when the community's nerves have been rubbed raw by conflicting reports about a subject as sensitive as radioactive contamination.

In any event, energy department functionaries have used up most of their credibility with their inconsistent responses to serious questions about worker safety. It's now up to Congress to sort it all out through the process of hearings. The first answer congressional representatives must obtain is to a question posed by Congressman Whitfield: "Is this plant safe today?"

Whitfield: Cleanup not evident

DOE chief Richardson next to visit

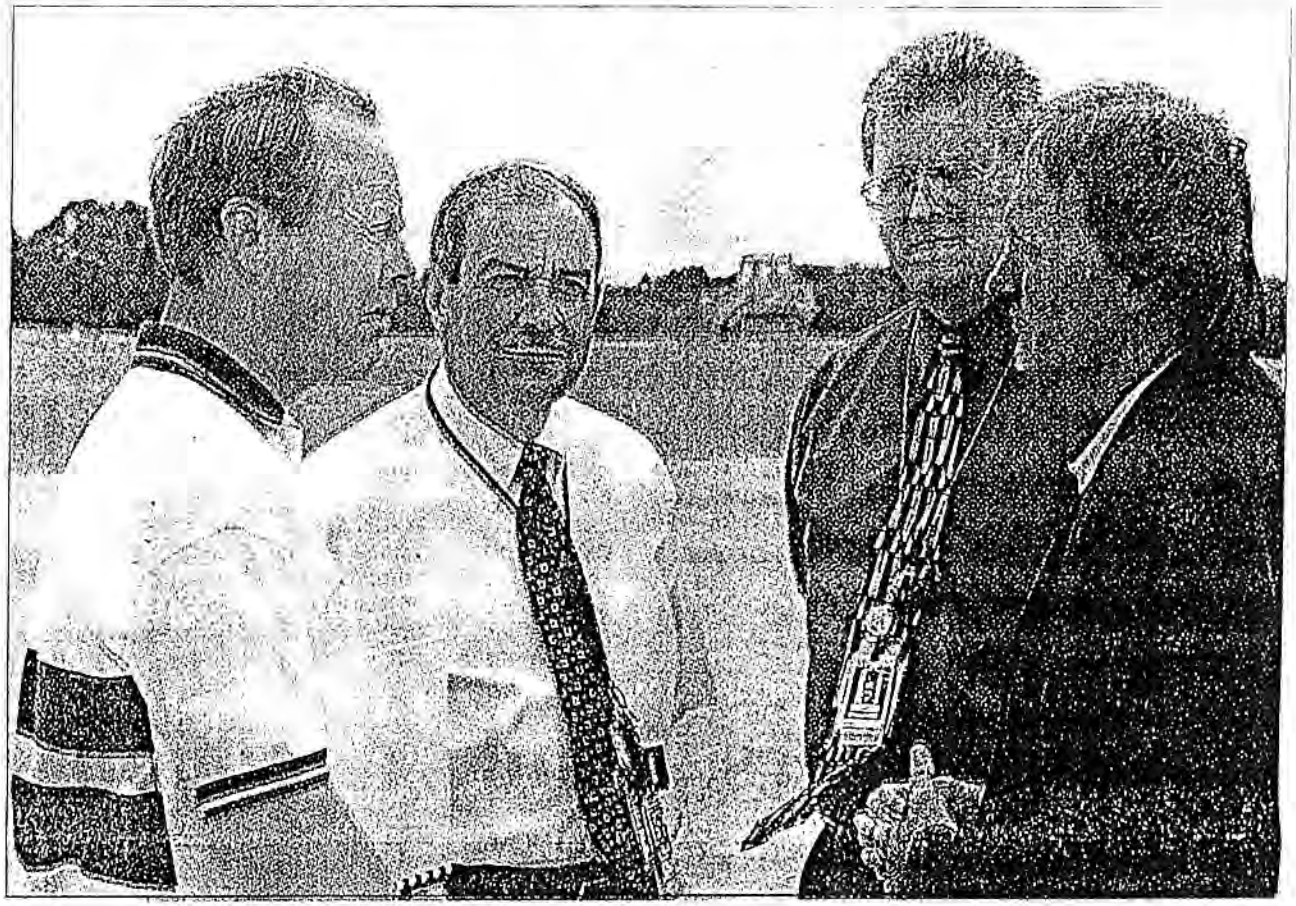
By Bill Bartleman
The Paducah Sun

After seeing mountains of contaminated waste inside the Paducah Gaseous Diffusion Plant, U.S. Rep. Ed Whitfield said he doesn't think the federal government got much for the $400 million it has already spent on cleaning up the facility.

"When you go around and see all of these sites – the metals, the hazardous wastes, the low (level radioactive) waste, the (38,000) canisters (of depleted uranium) and 50,000 barrels of waste – it is difficult to believe that $400 million has been spent and you still have this major of a problem," Whitfield said Sunday after touring the plant in western McCracken County. "It doesn't seem to me that we received much for our money."

Whitfield, however, acknowledged that it is a complex problem because the waste has been

Please see **WHITFIELD** / 12A



SETH DIXON/The Sun

Congressional visit: U.S. Rep. Ed Whitfield (left) talks with Department of Energy officials (from left) Jimmie Hodges, Kenneth O'Brien and James Massey of Bechtel Jacobs Sunday while touring the landfill portion of the Paducah Gaseous Diffusion Plant.

Continued from 1A

accumulating since the plant opened in 1952. He said he hopes to encourage his congressional colleagues to increase funding for the cleanup, which he said that even under the best of circumstances will take years to complete.

Under the current timetable, the work will take until at least 2010 and cost more than $1 billion. The money spent so far has been to stop contamination from leaving the plant and to plan the formal cleanup.

The plant's next visitor from Washington is expected to be Energy Secretary Bill Richardson. Sources told the Sun that Richardson is tentatively scheduled to visit the plant on Friday. Steve Wyatt, spokesman for DOE, would only say that Richardson's schedule for the week has not been released.

Last month, Richardson promised to visit Paducah in the wake of news stories that pollution both inside the plant and on nearby private property may be worse than what was reported by previous plant operators. The reports also said that some materials containing plutonium were processed at the plant without the knowledge of workers.

Details of the visit have not been finalized but he might use it to brief workers and the community on the preliminary findings from a two-week investigation by a special DOE team that looked at existing safety procedures. The team found a number of problems that resulted in a one-day shut down of normal environmental management operations so that officials could have time to review safety procedures.

Meanwhile, Whitfield visited the plant on Sunday to view some of the waste sites that are expected to be discussed on Thursday at the first of what is expected to be several congressional hearings.

Whitfield said purpose of the hearing is to separate fact from fiction regarding contamination at the plant.

He also said at a news conference after his tour that he doesn't think anything will be gained by trying to blame anyone for the contamination that exists.

"You can point a lot of fingers at a lot of different people, but the important thing we have to deal with is assure everyone the production facility is safe now," Whitfield said. "This is not an issue that we need to be doing a lot of finger pointing. We need to get the facts and come up with a solution, and proceed to solve the problems."

Lack of oversight to blame at plant

■ The investigative *team reports that DOE and Bechtel Jacobs didn't supervise contractors effectively regarding safety.*

By Bill Bartleman
The Paducah Sun

Some of the federal government's strict safety procedures were not followed at the Paducah Gaseous Diffusion Plant because of a lack of oversight by the U.S. Department of Energy and Bechtel Jacobs Co., the private firm under contract by DOE to manage and cleanup waste at the plant.

Those and other comments are made in a two-page memorandum of preliminary findings by a 14-member DOE investigative team that spent two weeks at the plant reviewing safety procedures. The findings resulted in an order by Energy Secretary Bill Richardson on Thursday to stop all environmental activities for one day so that safety procedures could be reviewed and improved.

At a news conference after the shutdown ended, officials said problems found by the team had been or will be corrected.

The report does not contain specific details of what the team found. Instead, it talks in generalities about problems that involve private contractors hired to do environmental testing inside the plant and construction related to cleanup and environmental management.

The criticism does not appear to be directed at the United States Enrichment Corp. or its 1,600 employees who enrich uranium for use as a nuclear fuel. The criticism is aimed at environmental cleanup and management activities that are under the control of DOE.

"DOE oversight of contractor and subcontractor activities has been very limited," the report said. "Likewise, Bechtel Jacobs' oversight of subcontracts has not been visible and effective. Consequently, many DOE requirements are not being effectively implemented."

The report also said that

Please see **REPORT** / 12A

Continued from 1A

regulatory violations may be occurring because of a lack of inspections in some areas, waste that is not properly identified and some waste storage areas that are not permitted.

"These areas have not been reported to state hazardous waste inspectors," the team said in its report.

The report also was critical of the way in which information about the plant and contamination has been released to the public.

"Information provided to the public has been delayed, is in forms that are not clearly understood by the general public and stakeholder groups, and leads to a perception that DOE and the contractor are withholding information from the public," it said.

The report of the preliminary findings was distributed to a select few DOE officials on Wednesday. The Louisville Courier-Journal obtained a copy of the report and reported the findings Sunday. A source allowed a Sun reporter to review the report Sunday.

George Benedict, DOE's assistant manager for uranium and engineering services, confirmed to the Courier-Journal that the report was authentic.

The report also confirms a story published in Saturday's Sun that said lapses in training workers and problems with environmental management were the primary reasons why Richardson stopped all normal environmental operations for one day.

The report also said:

■ Some safety procedures implemented by Bechtel Jacobs are generic and "do not contain the specificity of requirements or guidance necessary" for workers to effectively perform their various jobs.

■ Workers for outside contractors were not properly trained in radiation hazards and the necessity to follow strict rules for obtaining work permits when specific functions are performed, such as excavation or electrical work.

■ Some contaminated areas both inside and outside the plant were not properly posted with warning signs and, in some cases, had no warning signs at all.

■ The air-sampling procedure used in some areas is insufficient and "does not ensure" that the results are used to determine if workers should use respirators or other protection devices.

■ The McNary groundwater aquifer which is hundreds of feet deep, has not been tested for contamination that has affected other aquifers that are not as deep. Also, the report said testing has not been adequate on the plume of groundwater contamination that already has been identified. It said the testing can not determine "with high confidence" whether the plume is moving closer to the Ohio River.

The Courier-Journal

SATURDAY, SEPTEMBER 11, 1999

Radiation screening to expand

More former plant workers would be tested

By JAMES R. CARROLL
The Courier-Journal

WASHINGTON — Amid heightened concerns about workers' exposure to radiation at the Paducah Gaseous Diffusion Plant, a new project to screen the health of ex-employees at the Kentucky installation and at two other nuclear facilities wants to quadruple its budget.

If approved by Congress, the increased spending would speed up and expand the search for potential radiation-related diseases among current and former workers at Department of Energy plants in Paducah; Portsmouth, Ohio; and Oak Ridge, Tenn.

An estimated 15,000 people are believed to be most at risk among the 34,000 former workers at the three locations, where nuclear-weapons components were made. Paducah and Portsmouth now manufacture fuel for nuclear power plants.

"The DOE site manager at Paducah has said the government is going to spend $1 billion cleaning up dirt, cleaning up the site around Paducah over a 15-year period," said Dr. Steven Markowitz, project director and an occupational medicine physician at Queens College, City University of New York. "You've got to ask the question: Shouldn't workers be treated at least as well as dirt?"

The current program has a $1 million annual budget to screen 1,200 former workers at Paducah and the other sites. Markowitz has asked the DOE — at the agency's invitation — to boost spending to $4 million annually to allow about 5,000 people to be screened.

Energy Secretary Bill Richardson last month announced his agency's intention to expand the surveillance program to include current workers.

Under way since May, the screening program so far has checked 310 former employees at the three facilities.

Initial results of the screenings won't be ready until at least the end of the year, Markowitz said.

"We're not going to be able to draw big conclusions, but we'll be able to say more than we can now," he said. "We've

See RADIATION
Page 4, col. 4, this section

Radiation screenings may expand

Continued from Page One

looked at individuals, but we haven't compiled all the results yet."

"As soon as we are comfortable that we understand what the results are, we'll release them to the people who need to know them," including the media, Markowitz said.

Markowitz's project is under contract to the Paper Allied Industrial Chemical and Energy Workers International Union, which represents the workers at Paducah and other plants. The union received a federal grant for the project from the Energy Department.

As originally envisioned, the screening was to be a five-year pilot program only for former workers at Paducah, Portsmouth and Oak Ridge.

But after published reports that Paducah employees were not told that they were exposed to plutonium, uranium dust and other radioactive materials at the plant, the Department of Energy went to Markowitz and told him to request that the program be expanded and to "submit a (spending) proposal for what it would take," the doctor said.

Markowitz followed with a bid to quadruple the project's annual budget.

"We want to crank it up a lot" to add current and former workers "at an accelerated pace," he said.

The disclosures of worker exposure to plutonium at Paducah "caught us by surprise," Markowitz said, even though he said he had had "some inkling early on that there was potential exposure" to the deadly material.

"To me, it increases the urgency of doing cancer testing, particularly lung cancer," he said.

As luck would have it, researchers announced in July that a low-dose CAT scan could aid screening for lung cancer.

Rep. Ed Whitfield, the Republican who represents Kentucky's 1st District, which includes Paducah, said he is working to secure support from congressional leaders and the White House to increase spending for worker screenings.

He said he may seek to include the money in a catch-all supplemental spending bill that is making its way through Congress. The measure includes emergency relief to farmers, disaster aid and other items.

Under the screening program, former Paducah employees undergo complete examinations at local medical facilities, who then send the results to Markowitz.

Former employees are given physicals, including blood tests, urine tests, chest X-rays, and hearing and breathing tests. Each patient also provides an occupational history.

Every former worker who has called the screening project has been screened or will be, Markowitz said.

"I think it's a bit odd that we're running this program from New York for people in Kentucky," he said. "But it gives the people in the program the confidence that they are getting outside, expert evaluation not colored by the local situation."

The screening project tries to determine who might have been most at risk for radiation exposure according to a person's job description, the building where he or she worked, the department overseeing the work and how long each person was employed.

Simply working from radiation records on employees was not possible, Markowitz said. "It's tough, because (radiation) exposure information is suboptimal, let's put it that way."

Besides radiation-related illnesses, doctors are looking for such things as emphysema, which may have been caused by exposure to asbestos. Screening also looks for other diseases, including kidney and liver problems related to exposure to other dangerous substances such as nickel.

A whistle-blower suit filed in June alleges, among other things, that former plant operators were unconcerned about monitoring employees for radiation.

Fourteen current and former workers and their families have filed a separate $10 billion lawsuit against eight companies that operated the Paducah plant or produced nuclear fuel that was processed there. The suit alleges that employees were exposed to harmful levels of radiation. Lawyers for the plaintiffs want to expand the suit to class-action status, which would mean it could include as many as 20,000 people.

BY STEVE DURBIN, THE C-J

U.S. faults Paducah plant oversight

THE COURIER-JOURNAL SUNDAY, SEPTEMBER 12, 1999

Inspectors cite accountability, contamination

By JAMES MALONE
The Courier-Journal

PADUCAH, Ky. — An Energy Department oversight team has criticized the management of radiation exposure and nuclear waste at the Paducah Gaseous Diffusion Plant in an internal department report obtained by The Courier-Journal.

The team's preliminary observations included concerns over the sale to private industry of metal vats that contained "detectible plutonium." (The vats are used in the production of fluorine.) The team said that raised questions about the criteria used to justify disposal of such material.

The team, which combed the Paducah site's grounds and buildings for two weeks this summer, also noted problems with long-term storage of low-level radioactive waste; treatment of contaminated ground water flowing toward the Ohio River; marking of contaminated areas both on- and off-site; and oversight of subcontractors involved in cleaning up the plant's environment.

The report also noted a "clear lack of accountability associated with radiological protection issues," which included faulting the way officials calculated how much radiation to which workers and the public are exposed.

Reached at his home yesterday, George W. Benedict, the Energy Department's assistant manager for Uranium and Engineering Services at Oak Ridge, Tenn., acknowledged the report was authentic. Benedict was not a member of the oversight team but had received a copy of the report.

Until now the Energy Department has not released details of its findings, saying they have not been verified by laboratory analysis and testing.

Department spokesmen could not be reached for comment yesterday. A department report on the Paducah inspection may be available next month.

On Thursday, Energy Secretary Bill Richardson ordered an unprecedented halt in some operations at the plant during which department officials and contractors reviewed safety procedures and practices.

Today, U.S. Rep. Ed Whitfield, R-1st District, is scheduled to tour the plant's grounds, and have a news conference this afternoon. Hearings on the plant's environmental operations are scheduled this week in Washington.

IN A SUMMARY of their observations during the two-week visit, the department's investigators faulted their agency's oversight of the Paducah plant, which enriched uranium for nuclear weapons and, in later years, fuel for nuclear reactors.

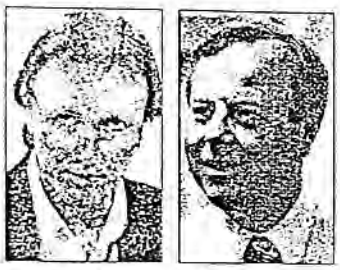
Their visit was prompted by news reports and lawsuits alleging that former plant operators had failed to report radioactive contamination both on- and off-site that may have endangered workers, the public and the environment.

"DOE oversight of contractor and subcontractor activities has been very limited," the report said. "Likewise, Bechtel Jacobs (which has the DOE's contract to clean up the plant's environment) oversight of subcontractors has not been visible and effective. Consequently, many DOE requirements are not being effectively implemented."

Bechtel Jacobs' Paducah manager, Jimmy Massey, declined to comment last night because he had not seen the team's observations.

The team also found that "information provided to the public has been delayed" and was in a form that is not clearly understood. This "leads to a perception that DOE and the contractor are withholding information from the public," the report said.

ONE OF THE co-chairmen of the federally chartered Site Specific Advisory Board, a community-based organization that reviews and makes recommendations on the cleanup program at the plant, said the observations would be troubling if they are verified.



Jimmy Massey, left, of cleanup contractor Bechtel Jacobs, had no comment on the report. Rep. Ed Whitfield, right, will tour the plant today.

"They say what we on the board have been questioning for some time," said Mark Donham of Brookport, Ill. "It says they are not getting the cleanup done and they are not getting information to the public."

In discussing waste management, the oversight team noted that "regulatory violations . . . may be occurring" in storage areas, including a lack of inspections and "unpermitted" waste storage. "These areas have not been reported to state hazardous waste inspectors," the team noted. And the observations noted that thousands of drums of low-level waste have been stored on-site in a manner that is not appropriate for long-term storage.

THE TEAM SAID the plant also has weaknesses in addressing ground-water contamination, specifically a 2.5-mile-long plume of water tainted with a solvent and technetium-99, a radioactive element that leaked out of the plant's drainage system.

Officials with Bechtel Jacobs have said recently that they don't know whether the plume has reached the Ohio River. They have said tests are under way to chart the plume's progress and acknowledged it has been moving toward the river at a rate of about a foot a day.

Energy Department investigators noted that there were not enough sampling points on the leading edge of the plume to define its location "with high confidence."

The team also says contamination of the McNary aquifer, which lies hundreds of feet below the contaminated ground water, has not been assessed. Bechtel Jacobs officials have

declined to say if the solvent and radioactive technetium-99 have tainted the aquifer. If the aquifer is contaminated, critics say that raises questions about the wisdom of the government paying to clean up ground water near the surface when the contamination is migrating hundreds of feet below.

The team also noted that the plant's marking of contaminated areas both on- and off-site was inadequate, and that radiological control procedures do not give workers the guidance necessary to do their jobs.

They said the air-sampling process does not ensure that test results are effectively used to establish the need for respiratory protection for workers, or to ensure that the devices used adequately protect workers.

And they found that "training provided to workers does not adequately discuss radiological hazards . . . which is necessary to inform the worker of work area hazards."

The Courier-Journal
Kentucky
www.courier-journal.com

Monday, September 13, 1999

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Louisville news B4
Weather B4
Deaths B5

Editor: Gideon Gil
Phone: 582-4657 / **Fax:** 582-4200

Whitfield says Paducah plant cleanups lacking

By JAMES MALONE
The Courier-Journal

PADUCAH, Ky. — A Western Kentucky congressman said yesterday that little has come from almost $400 million spent in the past decade on waste management and environmental cleanup at the Paducah Gaseous Diffusion Plant.

Touring the plant in preparation for a congressional hearing Thursday, U.S. Rep. Ed Whitfield, R-1st District, said he hopes that witnesses can separate fact from rumors about the complex, which had made fuel for nuclear bombs and, more recently, enriched uranium for nuclear power plants.

Recent newspaper reports and lawsuits allege that the plant has a legacy of hidden pollution and indifference to worker health and safety.

Whitfield said Energy Department officials have told him they have "very serious concerns" about management at the site and they "obviously have serious concerns about the operation of the cleanup effort." He said he would "expect to see some changes," but he declined to elaborate.

"It's startling in a way when you consider the amount of waste that we have in this area built up since the 1950s," Whitfield said. "It's going to take a monumental effort ... and many years to clean it up. But I think the government has a responsibility to do that."

He said it was "difficult to believe" that $400 million has been spent "and you still have this major problem out there."

Whitfield was referring to more than 37,000 tanks holding about 14 tons each of waste uranium, some 50,000 barrels of waste, leaking landfills, contaminated ground water and vast piles of scrap metal.

Whitfield said Department of Energy officials will brief him tomorrow about the results of the agency's oversight inspection of the plant last month.

Last week, the department ordered a one-day halt in some operations at the plant to allow a review of safety practices. A department document obtained by The Courier-Journal shows the inspectors had profound concerns, including not adequately training workers about radiological hazards, not fully calculating radiation exposure to the public and workers, selling metal contaminated with plutonium to the private sector and lax oversight of the cleanup by both the department and Bechtel Jacobs, the plant's environmental contractor.

Referring to the sale of the metal, Whitfield said, "I'm shocked that that would occur. ... If that was done, someone was totally irresponsible."

The department has proposed selling scrap metal, some of it radioactive, to raise money for the cleanup. But critics say such sales could put radioactive metals in products destined for human contact.

Union restrictions force liaison to quit

■ **Jim Chesnut** *says he feels that he can no longer do his job adequately.*

By Joe Walker
Sun Business Editor

Jim Chesnut has quit as liaison for a health study of former Paducah Gaseous Diffusion Plant workers because of atomic workers' union restrictions on his speaking to the news media.

Study coordinator Sylvia Kieding, who imposed the restrictions, said she regrets Chesnut's decision. But she said he did not follow union rules governing who should talk to the media, particularly in light of a recent groundswell of publicity regarding a federal lawsuit that alleges plant workers were exposed to plutonium and other hazards.

Chesnut, a former union local president, said he resigned Wednesday because of restrictions placed on him by Kieding, a consultant to the Paper, Allied-Industrial, Chemical and Energy Workers International Union (PACE).

"I don't have the ability to speak to the news media or execute other duties I feel are important without their (union officials') prior consent," he said. "I feel that I can no longer do my job adequately to represent other workers."

Word of the lawsuit, initially sealed and filed in Paducah in June, surfaced in July, after which the U.S. Department of Energy announced it had started investigating the plant. Since then, Chesnut has been interviewed repeatedly by local and national media.

Three current workers and a large environmental activist group filed the suit, unrelated to the health study. Begun last year, the study is aimed at identifying work-related diseases among former plant employees.

Chesnut mentioned his resignation while talking with the Sun about possible developments in the study as opposed to lawsuit allegations. Although visibly upset by the developments, he would not elaborate on what made him resign.

"I don't want this to jeopardize the study," he said. "I will continue to be available to help former workers who call me. I will do so even though I am not officially connected with the medical study."

He said he was disappointed in light of his dedication to the project, which meant long hours publicizing the need to find former workers. Chesnut said he drove across parts of four states, talking to the media for help in reaching the workers.

Kieding said that early in the health study she set ground rules that anyone besides international and local union officials must have clearance from the union before addressing the media.

"That's just a policy," she said. "It was specifically geared toward the plutonium situation once that arose, but there has always been a policy."

Kieding said she hopes people do not view the policy as censorship amid sensitive times for the plant. She stressed that the union, which represents many current and former plant workers, wants the truth about past exposures and any related health problems.

PACE Executive Vice President Robert Wages sent a letter commending Chesnut for his work and expressing regret at his resigning, Kieding said.

"Jim has certainly done fine work on the project," she said. "I'm not criticizing him at all. It was his decision. He just felt he couldn't live within the confines of the bureaucracy and the rules. We're going to miss him."

Chesnut, who worked in production at the plant from 1952 until his retirement in 1993, was union local president in the late 1970s. He said earlier that he was excited about encouraging retirees to be involved in the study.

Jim Chesnut
Not elaborating on resignation

The health assessment is being done by a consortium of PACE; Queens College, City University of New York, and the University of Massachusetts in Lowell. During at least four years, it will cover about 2,000 former Paducah plant employees, as well as past workers from enrichment plants in Portsmouth, Ohio, and Oak Ridge, Tenn.

Although there have been limited worker health studies at the other plants, this is the first extensive look at past employees of the Paducah plant.

David Fuller, president of PACE Local 3-550, said Chesnut's resignation is unfortunate and the result of his and Kieding's inability to find a solution agreeable to both.

"They (Chesnut and Kieding) are both good people whom I have respect for," Fuller said. "They both believe in this program and the betterment of the workers. I think they can agree that the medical surveillance program is vitally important to the workers, and that's what we have to keep sight of."

Stand-down seen as 'family meeting'

Friday, September 10, 1999 The Paducah Sun

DOE officials *give few details about what led to Thursday's shutdown of environment management operations at the Paducah plant.*

By Bill Bartleman
The Paducah Sun

U.S. Department of Energy officials continued to provide few details about what an investigative team saw inside the Paducah Gaseous Diffusion Plant to warrant Thursday's shutdown of routine environment management operations.

The one-day shutdown to review safety procedures was ordered Wednesday by Energy Secretary Bill Richardson just five days after the 14-member team left Paducah. Richardson said he issued the "stand-down order" because the team "did make some preliminary observations related to opportunities for improvement in radiological protections, procedures and control operations."

It was the first time Richardson has issued such an order, and he gave officials less than 24 hours to prepare for the review.

Both Wednesday and Thursday, DOE and others would not answer

Please see **DOE** / 12A

SETH DIXON/The Sun

Review of safety-related matters: Jimmy Massey (left), Paducah manager for Bechtel Jacobs, describes the Thursday shutdown as a timeout in operations as Robert Poe (center) and Steve Wyatt of the Department of Energy listen.

Continued from 1A

questions about specific observations made by the investigators or how those observations affected safety procedures. Richardson did say, however, that there was no imminent danger to either workers or the area residents.

"They had some general observations that there was room for improvement in the general way business was carried out," said Robert Poe, assistant manager for Environment, Safety and Quality for DOE's Oak Ridge (Tenn.) Operations. "Things are perhaps not operating as tightly as you would like them to operate. So we did a stand-down to remind people of their expectations."

Asked to elaborate, Poe gave this analogy: "When things are not going well in a family or things are not going the way you want them to go, perhaps you call a family meeting and discuss it. This is that kind of operation."

Steve Wyatt, press spokesman for DOE, said officials would not comment on the findings by the investigative team. "It was a time-out to review safety-related matters," Wyatt said. "That's about as far as we can go. We can't discuss any findings. That comes directly from (DOE headquarters in) Washington."

He said members of the DOE team are reviewing data gathered during the investigation and will prepare a report for Richardson, who has promised it will be made public. He is expected to receive it by the end of the month.

The plant has been in the national spotlight since it was revealed last month that three workers and an environmental group filed a lawsuit alleging that radioactive contamination at the plant is much worse that has been reflected in reports prepared by former operators. The suit also alleges that workers were not told that some of the uranium they enriched into nuclear fuel was contaminated with plutonium. The suit is pending in U.S. District Court in Paducah.

Thursday's shutdown order affected only environmental management operations. It did not affect the production of nuclear fuel, which is done by the United States Enrichment Corp.

Jimmy Massey — Paducah manager for Bechtel Jacobs Co., which is the contractor hired by DOE to oversee environmental management and cleanup — said officials met with workers, surveyed the plant to make sure contaminated areas were properly marked and reviewed safety procedures with workers.

He said environmental operations involving about 400 employees will return to normal today.

Massey said many of the workers filled out questionnaires in which they were asked to express their concerns, if they had any. A follow-up meeting will be held next week to respond to those concerns.

He said one concern expressed by workers is that they be notified in a timelier manner of the results of data from devices they carry that measure their exposure to radiation. At present, they are given those results once a year.

Also, he said they want to be informed of results of air monitoring and other tests conducted at the facility. Currently those results are given to some officials but not routinely distributed to all employees.

During the plant inspection, Massey said, officials found some warning signs that were weathered and needed to be replaced, and other signs that had incorrect telephone numbers for people to contact in emergencies or if they needed access permits to restricted areas. Those signs either have been or will be replaced, he said.

"What we did today was to focus on safety ... and get some good worker feedback," Massey said. "We took time out to look at what we were doing, how we were dong it and to listen to employes. From that standpoint and from my perspective, it was a good day and a successful day."

Panel seeks answers to allegations

■ U.S. Rep. *Ed Whitfield says the hearing will include testimony from three groups.*

By Bill Bartleman
The Paducah Sun

One of several questions that a congressional committee hopes to answer at a hearing next week is whether state and federal regulators have been lax in their enforcement of environmental laws at the Paducah Gaseous Diffusion Plant.

The Oversight & Investigations Subcommittee of the House Commerce Committee will hold the first congressional hearing Thursday regarding safety at Paducah's uranium enrichment plant and allegations of chemical and radioactive contamination of workers and nearby residents.

U.S. Rep. Ed Whitfield, R-Hopkinsville, a member of the subcommittee, arranged for the hearing. It will begin at 10 a.m. EDT in Room 2322 of the Rayburn House Office Building in Washington.

"We want to make sure the plant is safe now and explore if subcontractors or federal and state regulators have violated any laws," Whitfield said. "We want to make sure ... the plant and its workers were meeting all regulations and requirements."

Whitfield said the hearing is expected to last all day and will include testimony from three groups. "These allegations deserve complete answers from all parties that were ever involved with the operation of the Paducah Gaseous Diffusion Plant," he said.

The first group to testify will consist of those who made allegations in a federal whistleblower suit that there is plutonium contamination at the plant and that previous contractors falsified reports by understating environmental problems. The first group also will include union representatives.

The second group will include representatives of contractors involved in the operation and cleanup since the plant opened in 1953: Union Carbide, Martin Marietta, Lockheed Martin, Bechtel Jacobs and the United States Enrichment Corp.

The final group will include representatives of the U.S. Department of Energy and the Kentucky Cabinet for Natural Resources.

Whitfield said the names of those who will testify won't be known until next week. In some cases, he said, attorneys may represent some of the groups and individuals. Also, representatives of some environmental groups may be invited to testify.

Whitfield said environmental and safety issues at the plant are so complex that additional congressional hearings will be held.

"The big issue will be the responsibility of the federal government to take care of the medical costs of employees who have health problems as a result of working at the Paducah Gaseous Diffusion Plant," Whitfield said. He said those who developed health problems because of contamination from the plant should receive compensation from the federal government.

A House hearing on paying for illnesses will be held later, Whitfield said.

In relation to that, Whitfield said he may seek an additional $3.2 million in the 1999-2000 budget to help fund a study of the health of current and former workers at the plant in Paducah and at DOE facilities in Oak Ridge, Tenn. The current budget plan calls for an $800,000 allocation, which Whitfield said isn't enough to pay for medical tests required for thousands of current and former workers.

Also, the Senate Energy Committee is expected to hold a hearing within a month in Paducah, said John Mechem, press spokesman for Sen. Jim Bunning, who is a member of the committee. Mechem said details are still being worked out and he didn't know whether the full committee or a subcommittee would be in Paducah.

Also, Sen. Mitch McConnell said the Energy and Water Subcommittee of the Senate Appropriations Committee will hold a hearing in Washington before the end of September.

In preparation for the congressional hearings, Whitfield plans to visit the plant Sunday afternoon to meet with representatives of two worker unions, the Department of Energy and USEC.

"It is important for me to get back to the plant before the hearing," Whitfield said, "so that I can pinpoint the main areas of concern at the plant to other members of the committee and to witnesses."

Uranium hearings next week

Congress plans look at Paducah plant's safety

By JAMES R. CARROLL
and CHRIS POYNTER
The Courier-Journal

WASHINGTON — As Department of Energy officials reviewed safety procedures yesterday during a one-day halt in some operations at the Paducah Gaseous Diffusion Plant, Congress prepared to launch public hearings into alleged health and environmental dangers at the Kentucky facility.

Rep. Ed Whitfield, R-1st District, announced that the House Commerce Committee's oversight and investigations subcommittee would begin a probe of safety at the Paducah plant with a daylong hearing in Washington on Thursday. He said he expected additional hearings.

"Is this plant safe today?" is how Whitfield phrased the central question Congress wants to answer. He told reporters he thought the plant was safe, although he added, "There are some ongoing problems there, obviously."

In the Senate, Kentucky Sens. Jim Bunning and Mitch McConnell are working with leaders on final details for hearings soon on the Paducah plant by two panels, the Senate Energy and Natural Resources Committee and the Senate Appropriations Committee's energy subcommittee. One hearing may be held in Paducah.

BY JIM ROSHAN, SPECIAL TO THE C-J
Jimmy Massey, manager of projects, discussed yesterday's partial shutdown at the plant.

At an afternoon news conference at the plant, officials gave few details of the one-day "safety stand-down" that was ordered Wednesday by Energy Secretary Bill Richardson.

ABOUT 400 non-production workers met with managers in what Energy Department official Robert Poe compared to a "family meeting," where people come together to discuss concerns.

Jimmy Massey, projects manager for Bechtel Jacobs Co., the government contractor that oversees environmental cleanup and waste-storage operations, said workers expressed concerns about their health and made good suggestions about improving safety.

Massey said employees told managers that they wanted more timely reporting of results from monitors that measure airborne radioactivity and that they also asked for quicker results from radiation monitoring devices that they wear.

Those readings are compiled quarterly and given to workers annually. Massey said officials would study whether the results of both the individual exposure monitors and the air tests could be reported more often.

Massey said officials walked through the plant and ensured that all areas of known radioactive contamination were properly barricaded and that signs were posted by them. He said some signs had the wrong telephone numbers or contact names and needed to be corrected.

Poe, an assistant manager for environmental safety and quality at the Energy Department's complex at Oak Ridge, Tenn., said officials did not look for new or unmarked areas of contamination, because the purpose of the stand-down was to meet with employees and managers.

THE INFORMATION gathered yesterday will be compiled in a report, and the details will be discussed with plant managers next week, Poe said. He was among several Energy Department officials, including at least two managers from Washington, to participate yesterday.

Poe also said employees were reminded yesterday of the presence in the plant of plutonium and other hazards. A whistle-blower lawsuit filed in June by three plant employees alleges that, for more than 20 years, workers weren't told that they were being exposed to plutonium and other highly radioactive contaminants in used uranium fuel processed at the plant.

Poe said that some employees were aware before the lawsuit — and news reports about it — that plutonium was at the plant. In a later interview, he added that some people at the plant knew and others didn't.

In Washington, Whitfield, who sits on the subcommittee that will hold next week's hearing, said witnesses will include the plant workers involved in the whistle-blower suit. Representatives of former plant operators, including Lockheed Martin Corp., and officials from the Energy Department and Kentucky regulatory agencies also are being called, Whitfield said.

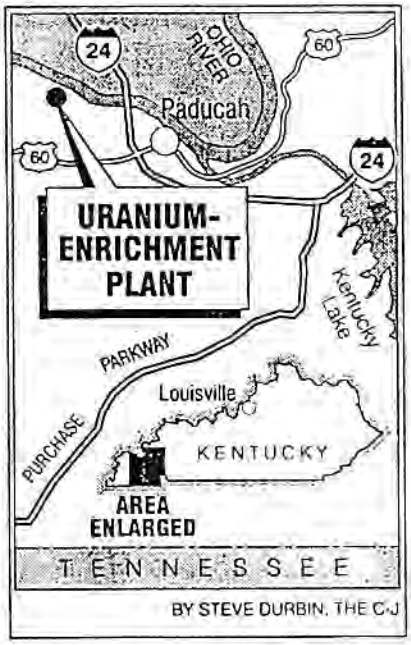
On a related matter, Whitfield said he would seek additional spending on a health-monitoring program involving former workers at the Paducah plant and at nuclear facilities at Oak Ridge and Portsmouth, Ohio.

That program, which has been under way only since May, currently is receiving $1 million in federal grants to screen former workers.

PUBLISHED REPORTS in recent weeks detailing decades of worker exposure at the Paducah plant to plutonium, uranium dust and other radioactive materials have sparked closer scrutiny of operations at Paducah.

BY JIM ROSHAN, SPECIAL TO THE COURIER-JOURNAL

Jimmy Massey, left, of Bechtel Jacobs Co., and Energy Department official Robert Poe said workers were reminded of safety precautions.



BY STEVE DURBIN, THE C-J

Rep. Ed Whitfield, R-1st District, told reporters he thought the Paducah plant was safe, but he added, "There are some ongoing problems there, obviously."

Congressional support for a probe into conditions at the plant was not difficult to secure, Whitfield said, "when you have the safety of that many people at stake."

"The health of the current employees and the former employees is the No. 1 priority in this whole issue, as well as the well-being of the community near the plant," Whitfield said.

The congressman said one area he wanted to explore was why a special investigation by the Energy Department in June reported finding no problems, but another team did find problems last week. Those problems included unmarked radioactive sites and workers without monitoring badges that would warn them of exposure to radiation.

Whitfield also said that with a host of federal and state regulations governing water, waste disposal, environmental hazards and other matters, "why have we reached the point we've reached on this?"

"Truthfully, I think the subcontractors' credibility is on the line, the DOE's credibility is on the line, the state of Kentucky's regulators' credibility is on the line, because all of them had significant responsibility for this (facility)," Whitfield said.

DOE won't detail safety concerns

■ **Officials inspect** *the Paducah Gaseous Diffusion Plant today after a shutdown.*

By Bill Bartleman
The Paducah Sun

U.S. Department of Energy officials won't say what safety concerns at the Paducah Gaseous Diffusion Plant caused Energy Secretary Bill Richardson to order an immediate one-day halt to normal environmental management operations so that safety procedures could be checked.

Richardson

The order means 400 workers will spend today inspecting the complex to ensure that potential hazards are correctly identified and properly posted, and that safety regulations are being followed. If problems are identified but not corrected today, some normal operations could be delayed longer, said DOE spokesman Steve Wyatt.

The order, the first of its kind issued by Richardson, does not affect the production of nuclear fuel by the United States Enrichment Corp. or areas of the plant that are leased to USEC, which has 1,600 employees not involved in environmental management. Most of DOE's environmental work is being done in areas outside USEC jurisdiction.

Richardson, energy secretary for 13 months, said he ordered today's "one-day safety stand-down" after reviewing preliminary findings of a 14-member DOE investigative team that left the plant Friday after spending two weeks reviewing records; taking soil, air and water samples; and observing environmental management and cleanup operations.

The investigation was ordered in the wake of a worker lawsuit alleging that environmental conditions at the site are worse than had been reported in the past, and that employees were not informed they were working with material contaminated with small amounts of plutonium.

Richardson, in a news release, said the investigative team did not find any imminent hazards to the workers or the public. However, he said, the team "did make some preliminary observations related to opportunities for improvement in radiological protection, procedures and conduct of operations."

Wyatt said officials were not prepared to identify the safety concerns that resulted in Richardson's order.

Attempts to get further comment from Richardson were unsuccessful. A spokesman in his Washington office said he was preparing to travel. Members of the environmental team have declined requests for interviews.

"Team members are still analyzing their data and validating their findings, and aren't prepared to get into that," Wyatt said when asked for details of the safety concerns. "They will want to complete all of their work before talking about any of the findings."

Wyatt said he didn't know if any written safety procedures were being violated.

Richardson said he should receive a report from the team by the end of the month and has promised it will be made public.

Bechtel Jacobs LLC is the contractor hired by DOE to do the environmental work through the use of subcontractors.

A copyright story in today's editions of The Washington Post says the stand-down was ordered because a preliminary probe uncovered lapses in programs designed to protect workers from harmful radiation.

It further quoted Richardson as saying, "This will be an effective way to focus attention and also a way to get managers and workers to bring renewed attention to environment, safety and health."

Last week, Bechtel Jacobs was conducting tests for DOE investigators when it found discrepancies from earlier radioactivity tests conducted in a cylinder yard where depleted uranium was stored. The tests revealed levels of radioactivity higher than found in previous tests. Bechtel Jacobs said the discrepancy apparently was the result of problems associated with earlier testing.

Officials said the discrepancies did not cause a health risk to outside contractors working in the cylinder yard. Wyatt said he didn't know if that was an example of a safety-concern finding that led to today's halt of normal operations.

Wyatt said procedures for today's safety review were still being prepared late Wednesday. He said the 400 workers under Bechtel Jacobs' jurisdiction will have an opportunity to ask questions and offer suggestions to make their working conditions safer.

Several DOE environmental officials from Oak Ridge, Tenn., will be in Paducah today to assist in the safety review, Wyatt said.

Jimmie Hodges, DOE's manager of the Paducah site, said the goal of the one-day shutdown is to make sure that safety programs are protecting workers and the community.

"The stand-down will focus on ensuring that work controls are correctly tailored to the work being done," Hodges said. "Our safety staff will ensure that all areas of known on-site radiological and chemical contamination are properly posted and that barriers and procedures are in place to prevent inadvertent entry. We will also remind workers of the presence of plutonium and other transuranics on site and measures in place to protect workers from these hazards."

The work stoppage does not affect production and related work done by USEC, which leases the plant from DOE to enrich uranium for use in nuclear fuel.

"We are not involved in this activity Thursday," USEC Communications Director Elizabeth Stuckle said. "We believe we have a very solid radiation protection program, one that we have scrutinized very carefully to ensure that we're providing adequate worker safety. But we will certainly cooperate with Bechtel Jacobs in any way we can."

USEC's radiation protection program is overseen by the Nuclear Regulatory Commission, which has inspectors stationed full time at the plant. Recently, a team of NRC specialists reviewed plant safety systems in light of the DOE investigation and revealed no problems.

Sun business editor Joe Walker contributed to this report.

Uranium plant to check safety today

One-day halt of some work unprecedented

By JAMES R. CARROLL
and JAMES MALONE
The Courier-Journal

WASHINGTON — Citing safety reasons, U.S. Energy Secretary Bill Richardson ordered a one-day halt to some operations at the Paducah Gaseous Diffusion Plant today.

The shutdown comes only days after a government inspection team found lapses in protecting employees from radiation hazards.

Yesterday's order, which the Energy Department described as a "safety stand-down," is believed to be the first ever for a plant owned by the Department of Energy, which runs nuclear facilities nationwide.

"There have been security-related stand-downs," said Steven Wyatt, a spokesman for the Paducah plant, "but this is the first for safety."

Wyatt said Energy Department managers and supervisors will walk around the complex today, visiting problem areas to ensure that they are properly marked as radioactive and that workers don't enter radiation areas without required monitoring badges. Workers also will receive unspecified safety training, he said.

Energy Department officials said in a statement released yesterday that the inspection team found no "imminent hazards to the workers or the public."

The stand-down will not affect the uranium enrichment operations of the United States Enrichment Corp., a private company that makes nuclear-reactor fuel in facilities leased from DOE and is overseen by the Nuclear Regulatory Commission. Those operations employ about 1,650 people.

The order will affect environmental cleanup operations and the yards where radioactive and hazardous wastes are stored. These are under the control of the Energy Department and are contracted to the Bechtel Jacobs Co., which in turn has subcontractors. About 400 people will be affected.

"While significant improvements have been made over the last several years, this stand-down affords us the opportunity to further build upon existing safety programs," Richardson said in a statement released by his department. "We also want to give employees and managers an opportunity to raise any concerns they may have, get questions answered and make suggestions for improved operations."

A special 14-member investigative team last Friday ended a 2½-week visit to Paducah that involved inspecting the sprawling facility, collecting environmental samples, interviewing

ASSOCIATED PRESS

Energy Secretary Bill Richardson ordered the shutdown.

employees and checking documents.

According to two congressional sources and an employee at the plant, safety problems discovered by the government team included places contaminated with radioactive materials that weren't marked by special warning signs.

IN ADDITION, the department said last week that it had found some subcontractors' workers without sensitive monitoring badges that would warn them if they were exposed to harmful levels of radiation.

The stand-down marked a dramatic reversal in the Energy Department's handling of potential safety problems at the plant. After being served last June with a sealed whistle-blower suit, the department sent a special team to Paducah and reported finding no problems.

The change in attitude drew fire yesterday from Kentucky's two senators, Jim Bunning and Mitch McConnell.

"This looks like a classic case of locking the barn door after the horses have been stolen," the senators, both Republicans, said in a joint statement. "Where were they in June?"

"While we are glad that the Department of Energy has taken this preliminary step to address and improve safety standards at the Paducah plant, we have serious concerns about how the DOE has handled this matter so far," the senators added.

Bunning and McConnell are seeking congressional hearings on the Paducah situation, as is Rep. Ed Whitfield, R-1st District, who represents the area in the House.

Asked whether the Energy Department or its contractors had mishandled operations at Paducah, Wyatt said: "I'm really not going to address that question." He did say that the the department was "generally pleased" with the performance of Bechtel Jacobs, but that there was "some room for improvement."

DEPARTMENT officials would not confirm or discuss any specific problems that were found in the latest inspection, and department spokeswoman Lisa Cutler said the stand-down "is not a response to any particular finding by the investigative team."

"It is based on overall observations of the visit," she said.

The department's statement yesterday made vague references to the need for improvement "in radiological protection, procedures and conduct of operations."

Jimmie Hodges, Energy Department site manager at Paducah, said in the same statement that the brief halt "will focus on ensuring that work controls are correctly tailored to the work being done."

"Our safety staff will ensure that all areas of known onsite radiological and chemical contamination are properly posted and that barriers and procedures are in place to prevent inadvertent entry," Hodges said. "We will also remind workers of the presence of plutonium and other transuranics onsite and measures in place to protect workers from these hazards."

The whistle-blower suit alleges that, for more than 20 years, workers weren't told that they were being exposed to plutonium and other highly radioactive contaminants in used uranium fuel processed at the plant.

HODGES TOOK an abrupt leave this week, but Wyatt said that was not linked to the DOE decision.

Hodges was "told to go home and rest" this week by his superior in Oak Ridge, Tenn., Wyatt said. Hodges was trying to ward off a persistent respiratory illness, Wyatt said. Asked whether Hodges was on sick leave, Wyatt answered, "It was a sick leave more than anything else."

Dale Jackson, a DOE official from Oak Ridge, is serving as acting site manager, Wyatt said.

Inside the high fences around the vast industrial complex near the Ohio River west of Paducah, the land is littered with sites — some no larger than a table top — marked as hazardous or radioactive. Plastic yellow and purple chains attached to poles on concrete stands carry the warning signs and mark the approximate areas of contamination.

Many of the low-lying areas throughout the facility are chained off. Two buildings are so contaminated they have been abandoned and locked.

Also spread over many acres are 65,000 tons of contaminated scrap metal, 51,237 drums of stored waste and 37,475 cylinders of uranium hexafluoride.

Cutler said the DOE's interviews with employees found that they believe safety at Paducah "is better now than it was in the past."

The special investigation of Paducah was ordered after published reports last month about worker exposure to plutonium and its presence in the environment around the plant.

In a separate action, eight companies that operated the Paducah plant, produced nuclear fuel there or sent nuclear fuel there were sued for $10 billion last week in U.S. District Court by 14 current and former workers and their families, and the suit could apply to as many as 20,000 potential plaintiffs if it is certified as a class action.

With about 2,000 workers, the Paducah plant is the city's largest employer.

BY STEVE DURBIN, THE C-J

"This looks like . . . locking the barn door after the horses have been stolen."

From a joint statement by Sens. Bunning and McConnell

CLEANUP OVERDUE

DOE should act swiftly to protect workers

It may take months or even years to get to the bottom of allegations that radioactive substances were improperly handled at the Paducah Gaseous Diffusion Plant, exposing workers and the facility's neighbors to dangerous levels of contamination. But one conclusion already is obvious: The federal government should get moving as soon as possible on a plan for cleaning up the plant site and converting by-products of the uranium enrichment process into materials that can be used commercially or safely stored.

Officials with the Department of Energy are investigating the disturbing charges made in a lawsuit filed by three workers and an environmental group against two former plant operators. Congressional committees also are expected to probe the allegations, which include credible claims that, during a period from the mid-1950s to the mid-1970s, workers at the plant were exposed without their knowledge to uranium contaminated with highly radioactive plutonium.

These investigations should be aggressive and thorough. Current and former plant workers as well as people who live near the facility need to know whether their health has been put in jeopardy by unsafe handling of radioactive material.

But there's no question that the government needs to deal with four decades worth of radioactive trash and leftover materials that have accumulated at the plant. Congress made that point last year — long before the lawsuit was filed — when it ordered the Department of Energy to spend $373 million building recycling facilities at the uranium enrichment plants at Paducah and Portsmouth, Ohio.

The recycling program is designed to convert depleted uranium hexafluoride into a more stable material that can be sold or stored. More than 47,000 cylinders containing depleted uranium hexafluoride are sitting on the property of the Paducah plant.

Clearly, something needs to be done with this material. But the DOE has been notably slow in responding to the congressional mandate — so slow, in fact, that U.S. Sens. Mitch McConnell and Jim Bunning have resorted to holding up confirmation of nominees for DOE posts, in an effort to pressure the agency into implementing the clean-up program.

This bureaucratic foot-dragging should end immediately. Energy Secretary Bill Richardson has declared that the Clinton administration is committed to protecting the health of plant workers and people who live near

Presumably, that commitment will be demonstrated in the DOE's investigation of safety issues at the plant, and in the administration's response to the findings. But, again, it needs emphasizing that federal officials can act now to lessen health and environmental concerns associated with the plant's by-products. The recycling facilities should be put on the fast track. These facilities will provide jobs for displaced workers, but they're also needed to eliminate the vast inventory of depleted uranium hexafluoride.

The depleted uranium hexafluoride isn't the only waste issue at the plant. It's clear that over the years the plant site has served as a dumping grounds for all sorts of substances, both radioactive and non-radioactive, that cannot be classified as benign. Recent news reports have called attention to debris piles, scrap metal yards and contaminated drainage ditches located on DOE property.

In addition to moving ahead with the recycling of the depleted uranium hexafluoride, federal officials should clean up *all* of the chemical contamination present at the site.

If, as Secretary Richardson says, federal officials are now prepared to accept responsibility for this unpleasant legacy of the Cold War, they will not delay cleaning up the environment surrounding the plant. Government officials can't respond decisively yet to unproven allegations about the plant's history, but they can and must do something about the undeniable environmental problems that exist there.

U.S. ignored leukemia concerns

Paducah plant not investigated by government

By JAMES MALONE
and JAMES R. CARROLL
The Courier-Journal

PADUCAH, Ky. — The federal government never investigated reports of leukemia among workers at the uranium enrichment plant in Paducah although plant and union officials raised concerns about the disease in the early 1990s.

A team from the National Institute for Occupational Safety and Health spent a week at the Paducah Gaseous Diffusion Plant in 1992 looking for records for a possible study on the health effects of worker exposure to uranium and electromagnetic fields.

The researchers found a wealth of employee health data in paper files and computer databases. They interviewed plant officials and union leaders, who expressed concern about leukemia among employees. They discovered a file on worker leukemia deaths.

And they never came back.

"The leukemia concerns should have been followed up," said James Stebbings, an Illinois epidemiologist and former NIOSH employee who led the team that visited the plant in December 1992. "Chances are 50-50 or better it would have turned out to be nothing. But it should have been done."

A NIOSH official said the agency had decided instead to first complete a study of the health of workers at a sister uranium enrichment plant in Ohio, where the metal was processed to a higher level of radioactivity than at Paducah. That study is still under way.

In an interview last week, Stebbings said that the Paducah plant's industrial hygiene department had maintained a file on leukemia cases that ended in 1981, and that an employee had informed the NIOSH team about it.

Stebbings said he did not know whether there were more instances of leukemia among plant workers and their families than would be expected for the general population — which would be evidence the cases were possibly linked to the plant.

But he said that the fact that the plant processed uranium contaminated with highly radioactive plutonium, which can cause leukemia and other cancers, was another reason the reports should have been investigated.

A whistle-blower lawsuit filed in June by three plant employees alleges workers were unknowingly exposed to plutonium and other radioactive contaminants in spent uranium fuel sent from the U.S. Department of Energy's Hanford, Wash., nuclear weapons reactor to Paducah for reprocessing.

Steven Ahrenholz, now assistant chief of NIOSH's Health Related Energy Research Branch in Cincinnati, was another member of the team that visited Paducah. He remembered concerns about leukemia there, but said those worries were based on a NIOSH study of worker health at the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio. That study, completed in 1987, found higher-than-expected incidence of leukemia and stomach cancer, but the results were not statistically significant.

A followup study was launched at Portsmouth, and "we were trying to determine whether it was appropriate at that time to add in that Paducah Gaseous Diffusion Plant with the Piketon study . . . or whether we wanted to do the Piketon mortality study update and see what the outcome of that was before we made any other decisions about what we would do," Ahrenholz said.

Ultimately, "at that time we felt that we should just proceed with the Portsmouth plant itself," he said.

He acknowledged there were "a lot of similarities" between Paducah and Piketon, but differences as well, chief among them the Ohio plant's production of much more highly enriched uranium — with more potential for radiation exposure — for use in nuclear weapons. The Kentucky plant enriches uranium to a much lower level. Both plants now make uranium for nuclear power plants.

The Piketon study involves every current and former employee who worked at least a week in the facility between Sept. 1, 1954, and Dec. 31, 1991 — a total of between 7,000 and 8,000 individuals. The study is scheduled to be completed around Jan. 1.

The only study of worker health at Paducah is one that is just getting under way and involves the union and researchers from the University of Massachusetts at Lowell. It is being done in response to a law passed by Congress in 1993 that required such studies at all Department of Energy nuclear facilities.

Jimmie Hodges, now the Department of Energy's Paducah site manager, was the agency's health and safety director for the plant when NIOSH investigators visited Paducah in 1992. Asked Thursday whether he knows of any files kept on leukemia, Hodges replied, "I've not heard anything like that, I'm just not familiar with that at all."

In 1992, the NIOSH researchers also learned there were files on Legionnaire's disease-causing bacteria in water samples; three files on kidney-stone analyses; and files on exposure to nickel and Transite, a form of asbestos.

Leroy Branham, a former official of the Paper, Allied Industrial, Chemical and Energy Workers union who still works at the plant and sat in on a NIOSH team briefing, recalls discussions about leukemia but doesn't remember who initiated them. He said he does recall hearing during the NIOSH meetings that the region had a high leukemia rate.

Jim Key, the union's environment, safety and health representative for hourly workers, recalled meeting with the NIOSH team. But Key, who worked as an electrician at the plant, recalled the leukemia concern was linked to reports about electromagnetic fields, high energy electrical fields from power switching yards.

The Kentucky Cancer Registry, which has tracked cancer cases since 1991, has not noted any unusual cancer incidence in McCracken County, where the Paducah plant is located.

Registry records show that in three of the four years from 1994 to 1997, McCracken experienced a higher rate of non-Hodgkins lymphoma, a cancer of the lymphatic system that is associated with radiation exposure, than did the state overall.

But Thomas Tucker, the registry's acting associate director for cancer prevention and control, cautioned the only way to determine whether cancer rates were tied to the Paducah plant would be to closely study the health histories of workers there most exposed to radiation sources.

McCracken County's rates for leukemia and cancer of the central nervous system, which also are associated with radiation exposure, have been either below or close to the statewide rates, the records show.

Tucker noted there were such a small number of cases of those two cancers in McCracken each year — fewer than 10 of each — that adding or subtracting one case would significantly change the rates.

Jim Chesnut, a former worker at the plant, said, "I heard people talk about leukemia. But there was never anything I recall specifically about it." But he said the recent disclosures about plutonium and the whistleblowers' allegations about historically lax safety practices at the plant have made former workers think.

"Most people know and have come to fear what they may or may not have been exposed to," he said.

Paducah workers file $10 billion suit

20,000 might eventually join class action

By JAMES MALONE
The Courier-Journal

PADUCAH, Ky. — A $10 billion lawsuit filed in U.S. District Court yesterday asserts that eight companies that operated or produced nuclear fuel for the Paducah Gaseous Diffusion Plant exposed workers and their families to harmful levels of radiation.

The suit was filed on behalf of 14 current and former workers and their families, but lawyers plan to seek class-action status, which could apply to as many as 20,000 people, said Bill McMurry of Louisville, an attorney working on the case.

The suit alleges that workers were unknowingly exposed to dangerous amounts of radiation and are suffering emotional distress because they fear becoming sick. Radiation exposure can cause various cancers, but the plaintiffs do not claim they are currently ill.

"Being exposed to high levels of radiation is like being (unknowingly) exposed to the AIDS virus," said Mark Bryant, a Paducah lawyer who filed the suit. "You never know if you will contract it. They worked there. They can't make that exposure go away."

The suit arose from disclosures in a whistle-blower suit that three plant workers filed in June. That suit alleges that Lockheed Martin Corp. and Martin Marietta Corp., former plant operators, had profited by lying to the government about the extent of environmental pollution around the plant and worker exposure to radiation. It alleges workers were unknowingly exposed to highly radioactive plutonium, which contaminated spent nuclear fuel that was shipped to the plant, and that plutonium was released into the environment.

Paducah has been rocked by disclosures in the whistle-blower suit. The plant is the community's largest employer, providing about 2,000 jobs in producing nuclear reactor fuel and continuing with a massive environmental cleanup that began in the late 1980s.

The three plaintiffs in the whistle-blower suit, Garland Jenkins, Charles Deuschle and Ronald Fowler, and their wives also are plaintiffs in the suit filed yesterday. One of their attorneys, Joseph Egan of Washington, D.C., also is a lawyer in the new suit.

Another plaintiff, David M. Sacharnoski of Paducah, said in a telephone interview that he worked at the plant from 1976 to 1980, replacing equipment in the buildings where reactor-grade uranium was made. He said he has had concerns about materials he had been exposed to. He said he was never told that he may have been exposed to highly radioactive metals, which contaminated some of the uranium processed in the buildings where he worked.

Named as defendants were Union Carbide Corp., Martin Marietta, Lockheed Martin and General Electric Co.

The suit alleges that General Electric produced fuel in Richland, Wash., that was shipped to Paducah for processing and that the company knew or should have known that workers would be exposed to radioactive contaminants.

But General Electric spokesman Gary Sheffer said yesterday that "GE had no role in Paducah, and GE's inclusion in the suit is specious. This was the result of events 30 years ago that were the responsibility of the government and not GE."

Department of Energy spokesman Steve Wyatt said yesterday he was not sure whether the contracts to operate the diffusion plants required the government to protect contractors against such lawsuits.

Among the plaintiffs' allegations were that they "inhaled, absorbed and ingested" radioactive materials as a result of the former operators' "intentional" failure to disclose the true nature of the plant's operations. Former operators concealed the truth for fear they would lose workers and be unable to maintain profit margins and contract bonuses, it says.

The suit also alleges a deliberate physical "battery" on workers by causing "extremely and illegally high doses of radiation, including plutonium to strike and injure the plaintiffs and class members."

Plaintiffs allege they have suffered sufficient exposure to claim emotional distress and fear of contracting "radiation-related diseases."

And it asserts that the defendants' conduct was "so outrageous in character and so extreme in degree as to go beyond all possible bounds of decency and to be regarded as atrocious and utterly intolerable in a civilized community."

Claims made in filing a lawsuit represent only one side of the case.

James Fetig, a spokesman for Lockheed Martin Corp. in Bethesda, Md., said they hadn't seen the suit and couldn't comment.

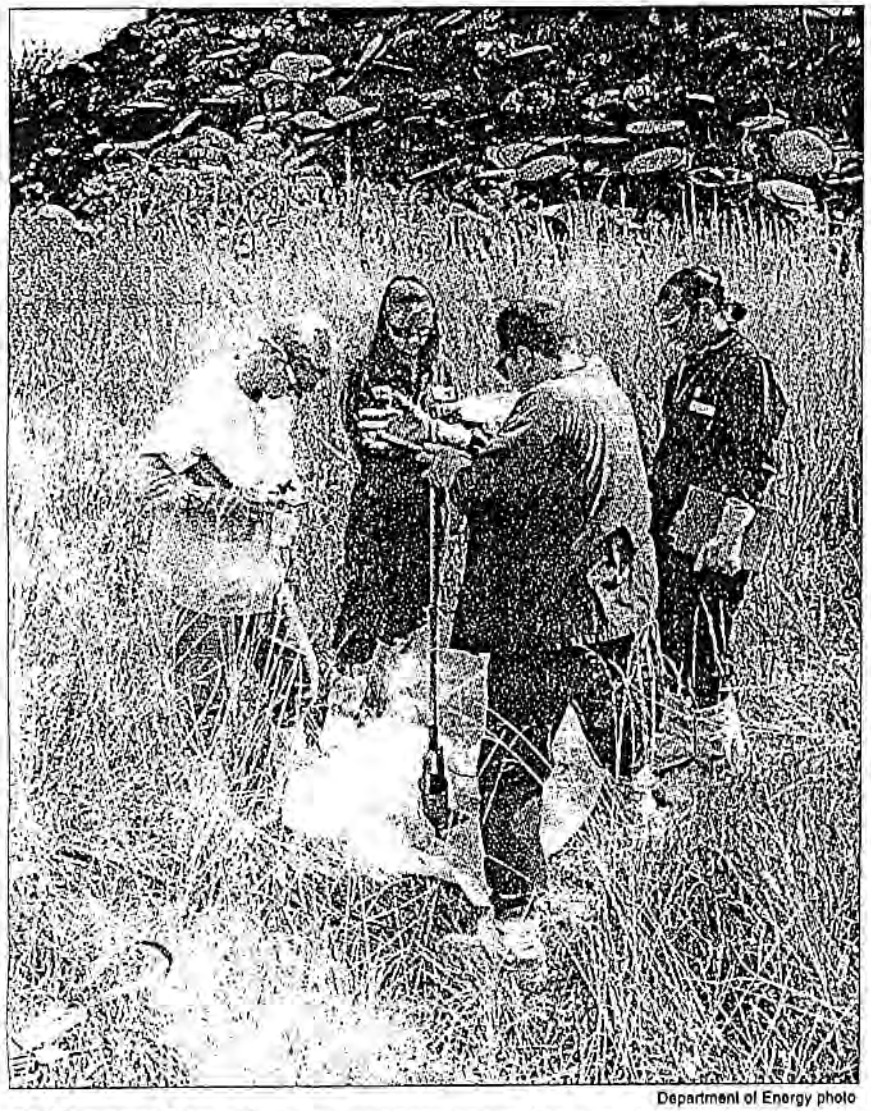
The telephones went unanswered late yesterday at Union Carbide Corp. in Danbury, Conn.

The Energy Department, after being served with the then-sealed whistle-blower suit in early June, sent an investigative team to Paducah that reported finding no serious problems.

But when the suit was leaked to the press, Energy Secretary Bill Richardson pledged a new investigation and dispatched department employees to investigate.

The inquiry's first phase ended yesterday, with a team returning to Washington to prepare a report that will be released in October.

Staff writer James R. Carroll contributed to this story.



Department of Energy photo

Soil samples: Soil and sediment samples are gathered inside the Paducah Gaseous Diffusion Plant's scrapyards by members of the Department of Energy investigation team and technicians employed by Bechtel Jacobs or its subcontractors. Related story, 5A.

Thousands may join suit over radiation

The lawsuit *seeks $5 billion in compensatory damages, $5 billion in punitive damages and the recovery of 'hundreds of millions of dollars' in unjust profits.*

By Joe Walker
Sun Business Editor

As many as 10,000 current and former Paducah Gaseous Diffusion Plant employees and their families may be eligible to join a $10 billion federal lawsuit alleging that former contractors poisoned the work force with plutonium and other contamination, say attorneys who filed the action.

"It's about compensating these workers," said lawyer Bill McMurry of Louisville, formerly of Paducah. "It's about accountability, compensation and punishment."

Filed Friday before U.S. District Judge Edward H. Johnstone in Paducah, the suit seeks $5 billion in compensatory damages, $5 billion in punitive damages and the recovery of "hundreds of millions of dollars" in unjust profits.

Defendants are former plant contractors Union Carbide Corp. and Lockheed Martin as well as General Electric Co., which allegedly shipped reactor fuel contaminated with plutonium to the Paducah plant for reprocessing from 1952, when the plant opened, until 1965.

The suit names 14 plaintiffs, including three — Ronald Fowler, Garland (Bud) Jenkins and Charles Deuschle — who in June filed a "whistleblower's" (False Claims Act) suit against Lockheed Martin in federal court in Paducah. Fowler and Deuschle are employees, and Jenkins is retired from the plant.

Joseph Egan, a Washington attorney and nuclear physicist who filed the whistleblower's suit, is a plaintiffs' attorney in the new lawsuit.

Please see **CURRENT** / 11A

Unlike the whistleblower's action, which asks for Justice Department intervention, the new complaint seeks damages directly from the former contractors alleging they made money at the expense of workers' exposure. The whistleblower's suit exempts Union Carbide because of a statute of limitations.

Mark Bryant of Paducah, another plaintiffs' attorney, said the new suit resulted from mounting phone calls to his office after word of the whistleblower's suit surfaced in July. The action is based on resulting facts that support the earlier suit, he said.

"We expect to get phone calls from a lot of people wanting to be plaintiffs," Bryant said.

Fowler's wife, Sandra; Jenkins' wife, Alice; and Deuschle's wife, Kay — a plant employee — also are plaintiffs.

Other plaintiffs are current or former plant workers Al Rainer, William Cossler Jr., Charles Ramsey and David Sacharnoski; Rainer's daughter, Chyanne Rainer Stevens, and Sylvia Mathis, Shanda Mathis and Sybil Mathis. Sylvia Mathis is the widow of H.C. "Ladd" Mathis Jr., a longtime plant employee and civic leader who died last year of lung cancer. Shanda and Sybil Mathis are their daughters.

"We're not trying to draw connections between anyone's death and his work out there," McMurry said. "Our task is to prove that these workers have been injured by their exposure to high levels of radiation."

The suit came as the U.S. Department of Energy, which owns the plant, announced the completion of its investigation into claims surrounding the whistleblower's suit. DOE spokesman Steve Wyatt declined comment on the new complaint, as did Lockheed Martin spokesman Jim Fetig.

"We have not seen the lawsuit and therefore are unable to comment," Fetig said.

Defendants' attorneys have 20 days to respond. McMurry said the plaintiffs' team wants to send notices to all current and former workers and their families asking them if they wish to join the suit. Johnstone must rule on that motion and set a time limit for responses, he said.

"A class action is determined by the numbers, but there is not any magic number," McMurry said. "It just has to be too numerous to handle each person's claim individually."

Bryant said the team will seek the involvement of the U.S. Department of Justice and the plant's main union, Paper, Allied-Chemical and Energy Workers International (PACE). Rainer, Cossler and Ramsey are union members.

Bryant said he would contact PACE international officials next week to ask for their support.

"The defendants can certainly afford to pay it if we can get a judgment against them," Bryant said. "It'll take years. This is not something that's going to happen tomorrow, but we're going to work with the union to try to get them on board."

David Fuller, president of PACE Local 3-550, said Bryant had not contacted him.

"Whether this lawsuit will become a part of any official response my union makes, I don't know. While I'm not ruling it (involvement in the suit) out, I certainly have no knowledge and have not been a party to any of this and hold out the option for a completely different course of action. It depends on what the international decides after a thorough review."

Among the allegations:

■ General Electric's Hanford facility shipped thousands of tons of highly contaminated uranium feedstocks to the Paducah plant, operated by Union Carbide from 1952 to '84, and Martin Marietta and its successor, Lockheed Martin, from 1984 to last spring. The reactor fuel had up to 700 times as much technetium and 450 times as much plutonium and neptunium than does the uranium that is typically processed. All three substances were contaminants and far more radioactive than uranium, enriched at Paducah for use in nuclear fuel.

■ The contaminants led to "widespread releases" to the plant and its surroundings, and the releases continue. Workers had "a continuous series of ingestions and exposures" — in excess of federal limits — from routine operations over many years.

■ Workers deserve compensation not only for physical injury but the fear of contracting radiation-related diseases and mounting medical expenses.

■ Contractors hid and misrepresented the facts, knowing that employees would otherwise refuse to work and file claims. The fraud led to "unjust enrichment" of contractors through profits, bonuses and incentives earned by not using proper safety precautions.

McMurry said the suit is based on Kentucky law that allows people to recover emotional damages for radiation exposures that are especially bad. The law stemmed from an unrelated court case involving a pregnant woman injured by X-rays, he said.

"That's important, given what we believe to be one of the most egregious violations of health physics laws ever," McMurry said of alleged plant exposures.

Kentucky's workers' compensation laws exempt employers from paying claims to workers injured unintentionally and in the normal course of business. McMurry said the federal suit alleges "outrageous conduct," which, if proved, would mean the injuries were deliberate and compensatory.

U.S. Department of Energy
PUBLIC NOTICE

Draft Environmental Assessment for Vortec Demonstration
Extension of Opportunity for Public Comment August 7 - October 6, 1999

The U.S. Department of Energy has extended the public comment period for the draft Final Environmental Assessment for the Proposed Demonstration of the Vortec Vitrification System for Treatment of Mixed Wastes at the Paducah Gaseous Diffusion Plant, DOE/EA-1230. The environmental assessment has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969. The U.S. Department of Energy (DOE) has prepared an Environmental Assessment (EA) to evaluate the potential impacts from construction and operation of a demonstration facility known as the Vortec Corporation Cyclone Melting System at the Paducah Site in Paducah, Kentucky. This EA has been revised based on comments received on the previous version distributed March 20, 1998. The original comment period extended from August 6, 1999 to September 7, 1999. DOE has extended the comment period an additional 30 days. The public is invited to comment on the draft EA from August 6 through October 6, 1999. Late comments will be considered to the degree possible.

The EA was prepared in accordance with the President's Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500-1508) and DOE NEPA Implementing Procedures and Guidelines (10 CFR 1021). With the revised EA, DOE evaluates the capability of the Vortec system for treating a portion of the low-level radioactive, Resource Conservation and Recovery Act (RCRA) hazardous, and polychlorinated biphenyls (PCB) mixed (radioactive, PCB, and/or RCRA-hazardous) wastes stored at the site. These wastes mainly include contaminated soils. The Vortec system would use a glass-making technology, known as vitrification, to melt wastes into a solid product that will meet the landfill disposal requirements of RCRA.

Based on the impacts analysis of the EA, DOE will determine whether to issue a Finding of No Significant Impact (FONSI) for the proposed evaluation of the Vortec system or prepare an Environmental Impact Statement (EIS), which would further study the project's impact to human health and the environment.

Written comments, or requests for information should be directed to:

W. David Tidwell, U.S. Department of Energy
Paducah Site Office
P.O. Box 1410
Paducah, KY 42001
Phone: (270) 441-6807
Fax: (270) 441-6801

The draft EA is available for review at:

DOE Environmental Information Center
West Kentucky Technology Park
Kevil, KY 42053
7:30 a.m. to 4:30 p.m. Monday - Friday
Or by appointment
(270) 462-2550

Paducah Public Library
Reference Desk
555 Washington St.
Paducah, KY 42003
(270) 442-2510.

Uranium, leukemia links not studied

■ Researchers found *a file on worker leukemia deaths. Through interviews with Paducah plant officials and union leaders, the team learned of worries about the disease among employees.*

Associated Press

Researchers from the federal government considered investigating reports of leukemia among workers at the Paducah Gaseous Diffusion Plant, but decided against it.

A team from the National Institute for Occupational Safety and Health spent a week at the Paducah Gaseous Diffusion Plant in 1992 looking for records for a possible study on the health effects of worker exposure to uranium and electromagnetic fields, The Courier-Journal of Louisville reported Sunday.

The researchers found plenty of employee data in paper files and computer databases, including a file on worker leukemia deaths. Through interviews with plant officials and union leaders, the team learned of worries about the disease among employees.

"The leukemia concerns should have been followed up," said James Stebbings, who led the team that visited the plant in December 1992. "Chances are 50-50 or better it would have turned out to be nothing. But it should have been done."

A NIOSH official said the agency had decided instead to first complete a study of the health of workers at a sister uranium enrichment plant in Ohio, where metal was processed to a higher level of radioactivity than at Paducah. That study is still under way.

Stebbings, now an Illinois epidemiologist, said last week that the Paducah plant's industrial hygiene department had maintained a file on leukemia cases that ended in 1981. He said an employee had informed the NIOSH team about it.

Stebbings said he did not know whether there were more instances of leukemia among plant workers and their families than would be expected for the general population.

But he said that the fact that the plant processed uranium contaminated with highly radioactive plutonium, which can cause leukemia and other cancers, was another reason the reports should have been investigated.

Three plant employees filed a whistle-blower lawsuit in June alleging that workers were unknowingly exposed to plutonium and other radioactive contaminants. They claim the exposure came from spent uranium fuel sent from the U.S. Department of Energy's Hanford, Wash., nuclear weapons reactor to Paducah for reprocessing.

Steven Ahrenholz, now assistant chief of NIOSH's Health Related Energy Research Branch in Cincinnati, was another member of the team that visited Paducah. He said concerns about leukemia there were based on a NIOSH study of worker health at the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio. That 1987 study found higher-than-expected incidence of leukemia and stomach cancer, but the results were not statistically significant.

A followup study was launched at Portsmouth.

"We were trying to determine whether it was appropriate at that time to add in that Paducah Gaseous Diffusion Plant with the Piketon study," Ahrenholz said, "or whether we wanted to do the Piketon mortality study update and see what the outcome of that was before we made any other decisions about what we would do.

"At that time we felt that we should just proceed with the Portsmouth plant itself."

He said that while there were similarities between the two plants, the Ohio plant produced much more highly enriched uranium — with more potential for radiation exposure — for use in nuclear weapons. Both plants now make uranium for nuclear power plants.

The only study of worker health at Paducah is one that is just beginning and involves the union and researchers from the University of Massachusetts at Lowell. It is being done in response to a law passed by Congress in 1993 that required such studies at all Department of Energy nuclear facilities.

Jimmie Hodges, now the Department of Energy's Paducah site manager, was the agency's health and safety director for the plant when NIOSH investigators visited Paducah in 1992. He said he didn't know about any files being kept on leukemia.

"I've not heard anything like that," Hodges said. "I'm just not familiar with that at all."

The Kentucky Cancer Registry, which has tracked cancer cases since 1991, has not noted any unusual cancer incidence in McCracken County, where the Paducah plant is located.

Beryllium adds to DOE concerns

■ **A memorandum** *says the highly toxic metal was used at the Paducah Gaseous Diffusion Plant.*

By Joe Walker
Copyright 1999, The Paducah Sun

An old Department of Energy memorandum mentions that beryllium, a highly toxic metal used in nuclear weapons, was used at the Paducah Gaseous Diffusion Plant, said a health physicist who is helping with a health study of former plant workers.

"It could have been in a laboratory on a very small scale, so I don't want to raise any concerns until we know more about this," said Mark Griffon of the University of Massachusetts at Lowell. "It didn't say anything about potentially exposed workers, either, so I'm not sure in what quantity or where this beryllium might have been at the Paducah facility."

Griffon said he does not recall whether the memo mentioned when the beryllium was in the plant, although it was probably not in recent years. In "risk mapping" discussions Aug. 17, a few former plant workers recalled dismantling nuclear missile parts for smelting many years ago but knew nothing about beryllium, he said.

"Some folks have suggested that the cones of the missiles were made of or coated with beryllium," Griffon said. "I didn't make much headway into that issue. If, in fact, it was used, they (workers interviewed) didn't know anything about it."

The retired workers said they had not heard about beryllium until news reports in July, when Energy Secretary Bill Richardson announced that the department would provide at least $11 million in benefits for contract workers exposed to certain toxic substances, notably beryllium. The department mentioned former workers in Oak Ridge, Tenn., and other cities as being exposed, but not Paducah. Union officials and federal lawmakers from Kentucky pledged to fight to expand the benefits to the Paducah plant.

Griffon, involved in the study of thousands of former enrichment plant workers, said he saw the beryllium memo about three months ago in the dead archive vault at a closed uranium enrichment plant at Oak Ridge. The memo was from DOE officials in Oak Ridge to those in Washington, he said.

"It's going through declassification, and I'm waiting for follow-up," Griffon said.

He said the memo mentioned that beryllium was at the Oak Ridge plant, and to a lesser extent at Paducah, but not at an enrichment plant at Portsmouth, Ohio.

Beryllium, a lightweight metal machined for use in nuclear weapons and reactors, is extremely toxic when particles are inhaled or ingested. The result is chronic, often disabling and sometimes fatal lung ailments.

The Department of Energy, which is investigating reports that workers were unwittingly exposed to radiation and toxins, says traces of plutonium entered the Paducah plant as a contaminant in nuclear fuel rods from the early 1950s to the mid-1970s. The department has not mentioned beryllium in association with the probe.

Griffon said a few past workers recalled recovering gold from missile parts and smelting the leftover metal for ingots.

"They didn't have any knowledge of any plutonium exposure associated with their work," he said. "That doesn't mean it wasn't there. It may have been a small quantity."

Dr. Steven Markowitz, an epidemiologist with Queens College, City University of New York, is leading the health study. The investigation has not revealed beryllium, although only about 100 Paducah workers have been screened, he said.

"We don't have any knowledge that beryllium was used at Paducah, but if it should surface, we would obviously add it to the medical screening," Markowitz said. "It has a way of showing up unexpectedly."

Sylvia Kieding, study coordinator, said medical testing for beryllium disease started at Oak Ridge when the study identified it as a hazard.

Paducah plant workers recovered thousands of ounces of gold from components of disassembled nuclear weapons that were shipped to Paducah from Texas in the early 1950s until 1986, DOE officials said recently. They denied allegations — made in a federal lawsuit by three plant workers — that warheads were shipped into the plant at night and disassembled to recover the gold.

DOE also has denied allegations in the suit that the gold was radioactive. Gold recycling reportedly ended in 1986.

Team to assess DOE cleanup

■ **SAIC's team** *will evaluate cleanup choices and recommend options.*

Staff report

KEVIL, Ky.

Bechtel Jacobs Co. LLC has awarded a multimillion-dollar subcontract to a team led by Science Applications International Corp. (SAIC) to do environmental cleanup assessment work at the Paducah Gaseous Diffusion Plant.

SAIC teamed with GEO Consultants of Kevil, a small business owned by a woman; PrSM of Oak Ridge, Tenn., a small business employing the disadvantaged; and Alabama A&M, a historically black university. The team will meet aggressive socioeconomic goals predefined for those types of businesses, Bechtel Jacobs said.

The contract includes four years' base performance from this Nov. 29 through Nov. 30, 2003, plus two options, each lasting two years, for a total of eight years. Based on the current scope of work, the contract is worth as much as $16.9 million if it lasts eight years.

SAIC's team will conduct environmental investigation, evaluate cleanup alternatives and write reports defining and recommending cleanup options. Other subcontractors will do the cleanup, governed by state and federal regulations.

Bechtel Jacobs is gradually moving its work force to subcontractors hired for ongoing cleanup work. About 11 of its employees performing work under the SAIC subcontract will have the chance for permanent jobs with SAIC or its partners.

Bechtel Jacobs, management and integration contractor for the U.S. Department of Energy, picked the team in competitive bidding. DOE owns the plant and oversees environmental management.

The Courier-Journal
Kentucky B
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Editor: Gideon Gil
Phone: 582-4657 / Fax: 582-42

Paducah plant air monitoring lapsed for weeks

State task force learned of problem after worker quit

By ROBERT T. GARRETT
The Courier-Journal

Even though it is paid by the federal government to do so, Kentucky failed to measure the air around Paducah's uranium-enrichment plant for possible radioactive material for about one to two months earlier this summer.

The state resumed its checks earlier this month at the direction of a task force created by Gov. Paul Patton to investigate allegations of radiation contamination in and around the plant.

The state says it has never found higher-than-normal amounts of airborne radiation at the seven sites outside the plant's grounds it agreed in late 1996 to check weekly. The state compares the radioactivity of particles trapped at those sites with that found at another location a few miles away.

But the state's slowness in starting the air-monitoring program and its recent lapse in collecting and testing air samples trouble some environmentalists.

Mark Donham, who is co-chairman of a citizens' advisory board that is watching cleanup of environmental problems caused by the plant, said he distrusts state and federal assurances that air around the 47-year-old plant is safe.

Donham noted that low levels of technetium, a man-made product that is radioactive, have been found in vegetables in a few gardens in the vicinity.

"The air emissions are my No. 1 concern," said Donham, who said he grows his own food and who lives 15 miles downwind from the plant.

Tuss Taylor, who heads the state's effort to oversee cleanup at the plant, said in 1995 that the state's air-monitoring program around the plant was begun as "more of an assurance . . . because the public tends to still not be too trusting" of the U.S. Department of Energy, which is the plant's owner.

But it was not until January 1997 — three years after the state purchased the eight air monitors — that the state ironed out several disagreements with DOE and got the monitors installed.

Kentucky receives about $1.5 million a year from DOE to pay for its expenses in overseeing the plant's compliance with environmental laws.

Jack Conway, deputy secretary of Patton's Executive Cabinet, said the federal government paid for the monitors and their installation. The state agreed to pay a trained person weekly collect the air filters, have them analyzed at a laboratory and maintain the air monitors.

Conway heads the state's interagency team that is gathering information about the plant. Patton assembled the team after Aug. 8 news reports about a lawsuit alleging widespread contamination of the environment around the plant and decades-long failure to protect thousands of plant workers.

At an Aug. 13 meeting of state officials, Conway said he was told that every air sample taken since January 1997 "has been below background," or the amount of radioactivity normally found in a particular locale.

But Conway said he also learned at the same meeting that a person who had been collecting the samples and returning them to Frankfort for lab analysis had quit and had not been replaced.

"We had not been down there the past six or eight weeks, and therefore we had not had a reading" since sometime in June, Conway said. He said he asked the Natural Resources and Environmental Protection Cabinet to resume collecting the samples and fashion a new arrangement.

The Cabinet for Health Services, which is responsible for public health and reviews the air-monitoring results, has shared in the temporary staffing arrangement, said spokeswoman Barbara Hadley Smith.

Conway and Smith said the readings resumed two weeks ago and have continued to show no unusual levels. And they said the health-services agency soon will contract with the University of Kentucky to collect the weekly air samples.

Until earlier this year, when Natural Resources Secretary James Bickford ended UK's contract with the state, UK had run the state's programs for testing groundwater, soil and air at or around the plant.

Continued from 1A

on Department of Energy land just north of the plant fence.

Although the site — about 36 square feet — is near the landfill, testing done so far suggests that the substance is not coming from the landfill, said DOE Paducah Site Manager Jimmie Hodges.

"We did another hole punch in the soil about 60 feet away and didn't encounter this material," he said. "We also monitor leachate — water that runs through the landfill — and we don't see any elevated levels like that found at the site."

Since discovering the problem and consulting the state, the plant has covered the area with plastic, soil and straw, surrounded it with rope and posted warning signs.

Hodges said DOE knew about the site because it was a dumping ground for debris from plant construction starting in 1950, long before there was a landfill. The dump site was scheduled to be cleaned up but had a much lower priority than contaminated groundwater, the plant's chief environmental concern, he said.

"This really wasn't a surprise area. We knew it existed. There was just a question of what was in there," Hodges said. "The basic surprise was that we had radioactive material."

He said contractors found no elevated radiation in initial tests, but he asked them to repeat the process about three weeks later. Workers dug up some of the material, which looked like pieces of tar paper and asphalt shingles. Secondary testing revealed elevated levels of uranium and technetium-99, both of which are radioactive, Hodges said.

Volpe said the plant faxed him preliminary test data Aug. 12 and followed Aug. 20 with a letter to the Cabinet for Natural Resources documenting the problem. A review of the data suggests that although the uranium levels are higher than expected, they are still consistent with natural uranium found in soil, he said.

Uranium hexafluoride, a man-made compound, is used by the plant in huge amounts to make fuel for nuclear reactors.

Technetium is not natural and is a signature of past plant practices. It came into the plant as a byproduct of nuclear fuel rods, which the plant processed from the early 1950s to the mid 1970s.

"I'm trying to sit down and run risk calculations," Volpe said. "But if this material was covered with soil, I don't feel it would pose a risk. That's my initial impression."

Volpe said tests showed no evidence of plutonium, similar to technetium. In June, three plant workers and an environmental activist group sued former plant contractor Lockheed Martin. Among the allegations is that workers were exposed to plutonium and that contaminated materials were secretly dumped in the landfill, which was not permitted to accept radioactive or hazardous waste.

Technetium and trichloroethylene, a common cleaning solvent, are considered the two leading plant contaminants, mainly because they are in groundwater. DOE keeps pumping and treating groundwater while looking for a more reliable treatment process. It also has replaced about 90 residential wells with city water to eliminate the groundwater threat.

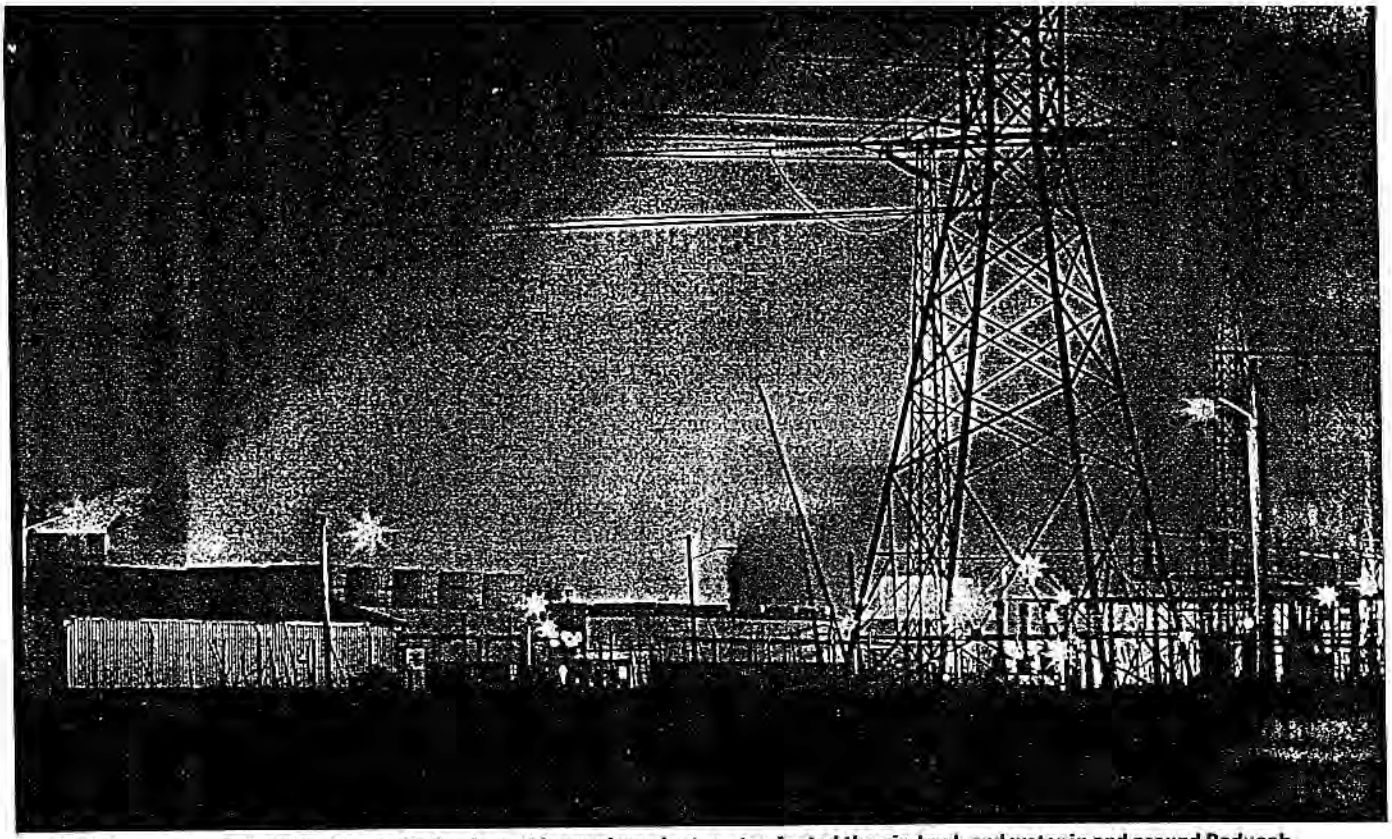
Elevated levels of uranium and technetium have been found in sediment, primarily in a ditch on plant property that for many years was a discharge point for treated wastewater. Hodges said the site where the black ooze was found is near a ditch that was filled in many years ago. It was replaced with a new diversion ditch, just west of the old one, to make room for the landfill, he said.

"That may be another reason the radiation found at the dump site shouldn't be quite so surprising," he said.

Hodges said records are sketchy on how long the area was a dump site. He said DOE has no information to support claims in the lawsuit that the materials were illegally dumped in the landfill.

Mark York, spokesman for the Natural Resources Cabinet, said DOE will submit plans for final cleanup of the dump site, as well as information on the source of the contamination and how it came to be dumped there.

"We are taking it seriously because it is radioactive material," York said.



A whistle-blower lawsuit claims that radiation from this uranium plant contaminated the air, land, and water in and around Paducah.

Indecent exposures

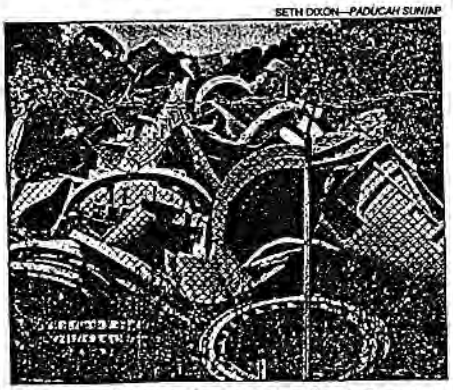
Why radioactive contamination bedevils a Kentucky town

BY BRUCE B. AUSTER

From the road, the building's a definite eye-catcher, a weird-looking structure shaped like the dome of a silo. Stranger still is the story of how it came to land in a suburban yard in Metropolis, Ill., population 6,822. It turns out that a man who worked in a uranium plant took the top of a big cooling tower, loaded it onto a truck, and drove it to Metropolis, where he decided it would make a perfectly fine garage for the family car. A cooling tower, it goes without saying, is not supposed to be so easily spirited from an industrial plant, much less a plant like Kentucky's supersensitive Paducah Gaseous Diffusion Plant, where highly trained workers handled dismantled nuclear weapons. But this apparent failure to control access to the Paducah plant was just one of many security lapses there that could threaten public health. Radioactive contamination has been identified outside Paducah's gates in the ditches, streams, and ponds adjacent to the facility, as well as at a downtown parking lot and at the local high school, according to sealed lawsuit documents obtained by *U.S. News* from sources that are not parties to the court action. The suit alleges that the contractor who ran the plant misled the federal government about worker exposure at the plant and about radioactive contamination. Sources familiar with the situation at Paducah are concerned that while residents are probably not exposed to exceedingly high doses of carcinogens, they are being exposed unnecessarily.

Until now, it was believed that only workers at the plant had been at risk. Each day, laborers there would handle uranium powder that they had been told, time and again, was safe enough to eat, documents claim. The lawsuit, however, offers voluminous evidence that the workers were exposed to extraordinary levels of plutonium radiation at the plant for decades. After the lawsuit was first reported in the *Washington Post*, the Department of Energy promised its own comprehensive investigation, noted that the health risks are a legacy of the past, and claimed that conditions are safe today.

SETH DIXON—*PADUCAH SUN*/AP



A boneyard of uranium-contaminated scrap

Exposure elsewhere. But excessive levels of radiation have been detected as recently as this year, not just on plant grounds but in the town of Paducah itself, according to court documents. On May 1, Ronald Fowler, one of the whistle-blowers, says he spotted and photographed several trucks containing canisters of uranium hexafluoride parked at a downtown parking lot in Paducah. The gate to the fenced lot was open and some of the cylinders carrying the enriched uranium, which was on its way to another plant to be made into fuel for a nuclear reactor, were within 30 feet of a sidewalk. One nuclear expert says a pedestri-

MICHAEL WILLIAMSON—*WASHINGTON POST*

Bechtel adds safety monitors

■ **The contractor** *coordinating cleanup activities at the Paducah Gaseous Diffusion Plant requires workers to wear personal radiation monitors.*

■ **Resignation's impact:** *State officials say problem with air monitoring did not endanger residents.* **5A**

By Bill Bartleman
Copyright 1999, The Paducah Sun

Bechtel Jacobs Co. ordered 25 employees of a private contractor working at the Paducah Gaseous Diffusion Plant to begin wearing radiation monitoring devices after it was determined they were being exposed to higher levels of radiation than was indicated in earlier tests.

The higher exposure level was found Monday during testing that was done for the U.S. Department of Energy's Headquarters Oversight Investigative Team, which is looking into allegations contained in a workers' lawsuit that alleged that former operators of the plant falsified documents regarding the disposal of contaminated waste and records regarding environmental contamination at the plant.

Jimmy Massey, environmental site manager for Bechtel Jacobs, said the exposure level detected Monday does not pose a health risk for the workers, but it is above limits established by Bechtel Jacobs and DOE that require wearing personal monitoring devices. The order

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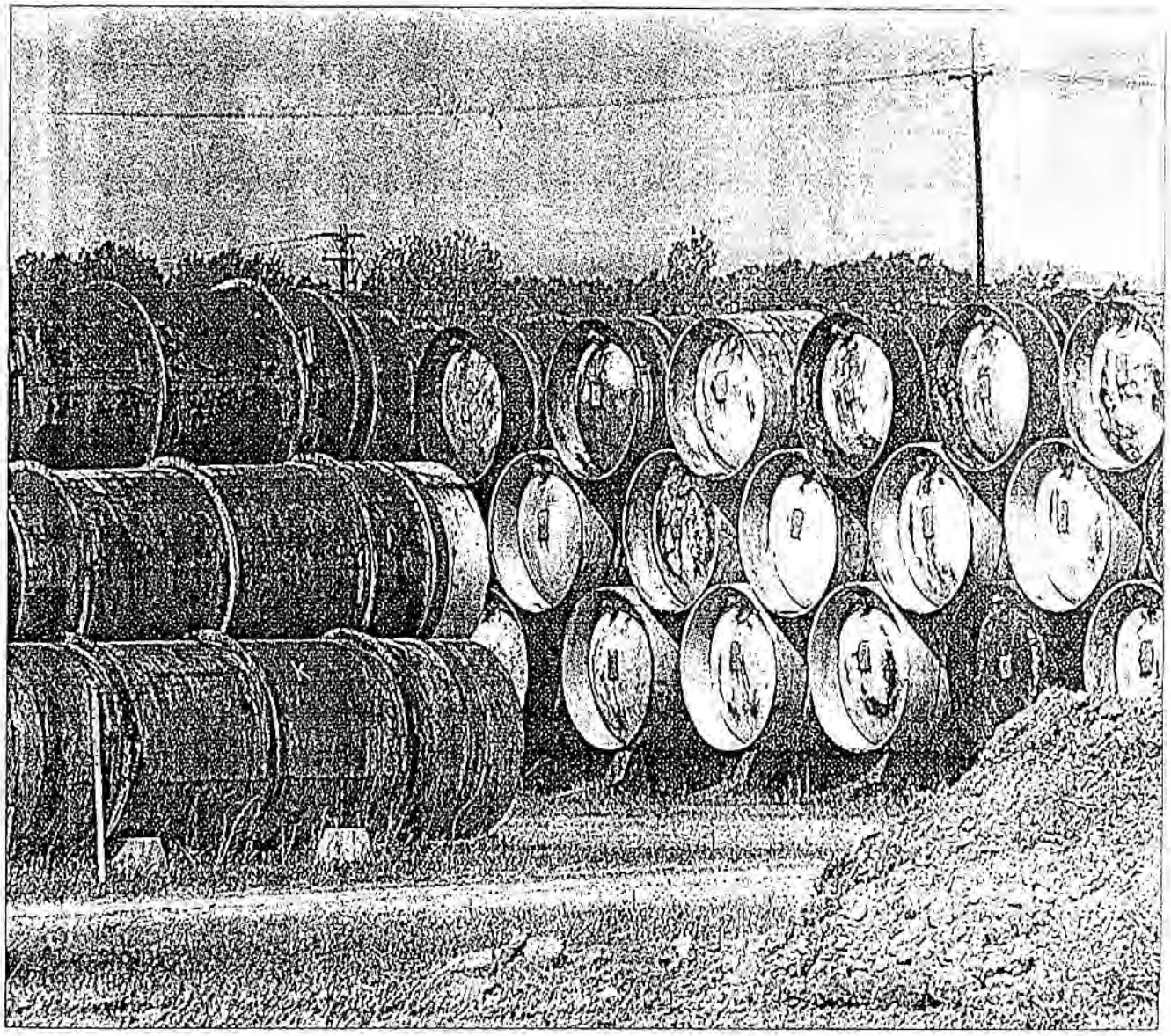

SETH DIXON/The Sun

Storage: Dirt from construction of a new storage yard sits in front of cylinders containing depleted uranium hexafluoride that will be placed in the yard after it is completed in December.

Bechtel adds personal radiation monitors

Continued from 1A

to begin wearing the dosimeter monitors was issued Tuesday.

Massey said the question he wants answered is why two earlier tests by his company indicated that the potential exposure was below levels that require monitoring. He said an investigation has been started to answer that question.

Massey said workers employed by MACTEC of Golden, Colo., are building a new concrete storage yard for steel cylinders that contain depleted uranium hexafluoride, the material left after Uranium-235 is enriched into fuel for nuclear power plants. He said the radiation is the result of gamma rays emitting from the cylinders.

The new cylinder storage yard is located in front of the plant and not far from its main access road.

Regulations require that anyone at the plant who has a potential exposure of more than 100 millirems of radiation per year must wear a dosimeter, a radiation measuring device. Massey said the monitoring level is far below the exposure limit of 5,000 millirems per year, set by the U.S. Environmental Protection Agency.

The cumulative dosimeter readings are kept for each person exposed, and anyone who receives more than 2,000 millirems within a year is reassigned to an area that would not subject them to the 5,000-millirem limit, Massey said.

Bechtel Jacobs' tests conducted April 22 and June 24 indicated that workers involved in the construction would not reach the 100 millirem threshold, Massey said. Construction began in May and should be completed in December.

"Physically, nothing has changed since April and June to explain the discrepancy," Massey said. "We messed up somehow ... and now the issue is to understand the reason for the discrepancy."

Bechtel Jacobs is the private contractor hired by the Energy Department to coordinate cleanup activities and manage existing waste at the plant.

There are almost 37,000 cylinders at the Paducah plant, each containing nine to 12 metric tons of depleted uranium hexafluoride. DOE will accept proposals later this year for recycling the material into some other nuclear substance or for use as a heavy metal. The concrete yards are being built to prevent potential soil contamination if any of the cylinders leaks.

Energy Secretary Bill Richardson ordered an investigation of the plant last month after the suit was filed.

A team of more than 20 DOE officials arrived at the plant Aug. 23 to gather data and review records related to plant operations since 1990. The team is expected to complete on-site work this week and then compile a report of its findings that could be issued next month.

One of the tasks of the group is to review the plant's current practices. As part of that job, they asked to tour the cylinder construction site and take readings of radioactivity. "The readings indicated the potential exposure in excess of 100 millirems," Massey said. "That doesn't mean they were exposed to that level ... just the potential ... and that is different than previous tests showed.

"We will take a look at ourselves and find out how it happened."

He said there were no plans to conduct medical tests or medical screening of the employees since the levels are so low and there was no direct exposure to the radioactive material. "It is from the gamma rays coming from the cylinders," he said.

According to documents prepared by the Energy Department, the average person will be exposed to 300 millirems a year from natural background radiation. By comparison, a person who has an upper gastrointestinal diagnostic X-ray series would receive 244 millirems.

Plant suit painful for former laborer

■ **Kenny Thomas** *says recent attention has brought back memories of health problems that started when he worked in an autoclave.*

By Joe Walker
Sun Business Editor

Kenny Thomas still wonders what was in the dirt and concrete he hauled nearly 13 years ago to a sanitary landfill from a building that heats uranium hexafluoride cylinders at the Paducah Gaseous Diffusion Plant.

Thomas

Thomas, who worked then as a laborer for Tilford Contracting, said that a few weeks into the job, he and others were told to start putting the excavated material into 55-gallon drums. He said plant workers told him the material would be shipped to Oak Ridge, Tenn., to be incinerated.

About the time the drumming started, the plant began running urinalyses on Thomas, who said he and other crew members didn't wear protective clothing. He said he was never told, and hasn't asked since, about what his urine tests showed.

"I really don't want to know. It wouldn't do me any good now, anyway," said Thomas, who lives at Kevil and works at Fort Campbell with another company. "But someone knows what was in that material. They might not want to tell the truth, but somebody knows."

Although that was in early 1987, Thomas says his memories are like a sore reopened by a recent avalanche of publicity stemming from a federal lawsuit alleging the plant exposed workers and the public to radioactive and chemical contamination.

The suit, filed in Paducah in June by three workers and a large environmental activist organization, alleges plant workers once dumped contaminated materials in the landfill even though it wasn't permitted to accept them. The suit names former plant operator Lockheed Martin and its predecessor, Martin Marietta, as defendants.

Spokesmen for the Department of Energy, which owns the plant, and USEC Inc., the plant operator since 1993, have said they know of no unauthorized materials being put in the landfill. Located just off Ogden Landing Road north of the plant, the waste site was closed in 1996.

Despite no evidence of unlawful dumping, a DOE investigative team continues to look for evidence to support claims that workers and the public were exposed to harmful substances, said DOE spokesman Steve Wyatt.

"We're relying on records, and the records are not that good," Wyatt said, conceding that records as recent as when Thomas worked at the plant should have been kept better. "In fact, DOE would love to talk to this fellow to understand more about what he knows. That information would help us in planning cleanup."

One of the major claims of the lawsuit is that workers breathed dust containing plutonium, a highly radioactive contaminant in nuclear fuel rods that were processed at the Paducah plant from the early 1950s to the mid-1970s. Traces of plutonium have been found in sediment in ditches on plant property that once were a discharge point for treated waste water.

Thomas said plant employees mentioned plutonium, dioxin, trichloroethylene and polychlorinated biphenyls or PCBs as contaminants of concern in the excavated material. They never disclosed if any of the contaminants was present, he said, but he became concerned when the drumming and urinalyses started.

If the material was hazardous, it would not have been shipped immediately to Oak Ridge because the DOE incinerator there did not open until 1991, Wyatt said. The incinerator is permitted to burn hazardous and low-level radioactive waste, he said, although most of the waste has been liquid.

Wyatt said the waste could have been stored at the plant and shipped to Oak Ridge after the incinerator opened. A considerable amount of mixed waste from Paducah has been sent to the incinerator, he said.

Thomas said he helped dig the floor out of an old autoclave, a building where uranium hexafluoride (UF6) cylinders are heated to pump the material into the plant's massive process buildings. The job involved building a new autoclave, he said.

For two or three weeks, Thomas and others hauled dump truckfuls of dirt and concrete from the floor of the old building to the sanitary landfill, he said.

"I knew it was an autoclave building," Thomas said. "I knew that working with uranium went on in there."

At one point during the digging, a backhoe fell into a deep sinkhole, he said, after which plant workers began sampling underground water. "I remember them saying they hoped it wasn't chromated water," Thomas said.

He said he later helped build a filter bed using charcoal and clay to treat the water. Such filters are used to treat for organic, or carbon-based, contaminants such as trichloroethylene, a common cleaning solvent and a primary groundwater pollutant at the plant.

Chromated water contains chromium, a toxic, anti-corrosive metal that is a skin irritant and a suspected carcinogen if inhaled or ingested in large enough amounts. The plant used chromium in cooling water for decades to prevent pipes from rusting. In recent years, chromium, considered hazardous, has been replaced by non-hazardous phosphate.

A few months after the autoclave job ended, Thomas worked for several days in a pumphouse supplying cooling water to one of the plant's four large processing buildings. He later developed facial skin irritation and an infection that led to serious upper respiratory trouble and several surgeries in his mouth and sinuses, he said.

Thomas sued Martin Marietta for workers' compensation benefits, alleging he was exposed to chromated water mist. The merits of the case were never explored because the case was dismissed on a controversial point: that workers' compensation laws immunize primary employers such as Martin Marietta from negligence claims arising from regular business. Thomas had already settled a claim with Tilford.

Perhaps because of the legal loophole, few workers' compensation claims have been filed against contractors of the enrichment plant, said Craig Housman, a Paducah attorney who represented Thomas.

"I remember looking at him in the hospital," Housman said. "He was in a bad way. There's no question but that something was drastically wrong with him."

Thomas said he has had recurring headaches since 1987 and vomits almost every morning, although he continues to work. Some doctors blame his shortness of breath on smoking, but he says he had no respiratory trouble before the chromated water incident.

He said he doesn't know if his work in the old autoclave harmed him and probably will never know. His hope is that with the lawsuit and investigation, the facts will come out about whether the plant did wrongful things and made people sick.

"I'm not asking for anything from them," Thomas said. "But I would like them to tell the truth."

Officials say lapse in monitorin wasn't dangerous

■ **They say** *that based on records before and after the lapse, area residents were not in danger of contamination.*

Staff and wire reports

State environmental officials say that based on records before and after a lapse in monitoring, area residents were not in danger of radioactive contamination for the four to eight weeks that air monitoring stations were not checked around the Paducah Gaseous Diffusion Plant.

John Volpe, head of Kentucky's Radiation Control Branch, said monitoring was resumed Aug. 16 after a lapse that was caused by the resignation of the employee who took weekly samples from eight monitoring stations.

"Under a temporary arrangement, the void in taking samples is being filled by personnel from the division of air quality office in Paducah," Volpe said. "We have trained a person who will have permanent responsibility for doing the monitoring. That person will begin working in the next day or two."

The lapse in monitoring was discovered Aug. 13 by a task force appointed by Gov. Paul Patton to investigate allegations of previously unreported contamination in and around the plant. The task force ordered that the monitoring resume, and the temporary arrangement was made with the air quality office in Paducah, Volpe said.

Volpe said the monitoring involves going to each of the eight stations once a week, removing a filter and sending it to Frankfort for testing.

Since the testing began in early 1997, Volpe said, there have been no radioactive readings above normal background levels found in the atmosphere. "Since resuming the testing, we haven't seen anything to heighten our concern about radioactive contamination from the plant," Volpe said

However, Mark Donham, co-chairman of a citizens' advisory board that is watching cleanup of environmental problems caused by the plant, said he distrusts state and federal assurances that air around the plant is safe.

Donham said low levels of technetium, a manmade product that is radioactive, have been found in vegetables in a few gardens in the vicinity.

"The air emissions are my No. 1 concern," said Donham, who said he grows his own food and who lives 15 miles from the plant.

Tuss Taylor, who heads the state's effort to oversee cleanup at the plant, said in 1995 that the state's air-monitoring program around the plant was begun as "more of an assurance ... because the public tends to still not be too trusting" of the U.S. Department of Energy, which is the plant's owner.

But it was not until January 1997 — three years after the state purchased the eight air monitors — that the state ironed out several disagreements with DOE and got the monitors installed.

Kentucky receives about $1.5 million a year from DOE to pay for its expenses in overseeing the plant's compliance with environmental laws.

Jack Conway, deputy secretary of Patton's Executive Cabinet, said the federal government paid for the monitors and their installation. The state agreed to pay a trained person to collect the air filters, have them analyzed at a laboratory and maintain the air monitors.

Conway heads the state's interagency team that is gathering information about the plant. Patton assembled the team after Aug. 8 news reports about a lawsuit alleging widespread contamination of the environment around the plant and decades-long failure to protect thousands of plant workers.

At an Aug. 13 meeting of state officials, Conway said he was told that every air sample taken since January 1997 "has been below background," or the amount of radioactivity normally found in a particular locale.

But Conway said he also learned at the same meeting that a person who had been collecting the samples and returning them to Frankfort for lab analysis had quit and had not been replaced.

"We had not been down there the past six or eight weeks, and therefore we had not had a reading" since sometime in June, Conway said. He said he asked the Natural Resources and Environmental Protection Cabinet to resume collecting the samples and fashion a new arrangement.

The Murray State News
August 27, 1999

Land Use Control Assurance Plan (LUCAP) Fact Sheet
PGDP Site Specific Advisory Board Meeting
September 16, 1999

Background

In April 1998, the EPA (Region 4) issued a policy regarding the use of land use controls at federal facilities, such as the PGDP. **Land Use Controls** (LUCs) are defined as "... any restriction or control that limits the use of and/or exposure to any portion of that property ...." The EPA policy requires the preparation of a **Land Use Control Assurance Plan** (LUCAP), which is a facility-wide plan explaining how the DOE will assure the long-term effectiveness of LUCs.

The PGDP LUCAP will be an appendix/attachment to a Memorandum of Agreement (MOA) that will be signed by the DOE, the EPA, and the KNREPC. The DOE issued a draft MOA and LUCAP to the EPA and the KDEP during April 1999 for review and comment. The DOE will issue a revised MOA and LUCAP to the EPA and the KDEP for approval within the next few weeks.

Highlights of the PGDP LUCAP Contents

Section 1, *Site Description*, contains a brief description of the PGDP, summarizes the land use planning process described in the PGDP Site Management Plan (SMP), and generally describes the DOE's Environmental Restoration (ER) Program.

Section 2, *Land Use Control Goals, Objectives, and Strategies*, contains the major components of the LUCAP. The highlights are summarized here.

- Section 2.1 indicates the LUCAP is applicable only to units where a LUC is selected as part of a corrective/remedial action and commits the DOE to prepare **Land Use Control Implementation Plans** (LUCIPs) for corrective/remedial actions that include LUCs. A LUCIP is a site-specific plan identifying LUC objectives and actions necessary to achieve and maintain those objectives.
- Section 2.5 specifies that decision documents will contain descriptions of any LUCs.
- Section 2.6 identifies LUCIP contents and specifies that all LUCIPs will be appended to the LUCAP.
- Section 2.7 specifies that monitoring and field inspections are to be performed as long as LUCs are required to ensure the LUCs remain protective and satisfy remedial action objectives.
- Section 2.8 addresses evaluations and notifications regarding land use changes and property transfers when LUCs are in place.
- Section 2.9 states that the DOE will provide an annual certification to the EPA and KNREPC indicating that the LUCIPs are being implemented, identifying any noncompliances with the LUCIPs, and identifying any nonmajor changes in land use.
- The remaining portions under Section 2 address access controls, points-of-contact, funding, site access, rights and authorities (of DOE, EPA, and KNREPC), the effective date of the LUCAP, and other standard items.

Section 3 contains references, and Appendix A contains definitions. As LUCIPS are completed, they will be attached to Appendix B. Appendix C contains sample language that will be used in proposed plans and records of decision.

For additional information regarding the PGDP LUCAP, please contact
Myrna Redfield (DOE) at 270-441-6800 or John Morgan (Bechtel Jacobs Company) at 270-441-5070.

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MEMORANDUM OF AGREEMENT
FOR IMPLEMENTATION
OF A LAND USE CONTROL ASSURANCE PLAN (LUCAP)
FOR THE UNITED STATES DEPARTMENT OF ENERGY
PADUCAH GASEOUS DIFFUSION PLANT

draft

I. PURPOSE AND SCOPE

This Memorandum of Agreement (MOA) is entered into by the United States Department of Energy Paducah Gaseous Diffusion Plant (DOE-PGDP), the United States Environmental Protection Agency Region 4 Office (EPA Region 4), and the Kentucky Natural Resources and Environmental Protection Cabinet (KNREPC). The purpose of this MOA, together with the attached Land Use Control Assurance Plan (LUCAP), is to establish and implement procedures to assure the long-term effectiveness of Land Use Controls (LUCs) being relied upon to protect human health and the environment at certain contaminated portions of the Paducah Gaseous Diffusion Plant (PGDP) that are undergoing remediation pursuant to the *Federal Facility Agreement for the Paducah Gaseous Diffusion Plant* (FFA).

On April 21, 1998, the EPA Region 4 Federal Facilities Branch issued a memorandum entitled "Assuring Land Use Controls at Federal Facilities" (Johnston, 1998). The purpose of the policy was to ensure the development of LUCAPs and Land Use Control Implementation Plans (LUCIPs) for federal facilities that utilize LUCs as components of remedial actions implemented at those facilities. The DOE-PGDP recognizes the memorandum as setting forth policy that does not carry the force of law as is established through rulemaking. Thus, as a matter of comity and cooperation and, most importantly, for the purpose of advancing the goal of protecting human health and the environment at the PGDP, DOE-PGDP, EPA Region 4, and KNREPC (hereinafter "the Parties") are entering into this MOA as a means to facilitate accomplishment of this shared objective.

II. RESPONSIBILITIES

The responsibilities of the Parties shall be as set forth in the attached *Land Use Control Assurance Plan for the Paducah Gaseous Diffusion Plant*, which LUCAP is fully incorporated herein (Attachment 1). The Parties agree to act in good faith in carrying out their responsibilities under the LUCAP.

III. MODIFICATION

This agreement may be modified at any time by mutual agreement of the Parties. Any minor modifications to this MOA and/or the LUCAP incorporated herein shall be made effective upon the written approval of the Parties' *Federal Facility Agreement* Project Managers. Any major modification shall be made effective upon the written approval by each of the signatories to this MOA (or their successors). A modification will be considered major if so determined by any of the three Parties hereto.

IV. TERMINATION

This MOA shall terminate at such time as the undersigned representatives of the Parties or their successors mutually concur that the objectives of the Parties pursuant to this MOA have been fulfilled. Alternatively, any Party may withdraw from this MOA upon sixty (60) days written notice to the other Parties. This 60-day notice requirement is for the purpose of allowing the Parties an opportunity to discuss any issues contributing to a Party's desire to withdraw from this MOA in the interest of reaching resolution so that the MOA can continue. It is understood that, should DOE-PGDP withdraw from this MOA, EPA and/or KNREPC may, consistent with applicable law, reconsider any remedy(ies) associated with any DOE-PGDP area having a LUC in place at the time of such withdrawal.

DRAFT

Signature Blocks:

_____

Jimmie C. Hodges
Site Manager
United States Department Of Energy
Paducah Gaseous Diffusion Plant

_____

John H. Hankinson, Jr.
Regional Administrator
United States Environmental Protection Agency

_____

James E. Bickford
Secretary
Natural Resources and Environmental Protection Cabinet

DRAFT

DOE/OR/07-1799&D2

Land Use Control Assurance Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

August 1999

DRAFT

DOE/OR/07-1799&D2

Land Use Control Assurance Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

August 1999

Prepared for the
Department of Energy
Office of Environmental Management

Environmental Management Activities at the
Paducah Gaseous Diffusion Plant
Paducah, Kentucky 42001
managed by
Bechtel Jacobs Company LLC
for the
U.S. Department of Energy
under contract DE-AC05-98OR22700

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PREFACE

This *Land Use Control Assurance Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1799&D1, was prepared to identify the strategy for assuring the long-term effectiveness of land use controls being relied upon to protect human health and the environment at areas of the Paducah Gaseous Diffusion Plant undergoing remediation pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act and/or the Resource Conservation and Recovery Act. This plan will be implemented by means of a Memorandum of Agreement (MOA) incorporating its terms with the United States Environmental Protection Agency and the Commonwealth of Kentucky's Natural Resources and Environmental Protection Cabinet.

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ACRONYMS AND ABBREVIATIONS

DOE	United States Department of Energy
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R.	Code of Federal Regulations
EPA	United States Environmental Protection Agency
FFA	Federal Facility Agreement
K.A.R.	Kentucky Administrative Regulations
KDWM	Commonwealth of Kentucky, Division of Waste Management
KNREPC	Commonwealth of Kentucky Natural Resources and Environmental Protection Cabinet
LUC	land use control
LUCAP	Land Use Control Assurance Plan
LUCIP	Land Use Control Implementation Plan
MOA	Memorandum of Agreement
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
PGDP	Paducah Gaseous Diffusion Plant
RCRA	Resource Conservation and Recovery Act
ROD	record of decision
SMP	site management plan
SWMU	solid waste management unit
U.S.C.A.	United States Code Annotated

1. SITE DESCRIPTION

1.1 PADUCAH GASEOUS DIFFUSION PLANT DESCRIPTION

The Paducah Gaseous Diffusion Plant (PGDP) is an active uranium enrichment plant located in western Kentucky; it is situated approximately ten miles west of the city of Paducah and four miles south of the Ohio River in McCracken County. The plant is owned by the United States Department of Energy (DOE) and operated by the United States Enrichment Corporation. Enrichment operations began in 1952, and the plant became fully operational in 1955. Hazardous, nonhazardous, and radioactive wastes have been generated, stored, and disposed of at the PGDP.

The goal of the DOE's Environmental Restoration Program is to assure that releases from past operation and waste management practices at the PGDP are investigated and appropriate response actions are selected so that human health and the environment are protected. State and federal Resource Conservation and Recovery Act (RCRA) permits were issued to the PGDP July 16, 1991, that require the proper treatment, storage, and disposal of waste; corrective action (i.e., cleanup); closure of regulated units; and investigation of off-site contamination (KDWM, 1991; EPA, 1991). The PGDP was placed on the National Priorities List (NPL) June 30, 1994 [59 *Federal Register* 27989 (May 31, 1994)]. Sites on the NPL are required to evaluate releases and conduct remedial actions/removal actions in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

In order to coordinate the requirements under CERCLA and the RCRA permits and to prevent duplication of efforts, the DOE, the United States Environmental Protection Agency (EPA), and the Commonwealth of Kentucky's Natural Resources and Environmental Protection Cabinet (KNREPC) entered into the *Federal Facility Agreement for the Paducah Gaseous Diffusion Plant* (FFA), DOE/OR/07-1707, on February 13, 1998, (EPA, 1998) pursuant to Section 120 of the CERCLA.

1.2 LAND USE PLANNING PROCESS

The proper development of land use assumptions is critical to implementing an efficient, cost-effective program that is protective of human health and the environment. The *Site Management Plan, Paducah Gaseous Diffusion Plant* (SMP), DOE/OR/07-1780&D2, provides a general description of the sitewide land use planning process at the PGDP (DOE, 1999). Descriptions of the areas at the PGDP to which land use controls (LUCs) apply will be contained in the implementation plans described in Section 2.6 of this Land Use Control Assurance Plan (LUCAP).

1.3 ENVIRONMENTAL RESTORATION PROGRAM DESCRIPTION

The goal of the DOE Environmental Restoration Program is to investigate and, if needed, respond to releases or threatened releases of hazardous substances to minimize or eliminate potential risks to human health and the environment. Appendix I-A of the

SMP contains a list of solid waste management units (SWMUs) that, after preliminary evaluation, have been determined to require additional investigation (DOE, 1999).

Because the PGDP currently is, and likely will remain, under federal ownership, the DOE desires future site remedy decisions that take land use into account. The DOE, the EPA, and the KNREPC (i.e., the Parties) agree that when land use controls, or LUCs, are selected as part of a corrective/remedial action, an implementation plan will be prepared to ensure that LUCs will be maintained for as long as necessary to keep the selected remedy fully protective of human health and the environment. Land use controls, land use implementation plans, and decision documents are defined in Appendix A of this LUCAP.

2. LAND USE CONTROL GOALS, OBJECTIVES, AND STRATEGIES

2.1 PURPOSE AND APPLICABILITY

This LUCAP was developed to assure the effectiveness and reliability of LUCs for as long as any LUC continues to be required in order for a remedial/corrective action to remain protective. The requirements described herein are applicable only to those areas within waste units listed in Appendix I-A of the SMP for which LUCs are selected as part of the corrective/remedial action. The Parties agree that, when any LUC is contemplated as a potential aspect of a remedial action under consideration, an analysis of the ability to implement the LUC should be performed at an early stage of the remedy selection process in sufficient detail to support a reasoned evaluation of that LUC in the remedy proposal and selection process.

When a corrective/remedial action that includes LUCs is selected for a waste unit, a unit-specific Land Use Control Implementation Plan (LUCIP) will be developed. Appendix B of this LUCAP contains the unit-specific LUCIPs. Multiple units may be included in the same LUCIP, as long as all of those units are addressed in the same ROD or other decision document. As LUCIPs are finalized and appended to this LUCAP, Appendix B will be updated to reflect any additions or deletions of units that require LUCs as part of the selected remedy. Table B-1 provides a list of all LUCIPs that are a part of this LUCAP. Copies of all updates will be distributed to the EPA and the KNREPC for inclusion in their copies of the LUCAP.

2.2 ACCESS CONTROLS

The PGDP is a federal facility with restricted access by the general public. Physical access to the PGDP is prohibited by security fencing, and armed guards patrol the DOE property 24 hours per day. These existing access controls are being maintained outside of the requirements of CERCLA due to the nature and security needs of the facility. Some of these existing access controls may become part of LUCs implemented pursuant to CERCLA decisions and, therefore, may be included within LUCIPs. Internal administrative procedures at the PGDP are designed to prevent site workers from

coming into contact with contaminants. In some situations, the Hazardous Waste Management Permit requires that the DOE obtain state approval prior to conducting necessary work in some SWMUs. The DOE complies with this requirement where applicable.

2.3 FEDERAL FACILITY PROGRAM AND POINT-OF-CONTACT

The PGDP Site Manager is responsible for monitoring, maintaining, and enforcing the unit-specific LUCIPs and the LUCAP. The PGDP Site Manager also is the point-of-contact for the LUCAP. The PGDP Site Manager can be reached as follows:

U.S. Department of Energy
Site Manager
Paducah Site Office
P. O. Box 1410
Paducah, KY 42001-1410

Phone: (502) 441-6800
Fax: (502) 441-6801

2.4 FUNDING

The Parties expect that all obligations of the DOE arising under this LUCAP will be fully funded through congressional appropriations. The DOE will use its best efforts and take all necessary steps to obtain funding to meet all of its obligations under this agreement. The DOE will notify the EPA and the KNREPC if appropriated funds are not available to fulfill the DOE's obligations.

2.5 DECISION DOCUMENTS

The Parties agree that, when unit-specific LUCs are to be implemented, an adequate description of the LUCs, along with conditions for their use, should be included in the appropriate decision document [i.e., proposed plan, record of decision (ROD), RCRA permit, as appropriate] that reflects the selected remedy for a unit. This description should include sufficient detail to allow evaluation of each LUC under remedy selection criteria contained in CERCLA, the NCP, and K.R.S. Chapter 224. Appendix C of this LUCAP contains an example of standard language for inclusion in such decision documents.

Decision documents approved prior to the effective date of the Memorandum of Agreement (MOA), in which LUCs were selected as part of the remedy, will be analyzed for the effectiveness of the LUCs during the ROD 5-year reviews.

2.6 LAND USE CONTROL IMPLEMENTATION PLANS

As a component of the post-ROD documentation for each waste unit that requires LUCs as part of the corrective measure/remedial action selected on or after the effective date of the MOA, a unit-specific LUCIP will be developed and approved following remedy selection through the unit-specific ROD and permit modification. The LUCIP should accomplish the following:

- Identify the area that is under restriction (e.g., a survey plat that is certified by a professional land surveyor, a detailed description or map using the plant grid coordinate system, etc.);
- Identify each LUC objective for the waste unit (e.g., prohibit residential use, etc.); and
- Specify the specific controls and mechanisms required to achieve each identified objective (e.g., install/maintain a fence, post warning signs, etc.).

For waste units where the corrective measure/remedial action is institutional controls only, the LUCIP will be developed in a separate post-ROD document (i.e., the LUCIP) identifying the LUCs that will be developed. For waste units where institutional controls are combined with an active corrective measure/remedial action, the LUCIP will be developed either as an appendix to the agreed upon post-ROD document (i.e., the Corrective Measures/Remedial Design Work Plan, the Corrective Measures/Remedial Design Report, the Corrective Measures/Remedial Action Work Plan, or any combination of the listed documents) or as a separate document, as appropriate. Upon approval, each unit-specific LUCIP will be appended to this LUCAP to serve as a single source for documenting all LUCs.

In conjunction with the ROD 5-year reviews, Appendix B of this LUCAP will be revised to reflect accurately decision documents, in which LUCs were selected as part of the remedy, that were approved prior to the effective date of this MOA.

2.7 MONITORING AND FIELD INSPECTIONS

Monitoring of LUCs will be performed quarterly throughout the remediation period for as long as LUCs are required unless the Parties, in the unit-specific LUCIP, approve another monitoring frequency. Justification for a different monitoring frequency will be provided in the unit-specific LUCIP, where appropriate. In addition, field inspections will be conducted at least annually to assess the conditions of all units subject to LUCs. These inspections are to be conducted to determine whether the current land use remains protective and consistent with all corrective measure/remedial action objectives outlined in the unit-specific decision documents (e.g., engineering controls remain in place, etc.). The mechanisms and methodology for the monitoring and field inspections will be established in the unit-specific LUCIPs. Records pertaining to the monitoring and field inspections required hereunder will be maintained in accordance with the data and records management provisions of the FFA.

2.8 NOTIFICATIONS

2.8.1 Major Land Use Changes

The Parties agree that "major changes in land use" are defined as follows.

- A change in land use that is inconsistent with the exposure assumptions in the risk assessment that was the basis for the LUCs (either human health or ecological risk assessment). Examples include the following: the human health risk assessment assumed that a unit is in "caretaker" status with a worker visiting the waste unit once a week for 2 hours, and the proposed change would have the worker at the waste unit for 8 hours a day, 5 days a week; any change from industrial, commercial, or recreational land use to a more sensitive land use, such as housing, schools, hospitals, and/or daycare centers is a major land use change; any change from industrial or commercial land use to recreational land use; any change in a land use that has been prohibited in order to protect the environment.

- Any action that may disrupt the effectiveness of the remedial action (e.g., excavation at a landfill, groundwater pumping that may impact a groundwater pump and treat system, or a construction project that may result in unacceptable exposure to an ecological habitat protected by the remedy).

- Any other action that might alter or negate the need for the LUC (e.g., any plan to actively remediate a waste unit subject to LUCs in order to allow for unrestricted land use).

In the event that the DOE anticipates any "major changes in land use" for the waste units subject to LUCs, the DOE will determine whether the contemplated changes will or will not necessitate the need for reevaluation of the selected remedy or implementation of specific measures to ensure continued protection of human health and the environment, and DOE will notify the EPA, KNREPC, and the Site Specific Advisory Board (SSAB) of its determinations. The DOE will evaluate such changes that impact RODs pursuant to 40 C.F.R. § 300.430(f)(3)(ii), 40 C.F.R. § 300.435(c)(2) , and 401 K.A.R. Chapter 38. The DOE will notify the EPA and the KNREPC in writing of such changes at least sixty (60) days prior to the initiation of such changes. Each notification will include these items:

- An evaluation of whether the anticipated land use change will pose unacceptable risks to human health and the environment or negatively impact the effectiveness of the remedy;

- An evaluation of the need for any additional remedial action(s) resulting from the anticipated land use changes; and

- A proposal for any necessary changes to the selected remedial action and identification of documentation requirements (e.g., ROD amendments, ROD Explanation of Significant Differences, RCRA permit modification, etc.) for the proposed changes.

Upon notification by the DOE of an anticipated major land use change, the EPA and the KNREPC shall evaluate the information provided and shall issue any comments within sixty (60) days of the notification so as to minimize any potential adverse impacts to PGDP activities or operations. Together with such comments, the EPA and the KNREPC each will indicate their agreement or disagreement with DOE's determination as to whether the anticipated change in use, considering any changes to the selected remedial action(s) and/or implementation of additional measures proposed by DOE, will ensure continued protection of human health and the environment. In the event the DOE proceeds with a major land use change that EPA and/or KNREPC determine will render a selected remedial action no longer protective of human health and the environment, the EPA and/or the KNREPC may take any action consistent with their respective authorities under applicable laws to ensure continued protection of human health and the environment.

Upon discovery of any activity inconsistent with any LUCIP, the DOE will notify the EPA and the KNREPC as soon as practicable. This notification will provide all pertinent information as to the nature and extent of the activity and describe any measures implemented or to be implemented (including a timetable for future completion) to reduce or prevent human health or ecological impacts resulting from the activity.

2.8.2 Property Transfer

In the event that the DOE determines to enter into any contract for the sale or transfer of any of the PGDP, the DOE will comply with the applicable requirements of Section 120(h) of CERCLA, 42 U.S.C.A. § 9620(h), in effectuating that sale or transfer, including all notice requirements. In addition, the DOE will include notice of the FFA in any document transferring ownership or operation of the PGDP to any subsequent owner and/or operator of any portion of the PGDP and will notify EPA and the KNREPC of any such sale or transfer at least ninety (90) days prior to such sale or transfer while the FFA is in effect. In the event of any property transfer of the PGDP or of any portion thereof, the DOE will consider the need for measures to ensure continued maintenance of any LUCs selected as part of a response action associated with the unit subject to transfer. The DOE will include in the above-referenced notice of transfer a discussion of its conclusions regarding the need for any such measures and any specific measures to be employed attendant to the transfer. No property transfer of the PGDP or any portion thereof or notice pursuant to Section 120(h)(3)(b) of CERCLA, 42 U.S.C.A. § 9620(h)(3)(b), will relieve the DOE of its obligation to perform remediation pursuant to the FFA. This provision does not relieve the DOE of its obligations under 40 C.F.R. Part 270 (Hazardous Waste Permit Program) or 401 K.A.R. Chapter 38 (Hazardous Waste Permitting Process). Property transfers also must comply with appropriate conditions of the PGDP Hazardous Waste Management Permit and Section XLII (Property Transfer) of the FFA (EPA, 1998).

2.9 CERTIFICATION

The PGDP Site Manager will certify annually that the DOE is implementing the LUCIPs in Appendix B of this LUCAP and will identify any noncompliance with these LUCIPs and describe steps taken to address any such noncompliance(s). This certification will be made in the Annual SMP Update. The annual certification also will serve to notify the EPA and the KNREPC of any change in designated officials or any changes of land use that are not considered major as described in Section 2.8 of this LUCAP.

2.10 CHANGE IN STATUS

Nothing included in this LUCAP should be construed to preclude the DOE from proposing at any time or from the Parties otherwise agreeing to effect the deletion of any unit from coverage under the terms of this LUCAP on account of any of the following:

- A post-remedy implementation change to applicable or relevant and appropriate federal or state cleanup standards;
- A change in previously documented contaminant concentration levels allowing for unrestricted use; or
- Any other reason agreed to by the Parties for which justification is appropriately documented.

2.11 FUTURE COMMUNICATIONS

The FFA Project Managers, identified in FFA Sections XXIV (Notification) and XXVI (Designated Project Managers), shall receive all correspondence and communications on behalf of the Parties pertaining to all matters falling under the terms of this LUCAP (EPA, 1998).

2.12 SITE ACCESS

All Parties agree to use the same procedures described in the FFA, Section XXVIII (Access/Data/Document Availability) regarding site access, data, and document availability with regard to this LUCAP (EPA, 1998).

2.13 RESERVATION OF RIGHTS

It is agreed and understood that the EPA and the KNREPC reserve all rights and authorities each agency currently has or hereafter acquires by law to require the PGDP to comply with those federal and state laws and regulations applicable to the investigation, cleanup, and near- and long-term maintenance of those waste units to be covered by this LUCAP. It also is understood that the DOE herein reserves those rights and authorities granted to the DOE by federal or state law, regulation, or executive order. The DOE further reserves the right to put all property under its domain to those

uses deemed necessary for mission accomplishment or otherwise deemed necessary by appropriate authority to meet the needs of the DOE.

2.14 ANTI-DEFICIENCY ACT

No provision in this document shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C.A. §1341). In the event DOE should, in the future, fail to perform activities required hereunder, Kentucky disagrees that an Anti-Deficiency Act defense or any other defense based on the lack of appropriations or funding exists. However, DOE and Kentucky agree and stipulate that it is premature at this time to raise and adjudicate the existence of any such defense. Acceptance of this provision (or any other specific reservation of rights by Kentucky) does not constitute a waiver by DOE of its right to argue that its obligations hereunder are subject to the provisions of the Anti-Deficiency Act.

2.15 EFFECTIVE DATE

The LUCAP shall become effective on the date that the last of the authorized representatives of the Parties signs the MOA.

3. REFERENCES

DOE, 1999. *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky,* DOE/OR/07-1780&D2, Annual Revision-FY 1999, United States Department of Energy, Paducah, KY, February 1999.

EPA, 1991. *Hazardous and Solid Waste Amendments Permit,* EPA ID # KY8-890-008-982, United States Environmental Protection Agency, Region 4, Atlanta, GA, August 19, 1991.

EPA, 1998. *Federal Facility Agreement for the Paducah Gaseous Diffusion Plant,* DOE/OR/07-1707, United States Environmental Protection Agency, Region 4, Atlanta, GA, February 13, 1998.

Johnston, 1998. Johnston, Jon D., Chief, Federal Facilities Branch, United States Environmental Protection Agency, Region 4, Policy Memorandum to the Federal Facilities Branch, "Assuring Land Use Controls at Federal Facilities," Atlanta, GA, April 21, 1998.

KDWM, 1991. *Hazardous Waste Management Permit,* EPA ID # KY8-890-008-982, KY/B 258, Kentucky Division of Waste Management, Frankfort, KY, August 19, 1991.

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APPENDIX A

DEFINITIONS

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The following definitions apply to this Land Use Control Assurance Plan:

CERCLA, as defined in the National Oil and Hazardous Substances Pollution Contingency Plan, is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.

Decision Document, as defined in the EPA Region 4 Land Use Controls Policy, refers to CERCLA Records of Decision, Resource Conservation and Recovery Act (RCRA) Statements of Basis/Notices of Decision, and RCRA Permit Modifications (Johnston, 1998).

Facility, as defined in the EPA Region 4 Land Use Controls Policy, refers to a military base or other entire federal installation (Johnston, 1998).

Land Use Control (LUC), as defined in the EPA Region 4 Land Use Controls Policy and in regard to real property on federal facilities, means any restriction or control that limits the use of and/or exposure to any portion of that property, including water resources, arising from the need to protect human health and the environment (Johnston, 1998). The term encompasses "institutional controls," such as those involved in real estate interests, governmental permitting, zoning, public advisories, deed notices, and other "legal" restrictions. The term also may include restrictions on access, whether achieved by means of engineered barriers (e.g., fence or concrete pad) or by human means (e.g., the presence of security guards). Additionally, the term may involve both affirmative measures to achieve the desired restrictions (e.g., night lighting of an area) and prohibitive directives (e.g., no drilling of drinking water wells). Considered altogether, the LUCs for a facility will provide a tool to help maintain the level of protectiveness that one or more remedial/corrective actions were designed to achieve.

Land Use Control Assurance Plan (LUCAP), as defined in the EPA Region 4 Land Use Controls Policy, is a written facility-wide plan that sets out the procedure to assure that LUCs remain effective over the long term for all areas at the particular facility where they are required (Johnston, 1998).

Land Use Control Implementation Plan (LUCIP), as defined in the EPA Region 4 Land Use Controls Policy, is a written plan, normally developed after a decision document has required one or more LUCs for some particular area (e.g., operable unit, contaminated unit, and/or solid waste management unit), that identifies each LUC objective for that area (e.g., to restrict public access to the area for recreational use) and specifies those actions required to achieve each identified objective (e.g., install/maintain a fence, post warning signs, record notice in deed records) (Johnston, 1998). The LUCIPs specify what must be done to impose and maintain the required LUCs and, therefore, are analogous to design and/or operation and maintenance plans developed for active remedies.

Monitoring, as defined in the EPA Region 4 Land Use Controls Policy, is used to indicate a variety of investigative activities, ranging from "drive-by" visual observations to detailed scientific sampling and testing (Johnston, 1998). The nature of the particular

LUCs being implemented will determine the type(s) and extent of any "monitoring" activities provided at an operable unit.

Proposed Plan, as defined in the Federal Facility Agreement (FFA), means "...the report which briefly describes the remedial alternatives analyzed, proposes a preferred remedial action alternative, and summarizes the information relied upon to select the preferred alternative" (EPA, 1998). The Proposed Plan shall meet the criteria established in 40 C.F.R. § 300.430(f)(2). The Proposed Plan shall be considered as equivalent to the Draft Permit Modification.

RCRA is the Resource Conservation and Recovery Act, 1976, a federal law that established a regulatory system to track hazardous substances from their generation to disposal. The law requires safe and secure procedures to be used in treating, transporting, storing, and disposing of hazardous substances. The RCRA is designed to prevent the creation of new, uncontrolled hazardous waste units.

Record of Decision (ROD), as defined in the FFA, means "...the document issued which describes a remedial action plan for an Operable Unit pursuant to Section 117(b) of CERCLA, 42 U.S.C.A. § 9617 and shall be consistent with 40 C.F.R. § 300.430(f)(5)" (EPA, 1998).

Statement(s) of Basis means the report(s) describing the corrective measure(s)/remedial action(s) being conducted pursuant to the RCRA, as amended by the Hazardous and Solid Waste Amendments.

Waste Unit refers to a particular area (such as an "operable unit") that makes up only a portion of the facility.

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APPENDIX B

WASTE UNIT-SPECIFIC
LAND USE CONTROL IMPLEMENTATION PLANS

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Table B-1. Unit-Specific Land Use Control Implementation Plans

Document Title[1]	Issuance Date[2]

[1] This should include the document title, document number, revision number, and date.
[2] This should include the date of the most recent regulatory approval.

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[WASTE UNIT-SPECIFIC
LAND USE CONTROL IMPLEMENTATION PLANS
TO BE ATTACHED AS THEY ARE COMPLETED AND APPROVED]

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APPENDIX C

SAMPLE LAND USE CONTROL LANGUAGE FOR INCLUSION IN DECISION DOCUMENTS

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C. SAMPLE LAND USE CONTROL LANGUAGE FOR INCLUSION IN DECISION DOCUMENTS

The following is an example of language for inclusion in decision documents that specify land use controls (LUCs) as part of the selected remedy. This language may be modified as necessary to address waste unit-specific requirements.

Examples C-1 through C-4 contain sample language and information for identified sections of decision documents that include LUCs in the remedy.

EXAMPLE C-1

Sample Language for
the Executive Summary and Preferred Alternative Sections of the Proposed Plan
and
the Declaration (Description of Selected Remedy) Section of the Record of Decision

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Based upon the investigation, the remedial action objectives are to

- [*insert waste unit-specific remedial action objectives*] and
- [*example: reduce the risk to human health and the environment.*]

The LUC objective(s) necessary to ensure the protectiveness of the preferred alternative is (are)

- [*insert waste unit-specific requirements;*]
- [*example: prevent contact, removal, or excavation of buried waste in the area;*]
- [*example: preclude residential use of the area;*] and
- [*example: prevent unauthorized access to contaminated groundwater in the area.*]

EXAMPLE C-2

Sample Language for
the Selected Remedy Section of the Record of Decision

The text should include the following information.

- *Identify current and anticipated future land use for the unit(s) (e.g., industrial, recreational, or residential). (Example: The unit is an industrial zone as identified in Figure 3.3 of the Site Management Plan for both current and anticipated future land use.)*

- *Identify necessary limitations on future land use. (Example: However, the DOE has recommended limitations on residential and recreational use of DOE land in the vicinity of the unit.)*

- *Identify the types of controls and restrictions that will be implemented to achieve the land used control objectives. (Example: Institutional controls, including deed restrictions, will be maintained to ensure long-term protectiveness until they are deemed unnecessary.)*

In accordance with the MOA, a LUC Assurance Plan (LUCAP) for the PGDP has been developed and approved by the EPA and the Commonwealth of Kentucky Natural Resources and Environmental Protection Cabinet (KNREPC) [*insert MOA and LUCAP references (i.e., DOE, 1999)*]. The results of the [*insert waste unit name*] baseline risk assessment identified potential risks to [*identify future receptor*]; therefore, the selected remedial alternative for this operable unit includes LUCs to protect [*identify future receptor*]. A LUC Implementation Plan (LUCIP) for the [*insert waste unit name*] will be developed and submitted to the EPA and KNREPC for approval. The unit-specific LUCIP will be submitted with the [*insert the name of the post-ROD document that will contain the LUCIP*] in accordance with the schedule presented in Appendix [*identify the appropriate appendix*] of this ROD. The LUCIP will specify how the DOE will implement, maintain, and monitor the LUC elements of the remedy identified in this ROD to ensure that the remedy remains protective of human health and the environment. Upon regulatory approval, the [*insert waste unit name*] LUCIP will be added to Appendix B of the PGDP LUCAP [*insert PGDP LUCAP reference (i.e., DOE, 1999)*].

The LUC objective(s) identified to assure the protectiveness of the preferred alternative is (are)

- [*insert waste unit-specific requirements;*]

- [*example: prevent contact, removal, or excavation of buried waste in the area;*]

EXAMPLE C-2 (Continued)

Sample Language for
the Selected Remedy Section of the Record of Decision

- [*example: preclude residential use of the area;*] and
- [*example: prevent unauthorized access to contaminated groundwater in the area.*]

The institutional controls selected to prevent unauthorized exposure to the contaminated media at [*insert waste unit name*] include the following:

- [*insert description of specific institutional controls;*]
- [*example: controlled access to the waste unit through existing PGDP security gates and perimeter fences and the site use/site clearance program;*]
- [*example: installation of warning signs at the most probable access points instructing workers to contact the waste unit custodian prior to entry;*] and
- [*example: general maintenance of the waste unit, including signs and visible markers, to identify the waste unit.*]

In addition, a description of the boundary to which LUCs apply will be prepared and included with the appropriate post-ROD documents [*specify the documents, if possible*].

[*If the LUCs include deed restrictions, include a description of these restrictions and their purpose in the ROD.*]

EXAMPLE C-3

**Sample Language for
the Decision Summary (Site and History and Enforcement Activities) Section
of the Record of Decision**

By separate Memorandum of Agreement (MOA) [*insert PGDP MOA reference (i.e., DOE, 1999)*], the EPA, the KNREPC, and the DOE have agreed to implement facility-wide, certain periodic site inspection, certification, and notification procedures set forth in a LUCAP [*insert PGDP LUCAP reference (i.e., DOE, 1999)*]. These procedures are designed to assure maintenance by the DOE of any waste unit-specific LUCs, set forth in this ROD and deemed necessary for future protection of human health and the environment. A fundamental premise underlying execution of the MOA is that, through the DOE's substantial good-faith compliance with the procedures called for in the LUCAP, reasonable assurances would be provided to the EPA and the KNREPC as to the permanency of those remedies, which includes the use of waste-unit specific LUCs at the PGDP.

The terms and conditions of the LUCAP or MOA are not specifically incorporated or made enforceable herein by reference. However, it is understood and agreed by the DOE, the EPA, and the KNREPC that the contemplated permanence of the remedy reflected herein is dependent in part upon the DOE's substantial good-faith compliance with the specific LUC maintenance commitments reflected therein. Should such compliance not occur or should the MOA be terminated, it is understood that the protectiveness of the remedy concurred in may be reconsidered; consequently, additional measures may need to be taken to assure adequate, necessary, future protection of human health and the environment.

EXAMPLE C-4

Sample Information for
Post-ROD Schedules contained in the Proposed Plan and Record of Decision

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The ROD will contain a schedule for issuance and review of the LUCIP. The schedule will include, at a minimum, the following key components:

1. *The date that the D1 LUCIP will be issued for EPA and KNREPC review;*
2. *The duration, beginning and ending dates of the EPA and KNREPC review period for the D1 LUCIP;*
3. *The duration, beginning and ending dates of the period for the DOE to respond to regulatory comments on the D1 LUCIP and prepare the D2 LUCIP; and*
4. *The duration, beginning and ending dates of the EPA and KNREPC review and approval period for the D2 LUCIP.*

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