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

Chair

Craig Rhodes

Board Members

Kit Atkinson
Nola Courtney
Mark Donham
Edward Duff
Angela Farmer
David Fuller
Judy Ingram
Vicki Jones
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)

Dale Jackson
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) 744-9010.

Agenda for the October 21, 1999, meeting:

- Call to order/Discussions
- Minutes from July, August, September
- Public Comments and Questions
- Update on DOE EH investigation of environmental, health and safety concerns
- Information Handouts
- Program Status Updates
  EM&EF Projects
  Depleted UF_6
  Scrap Metal
  WAG 3, 8, 28/Data Gaps update
  Surface Water OU Work Plan (copy in board office)
- Sitewide Cumulative Effects
- Programmatic Presentations
  Land Use Control Assurance Plan (LUCAP)
  ITRD
  WAG 6—Gregory Waldrop
- SSAB Subcommittee Reports
  Community Relations—Judy Ingram
  Consultant—Bill Tanner
  Membership—Nola Courtney
  Chairs Meeting Report—Vicki Jones
- Action Items from September Meeting
- SSAB Recommendations Status
- Administrative Issues for the Board
  Notification of members regarding news items
  Review of the SSAB Draft Workplan
  Future Tours
  Financial Update/2000 Budget
  Upcoming Stewardship Conference in Oak Ridge

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Site Specific Advisory Board
Meeting Minutes
October 21, 1999

The October 21, 1999, Site Specific Advisory Board (SSAB) meeting took place at the Information Age Park Resource Center in Paducah at 5:30 p.m.

The following board members were present: Kit Atkinson, Nola Courtney, Mark Donham, Edward Duff, David Fuller, Judy Ingram, Vicki Jones, Merryman Kemp, Ronnie Lamb, Linda Long, Craig Rhodes, Jim Smart, Bill Tanner, and Gregory Waldrop. The facilitator present was Steve Kay. *Ex Officio* members present were: Carl Froede, Environmental Protection Agency (EPA), and Dale Jackson, Department of Energy (DOE). The DOE federal coordinator present was John Sheppard. Todd Adams of the Kentucky Radiation Control Branch and Brian Baker, Gaye Brewer, and Jon Maybriar of the Kentucky Division of Waste Management (KDWM), were present. Also present were the following members of the public and employees, contractors, and subcontractors of the DOE: Bruce Gardner, Kristi Hanson, Norm Jetta, Jackie Kittrell , Walter Perry, Al Puckett, Myrna Redfield, Shirley Speer, Debbie Wattier, and Corrine Whitehead.

Agenda

Steve Kay called the meeting to order and asked if there were any modifications to the agenda. It was suggested that the minutes for the past three months be considered so they can be sent to the Federal Register and web page. The regular items would be held till next meeting for the discussion of the update on DOE EH investigation. The amended agenda was approved.

Minutes

The July 15, meeting minutes with revisions were approved by consensus. The August 19, 1999, meeting minutes were approved with revisions to be clarified per phone with Donham. The September 16, 1999, meeting minutes are to be revised per notes and resubmitted to board at the November 18, 1999, SSAB meeting.

Donham commented that while working on amending previous meeting minutes, he discovered that the meeting minutes taken by Ms. Speer were being further edited by the Bechtel Jacobs public relations office. Donham commented that the meeting minutes are being shortened too much. He said they are being edited so much that there is too much dialogue left out. He questioned the fact that the board has a minute taker and yet the minutes are not reflecting a lot of the comments. Sheppard said whatever serves the board best is what DOE wants. Kemp stated that some organizations do have the kind of minutes that the board has been getting but that it is up to the board how they want the minutes recorded. Waldrop said the minutes should not be edited by Bechtel Jacobs Public Relations. Sheppard explained that they are edited for correctness of names and such. Wattier noted that the minutes were edited so that if someone not present, they would know what went on at the meeting. After additional discussion, Kay suggested that the notes from the meeting be used for the minutes, and if the need were there, we would address this further. A proposal was made to that effect; this will be tried for 2 months, at which time it will be determined if this is a better solution to the problem. Proposal was approved.

The July meeting minutes were approved by consensus. The August meeting minutes were approved with revisions to the Environmental Reports, cumulative impacts, Rick Bonzek issue, and Sheppard's comments regarding the ITRD meeting. The revisions are to be clarified per phone call to Donham. The September meeting minutes are to be rewritten to expand per notes and resubmitted to board at November 18, 1999, SSAB meeting. Some noted revisions were: Donham's comments regarding scientific uncertainty and Rhodes' request that the transcript of his Vortec discussion with Norm Jetta be included in the minutes. Proposal was made and approved to have the September minutes revised and brought back to the board.

Smart asked how much a transcriptionist would cost? Kay said approximately 4 hours per 1 hour of meeting. Fuller suggested going with the proposal as stated. Donham said a lot of people are reading the minutes and that was his motivation for wanting them to be complete?.

Public Comments and Questions

Jackie Kittrell, a citizen from Oak Ridge complimented the board for the way it handles its meetings and added that this is the only cleanup site that has had an active board in place during an investigation of this size. She said she is involved with an environmental group

in Oak Ridge – some of whose members formerly were members of the Oak Ridge SSAB but resigned in protest – and that the group would like to meet with the Paducah SSAB.

Plant neighbor George Benton asked why he did not have DOE-provided city water yet. Ronnie Lamb commented that in the Investigation Report all residents in a certain area were to have water provided and that Benton lives within that area. Ingram asked Sheppard why Benton did not have water. Sheppard said he did not know, but would find out???. Tanner explained that the landowner where Benton lives? did not want to give up water rights to the rest of his farm. Waldrop asked if the landowner would approve. Rhodes asked what could be done while DOE was getting approval from landowner. Jackson said he would buy drinking water for Benton but DOE could not go against the landowner's rights. Lamb said he suggested that Benton be signed up tomorrow. Jones asked if this was going to cause problems with other people who have signed away rights to get water. Benton said the landowner agreed to let him have the water. Plant neighbor Al Puckett urged that not just drinking water be considered but all of the water they use was important. Waldrop said this needed to be high priority by the weekend. Smart added that the board could not ignore legal obligations to the landowner. Sheppard asked Bechtel Jacobs' representatives if the well was contaminated; he was told they would have to check.
Tanner said if anything conflicts with the Water District he has to abstain in a vote. He said if Benton would sign the papers, the Water District would hook up his water on Friday. After discussion of the implications with the landowner, it was approved to recommend/request having Benton's water hooked up and have DOE work with landowner to work out location of the line. Donham questioned why DOE could limit anything regarding the water. Tanner explained that water is paid for by DOE no matter how much a resident uses. Kemp clarified that DOE provides clean water and does not want people to use the contaminated water for anything. Jones asked to what page in the report Lamb was referring. Waldrop asked that a weekly update regarding this issue be sent to Rhodes. Proposal approved. The board also asked that DOE refund Mr. Benton any fees he pays to the Water District while final details are being negotiated with the landowner.

Courtney asked why this had not been taken care of in six years. Sheppard agreed to provide data. Maybriar asked to be provided with same data.

Update on DOE EH investigation of environmental, health and safety concerns

Jackson stated that the issues revolve around the lack of progress in the cleanup of the site, and that DOE has to move forward, systematically -- they have to accomplish cleanup at this site. He stated that DOE needs to harness the momentum that is started and move with it. Drum Mountain and storage areas need to be cleaned up and accomplished in a worker-sensitive way. He said he intends to get it done.

Rhodes asked what Jackson's intentions were as far as the board is concerned. He would like the board to be consulted during decision making-- not after the fact. Jackson said in his capacity he

would like to hear from the board in the near future, that he would like to have the board's input. Sheppard asked if there could be a subcommittee that could meet and then report back to the board. There was some discussion regarding the fact that the time was so short for turnaround of input. Donham asked how 40 years of problems were expected to be solved in 30 days. He asked why the board did not get the annotated list of documents the investigation team had requested. He said 30 days is not enough time, that DOE was moving too fast, and that he was worried that the agency might be trying to get around environmental regulations. Jackson said that DOE has to respond in a short time when there is money appropriated or it goes somewhere else. He said the board does not have to respond; he was merely requesting??? the board participate. The site office has to respond to the EH team report and make recommendations for the money within 30 days, Jackson said. He said he knew nothing about anyone seeking an exemption from environmental regulations.

Waldrop said it would be good if the board participated in a monthly project planning meeting.

Kay explained the priority of how the board needed to decide how it could be involved in the next 30 days. Donham asked if the decision had been made to invest in Drum Mountain. He asked, "Why can it not be discussed now?" Sheppard said DOE has to have a corrective action plan. Jackson added they would include short-term and long-term actions for funding now. He explained that he was just using Drum Mountain as an example. DOE has to go forward with this "plus-up money." He said he is willing to send to the board what is being evaluated and solicit the board's input. Duff said the board needs a subcommittee and he volunteered to serve. Donham asked why C-340 and Drum Mountain must be prioritized and was Jackson thinking of those in particular. Jackson said he was citing specific projects as an example. He explained that cleanup was very expensive for Drum Mountain and that someone had suggested that fencing would be cheaper and work on something else. There has not been a decision yet, he added, and this is what DOE would like input from the board on in the next 30 days. Kay asked if the board is interested in having a subcommittee meet with Jackson and report back to the board. Atkinson and Donham volunteered. Fuller asked if the subcommittee would be making recommendations for the board or coming back to the board to present what was discussed.? Corrine Whitehead asked if DOE had considered the New Madrid Fault situation. Jackson said there are seismic upgrades being done. Waldrop said the subcommittee could get public input. Tanner asked what the time frame was for meeting. Jackson offered to meet and explain where DOE was as far as suggestions. Tanner suggested having a special meeting before November SSAB meeting. He said the priority is to protect the people. Donham asked if DOE, EPA, and the State are going to identify certain projects or procedures. He asked Jackson if he was anticipating the government to specify on what the extra funding is to be spent. Jackson said the money would have to be 'earmarked' for certain projects. Donham said if DOE is doing things the same way, why does a decision have to made in 30 days?

Fuller said priorities will be set at congressional hearings next week. There was discussion about coordinating with DOE, EPA, and the State. Froede said the state and EPA were trying to get more money rather than having it go to Oak Ridge, and that the SSAB could help get this done. Kristi Hanson of Brookport, Ill., asked if waste had to be

characterized. Froede said for a removal action a "full blown" characterization is not required. Jackson said the best proposal will get the money; if DOE can say that the SSAB concurs or partly concurs, it helps. Kemp said Tennessee and Ohio have congressmen who are knowledgeable about the situation and have been involved and that now because of media involvement Kentucky's delegation might get more involved. She said we need to take advantage of the opportunity. Donham said he thought it was a good idea for the SSAB to meet with DOE, EPA and the state. Jackson said he did not think that a meeting involving all parties could be arranged on such short notice. Fuller said EPA would do its own prioritizing. Tanner made a motion that the board have a subcommittee to offer ideas to DOE, that they meet once a week, and that they have a special meeting of the subcommittee? for the entire board. Smart asked if the board could empower the subcommittee to make suggestions? to the board. Fuller said he had a problem having a subcommittee not coming back to the whole board for suggestions. Kay reiterated the proposal to have a subcommittee. Proposal was approved. Volunteers were: Atkinson, Donham, Duff, Jones and Tanner. Tanner will serve as chairman of the subcommittee. The subcommittee would attempt to meet the week following the SSAB meeting. Jackson offered to meet with members individually if necessary.

Atkinson asked Froede if the EPA had a time limit on completion of ??? one suggested project or the funding?. Donham said there was in the Site Management Plan. Froede said cost was DOE's responsibility.

Rhodes said he had spoken with Pat Worthington and Bill Eckroad of the investigation team and that they were willing to discuss the report with the board. He said he will call and invite them to the November 8 meeting.

Froede made a presentation on the state and federal EPA recommendations for cleanup objectives. He broke it into two categories – Federal Facility Agreement Requirements and Non-FFA Requirements.

FFA Requirements

(not in order)

1. Remove radioactive burial grounds
2. Demolish abandoned buildings
3. Additional actions on groundwater plumes
4. Drum Mountain removal
5. Tar removal at C-746-T
6. Addressing groundwater sources

Non-FFA Requirements

1. Legacy low-level waste drums
2. Depleted UF6

3. Seismic upgrade on USEC buildings
4. Landlord costs

He also spoke about the possibility of getting Paducah more money through the D&D Fund and said SSAB input would put the "strong arm" on Congress and the Oak Ridge Operations Office to get money to Paducah and keep it there.

A special meeting was set for 6 p.m. on Monday, Nov. 8.

Membership

Fuller recommended Leon Owens to replace himself on the board on behalf of the worker's union. He is to be sent an application

ATSDR

Courtney said everyone would be getting a draft Of the Agency for Toxic Substances and Disease Registry report on the Paducah site and wanted to know if the board would like an representative to come to a SSAB meeting. Redfield said information would be provided to the board.

Land Use Control Assurance Plan

Froede noted that he had included a handout in the packet that was very thorough.

ITRD

Donham commented on the ITRD meeting. He said there were two documents handed out that should be included in the next packet. He recommended that the board have representation at the meetings. Sheppard said that there had been comments on ITRD on other projects.

WAG 6

Waldrop said he would put document about C-400 in the SSAB office. Donham said a lot of money was going to be spent on WAG 6 and that SSAB really should keep up with it.

Stewardship Conference

Sheppard said this meeting was significant and hoped someone from the board could go.

November 18, 1999, Agenda

Tanner gave a briefing of what to expect on the November 18, 1999, SSAB meeting planned for Metropolis, IL. There will be a 2-hour public meeting with presentations, followed by the regular board meeting. Groundwater issues and air issues of interest to southern Illinois will be presented. John Sheppard is to get someone to do presentation on g roundwater. USEC and Vortec will be there to present on air issues. Gardner is to come up with a questionnaire for the public. Donham questioned Vortec getting to present. Kemp said she thought it would be an endorsement. Tanner said he could introduce the presentations and make sure the attendees knew it is just information. Lamb said the board traditionally had a hands-off approach to USEC. Why do they get to comment? Fuller asked why have someone speak on a subject the board could not comment on. Jackson said it sounds like information that the board could use later. Donham suggested having John Tillson, Dr. Cochran or others present opposing views. He does not think the meeting as proposed is a balanced presentation. Tanner said the agenda could be changed. Sheppard said he thought the Metropolis meeting discussion??? was taking up time the board needed for other items. Waldrop said he thought the air and water were desirable presentations. Donham said he was not against presentations on air and water, that he was against a one-sided meeting. He does not think it is fair or right and said he was concerned about giving a forum to Bechtel Jacobs, DOE and USEC without having a DOE critic talk. Fuller asked why the board had to be the vehicle. Tanner said it is part of the SSAB's mission to do public outreach. There was a suggestion to postpone the meeting or let both sides be heard; it was decided to not let Vortec present. The proposal was made to set the time limits to one hour for each subject including time for questions or comments from the floor.

Community Outreach

Ingram explained logo information and choices were passed around for vote. The logo the board decided on was the bird in the circle, with the slogan: "Working for the future."

Agenda for next month's meeting

Items not discussed tonight and held over for the November 18 meeting included: LUCAP, WAG 3/8/28 Data Gaps information, other subcommittee reports.

Meeting adjourned at 11:17 p.m.

Minutes for Sub-committee Meeting
Thursday, October 28, 1999, at 4:00 p.m. at DOE site office.
Dale Jackson opened the sub-committee meeting. Members present were; Kit Atkinson, Ed Duff, Vicki Jones, and Bill Tanner. Dale Jackson and John Sheppard of DOE were present. Paul Clay, Bechtel Jacobs, Deputy General Manager, was present.

Paul Clay informed the members of Jimmy Massey's reassignment. Gordon Dover of Bechtel Jacobs will be replacing Jimmy Massey. Clay went over Mr. Dover's background and qualifications. (Letter included)

He said that on November 19th there will be a 60% confidence meeting explaining the progress of the suggestions regarding the investigation report. He discussed the issues covered in a handout (included) and the board commented on each area.

Considering funding for source removal- attention has been spent on characterization- was necessary-but now the funding is to be put toward cleanup.

Dale Jackson clarified by listing the need to clean Drum Mountain and discussed DMSA-criticality concern. He said that the suggestion for the entire area to be fenced had been made, with an estimate of 16 million dollars. Bill Tanner said he did not think that spending money on fencing was a good solution, that it would look as though DOE had accepted defeat. He thought this would be the very worst thing they could do to this area. Kit Atkinson agreed. Jackson commented that he was glad to hear the comments against the fencing idea.

Clay addressed #2, and explained that it is listing of additional posting for the Kentucky Wildlife Area where there is contamination. $250,000 allocated for hot spots particularly looking for transurantics. There was discussion about hunters in the area and Bill Tanner noted that the public will not understand what all the signs means. John Sheppard said people hunting could check in and get information brochures. Dale Jackson said more guards had been suggested. Clay said this method was really more for workers who might be working the area than for someone who would be in there hunting for just a little while.

They explained how contaminated concrete rubble was used to build these little bridges and there is run off, what is now called hot spots. It has been suggested that the hot spots be dug up and the contamination taken inside the fence. Tanner asked if hot spots were eliminated would all contamination outside the fence be taken care of. Clay said it would be a start.

Dale asked how group would categorize each of the areas listed.

Bill Tanner said four things are important:
1. immediate health risks on/off site to people
2. stop at sources
3. clean up outside the fence/ get back inside
4. clean up inside the fence

This is the list of things talked about; the numbers to the left were the suggested priority according to the list of criteria above.

1	Clean Drum Mountain
4	DMSA- criticality concern- workers
1-2	Hot Spot excavation
2-1	signs, fences, public access
	undefined air emissions
1-2	groundwater plumes
1	McNairy aquifer
1-2	abandoned building
4	low level waste- 435 requires shelter
1	burial grounds
4	cylinder yards
	seismic upgrade/ 80-250

McNairy potential was discussed at some length. Jackson said he wanted to find out more about this issue.

There was discussion about Pump and Treat and its effectiveness. Jackson said DOE would get some more numbers together before the next meeting.

Question was asked what would be done with burial grounds and Drum Mountain. Jackson said some had suggested that it be characterized and shipped to Envirocare.

Shipping waste to Envirocare was discussed. Jackson asked if we really want to send all the money to other states?

There was open discussion regarding the different issues listed in the handout. Tanner listed four areas that should be considered and prioritized the urgency accordingly.

the group

Vortec was discussed, suggestion was made for Vortec to come up with more of a guarantee, DOE should commit money up front to get it up and working, then paying only as it cleans up.

Jackson agreed to meet with group again before November 8, SSAB meeting, if a time could be set.

Meeting was adjourned.

(Another meeting of the sub-committee could not be set due to scheduling conflicts.)

Notes from the Sub-committee, Thursday, October 28, 1999, at DOE site office.
Dale Jackson opened

Paul Clay, Bechtel Jacobs, Deputy General Manager

November 19th there will be a 60% confidence meeting

Jo Nemec is coming to Paducah to announce Jimmy Massey's resignation

communication- newspaper had the story

Gordon Dover/ Bechtel Jacobs will be taking Jimmy Massey's place

Mr. Clay went over Mr. Dover's background and qualifications

Went over handout (included)
1. consideration of Drum Mountain funding
2. cost and schedule to address 11 storage areas
   a. suggested adding one area that should be addressed

Considering funding for source removal- attention has been spent on characterization- was necessary

Dale Jackson clarified by
1. clean Drum Mountain
2. DMSA- criticality concern

said that suggestion for fence had been made - Bill Tanner said he did not- accepted defeat very worst thing they could do to this area. Kit Atkinson agreed. Dale commented

16 million dollar estimate on fencing

#2 is listing of additional posting

$250,000 allocated for hot spots particularly looking for transurantics

Bill Tanner asked what all the initials and etc. means?
The public will not understand.
John Sheppard said if people would check in- get brochures- this would help…
Dale Jackson said guards had suggested more guards might help - Bill Tanner suggested working through Wildlife

Discussion about hunting-

Mr. Clay said this is designed mostly for workers who will be working in the area- not really for someone who would be there once in a while for just a little while

Bill asked if hot spots were eliminated would all contamination outside the fence be taken care of.
Contaminated concrete rubble was used to build these little bridges and run off

Mr. Clay said it would be a start.

Kit Atkinson asked if after rain would hot spots be caused again?

Clay said if you get hot

Bill suggests if they were a mineral source

#3 Non-point source
Clay didn't like reference as fugitive
Bill said needs good answer for November 18 Metropolis meeting
Ed Duff suggested getting Allied statistics for comparison

Bill referred to Regional/ McNairy
McNairy does not stop at river
What has pump and treat done to---
it is having significant impact

reduction of mass- TCE- is being recovered, containing spread

John Sheppard said DOE plans on installing a reactive wall
address sources that ITRD sources

McNairy is

Bill asked what the cost of the wall across the Southwest plume?

John Sheppard said approximately 1 ½ million

Bill said Mother Nature is best
he said we should go after the source

Is there any bacteria that eat TCE?
John Sheppard said yes- some studies are being made on this.

Bill Tanner suggested using money (8 million) from cylinder yards for conversion- instead of putting in concrete pads, etc.
No painting next year (2000)

Bill Tanner asked a question about an abandoned building contributing to outside contamination?

Dale Jackson said probably not- but maybe

Kit Atkinson asked where landfills are?

Dale asked how group would vote
Bill Tanner said four things are important to him. They are:

1. immediate health risks on/off site to people
2. stop at sources
3. clean up outside the fence/ get back inside
4. clean up inside the fence

1	Clean Drum Mountain
4	DMSA- criticality concern- workers
1-2	Hot Spot excavation
2-1	signs, fences, public access
	undefined our emissions
1-2	groundwater plumes
1	McNairy aquifer
1-2	abandoned building
4	low level waste- 435 requires shelter
1	burial grounds
4	cylinder yards
	seismic upgrade/ 80-250

McNairy potential

Discussion about Pump and Treat

Dale said DOE would get some more numbers together before the next meeting

Question was asked what would be done with burial grounds and Drum Mountain

characterized and shipped to Environcare

Dale asked if we really want to send all the money to other states?

If Vortec would only do-
to give trial run

is there a guarantee?
Pilot?
Air emission?

Commit money up front to get it up and working

then paying as it cleans

Dale said if the committee wanted to get back together before the Monday, November 8 ,
SSAB meeting, he would be willing.

FY2000 Budget - Paducah Site-Specific Advisory Board

General Support to the SSAB

Office Rental	$ 5,000.00	
SSAB Member Travel	$ 33,000.00	
Administrative Support	$ 72,331.00	
Information and Communication	$ 45,090.00	
Subtotal, General Support		**$ 155,421.00**

Support to SSAB Subcommittees

Nominations and Membership
No specific needs identified

Community Outreach

Travelling Exhibit	$ 9,000.00	
Exhibit Revisions	$ 900.00	
Meeting Announcements in Media	$ 3,630.00	
SSAB Newsletter	$ 6,658.00	
SSAB Fact Sheets	$ 1,440.00	
Mailing List Maintenance	$ 1,824.00	
SSAB Web Page Maintenance	$ 1,500.00	

Budget and Finance
No specific needs identified

Policy and Personnel

SSAB Technical Advisor	$ 25,000.00	

Training and Programs
No specific needs identified

Subtotal, SSAB Subcommittees		**$ 49,952.00**

TOTAL SSAB FY2000 BUDGET **$ 205,373.00**

DOE NEWS

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

FOR IMMEDIATE RELEASE
October 20, 1999

Investigation Team Issues its Final Report on Paducah

Additional Corrective Actions Taken In Response

The Office of Oversight in the Department of Energy's (DOE) Office of Environment, Safety and Health today released a report of its findings of the Phase One Independent Investigation of the Paducah Gaseous Diffusion Plant in Kentucky. The first phase of the investigation -- ordered in August by Secretary of Energy Bill Richardson in response to allegations of improper environment, safety and health practices -- covered activities at the plant since 1990. This initial phase was designed to provide Secretary Richardson with a timely assessment of the current status of environmental protection, worker and public health and safety, and guide the department's plans for any necessary corrective action.

"The final report largely confirms the preliminary findings we reported to the Congress last month and confirms that current operations do not present an immediate risk to workers or the public," said Dr. David Michaels, the department's Assistant Secretary for Environment, Safety and Health. "The investigators documented a number of weaknesses that perpetuate the risks and hazards of legacy operations and that the department needs to fix. But these are not insurmountable problems."

In September, preliminary findings and corrective actions were announced. Since release of preliminary findings, the report has been validated for accuracy with the site management. The report contains new detailed results of environmental samples collected from groundwater, surface water and soil/sediments. The types and levels of contamination detected in samples analyzed independently were generally consistent with the site's past environmental monitoring results.

Issuance of the report followed a six-week investigation including two weeks of onsite activities. The 20-member team of environment, safety and health professionals and technical experts conducted more than 100 interviews with managers and workers, observed work activities, inspected plant facilities, sampled and analyzed groundwater, surface water, sediment and soil, conducted radiological surveys, and reviewed hundreds of documents.

R-99-283

(MORE)

Printed with soy ink on recycled paper

In the environmental area, the team noted that the Paducah plant currently operates in compliance with the Federal Facility Agreement between EPA and the Commonwealth of Kentucky and has made extensive efforts to characterize major sources of groundwater contamination and protect the public from that contamination. At the same time, the team noted that there has been limited progress in isolating or remediating the numerous sources of offsite contamination. The report points out that funding for cleanup has been much less than requested, and little progress has been made toward final cleanup. As a result, two of Paducah's early major cleanup milestones under the agreement -- to remediate "Drum Mountain" and to characterize the waste unit beneath it -- are in significant jeopardy.

The team also noted that the radiological protection program has been improved since 1990 with the addition of staff and establishment of numerous controls such as dosimetry, bioassay and contamination controls. Despite these improvements however, the program requires a higher level of discipline, formality and rigor in order to provide workers with maximum protection. The team also found that improvements were needed in establishing, maintaining and following procedures, particularly for work performed by subcontractors.

In addition, the team said that criticality safety hazards in DOE material storage areas have not been characterized, analyzed and resolved even though they were identified more than two years ago, posing a potential hazard to workers in surrounding areas.

The report also concludes that neither DOE nor the contractor Bechtel Jacobs has conducted effective oversight of environment, safety and health performance or ensured that all DOE and regulatory requirements are met.

The department and the contractor are aggressively working to implement the recommendations in the investigative team's report. The actions include:

Environmental protection

- Work is being accelerated on the cleanup of contaminated scrap metal ("Drum Mountain").
- DOE, the Commonwealth of Kentucky and the U.S. Environmental Protection Agency are re-examining current site priorities, schedules and funding for characterization and cleanup.
- A meeting has been scheduled with the Commonwealth of Kentucky to discuss sources of air emissions and a revised emissions management plan.
- A walk down of radiological postings was completed, with corrective actions taken where needed.

Training

- Requirements for job-specific Radiation Work Permits have been reviewed and clarified to ensure adequate implementation.

Criticality safety hazards

- The department last week began characterization and removal activities for the first DOE Material Storage Area (DMSA) associated with the seismic upgrades at the Paducah Plant. This activity is being conducted using established safety procedures.

- Over the next several months, the department will perform the characterization, handling and disposal of the DMSAs cited in the investigation report. Lessons learned from characterization of removal of the first DMSA will be used as we proceed with characterization and removal of the remaining DMSAs identified in the investigation report.

- Additionally, the department is proceeding with interim measures to reduce the DMSA combustible loading, provide specialized training for workers who transverse DMSAs, review fire response procedures in place and ensure postings of criticality safety hazards are adequate.

Oversight

- The department has assigned facility representatives at Paducah on an interim basis. Two full time facility representatives will be stationed at Paducah who will provide regular surveillance of operations and safety practices.

- The department is establishing a program for environment, safety and health oversight at Paducah.

DOE program managers responsible for oversight of the Paducah plant are required to develop and submit a corrective action plan addressing each of the report's findings within 30 days. Progress on implementing the corrective actions will be monitored by the oversight staff within the Office of Environment, Safety and Health.

The investigation team has returned to Paducah to conduct the second phase of the investigation which will focus on the full range of environment, safety and health issues at the plant from its inception in the early 1950s. More than 150 current and former workers are being interviewed to learn more about where recycled uranium may have been used most, whether workers were told and how they were told, and the types of protection given to workers. The Phase II investigation is expected to be completed by the end of the year and will guide the department's medical monitoring efforts. Similar Phase I and II investigations will also be conducted at the Portsmouth (Ohio) Gaseous Diffusion Plant and the former Gaseous Diffusion Plant in Oak Ridge, Tennessee.

The report is available on the Internet at **http://tis.eh.doe.gov/portal** or by calling DOE's Paducah site office at 270/441-6830. The report will also be available for review at the Paducah public library and DOE's Environmental Information Center in Kevil, Kentucky.

-DOE-

R-99-283

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 groundwater characterization 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 [active], C-533, C-535, and C-537), as well as the C-340 Reduction and Metals Facility (inactive), 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.

-more -

Status:

- Remedial Investigation afield work for WAG 28 and Site Evaluation field work for WAG 8 have been completed. Field work on WAG 3 and Data Gaps are continuing and is expected to be complete by the end of 1999.
- 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 Kentucky Department for Environmental Protection considers excavation to be the only acceptable remedy.

Status:

- USEPA has directed DOE to issue the (D2) Proposed Plan by 11/16/ .
- A final (D3) Proposed Plan and D1 Record of Decision are tentatively scheduled for mid-2000.

-more -

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 413 million gallons of groundwater water have been treated through September 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 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:

- 9.1 million gallons groundwater were treated at the Northwest System during September 1999, with the facility operational 99.2% percent of the time.
- No groundwater was treated at the Northeast System during September 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 was completed October 5, 1999 and the system has returned to operation.

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. The technology was 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 and EPA have approved these documents.
- Construction of the treatment system began the first of August, with operations scheduled to begin mid-November 1999.
- The system is expected to operate for approximately 2 years in order to achieve targeted clean-up levels.

- more-

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 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 on the D2 WAG6 Remedial Investigation Report on August 13, 1999. A comment response summary for the comments received was submitted on September 30, 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. Comments were resolved and incorporated into a D2 version of the document and resubmitted on October 13, 1999.
- 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.
- The Innovative Treatment Remediation Demonstration process for the Groundwater Operable Unit Feasibility Study continued with a meeting at Paducah August 19-20, 1999m October 20-21, 1999 and teleconferences held September 23, 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.

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 on seven SWMUs, and makes recommendations for each. 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.
- KDEP letter of September 24, 1999 allows for one SWMU to be a "No Further Action" and five SWMUs to be deferred to the Surface Soils Operable Unit. The letter requests documentation from DOE that the acid neutralization tank at SWMU 28 is not leaking.

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.
- The informal dispute resolution ended September 27, 1999.
- The formal dispute resolution process began September 27, 1999.

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 approved the report on September 27, 1999 after changes were made to the original document. Feasibility Study activities have been incorporated into the Groundwater Operable Unit.
- On September 29, 1999, USEC personnel completed the removal of all sediments and liquids from the abandoned C-720 maintenance facility compressor pit sump. More than 700 gallons of liquid and five drums of sediments were placed in storage pending characterization. After characterization and review, the empty sump will be filled with concrete.

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.

-more-

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.
- 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 was transmitted to regulators September 29, 1999. Responses from regulators are due by January 3, 2000.

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:

- In July, a Request for Proposals was issued by Bechtel Jacobs Company LLC to 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.

-more-

- About 2,900 gallons of PCB/RCRA liquid waste were shipped to the TSCA Incinerator in Oak Ridge on August 31, 1999.
- About 120 cubic meters of uranium precipitate was shipped from Paducah to Envirocare on September 28 and 29.
- Twenty-six containers of mixed waste were shipped to Texas for stabilization treatment in September.
- The contract for waste treatment operations was awarded in September to a six-company team headed by Weskem LLC.

-END-

Bechtel Jacobs Company LLC
Paducah Project

Site Specific Advisory Board

Actual Costs to Date *(Including Prior Year)* **thru**
September, 1999: $ 117,723

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	418	9,142
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	2,498	12,911
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	5,804	48,900
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	8,720.30	70,953

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: $ 70,953
Remaining Funding: $ 21,531

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	279	1,598
BJC Procurement	Contract Work	982	92	(92)	0	0	0	0	0	0	0	0	0	646	646
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, Sound Recording, Public Notice, etc.	840	0	0	0	0	0	0	61	101	0	1,001	1,554	685	3,402
Support Activities Distributable	Telecommunications, Computing Support, etc.	7,979	14	90	923	246	613	1,640	951	(1,283)	562	443	488	(1,193)	3,496
Total Project		11,487	190	(86)	966	288	701	1,727	1,061	(1,099)	650	1,488	2,836	418	9,142

NOTES: *In September, Procurement charged time to the SSAB inorder to set up the contracts for the SSAB in FY00.*

"SSAB Misc Expenses" includes the following:

$	7.95	Office Supplies
	197.17	Business Travel - Ordinary
	480.00	SC-CA018U Design Integration Group
$	685.12	

Roberts & Kay, Inc.
Paducah Project

20-Oct-99
7:14 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	2,590	11,786
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	(91)	1,125
Total Project		15,570	0	1,292	1,186	0	4,277	496	2,008	(3,561)	2,323	1,173	1,216	2,498	12,911

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 - OR.*

Jacobs Engineering Group, Inc.

Paducah Project

TASK NUMBER:

35 - H831 - 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	4,993	39,346
BJC Sub. - Jacobs Engineering (Accruals)	11,332	0	0	8,769	(840)	(490)	16,507	3,707	(17,094)	732	(556)	(1,993)	811	9,554
Total Project	19,713	0	0	10,171	2,996	3,204	19,669	9,627	(12,458)	4,528	3,248	2,111	5,804	48,900

INVOICES

35-H831-48 Statement of Cost - Voucher Number: N/A
Total Amount Due $ 107.00 PAID - JUNE

35-H831-48 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	Voucher Number: 10
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	696.35
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	377.45
Teaming Subcontractors: PAI Corporation	258.03	680.28	1102.53	950.04	0.00	1570.63	1,013.77	754.99	1,136.10	2,433.13	2,046.82	2,052.19	2,317.05	2,931.12
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	987.85
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	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	$4,992.77
	PAID - JULY	PAID - SEPT	PAID - SEPT	PAID - SEPT	PAID - DEC	PAID - JAN	PAID - FEB	PAID - MAR	PAID - APR	PAID - MAY	PAID - JUN	PAID - JU	PAID - AUG	PAID - SEP

Bechtel Jacobs Company LLC
Paducah Project

Site Specific Advisory Board

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Roberts & Kay, Inc.
Paducah Project

20-Oct-99
7:14 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
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Jacobs Engineering Group, Inc.

Paducah Project

20-Oct-99
7:14 AM

TASK NUMBER:

35 - H831 - 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
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INVOICES

35-H831-48 Statement of Cost - Voucher Number: N/A
Total Amount Due $ 107.00 **PAID - JUNE**

35-H831-48 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	Voucher Number: 10
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	696.35
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	377.45
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	2,931.12
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	987.85
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	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	$4,992.77
	PAID - JULY	**PAID - SEPT**	**PAID - SEPT**	**PAID - SEPT**	**PAID - DEC**	**PAID - JAN**	**PAID - FEB**	**PAID - MAR**	**PAID - APR**	**PAID - MAY**	**PAID - JUN**	**PAID - JU**	**PAID - AUG**	**PAID - SEP**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW
ATLANTA, GEORGIA 30303-8909

4WD-FFB

APR 21 1998

MEMORANDUM

SUBJECT: Assuring Land Use Controls at Federal Facilities

FROM: Jon D. Johnston, Chief
Federal Facilities Branch

TO: Federal Facilities Branch

I. PURPOSE AND APPLICABILITY

This memorandum establishes EPA Region 4 Federal Facilities Branch policy on measures to be taken to assure the long-term effectiveness of land use controls (LUCs) being relied upon to protect human health and the environment at contaminated federal facilities undergoing remediation pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and/or the Resource Conservation and Recovery Act (RCRA). The purpose of this policy is to establish uniform requirements for efficient oversight of LUC remedy components at federal facilities and to clarify our expectations and criteria for concurring on remedies including LUCs. This policy should not be interpreted as altering the Region's preference for active and permanent remedies consistent with CERCLA and RCRA remedy selection criteria. We continue to regard LUCs primarily as components of, or enhancements to, remedies which employ treatment that reduces toxicity, mobility, or volume as a principal element.

Effective with issuance of this memorandum, it is Federal Facilities Branch policy to require -- as a precondition to concurrence on any remedial and/or corrective action involving any reliance on one or more LUCs for the protectiveness of that action -- that the lead federal agency seeking EPA's concurrence commit itself to implementing a detailed written LUC Assurance Plan (LUCAP) designed to assure the effectiveness and reliability of the required LUC(s) for as long as any LUC continues to be required in order for the remedial/corrective action to remain protective.[1] Such a requirement is consistent with this Agency's obligation, for

[1] During the initial ninety (90) days after this policy is issued, the requirement for a federal agency to commit to a LUCAP may be waived as a precondition to EPA's concurrence on any action which, in the opinion of the Federal Facilities Branch Chief, might be unduly delayed if this precondition were applied.

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example under CERCLA remedy-selection criteria established in the National Contingency Plan at 40 C.F.R. §300.430(e)(9)(iii), to assess the long-term reliability of ongoing remedial measures as part of evaluating a remedy's effectiveness in protecting public health and the environment. This policy applies with respect to federal facilities which are expected to remain in the control of the federal agency for the foreseeable future. Because of significant differences in the kinds of measures which may be required to assure the effectiveness of LUCs after property passes out of direct federal agency control, this policy is not specifically applicable to situations involving imminent transfer of the facility to a private party; however, the objectives of this policy -- to assure long-term effectiveness of LUCs -- and the approach this policy utilizes for such assurances may be utilized for some situations involving a property transfer. This policy is applicable to Region 4 federal facility: 1) CERCLA actions at NPL sites; and 2) HSWA corrective actions within non-HSWA authorized states. For their consideration as guidance, the policy will be provided to HSWA-authorized states and to those federal facilities taking CERCLA actions on non-NPL sites.

II. APPLICABLE DEFINITIONS

As used in this policy, the term *"Land Use Control"* or *"LUC"* in regard to real property on federal facilities should be broadly interpreted to mean any restriction or control, arising from the need to protect human health and the environment, that limits use of and/or exposure to any portion of that property, including water resources. This term encompasses "institutional controls," such as those involving real estate interests, governmental permitting, zoning, public advisories, deed notices, and other "legal" restrictions. The term may also include restrictions on access, whether achieved by means of engineered barriers such as a fence or concrete pad, or by "human" means, such as the presence of security guards. Additionally, the term may involve both affirmative measures to achieve the desired restriction (e.g., night lighting of an area) and prohibitive directives (no drilling of drinking water wells). Considered altogether, the "LUCs" for a facility, in conjunction with the base master plan, will provide a blueprint for how its property should be used in order to maintain the level of protectiveness which one or more remedial/corrective actions were designed to achieve.

The term *"Land Use Control Assurance Plan"* or *"LUCAP"* is a written installation-wide plan that sets out the procedure to assure LUCs remain effective over the long-term for all areas at the particular installation where they are required. Because of its procedural nature, there will normally be only one LUCAP per installation (although a number of "substantive" LUC Implementation Plans may be appended to it). Minimum contents of a LUCAP are listed below in Part A of Section IV.

The term *"LUC Implementation Plan"*, as used in this policy, refers to a written plan, normally developed after a decision document has required one or more LUCs for some particular area (operable unit, contaminated unit, and/or solid waste management unit) which 1) identifies each LUC objective for that area (e.g., to restrict public access to the area for recreational use) and 2) specifies those actions required to achieve each identified objective (e.g.,

install/maintain a fence, post warning signs, record notice in deed records). LUC Implementation Plans specify what must be done to impose and maintain the required LUCs, and are therefore analogous to design and/or operation and maintenance plans developed for active remedies.

The term *"decision document,"* as used in this policy, refers to CERCLA Records of Decision (RODs), RCRA Statements of Basis/ Notices of Decision, and RCRA Permit Modifications.

As used in this policy, the term *"facility"* refers to a military base or other entire federal installation, whereas the term *"site"* refers to a particular area (such as an "operable unit") making up only a portion of the facility.

The term *"monitoring"* is used in this policy to indicate a variety of investigative activities, ranging from mere "drive-by" visual observations to detailed scientific sampling and testing. The nature of the particular Land Use Controls being implemented will determine the type(s) and extent of any "monitoring" activities provided for under this policy.

III. BACKGROUND

CERCLA and RCRA require cleanup of hazardous substances which have been released into the environment to a degree which is determined to be "protective of human health and the environment." How a piece of land is anticipated to be used in the future is frequently an important consideration in determining the extent of remediation necessary to achieve the required protectiveness. For example, assumptions about whether a piece of land is likely to be used in the future for residential or industrial activities may influence the evaluation of exposure pathways made during the baseline risk assessment, thereby affecting the likely exposure scenario, the resultant risk determined to be present, and consequently how much (if any) cleanup is needed to lower that risk to "protective" levels. Similarly, one or more aspects of a remedy chosen as the means of lowering the risk to "protective" levels may involve deliberate efforts to maintain or impose some limitation on future use of the property, such as limiting physical contacts with contaminated soil through engineered barriers or limiting legal rights to use ground water resources by recorded deed restrictions, covenants or "institutional controls."

In such circumstances, uncertainties about the future use assumptions and/or the ongoing effectiveness of the use limitations imposed are directly related to achievement of the central objective of the entire remediation process -- protection of human health and the environment. In light of EPA experience in this Region and elsewhere, that land use control and environmental protection programs have not been adequately coordinated to ensure adherence to LUCs, we believe that it is essential to adopt new, more reliable means for assuring that necessary LUCs are maintained. Because we regard inadvertent violations as the most probable reason why LUCs might not be maintained on federally-controlled property, we think that it is important for each federal facility relying on LUCs to commit to implementing an active LUC-

monitoring process, and to raise the visibility of its LUCs through periodic reporting/certification by each such facility's base commander or top civilian manager reaffirming the ongoing integrity of LUCs to EPA and state environmental regulators. As described below, this process should be embodied in a facility-specific Land Use Control Assurance Plan (LUCAP).

IV. IMPLEMENTATION

A. **Land Use Control Assurance Plan:** A LUCAP may be documented in a number of different ways, for example, in a Memorandum of Agreement (MOA) or a Federal Facility Agreement (FFA) between EPA, the State and the federal installation or service. The LUCAP should also be referenced in the base master plan. The LUCAP may be developed and signed prior to the next planned decision document in anticipation of its need, or its development within a specified time may be required by the next decision document, as a condition of EPA's concurrence. In the absence of an approved LUCAP or some specific, time-bound requirement for the development of one, the provisions of a LUCAP, as described below, shall be incorporated into any decision document that requires LUCs. Once the installation-wide LUCAP is in place,additional site-specific LUC Implementation Plans will be appended to it as final cleanup decisions are made.

All LUCAPs will include, at a minimum, the following:

1) A requirement that, after each decision document selecting any LUC, a LUC Implementation Plan must be developed and approved for the subject site (operable unit, corrective action unit and/or solid waste management unit). The LUC Implementation Plan must identify the land area under restriction (e.g., by a certified survey plat) and the LUC objectives for that area, and must specify the particular controls and mechanisms which will be used to achieve each identified LUC objective. Each site-specific LUC Implementation Plan will be attached to the LUCAP as it is approved so that the LUCAP will serve as a single facility-wide source documenting all LUCs.

2) Identification of the federal facility program and point-of-contact designated responsible for monitoring, maintaining and enforcing site-specific LUC Implementation Plans and site-wide LUCAP.

3) A commitment by the facility to request funds for maintaining LUCs in budget allocation requests.

4) A requirement for quarterly on-site monitoring by the facility for compliance with the LUC Implementation Plans throughout the remediation period, unless another monitoring frequency is approved in the LUC Implementation Plan.

5) A requirement for the facility to provide notification to EPA and state regulators and obtain their written concurrence whenever the facility anticipates any "major changes in land use" (defined below) for the sites subject to LUCs. The facility should notify the regulatory agencies as soon as a major land use change is anticipated in order to allow sufficient time for regulatory review and amendments to remedy selection decision documents. Such notifications should be made to the regulatory agencies at least 60 days prior to a major change in land use and should include:

a) 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;
b) an evaluation of the need for any additional remedial action resulting from the anticipated land use changes; and
c) a proposal for any necessary changes to the selected remedial action, and identification of procedural requirements (e.g., ROD amendment/RCRA permit modification) for the proposed changes.

The regulatory agencies should provide a written response in a timely manner after the facility's notification and request for review, taking into account the need to minimize any adverse impact upon facility operations.

The following are considered "major changes in land use":

a) 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). For example, the human health risk assessment assumed that a site is in "caretaker" status with a worker visiting the site once a week for 2 hours, and the proposed change in land use would have the worker at the site 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 day-care centers is a major land use change. Similarly, any change from industrial or commercial land use to recreational land use is also considered "major changes in land use." Further, any change in a land use that has been prohibited in order to protect the environment is also a major land use change. For example, an area with residual contamination may be prohibited from being used for creation of wetland habitat and the land use change would result in the creation of a wetland.
b) Any action that may disrupt the effectiveness of the remedial action. For example, 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.
c) Any other action that might alter or negate the need for the LUC. For example, any plan to actively remediate a site subject to LUCs in order to allow

for unrestricted use.

6) A requirement for the facility to conduct field inspections at least annually to assess the conditions of all sites subject to LUCs. These inspections shall determine whether the current land use remains protective and consistent with all remedial action/corrective measures objectives outlined in the decision document.

7) A requirement for the designated official responsible for the facility operations (e.g., DOD Base Commander, DOE Site Manager) to certify the continued compliance with all site-specific LUC Implementation Plans described in an annual report to specified EPA and State officials. The annual report shall also serve to notify agencies of a change in designated officials or of land use changes that are not considered major under subparagraph 5 above.

8) A requirement for the facility to notify EPA and the State immediately upon discovery of any unauthorized "major change in land use" or any activity inconsistent with any LUC Implementation Plan and to describe what actions will be taken to ensure protectiveness.

9) A requirement for advance notification to EPA and the State in the event of that the facility contemplates any transfer, by sale or lease, of sites subject to LUCs in order to ensure adoption of such additional measures as may be needed to assure continued compliance with LUCs on the transferred property.

B. **Decision Documents:** All decision documents for sites at which the remedy involves LUCs will require reasonable assurances that LUCs will be effectively maintained and monitored. Compliance with a LUCAP which includes the minimum provisions listed above in Part A of this Section is one method for satisfying this requirement. Decision documents establishing LUCs shall specify the general land use designation, the associated land use exposure assumptions and the general LUC objectives. The following information should be specified in any decision document requiring LUCs:

1) Assumptions made concerning current and expected future land use designation/exposure scenarios. The land use scenario(s) used in risk assessment upon which the risk management and remedy decisions are premised should be stated. Identify the Lead Agency's Current and Future Land Use Designation, how such designations were developed, and the human health/ecological exposure scenarios which may not be protective under less restrictive land uses. Specify the time period necessary for remediation/corrective measures and LUCs.

2) Identification of the LUC objectives that are necessary to ensure the protectiveness of the remedy decision. Specific means to achieve the LUC objectives may be included in the decision document on a case-specific basis. In general, the specific means of

achieving the LUC objectives will be included in the site-specific LUC implementation plan.

3) A requirement to develop a site-specific LUC Implementation Plan, which will include site-specific controls and controls necessary to assure the protectiveness of the selected remedy. The LUC Implementation Plan may include, for example, site access controls, site security, operation and maintenance activities necessary to maintain any physical access control features, drilling controls, groundwater use controls, signs, etc.

C. **Existing Decision Documents with LUCs**: At some federal facilities one or more previously completed decision documents containing LUCs are currently in place. EPA intends to address these issues as a part of the 5 Year Review and/or as a part of the the HSWA permit review. The review process should include an analysis of the effectiveness of LUCs, with emphasis on those LUCs not subject to a LUCAP. This policy is not intended to imply automatic reopening of previously completed decision documents. As needs are identified, EPA, in coordination with the state, will negotiate a schedule for developing LUC Implementation Plans with the affected facility. These LUC Implementation Plans will then be appended to the facility-wide LUCAP. If a facility-wide LUCAP has not been developed, EPA will require submission of a LUCAP at the time the site-specific LUC implementation plans are due, in accordance with the negotiated schedule.

V. DISCLAIMER

This memorandum is intended solely to guide employees of the Federal Facilities Branch, EPA Region 4, in carrying out their responsibilities with respect to federal facility actions to which the guidance is expressly made applicable. It is also being distributed to HSWA-authorized Region 4 states and to certain federal facilities taking CERCLA actions at non-NPL sites within Region 4 for their consideration as guidance. This policy does not constitute rulemaking by EPA and does not create legal rights or obligations in any person or entity.

cc: Anne Heard, EPA Region 4 - EAD
Jim Woolford, EPA HQ - FFRRO
Craig Hooks, EPA HQ - FFEO

The Paducah Sun

October 8, 1999

Senate resets plant inquiry for Oct. 26

By Joe Walker
Sun Business Editor

U.S. Sen. Mitch McConnell will preside Oct. 26 at a Washington hearing to examine the extent, cost and priorities of cleaning up the Paducah Gaseous Diffusion Plant.

The hearing, by the Energy and Water Subcommittee of the Senate Appropriations Committee, was postponed from Oct. 19 because of a possible conflict with other legislative business. It will begin at 9:30 a.m. EDT in room 124 of the Sen. Dirksen Building.

Although a final witness list has not been compiled, McConnell said those testifying will include Department of Energy and Nuclear Regulatory Commission officials, as well as some plant workers. This is the third congressional hearing regarding plant contamination and cleanup.

"I suppose it will be impossible to avoid some repetition, but we're going to try to go into some new directions," McConnell said.

He and U.S. Sen. Jim Bunning have asked the General Accounting Office, Congress' investigative arm, to determine how much of the $400 million in waste management money already sent to the Paducah plant "is actually going to cleanup."

DOE says red tape eats about 90 percent of the funds, and the senators want a detailed breakdown. "I don't know if that's (percentage) true, but if that's the case, we need to make more progress on cleanup," McConnell said.

Employee safety is another chief concern. McConnell wants current and former workers medically tested, which DOE has started to do.

Another investigative area is cleanup priorities, including contaminated groundwater, drums of waste and thousands of cylinders of depleted uranium hexafluoride (UF6).

In a related development, DOE will revise its request for proposals from private firms for a facility to convert the spent UF6 into a safer material. The department said Thursday that it will release a new draft request in November because of "the large number of comments received and the changes resulting from those comments."

The new schedule is not expected to alter the construction and operations schedule, DOE said. It plans to spend nearly $400 million - $200 million at Paducah and a similar amount for a sister facility near Portsmouth, Ohio - to start building the facilities by March 2002 and have them running by December 2004. A contract is suppose to be awarded early next year.

DOE issued the first draft July 30, requesting public and industry comments by Aug. 20. In a news release Thursday, the department said it was "impressed by the number and quality of comments" from firms and representatives of many communities. That response supports the intent "for a private-sector approach" to conversion, the release said.

DOE said it is considering a "wide range" of conversion products that may be proposed by industry, conditional on a viable waste disposal path.

For more information, contact Edmond Tourigny, acting associate director of the DOE Office of Nuclear Energy, Science and Technology's Depleted Uranium Hexafluoride Management Program, at 202-586-3621. His fax number is 202-586-3607. The e-mail address is DUF6-RFP.comments@hq.doe.gov

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The Paducah Sun

September 22, 1999

1952 memo cited plutonium danger

By Bill Bartleman
The Paducah Sun

Operators of the Paducah Gaseous Diffusion Plant knew as early as 1952 that plutonium provided a much greater health hazard than uranium and would require special handling and revised safety procedures.

But plant workers say that a memo prepared for the Atomic Energy Commission on March 26, 1952, suggesting "certain changes in the plant health physics program" apparently was ignored for 40 years.

The memo was included in documents released at a U.S. Senate hearing Monday in Paducah and will be presented at a House committee hearing today in Washington. It was included in testimony by Jim Key, who is the environment, safety and health representative for Local 5-550 of the plant's atomic workers' union.

Government officials have acknowledged that small amounts of plutonium were contained in recycled uranium that was shipped to Paducah from a nuclear weapons production plant in Washington state from 1953 until '76. At the time, the Paducah plant was operated for the federal government by Union Carbide Corp.

Union Carbide's Safety and Radiation Hazards Department prepared the memo on the hazards of plutonium that at the time was being processed at the gaseous diffusion plant in Oak Ridge, Tenn., which is now closed. The memo was not specific to Oak Ridge but applied to any plant where plutonium-laced uranium was processed.

The Paducah plant opened in 1952 to enrich uranium for use in nuclear weapons. It now enriches uranium for use as fuel in nuclear power plants and is operated by the United States Enrichment Corp. The Atomic Energy Commission was the predecessor of the Nuclear Regulatory Commission.

The six-page memo was a classified, or secret, document until July 1995.

"Since plutonium has a specific activity approximately 100,000 times that of uranium, it may be noted that a very much smaller mass of plutonium is required" to cause surface and air contamination, the memo said.

It said the hazard of plutonium contamination "will be adequately met if more stringent requirements of personal cleanliness before smoking or eating are made, if more attention is paid to hand monitoring and the use of gloves where hand contamination is considered probable, and if additional consideration is given to employees involved in spills and material releases."

The memo suggested that each of the gaseous diffusion plants be analyzed to determine areas where plutonium contamination hazards exist or could occur. It said areas where the plutonium contamination level is greater than one part per million should be subjected to special precautions, special safety procedures and warning signs.

Key said in his prepared testimony that the 1952 memo and another prepared in 1985 apparently were not followed or enforced. The 1985 memo prepared for the Department of Energy suggested

the need for a study of workers' exposure to uranium, plutonium and other transuranics, all radioactive elements.

"We have no evidence that these recommendations were acted upon or communicated to the work force," said Key, who has worked at the plant for 25 years.

Other workers who testified Monday and will testify today told stories about working in contaminated buildings and disposing of radioactive materials without protection and without warning that it was hazardous to their health.

Contamination at the plant has gained nationwide attention in the wake of a worker lawsuit that claims conditions at the plant are worse that previous reports have indicated and that workers were not told they were processing uranium that contained plutonium and other transuranics.

Key said a contamination control program for transuranics was not implemented until 1992. At the time, the plant was operated by Martin Marietta Energy Systems.

"What is clear is that the AEC and DOE contractors knew of the need to protect workers from plutonium and other transuranics with special safeguards as early as 1952," Key said. "Finally, 40 years after the Union Carbide memo ... Martin Marietta Energy Systems commenced a contamination control program for neptunium and plutonium."

The 1952 suggestions included special handling of contaminated equipment that required maintenance. "Special precautions and segregation of working space may be necessary in some maintenance locations ... and that some in-place maintenance will be required," the memo said.

It also suggested regular monitoring of areas where the potential exists for plutonium contamination, requiring the use of respirators where air samples indicate the presence of plutonium, and requiring employees to wash their hands and be checked for contamination before eating, smoking or leaving work.

It also said workers assigned to contaminated areas should be provided with coveralls, shoes and caps that should be changed after each work shift and cleaned at the plant.

Other suggestions included identifying contaminated equipment with special tags, requiring hazardous-work permits in contaminated areas and regular medical checkups for workers in exposed areas.

"Personal protective measures ... should be rigidly enforced for personnel working in these specifically controlled areas," the memo said.

But Key and others said that not only were the suggested rules not enforced, but also no evidence could be found that they were ever communicated to the workers.

Also, Key said that even after DOE and the plant contractor acknowledged there was plutonium and neptunium contamination at the plant, they didn't do a good job of communicating it to workers.

He said the reality of the plutonium contamination did not register with most workers until after news reports appeared last month about the lawsuit alleging that workers were never told that some of the uranium processed at the plant contained plutonium.

"After 1990, when the term 'transuranics' was introduced to the hourly work force, a listing of specific radioactive elements, such as plutonium, was rarely included in employee communications, and when plutonium was mentioned, it was labeled as a trace quantity," Key said.

"Even today, the current basic training manuals that every employee must study to work at the

plant do not communicate the presence of plutonium and neptunium."

He and others said conditions at the plant today appear to be much safer. They said specific safety rules are followed to help protect workers.

Also, an investigation by a special Department of Energy team concluded that there are no imminent dangers at the plant. But the team also said there are potentially hazardous chemicals at the plant that must be cleaned up to prevent problems for workers and the community.

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The Editorial Page

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Protestants should start a large Christian school in McCracken County

EDITOR:

As the new public school season begins all you can hear on TV and radio and read in the papers is our nation's fear of when violence will strike this year and where it will strike. No one seems to doubt that it will strike.

It's really sad but realistic how some schools are trying to prevent it from happening in their schools. They have installed metal detectors, hidden cameras, roving security guards, doors that automatically lock when closed and they're even doing away with school lockers.

Most of the teachers are intimidated and scared of their students. They do not know how to discipline the students as they fear they will have no backing and could even lose their jobs. Many of the students do as they please and eventually graduate from high school not knowing how to read or write.

The public schools have many teacher vacancies now and are unable to fill them because the good, qualified teachers are finding employment elsewhere, and who could blame them. Because of the shortages, the public schools are putting up with a lot of nonsense from unqualified teachers. Some of them couldn't even pass the tests they give their students.

Our government let one woman,

IN OUR OPINION

September 22, 1999

DIFFERENT TIMES

Were plant practices evil or just dumb?

The first of what will be a series of congressional hearings probing worker exposure to radioactive and other dangerous substances at Paducah's gaseous diffusion plant unfolded in Paducah Monday. Kentucky Sen. Jim Bunning and his House colleague, 1st District Rep. Ed Whitfield, convened a proceeding on the Paducah Community College campus where present and former plant workers recited a litany of past practices which, anecdotally at least, were hair-raising.

As was noted in a column on this page Sunday, many of the underlying environmental hazards at the plant have long been known. Contaminated scrap, ditches into which radioactive waste was routinely dumped, thousands of depleted uranium cylinders, drums buried in poorly recorded or unrecorded areas of the DOE reservation, a classified landfill in which Lord knows what may be buried: all of these are legacies people here would like to be rid of. But they have hardly been a secret. The fact the federal government already has spent $400 million to assess the problems and complete a cleanup by 2010 evidences that fact.

The question that remains unanswered is not whether workers were unreasonably endangered - it appears that they were - but whether the sorts of practices detailed Monday were typical of industrial practices of those times or were something more sinister.

From a 1999 perspective, those practices are outrageous. But we are quick to forget the sorts of things that passed muster in the scarcely regulated industrial environments of the '60s and early '70s. We recall that one of the Calvert City chemical plants during that era dumped so much raw mercury

Madalyn O'Hair, help take the Ten Commandments, morning prayer and Bible study out of the classroom. Our government calls it separation of church and state. It's really separation of God from His people.

When you take God out of the schools you let evil in, and boy, do we have that.

In Mississippi before a kid went to school and killed his classmates, he killed his parents. At Heath High School, the kids were murdered by a classmate as they were praying. At Columbine, the killer asked if there were any Christians present and a girl raised her hand and was murdered. In Murray, teen-agers were drinking blood and calling themselves vampires before they killed the parents of a girl in their organization in Florida.

If these kids were serving God instead of the devil, none of this would have happened. The reason I can state this is that of all the school violence that has been reported, and more has not been reported than has been reported, not one incident has happened in a Catholic school, like our local St. Mary's.

Isn't this great? Doesn't it tell you something?

No, I'm not a Catholic, but I admire and respect the way they run their schools.

I am a Protestant, and I am asking all Protestants to unite and start a large Christian school in McCracken County where you can have prayer, the Ten Commandments posted and daily Bible readings without hurting the feelings of non-Christians. You can have discipline and dress codes. You can have good, qualified teachers who love the Lord. Your children can get a good education.

into the Tennessee River that it contaminated not only bottom-feeding fish, but game fish, which people were cautioned against eating in any quantity for several years. However, that dumping had not been illegal at the time and was in fact fairly typical of chemical plants of that era.

Likewise, many millions of dollars were spent at various Calvert City plants in the 1980s to either remove drums of chemical waste that had been buried on site, or to transfer them to lined on-site landfills that complied with new, tough EPA regulations. Again in virtually all of those situations the original disposal of the waste was neither illegal nor unusual industrial practice. Rather it reflected the relative scientific ignorance of those times.

We get the sense that the question many local people now would like answered is this: Was what happened at the diffusion plant a mere extension of that era's archaic industrial practices? Or was it callously conceived and illegal? Did the government - and make no mistake about this, it was the United States government that ultimately ran this facility - operate Paducah's plant with a level of indifference to workers that was calculated to be worse than at other nuclear facilities?

It is a hard one to get your arms around. On one hand there is the disclosure in this newspaper a week ago that in 1960 a scientist for the Atomic Energy Commission (which oversaw the plant then) became convinced some 300 workers handling recycled uranium here were exposed to neptunium, an element even more dangerous than plutonium. He wanted them tested, but the AEC balked because the contractor, Union Carbide, feared the union would then demand hazard pay. The scientist's memo says the AEC acquiesced and recommended instead that tissue samples be obtained from those workers after they died to find out what killed them.

This is incredibly callous. And remember, the contractors worked for the AEC, not vice versa. This was ultimately the government's call (although we would not wholly acquit the contractor on that score).

Yet the news of the past five years or so has unearthed scores of cases from that same era in

education.

Parents, you spend hundreds of thousands of dollars on houses. You spend tens of thousands of dollars on automobiles. Yet, your children are your biggest asset.

Let's let our children know we care by saying goodbye to the public school system. Thanks to the Catholic schools for setting such a good example.

RICHARD S. MORGAN
Paducah

St. John collecting box tops as fund-raiser for education

EDITOR:

This year our school, St. John Elementary, is once again participating in the Box Tops for Education fund-raiser from General Mills. This is an easy way for St. John to earn dollars for our school without a great deal of effort. There are a variety of products that have the Box Tops for Education label on them.

We are asking parents, neighbors, relatives and friends to save Box Tops for Education logos from participating cereals, snacks, yogurts, etc. to raise money for our children's education. St. John will receive 10 cents for every box top that is collected. Our goal is to raise an additional $200 for our school operating fund, which will directly benefit our children.

Please help support the children in our community and send in your box tops to our school.

CINDY DAVIDSON
Paducah

WRITE YOUR REPRESENTATIVES

unearthed scores of cases from that same era in which government scientists deliberately exposed soldiers, pregnant women and other civilians to radioactive materials in medical studies without telling them about it. While shameful, it is a fact that the government used the Cold War mentality of those times to justify many wrongs against its citizens. (Of course the government itself was relatively ignorant of radiation risks, but that doesn't justify using unwitting humans as guinea pigs.)

Whether our local workers are merely among the many victims of that government mindset, or if they were in fact singled out for particularly bad treatment - or whether the answer lies somewhere in between - may never be sorted out. Many who would know are dead.

However, looking ahead, it is at least encouraging that the same workers who related these startling Cold War practices also testified this week that safety practices at the plant have improved markedly in the past few years and, as one of them put it, "I feel that controls over the radiation problems of the past are now in check."

There also was testimony that by increasing federal cleanup appropriations by $10 million per year, the plant's legacy of environmental problems can be neutralized in 10 years, and there is some hope the government will deliver on that.

Finally, it appears that to the extent money is any help, workers shown to have been harmed by the past practices will be compensated by the government.

The picture looking forward is a good bit brighter than the one looking back.

- Jim Paxton

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In Harm's Way, But in the Dark: Workers Exposed to Plutonium at U.S. Plant (Aug. 8)

Uranium Plant Risks Were Concealed

By Joby Warrick
Washington Post Staff Writer
Tuesday, September 21, 1999; Page A1

Managers of the government's Paducah, Ky., uranium plant knew for decades of unusual radiation hazards inside the complex but failed to warn workers because of fears of a public outcry, according to documents to be released by a congressional panel this week.

Faded memos unearthed by workers and federal investigators shed new light on what early plant officials knew about the presence of plutonium and other highly radioactive metals in the plant -- knowledge that was kept from the workers for nearly four decades.

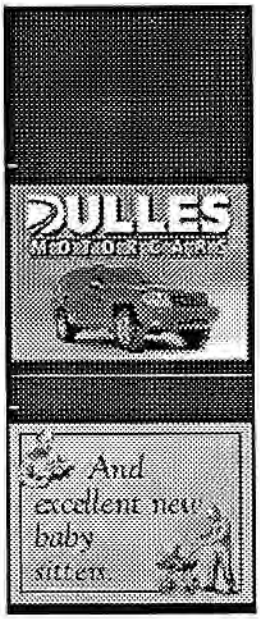
In one 1960 document, a government physician wrote that hundreds of workers should be screened for exposure to "transuranics" -- radioactive metals such as plutonium and neptunium -- but he said plant officials feared such a move would cause alarm and lead to higher labor costs.

"They hesitate to proceed to intensive studies because of the union's use of this for hazard pay," says the memo, discovered by Energy Department officials investigating the plant.

The documents from government archives have been turned over to a House Commerce Committee panel, which is holding hearings Wednesday into allegations of unsafe conditions at the Paducah Gaseous Diffusion Plant. The Washington Post obtained advance copies of the documents and prepared testimony of some current and former plant officials.

Accounts of plutonium contamination and illegal waste dumping at the facility have triggered an Energy Department investigation and a class action suit by employees who believe the plant put them at risk.

Energy Secretary Bill Richardson toured the plant on Friday and formally apologized to workers for the government's failure to fully inform them about the risks. He pledged millions of dollars in new spending to compensate ailing workers and to accelerate the cleanup of the plant. And he presented an award to the family of the late Joe Harding, an employee who had tried vainly for years to convince Energy officials that hazards in the plant had caused his fatal illness.



"On behalf of the government I'm here to say I'm sorry," Richardson said. "The men and women who have worked in this facility helped the United States win the Cold War and now help us keep the peace. We recognize and won't forget our obligation to them."

Plant officials, while acknowledging the presence of plutonium at Paducah, have said the amounts were small and were likely of little threat to workers.

Government contractors who ran the plant over the last 47 years have declined to comment because of pending litigation. A Union Carbide Corp. spokesman, in a statement last month, said the alleged acts at Paducah occurred long ago, and none of the current managers had any detailed knowledge of what had happened. Union Carbide operated the plant from 1952 to 1983.

The documents and testimony to be presented at the congressional hearing suggest that the federal government and private contractors running the plant ignored decades of warnings to protect workers from plutonium, a man-made metal that can cause cancer if inhaled in amounts as small as a millionth of an ounce.

"What is clear is that the [government] contractors knew of the need to protect workers from plutonium and other transuranics . . . as early as 1952," Jim H. Key, the ranking environmental and safety official for the plant's unionized employees, states in prepared testimony to be delivered Wednesday.

Key, who has not yet spoken publicly about the allegations of workers' exposure, alleges "widespread, systematic and documented failures" by the government and its contractors to control the spread of radioactive hazards. He describes smoky, radioactive fires inside the plant and thick clouds of radioactive uranium dust -- workplace hazards for which workers were neither trained nor equipped.

Former workers also have come forward with evidence suggesting that past managers viewed the contamination as a practical and economic problem. John Tillson, a hydrologist who analyzed early operations at the plant while working for a cleanup contractor, said Paducah managers tried to recover the transuranics from the plant's waste stream in the 1950s and 1960s, when the metals were in high demand for nuclear materials research.

By 1970 the prices had dropped, and the recovery programs were halted, he said.

Plant officials even began processing sewage sludge from the plant after it was found to contain high levels of uranium. Harold Hargan, a 37-year employee who was detailed to the recovery program, said the

uranium in sludge came exclusively from the plant's sanitary system, which included lavatories, wash rooms and laundry facilities. "All that uranium was either on workers' clothes or bodies -- or inside their bodies," he said.

Although no formal epidemiological study has been completed for Paducah, some workers have long raised questions about what they believe are unusual rates and types of cancers in their communities. Those fears have risen sharply in the wake of reports that plutonium and other highly radioactive metals were also present in the workplace, Key, the union safety officer, says in his statement.

"The majority of current and former workers are afraid that they may have been exposed to substances like plutonium without proper protection and that they will, as a result, be stricken with a fatal disease," Key wrote. "I myself have this fear from my 25 years at Paducah."

Hired by the plant's original contractor, Union Carbide, in 1974, Key said he began witnessing safety problems almost immediately. During his first year on the job, he was engulfed in radioactive smoke after helping dump drumloads of highly flammable uranium metal into an open pit on the plant's grounds.

"The uranium spontaneously ignited . . . and a pungent and irritating smoke enveloped us," said Key, an hourly worker and officer in the local chapter of the Paper, Allied-Industrial, Chemical and Energy Workers International Union. "To my knowledge this dumping ground has never been characterized."

Workers inside the building where powdered uranium was processed were not required to wear respirators, even though the dust at times was so thick it was difficult to see, Key said.

"I recall having to hold my breath to get through clouds of unknown fumes," he said.

In the 1970s, Key would observe workers cleaning up spills of "black powder," which he later learned consisted of recycled uranium from the government's plutonium production facilities. Not until 1990 did plant officials tell the union that the powder contained small amounts of "transuranics" -- a class of highly radioactive metals that includes neptunium and plutonium. Plutonium is 100,000 times more radioactive per gram than uranium.

Key cited a 1952 Union Carbide memo that suggests the need for special labeling of "plutonium contaminated locations."

Years later, in a 1985 memo, Energy officials advised Paducah's managers to test workers who handled the recycled uranium for

exposure to transuranics. Key notes, "We have no evidence that these recommendations were acted upon or communicated to the workforce."

In 1991, Martin Marietta Energy Systems, which was now operating the plant, began a voluntary program to test workers for exposure. Thirty workers participated, but the test results were "invalidated" due to what the company termed "concerns and discrepancies" regarding the testing lab, Key said.

He said the company refused to release the results to the union, explaining in a memo that "management is reluctant to release this information due to concerns about how it would be used."

Concerns about public reaction were echoed in the 1960 memo from H .D. Bruner, a physician, to Union Carbide and Atomic Energy Commission medical officials. He expressed concerns about relatively large amounts of neptunium in recycled uranium delivered to the Paducah plant. "But I am afraid the policy of the plant is to be wary of the unions and any unfavorable public relations," the memo states.

Although workers in some buildings were furnished with gas masks, Bruner said the respirators were not used and did not appear to be effective against the tiny uranium particles in the air.

"The human factor in handling [the recycled material] should be considered a source of potential exposure," he wrote.

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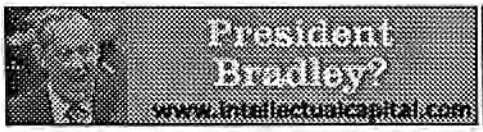

The Paducah Sun
September 17, 1999

Panel members hope for speedier cleanup

By Joe Walker
Sun Business Editor

Some members of a citizens' advisory group say they hope a recent onslaught of bad publicity will generate more money and a faster cleanup of the Paducah Gaseous Diffusion Plant.

The group met just before Energy Secretary Bill Richardson's public meeting Thursday night to disclose problems at the plant. A few members who stayed to hear Richardson said they want the disclosures - fueled by two lawsuits filed in U.S. District Court, a massive worker health study and a DOE investigation - to make the public more concerned and involved with the cleanup.

"Hopefully, with the plant being in the spotlight, we can get increased funding to clean this stuff up and not let it drag on," said Bill Tanner, a member of the plant's Site-Specific Advisory Board. "We have to see to it that the plant environment is safe for future generations."

Tanner - superintendent for the West McCracken Water District, which surrounds the plant - represents a cross-section of board members including businesspeople, environmental activists, neighbors, regulators, union officials and others. He said the publicity has caused the group to be more emphatic in its dialogue with the Department of Energy.

But another member, Paducah businesswoman Merryman Kemp, said she is concerned that it took widespread media coverage of the plant problems - starting with a Washington Post story in July about one of the suits - to get more of the public interested.

"We had an open house less than a month before the Post story broke, and we (members) ended up talking with each other," Kemp said.

The Post's story revealed an assortment of claims in a then-sealed federal lawsuit by three plant workers and a large environmental organization. Among other things, the suit alleged that employees had been exposed to plutonium dust.

As publicity mounted, DOE disclosed that it was probing the claims and recently released findings that despite serious past problems, there is no imminent threat to workers or the public. Earlier this month, a second suit was filed seeking to include as many as 10,000 current and past employees and their families in allegations of contamination.

Although DOE and the state say repeated sampling shows the plant environment is safe, Kemp said public safety remains among her chief concerns. She said she wonders if farm produce harvested near the plant and sold locally contains contamination. Another worry, Kemp said, is the long-term effects of plant contamination.

"Right now, for example, they really don't have the technology to clean up the groundwater," Kemp said.

DOE has provided city water to scores of homes near the plant threatened by a large area of groundwater contaminated with trichloroethylene, a common solvent, and technetium-99, a radioactive contaminant in nuclear fuel rods processed by the plant many years ago. The department has a project to pump and treat the water but admits the technology is inefficient.

Mark Donham, an environmental activist who chairs the advisory board, said one of his biggest worries is that not all the plant waste and contamination is being properly characterized, which will lead to improper disposal.

"Second, they (DOE officials) are still not giving us enough information," he said. "It's like fighting tooth-and-nail to get information out of them."

Donham's comments came after the board approved his resolution that DOE conduct an environmental impact statement for Vortec, a proposed project using intense heat to melt contaminated soil into glass-like pellets that do not leach. The department believes Vortec is safer than the current system of storing the soil, which is removed during cleanup, in thousands of drums at the plant.

DOE has said it has found no significant environmental impact from the Vortec process. Donham countered that the waste involved has not been properly characterized. He also said DOE did not list an alternative to the process, which would cost at least $20 million.

"There are alternatives other than just putting the stuff in a big burner and cooking it," Donham said.

DOE's David Tidwell said soil containing high levels of radioactive contamination cited by Donham would not qualify for Vortec. In response to another member's question, Tidwell said a finding of no significant impact would accelerate the project, while an impact statement could cost as much as $2 million and take two to four years to complete before that cleanup work could begin.

The board approved the Vortec impact statement resolution after several onlookers spoke in favor of it. They included Jackie Kittrell of the American Environmental Health Studies Project, which claims that a DOE toxic and low-level radioactive waste incinerator at Oak Ridge, Tenn., caused pollution that made workers sick. The people were employed at a DOE uranium enrichment plant that closed in the late 1980s.

Kittrell said the group believes that emissions from the incinerator contained beryllium, a toxic metal used in making nuclear weapons and fuel. Richardson has expanded a program to provide compensation to workers at DOE facilities, including Paducah, who contracted beryllium-related illnesses.

Before Oak Ridge had an advisory board, DOE opened the incinerator without an environmental impact statement and a proven method of monitoring stack emissions, Kittrell said. She urged the Paducah board to stand firm for an impact statement even if Vortec proves to be the best technology.

"It just makes a whole lot of sense," she said, "other than winding up like we have."

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The Courier-Journal
Wednesday, Oct. 20, 1999 LOCAL NEWS

DOE may fault Paducah oversight

Report assesses why problems not corrected

By JAMES MALONE, The Courier-Journal

PADUCAH, Ky. -- Department of Energy investigators are expected to say in a report to be released today that there were breakdowns in oversight at the Paducah Gaseous Diffusion Plant that contributed to long-standing environmental problems not being corrected.

Among their concerns, based on a contractor's comments on a draft of the report, are that potentially fissionable radioactive material stored inside buildings has not been completely analyzed. As a result, the risk of an uncontrolled nuclear reaction -- called a criticality accident -- while small, cannot be ruled out.

Comments by Bechtel Jacobs Co., the Energy Department's clean-up contractor, indicate the report discusses a lack of funding to study and dispose of the unknown materials.

"The statements that the risk of a criticality accident occurring is not known (in storage areas) is 'technically correct,' " according to the contractor's comments, which were obtained by The Courier-Journal.

Bechtel Jacobs has agreed to undertake an "independent review" of its radiological protection program for workers, according to the company's comments. The company asked the Energy Department to note in its final report, however, that during 1999 "we have experienced zero personal contamination events."

The department has found Paducah workers generally are safe and not currently exposed to harmful radiation, but department investigators this summer faulted Bechtel Jacobs' radiation-control program when laborers were found in a contaminated area without badges.

Bechtel Jacobs spokesman Mark Musolf said the company had not seen the final report, but was generally pleased with the draft it was shown.

"Obviously, we had a quibble with some things" in the draft, he said, "but generally, it was a good report."

The Energy Department, in a preliminary report released last month, has already faulted both its own oversight and that of its contractors, including Bechtel Jacobs, which is charged with the storage and cleanup of waste at the plant.

The findings that will be released today are the first of a two-part comprehensive review of the plant's operations, going back to 1990. A study still under way will focus on historical operations back to the plant's 1952

opening.

The investigation began after a whistle-blower lawsuit filed in June alleged that years of indifference and mismanagement had exposed unknowing workers to plutonium-contaminated dust and that discharges had fouled the ground water and soil under and around the 3,400-acre complex. The lawsuit also alleged that contractors had lied to the government about the extent of the radioactive contamination so they could collect financial incentives.

Problems at the Paducah plant, which produces uranium for nuclear reactor fuel, have led to two congressional hearings, two lawsuits and questions about what the government has received for the almost $400 million it has spent on cleaning up the plant in the past decade.

The investigation was promised by Energy Secretary Bill Richardson, who earlier this fall apologized to Paducah workers and the community for what he said were lapses in accountability and oversight. Richardson said he would ask Congress to pay Paducah workers or their surviving spouses who could claim radiation induced-illness.

The department oversight team report also is expected to look at issues of health and safety, such as:

A 1992 Oak Ridge investigation that found evidence that some Paducah workers felt intimidated and were fearful of publicly raising concerns about safety.

Recent events involving employees of Bechtel Jacobs subcontractors who were exposed to harmful chemicals while drilling test holes in the ground or who were found to be working in contaminated areas without wearing badges to detect radiation.

Worker exposures to radioactive materials after a drum exploded and other incidents in a hazardous waste storage building, which The Courier-Journal reported last month.

Bechtel Jacobs' decision this summer to call a police bomb squad to disable a small vial of an unknown substance discovered during sediment testing.

In its response, Bechtel Jacobs told the department some statements in the draft report on lax controls and procedures "appear speculative and potentially inflammatory." Department spokesmen did not return phone calls yesterday.

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IN OUR OPINION

October 19, 1999

GLACIAL PACE

DOE site cleanup mired in bureaucracy

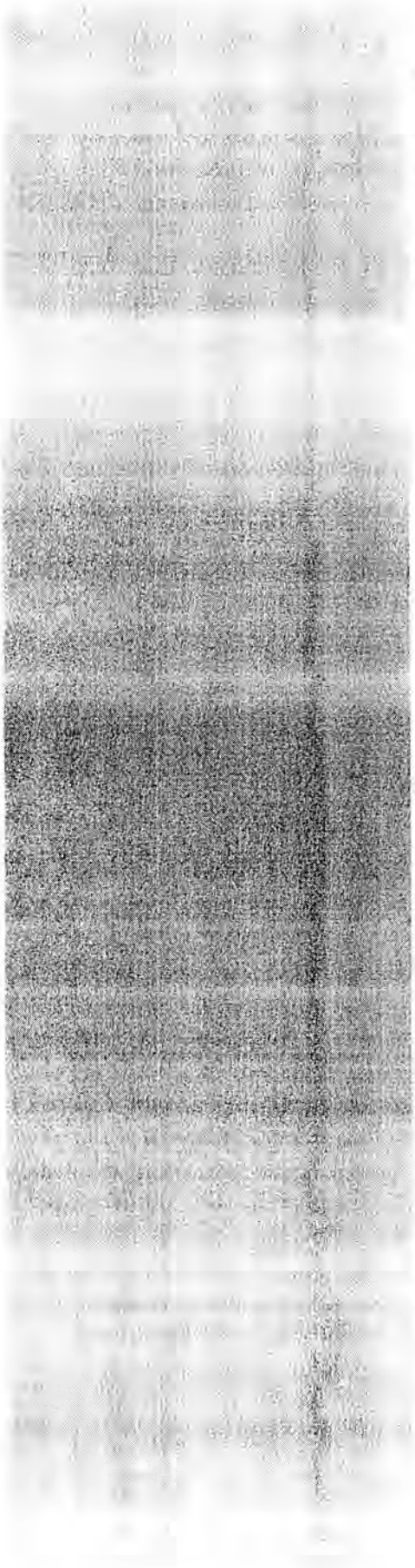
A federal Department of Energy official's insistence that the government needed the better part of 10 years and $400 million just to prepare for cleaning up contamination at the Paducah Gaseous Diffusion Plant will not give much comfort to taxpayers or people who live near the facility.

Carolyn Huntoon, DOE's assistant secretary for environmental management, recently joined the list of top DOE officials who have visited the plant since reports surfaced in August that workers at the plant may have been exposed to high levels of radioactive contamination. Huntoon told reporters the $400 million had not been wasted on bureaucratic paper shuffling and time-consuming efforts to comply with an array of environmental regulations. The money was needed to finance preliminary analysis of the contamination, which she described as "front-end work."

This raises a question: How many DOE officials and contractors does it take to screw in a lightbulb? Answer: 10 - one to screw it in, and nine to do the preliminary analysis.

We don't wish to trivialize the serious environmental problems at the gaseous diffusion plant, or to poke fun at the federal government's commitment to dealing with these problems. But some of the answers DOE officials have given the public about the pace and cost of the cleanup in Paducah simply do not pass the test of common sense.

Huntoon said the "front-end work" includes "putting processes in place," drilling wells to collect groundwater samples and pinpointing the plumes of contaminated groundwater that are migrating from the plant site.



Most observers would concede that locating the groundwater plumes tainted with trichloroethylene, a chemical used for cleaning, is work that requires care and precision. Also, the sampling, testing and collecting of data obviously are necessary first steps in the cleanup process.

But no institution other than the federal government would try to justify spending 10 years and $400 million on "preliminary analysis." Huntoon is parsing words when she says this is all part of the "cleanup." Yes, this is supposed to be an environmental cleanup operation, but very little of the contamination at the site has actually been cleaned up. The garbage, so to speak, is still there, and the neighbors aren't happy about it.

It appears that the phrase Huntoon used, "putting processes in place," describes, for the most part, the dotting of bureaucratic i's and the crossing of regulatory t's. A reasonable assumption is that this type of work has consumed most of the past decade and a great deal of the taxpayers' $400 million. Congress is looking into reports that up to 89 percent of the $400 million was used for waste management and to comply with regulations.

We're confident the waste at the gaseous diffusion plant is well managed, but like most people in this area, we want to see it cleaned up and eliminated as an environmental threat to the Ohio River and the land surrounding the plant.

Huntoon pointed out the large scale of the problem when she said, "Until you come down here and see the scrap yards and drum mountain and talk to the people, it is very difficult to appreciate the challenge we have."

After 10 years, the "challenge" is still there - 50,000 drums of waste, 37,000 cylinders of depleted uranium, 65,000 tons of scrap metal, abandoned buildings containing high levels of radioactivity, a plume of contaminated groundwater that is moving inexorably toward the Ohio River.

Perhaps the DOE will finally develop a sense of urgency about the Paducah cleanup, now that a

number of agency officials, with inquiring reporters in tow, have taken a first-hand look at the contamination problems.

Members of Congress should continue to prod the agency - and provide money that's legitimately needed to eliminate environmental hazards.

The federal government is capable of cleaning up environmental messes in a hurry; it has proved that by supervising "emergency" cleanups of toxic dump sites under the EPA Superfund program.

It's not our contention that the situation at the gaseous diffusion plant constitutes an emergency. We accept the conclusion of federal and state environmental regulators that contamination at the site does not pose an immediate - emphasis here on immediate - threat to plant workers or to people who live near the facility.

However, a decade certainly is long enough to wait for the real cleanup of the plant site to get under way. The time for "front-end work" is over.

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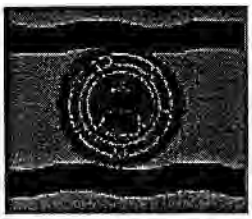

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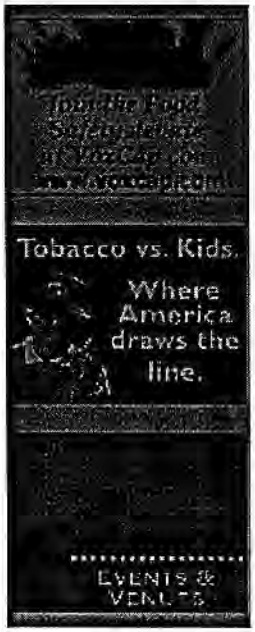

Cleanup Effort at Paducah Questioned

Radioactivity Still Poses Threat, 2 Lawmakers Say

By Joby Warrick
Washington Post Staff Writer
Saturday, October 16, 1999; Page A03

Two key House Republicans have given a skeptical appraisal of the Energy Department's efforts to clean up its Paducah, Ky., uranium plant, publicly questioning the agency's assurances that workers and neighbors are safe.

Despite an official finding last month of "no imminent hazards" at Paducah, the department's own reports show significant radioactive contamination outside the plant in areas accessible to the public, Reps. Thomas J. Bliley Jr. (Va.) and Fred Upton (Mich.) wrote in an Oct. 12 letter to the White House.

In one ditch near the plant, radiation levels were high enough to prompt inspectors to return to the site in protective suits, the lawmakers noted, citing testimony by Energy Department officials.

"Clearly there is a serious threat of radiological contamination to anyone who may access these uncontrolled areas," said the letter, released yesterday.

Bliley, chairman of the House Commerce Committee, and Upton, chairman of the panel's oversight and investigation subcommittee, are leading one of two congressional probes into environmental and safety problems at the 47-year-old Paducah Gaseous Diffusion Plant, which once supplied enriched uranium for nuclear bombs.

Republicans in recent weeks have criticized the department for failing to recognize the problems years before they became public in August. In the Oct. 12 letter, Bliley and Upton also accused the department of impeding progress by refusing to share results of environmental monitoring at the plant.

"DOE has not demonstrated that it is capable or fully committed to ensuring the safety of the community surrounding the Paducah site," they wrote.

Administration officials dismissed the charges as baseless, citing what they described as an aggressive response by Energy Secretary Bill Richardson to reports of past worker exposure to radioactive plutonium at Paducah. Besides the probe launched by Richardson in August, he also ordered a 24-hour safety "stand-down" at the plant and issued an apology and a promise of compensation to ailing workers.

A preliminary investigation last month found "no imminent hazards" that would warrant an immediate shutdown. But the probe did uncover "serious problems," including lapses in safety practices and radioactive contamination off site.

Administration officials fired back at the Republican-controlled Congress for failing to fund programs to speed up medical monitoring at Paducah. Of $21.8 million in increased funding requested by Richardson, lawmakers approved $10 million for accelerated cleanup but no additional money for workers. "We are serious about keeping our commitment to the workers, so we'll find the money," said David Michaels, assistant energy secretary for environment, safety and health.

After the expected release of a final report on Paducah next week, plant officials will have 30 days to come up with a detailed plan for fixing safety problems.

A second Paducah investigation, which looks at worker exposures before 1990, entered a new phase this week with Energy Department interviews with more than 150 employees who worked at the plant before 1990. Carolyn Huntoon, assistant energy secretary for environment management, met with some of the workers yesterday during a tour of the plant.

Investigators are already sifting through hundreds of records and other evidence submitted by workers and by neighbors of the plant. One 1998 memo suggests that managers knew of at least one area outside the plant where radiation could pose a risk.

"Even though this section is rather small, . . . the potential exists for the unescorted general public to have access to an area with the potential for a high dose of radiation," the memo states. In a 1991 document, a state police investigator cites allegations from confidential sources of illegal dumping of radioactive waste outside the plant. The now-retired investigator, Don W. Senf, of the state's Hazardous Devices Unit, told commanders in a report that the alleged dumping had gone on for years. Senf, in an interview last week, said his commanders did not investigate the claims.

A Kentucky state police spokesman said yesterday that the agency did act by checking radiation levels at a police firing range near the plant. "We didn't find anything there," Lt. Kevin Payne said.

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The Paducah Sun
October 13, 1999

No tritium detected in workers

By Bill Bartleman
The Paducah Sun

Initial test results of health physics technicians at the Paducah Gaseous Diffusion Plant showed no signs of the presence of tritium in their bodies.

"It is what we expected," said Elizabeth Stuckle, spokeswoman for USEC Inc., the plant operator. "We do not use tritium in any aspect of the uranium enrichment process."

Seven workers were tested last week after a plant employee notified USEC that tritium was discovered in April in the urine of a man who had left the Paducah plant to work at another nuclear facility.

Tritium is an isotope of hydrogen and can exist as a liquid or gas. It is used commercially in self-illuminating devices such as watches, exit signs and night scopes on rifles. It also was used in the production of hydrogen bombs.

Officials with the U.S. Department of Energy and the Nuclear Regulatory Commission said low levels of exposure are common and can come from tritium's leaking from a watch or other self-illuminating device.

High levels of exposure can cause cancer and other health problems.

Stuckle said the plant identified seven health physics technicians who worked in the same areas of the plant as the former employee. Urine samples were taken, and the results of the first four - received Tuesday - were negative, Stuckle said.

Results of the other three are expected no later than the end of the week. "We anticipate those results will be the same," Stuckle said.

She said the tests were conducted even though officials felt confident that the contamination did not come from inside the plant. "We always take a conservative road in these kinds of reports," she said. "It was a prudent business decision to go ahead and have the individuals tested."

Plant officials would not identify the former employee who had tritium in his system. They said that although it was in his urine, the level was below what is considered a health risk.

The man worked at the plant from June 1998 until April. His wife continues to work at the Paducah plant in the health physics department, Stuckle said.

Stuckle said USEC officials have been trying to contact the former employee in an effort to help trace the source of contamination. However, she said that "he has not responded to those efforts."

The employee who reported the test results that revealed the tritium to USEC also is a health physics technician but has not been identified because of confidentiality rules, Stuckle said.

In recent months, the plant has attracted nationwide attention regarding the possible existence of highly radioactive contaminants stored on the site and buried in landfills.

Allegations in two federal lawsuits include the existence of trace amounts of neptunium and plutonium contained in spent nuclear fuel that was reprocessed at the plant from 1952 to 1976.

The U.S. Department of Energy, which owns the plant and leases production facilities to USEC, has confirmed those elements' presence but said the plant is safe for workers and neighbors.

DOE is also planning a $1 billion cleanup of contaminated waste.

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The Courier-Journal
Wednesday, October 6, 1999 LOCAL NEWS

Paducah plant faces new inquiry

Senators want congressional investigation

By JAMES R. CARROLL, The Courier-Journal

WASHINGTON -- Not trusting the Department of Energy for answers, Kentucky's two senators are initiating an independent congressional study of contamination and potential cleanup costs at the Paducah Gaseous Diffusion Plant.

"What is the amount of money it's going to take to get this done correctly?" asked Sen. Jim Bunning, who originated a request for an assessment by the General Accounting Office, a nonpartisan investigative arm of Congress.

Bunning sent the GAO a letter that was also signed by Sen. Mitch McConnell and the chairman of the Senate Energy and Natural Resources Committee, Sen. Frank Murkowski of Alaska. All three are Republicans.

The Energy Department has told Kentucky lawmakers and state officials that the cleanup, which is scheduled to run through 2010, would cost between $1 billion and $2 billion.

"But those are guesstimates, rather than estimates," Bunning said in an interview.

The senators asked the GAO to determine:

- How much of the cleanup money Paducah already is receiving is going simply for paperwork and to meet regulatory requirements.
- What is in the hazardous and radioactive waste at the plant.
- What are the Energy Department's priorities for cleanup projects at the site.

A plant official complained at a congressional hearing last month that 89 percent of cleanup money went to paperwork, but later backed off on that estimate. The Environmental Protection Agency, which works with Kentucky to oversee cleanup operations, contends the paperwork burden is minimal.

The Energy Department is reviewing what materials came to, left and were produced or stored at the Paducah facility during nearly 50 years of operation.

"We trust the GAO to find (the information) factually more than the Department of Energy," Bunning said. "The DOE has been in charge (in Paducah) quite a long time and saw no reason to do anything about cleanup until we were forcing them into it."

The senators want the GAO to conclude its work by February, when Congress

receives the administration's proposed fiscal 2001 budget and begins work on its own spending priorities.

Previous stories on the Paducah plant are online at:
www.courier-journal.com/cjextra

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The Editorial Page

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The Paducah Sun

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IN OUR OPINION

October 5, 1999

WHAT CLEANUP?

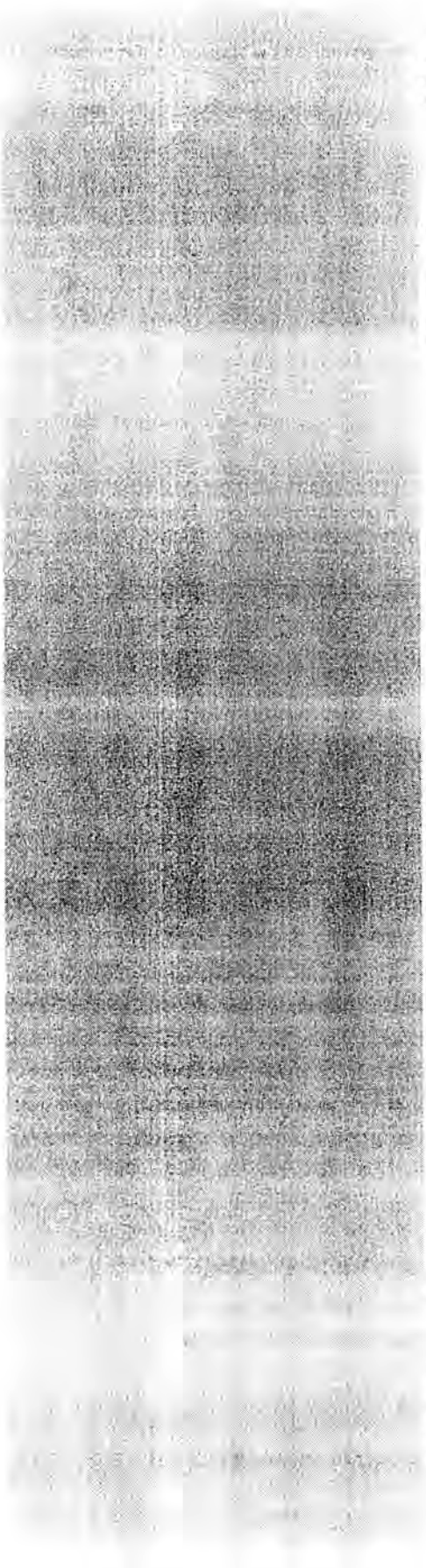
Government wasted environmental money

An especially galling and possibly even dangerous example of government waste has been identified as a result of the controversy over allegations that workers at the Paducah Gaseous Diffusion Plant were exposed to high levels of radioactive contamination. It turns out that the federal government's massive, 12-year environmental clean-up effort at the plant has accomplished very little - in large part because only a little more than a fourth of the $388 million in taxpayers' money spent for this purpose has been used for actual cleanup operations.

Several weeks ago, 1st District U.S. Rep. Ed Whitfield took a tour of the plant site, and noted the presence of piles of contaminated scrap metal, 37,000 cylinders of depleted uranium and thousands of drums of chemical waste. "When you go around and see all of these sites ... it is difficult to believe that $400 million has been spent and you still have this major of a problem," said Whitfield. "It doesn't seem to me that we received much for our money."

Indeed. Out of $388 million the government allocated over the past 12 years for dealing with environmental problems at the Paducah plant, just $106.9 million was spent for activities that actually cleaned and restored the environment, the Courier-Journal of Louisville recently reported. Clearly, Paducah has received very little bang for the taxpayers' buck.

For every $4 that arrives at the plant for the cleanup, a little less than $3 goes for storing waste, monitoring pollution, keeping up with paperwork and other items that have more to do with dotting regulatory "i's" than getting rid of toxic waste and materials contaminated with radiation.



At this rate, the government will need another dozen years and at least a billion more dollars just to make a noticeable dent in the pollution problems at the gaseous diffusion plant.

During a Sept. 20 U.S. Senate hearing held in Paducah, a Department of Energy official explained why so little progress was being made on the cleanup. Referring to scrap yards, landfills and a "mountain" of drums containing chemical waste, the official remarked, "They aren't being cleaned up. They are only being studied."

Studied? This isn't a chemistry experiment; it's a federally mandated environmental cleanup operation. After 12 years, the time for study is over.

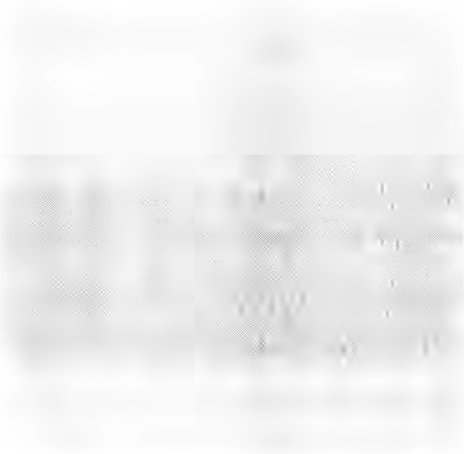
It appears that two things are needed to get the long-delayed cleanup moving - regulatory relief (and regulatory sanity) and more federal money.

Department of Energy officials have asked state and federal environmental regulators to exempt the plant from some costly regulations so that more money can be spent on cleaning up pollution. State officials have indicated they're willing to discuss easing regulations.

A hope is that officials with the federal Environmental Protection Agency also will consider allowing a little more flexibility in the interpretation of environmental rules. After all, the goal is to clean up the site, not spend decades monitoring it.

But even with regulatory relief, a cleanup program this large will require more funding. Officials with Bechtel Jacobs, the contractor working on environmental cleanup at the plant for the DOE, say the cleanup can't be completed by the current goal of 2010 unless funding is increased.

Last week Congress took a step toward speeding the cleanup by authorizing a modest increase in funding for environmental operations at the Paducah plant. The additional funds are welcome, but given that officials have used $388 million merely to waltz around the problem for 12 years, it's worth wondering whether the available money is sufficient



to produce measurable progress.

Delay on cleaning up the plant site no longer is acceptable - not with the emerging concerns about radioactive contamination and the growing threat posed by a plume of contaminated groundwater that is advancing from the facility toward the Ohio River.

The government has to prove to the people of McCracken County that it is capable of protecting the environment as well as spending taxpayers' money.

-Letter and E-Mail Guidelines-

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First - sign your name on any written communication. Don't send a photocopy of a letter or of your signature.

Second - include your complete address and telephone number where we can reach you in the daytime.

Third, - be brief.

Fourth - except in unusual circumstances, don't ask us to withhold your name. The object of all this is to give readers a forum for full and fair discussion of public issues. Sometimes we have not enforced one or another of these rules where no harm seemed to result, but writers who adhere are those most likely to be published. Letters are published pretty much on a first-come, first-serve basis. We cannot guarantee publication dates.

The Paducah Sun
October 4, 1999

Money spent on cleanup

Associated Press
LOUISVILLE, Ky.

During the past 12 years, only slightly more than one-fourth of the $388 million spent on environmental problems at the Paducah Gaseous Diffusion Plant went to actual cleanup programs.

While $106.9 million went to cleanup, the rest was spent on studying the environmental problems, storing waste, monitoring pollution, administration and other items.

Spending on cleanup has declined dramatically since the mid-1990s, despite decades of pollution and ongoing dangers from radioactive waste stored at the plant, according to records from the facility.

During the fiscal year that ended last week, spending on actual cleanup activities at the western Kentucky uranium-enrichment plant, including disposal and treatment of pollution and waste, totaled $11.5 million. That amount is less than half of the historical high of $26.2 million spent in fiscal 1995, according to numbers put together by Department of Energy officials at the plant and obtained by The Courier-Journal.

A category of cleanup spending called "Remedial actions" - which includes the operation to pump and treat two underground plumes of water contaminated with radioactive technetium-99 and an industrial solvent - received less than one-fifth of the spending they did in fiscal 1995, the records show. The plumes are moving toward the Ohio River.

"We think Paducah ought to be a higher priority," said Jon Johnston, federal facilities branch chief for the Environmental Protection Agency's Region 4, which includes Kentucky.

Kentucky's congressional delegation, along with Gov. Paul Patton and other state officials, have been pressuring the Energy Department and the White House for a dramatic and an immediate increase in cleanup spending - on the order of $100 million per year.

"They have not been interested in cleanup," Sen. Mitch McConnell, R-Ky., said of the Energy Department. "The only good thing about all these revelations (of problems in Paducah) is it should make it easier for us to get the department to

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ENVIRONMENT

Tokaimura incident similar to one at Oak Ridge

Scripps Howard News Service

OAK RIDGE -- The radiation accident that occurred last week at a uranium-processing facility in Japan was strikingly similar to an accident that occurred 41 years ago at the Y-12 nuclear weapons plant in Oak Ridge.

"That was the thing that hit me immediately," retired Department of Energy official Joe Lenhard said after reading newspaper accounts and watching TV reports on the situation at Tokaimura, Japan.

Lenhard was a radiation protection specialist at the time of the Oak Ridge accident, June 16, 1958, which resulted in the hospitalization of eight Y-12 workers.

The so-called criticality accident, involving an uncontrolled, self-sustaining nuclear chain reaction, occurred when a solution of highly enriched uranium was inadvertently drained into a 55-gallon drum.

The drum was not safely configured to handle the fissile uranium solution (about 90% U-235), and a nuclear reaction -- signaled by a flash of blue light -- exposed nearby workers to a dangerous burst of radiation.

"This regrettable accident is believed to be the first nuclear excursion to have occurred in a uranium processing facility," investigators said in a report issued weeks later.

Alarms went off throughout the Oak Ridge plant, and hundreds of plant workers reported to evacuation zones while safety officers tried to identify the problem, which soon dissipated.

"For a while there we had a 55-gallon nuclear reactor," said Hal McAlduff, an Oak Ridge employee of the Atomic Energy Commission who participated in the accident investigation.

The accident caused little damage to plant facilities and reportedly posed no hazard to the general population or the environment.

Several Y-12 workers, however, received severe radiation doses -- up to 461 rems -- and suffered symptoms of radiation sickness, such as nausea, hair loss, bleeding gums and aberrant blood counts.

All of the eight men eventually returned to work at Y-12, and three of them are still living.

Bill Clark, one of the workers, recently said the accident ruined his life. He said he was later laid off at Y-12 and had trouble finding another job, partly because he was stigmatized as a risk because of the radiation exposure.

Clark blames the accident for some of his health problems, including a bout with colon cancer.

The eight workers sued the federal government for damages and settled out of court in 1960.

Lenhard said many aspects of the Japanese accident, such as the transfer of uranium solution between containers and the flash of blue light, were "amazingly similar" to the Y-12 accident scene.

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The Paducah Sun

October 3, 1999

Retiree: No fraud, no lies at plant

By Bill Bartleman
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Dick Baker says the only lies and deceptions about the operation of the Paducah Gaseous Diffusion Plant are coming from those who are alleging that the plant was unsafe for workers and that it caused widespread health problems.

"If you do a real epidemiological study of all the health effects of the people who worked at the Paducah plant and compare them with the population of 10,000 people somewhere else, I think you'll find the Paducah plant population is healthier," said Baker, who was the plant's original health physics director.

Since 1952, the plant has enriched uranium for use in nuclear weapons and as fuel to power generating plants. The plant is now leased by the U.S. Department of Energy to the United States Enrichment Corp.

Baker, who still lives in Paducah, worked there from October 1951, before the start of production, until he retired in 1986. He began working at the Oak Ridge (Tenn.) Gaseous Diffusion Plant in 1945.

His duties in Paducah were to develop programs to make sure employees were not overexposed to radiation, train workers about the safety procedures, monitor working conditions and oversee testing of workers whose job assignments were in high-risk areas.

Baker's views are far different from those of people who have gained national attention after filing federal lawsuits seeking millions of dollars in damages, and people who have testified at two congressional hearings. He believes the public is being misled about the plant's safety and working conditions.

Baker, 77, also expressed anger at the news media for the attention given to a small number of current and former employees who have alleged that the federal government and plant management lied, were deceptive about working conditions and falsified medical records to conceal the effects of exposure to radiation and other chemicals.

It is because of those news articles and broadcast reports that he agreed to speak out and give his account of conditions at the plant.

"There are a lot of lies surrounding a little bit of truth," he said of the allegations. "There was no fraud. People were not lied to. A fraudulent conspiracy was just about impossible because of the number of people involved in the operation."

He said managers who worked for Union Carbide Corp., the first operator of the plant, had no reason to be involved in a conspiracy or to hide facts from workers. "There was nothing to gain because the contractor was paid a fixed fee, not a fee based on performance," he said. "They were told to do the best job they could."

He said the fee based on performance began when Martin Marietta became the operator in the early 1980s. Even then, he said, managers had no incentive to deceive or falsify facts about the operation and environmental management.

"I think we did a good job of protecting the people," Baker said. "We had health protection measures in place, and we trained people. We did everything we could to make it safe and never had any employee who showed exposure at levels above the annual acceptable limits."

Baker acknowledged there were incidents in which radioactive materials spilled inside the plant and were released into the atmosphere. However, he said those accidents were the exception, not the rule.

"People who have talked about those incidents painted a worse picture than it was," he said. "We did have some areas where we had visible dust at times, but certainly not all the time. It was not an everyday occurrence."

He said the health and safety programs that were in place protected workers from overexposure.

"There were design problems when the plant first started," he said. "We did have quite a few problems and accidents in which emergency procedures were used. But the training paid off, and workers were protected."

He said the early problems were related to the plant's physical characteristics and design. There would be uranium leaks in joints in the process equipment and spills from an antiquated process of loading uranium feed material into the cascade system.

Initially, he said, the feed material came to the plant in 30- and 55-gallon drums that had to be opened and dumped into feed hoppers. He said the potential existed for spills and airborne exposure.

"The guy operating a drum dumper had to wear respiratory protection all the time he was dumping," Baker said. Also, those workers were given plant-issued coveralls that they took off before going home at night.

In later years, Baker said, all hourly workers were issued work clothes that were changed at the end of each day. Also, they were given time at the end of the workday to shower and change into their street clothes.

Another problem during the early years of the plant operation was in the area where ash was removed from the operating system. He said the tails, as they were called, had high levels of radioactivity and were placed in drums. Workers had to go into the processing room to put lids on the drums, which caused exposure. He said the exposure was not above acceptable dosage limits.

Respiratory protection, which was required, involved the use of a military-style gas mask that included a filtering system to remove small particles. He said the efficiency of the masks was tested by the manufacturer and at the plant.

Not long after the plant opened, he said a shipping cylinder was developed that could be bolted directly onto the cascade system, eliminating the need to dump drums into the hopper. Also, the same cylinders were used to remove the depleted uranium from the system.

By 1960, he said the problems in the production system were fixed through engineering advancements and changes in equipment. "There were more releases and accidents before 1960 than there have been since 1960," Baker said.

Baker said there were specific rules to protect employees whenever there was a leak.

"I was impressed by the importance of minimizing the amount of uranium and contamination in the air to keep it from entering people by inhaling it," Baker said. He said floor and surface contamination needed to be cleaned up but didn't pose the problems of airborne contamination. He

said workers were trained not to sweep with a broom but to clean with vacuum hoses.

He said workers were trusted to follow safety procedures and use protective equipment. He said supervisors were responsible for seeing they were followed.

"The compliance was fairly good to very good," he said.

A major part of the safety program was to monitor employee exposure through urine tests, Baker said. Also, he said some workers in areas that had potential for high exposure were given special body testing to determine what level of radiation they had in their systems.

Some were sent to Oak Ridge for testing until a mobile unit was built that was brought to Paducah on a regular schedule.

He said the test results were given to the worker, who immediately took them to one of the plant's medical technicians. A technician read and explained the results.

At least one worker has alleged that he had high levels of contamination but that his records were changed.

Baker denied that. "The records passed through too many hands to hide or falsify the results," he said. "We wanted complete honesty from the people we hired. We had people in the program who weren't shy about expressing their views."

Workers who had high-exposure levels or the potential of meeting annual dosage limits were checked several times, Baker said. Those who had high levels were transferred to other jobs with a lower risk of exposure.

Air samples were taken in areas where there was risk for accidents and leaks. If air samples indicated higher than normal levels, workers were tested for exposure.

Also, Baker said he was aware that neptunium and plutonium were included in the uranium fuel that was brought to the plant from nuclear reactors to be recycled. He said workers who needed to know were told about those highly radioactive elements.

Baker said the greatest risk for exposure to neptunium and plutonium was in the ash receivers that contained waste from the enrichment process. He said that for several years in the late 1950s, there was a recovery process to remove the neptunium from the ash. The recovered neptunium was sent to other facilities where it was used in highly secretive operations to build nuclear bombs and as a power source in satellites and space vehicles being developed by NASA.

"Employees were not lied to about what was in the process," Baker said. "Some people were not told about or trained in handling plutonium and neptunium because it was not in their work area. Others may have been told about it but forgot it because we didn't stress it."

He said it wasn't stressed because it was during the Cold War and much of the work was part of a secret national defense program.

Baker said one of his big disappointments in looking back at the operation of the plant is that hazardous waste was buried at the plant and released into streams. At the time, however, he said there were no regulations to prevent it and experts hired to study the effects said it wouldn't harm the environment.

He said a chemical used to clean equipment was diverted to the Little Bayou Creek, which emptied into the Ohio River. He said officials at the time had determined that the contaminants would not cause harm because they would be diluted by the volume of water in the Ohio River.

Also, he said there were no landfills or waste disposal sites that would accept mixed waste, which is waste contaminated with both radiation and chemicals. "We wanted to ship the waste off to a proper disposal area, but we weren't allowed to. We couldn't get rid of it, so we had to bury some of it."

At the time, he said officials didn't think it would cause problems because of the heavy clay content of the soil.

However, contamination has leached into the soil and the groundwater. Private wells near the plant were contaminated.

"In retrospect, the Atomic Energy Commission should have built a much larger cleaning and uranium recovery system than they did out there," Baker said. "They just couldn't keep up with the stuff that was generated at the plant."

Baker said he has contacted the U.S. Department of Energy and volunteered to meet with a team of investigators to relate his knowledge about past operations and history of the plant. DOE is trying to reconstruct the history to determine whether past operators violated rules and procedures, and whether employees were misled about the operation and exposed to hazards that caused health problems.

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Letters

Information needed to clarify issues concerning gaseous diffusion plant

EDITOR:

I am pleased to see The Paducah Sun beginning to delve beneath the one-line statements issued by plant and DOE officials in an effort to get to the truth. To assist these efforts, I have put together some information that might clarify recent stories that have been covered in local, regional, and national news sources.

The "X-element" document referenced by Mr. Bartleman describes the accomplishments of the transuranic recovery system at the plant that primarily focused on cylinder heels and chemical filters designed to catch these specific materials. Large quantities of concentrated transuranics were processed in a different system. It should be noted that plutonium was extracted and purified along with neptunium. Additional systems existed for thorium and technetium.

Thorium has not received much press — yet, but came into the plant in diluted and concentrated forms. Thorium is particularly hazardous to humans.

oducts of transuranic efforts were concentrated gh to require "criticality safe" containers. These containers are used when the materials inside could undergo spontaneous fission that would emit immense quantities of deadly radiation. Assertions from plant officials that imply this activity was some type of short term, table-top operation are misleading at best. These systems were described in documents written before 1996. Clarification on all of these issues is particularly important to the workers (or their relatives) who used to work in the transuranic areas or later disassembled the equipment.

Another brief clarification needs to be made on an article in the Sept. 25 edition of The (Louisville) Courier-Journal. During my tenure at the PGDP, I was informed about an occasion where a drum of transuranic system waste burst and emitted a cloud of brown smoke that headed toward a group of subcontractors working on a cooling tower. This occurred several years prior to the recent drum failure and should have forewarned those in charge that the drums were not safe. Clearly, subcontractors might have been exposed to significant dangers which were not identified to them.

During the next several months it will become clear that there are three primary issues at the plant: worker exposure to radiation and chemicals, financial mismanagement, and the misleading of the government by individuals/companies at the site.

I believe that it will become apparent that individuals responsible for some of these acts are still at the site wearing a different company's hat. I reported my concerns to the DOE, site officials and the Oak Ridge DOE Inspector General's office in 1995, the FBI in 1996, and the Office of Special Counsel in 1997. My reports included examples of mismanagment, fraud, improper waste handling, document destruction, and worker exposure to radiation and chemicals.

Mr. Whitfield has begun to hit on the aspect of monetary waste and I believe handing these persons even more money is the last thing that the taxpayers should be asked to do. You will not knock common sense into a person by hitting them with larger wads of money.

JOHN TILLSON
Sharpe

The Editorial Page

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The Paducah Sun

DOE proposing experimental incinerator for toxic waste

EDITOR:

This letter is to alert the citizens of the area to a proposal by the Department of Energy to use an experimental incinerator, Vortec, to treat tons of transuranic, (radioactive) and toxic waste at the Paducah Gaseous Diffusion Plant.

Vortec is experimental. It has never been used for a cleanup. It has never been used to burn radionuclides. When tested in Pittsburgh where it was built, it failed to destroy heavy metals. During testing, Vortec released pollutants out its stack into the air.

If allowed to be used here, Vortec will release millions of gallons of water containing radionuclides and heavy metals into Big Bayou Creek. Vortec will release pollutants out its stack into our air that will travel for miles. On top of this, DOE admits accidents and human error could occur.

We have been and continue to be exposed to deadly groundwater and air pollution from the plant. We can't let DOE expose us to more pollution.

DOE needs to concentrate on building storage facilities for the waste until a safe, proven treatment can be found.

Please comment on the proposal to let Vortec come into our community. DOE is taking public comments on this proposal. Call or write David Tidwell, DOE, P.O. Box 1410, Paducah, KY 42002,

IN OUR OPINION

October 2, 1999

POSITIVE STEP

Plant cleanup funding gets needed boost

McCracken County residents and workers at the Paducah Gaseous Diffusion Plant should draw some encouragement from congressional approval of legislation authorizing $63 million to speed the cleanup of contamination at the uranium enrichment facility.

After weeks of negative publicity stemming from allegations that workers at the plant were exposed without their knowledge to highly radioactive substances, the congressional action (President Clinton signed the bill Thursday) represents a positive step toward eliminating environmental problems caused by the 47-year-old plant's operations. The funding also should beef up health studies of current and former workers, but that point is in dispute. Energy Secretary Bill Richardson apparently believes the amount allocated for health studies isn't adequate.

In any event, as a result of the reports about contamination at the plant, Paducah will receive an additional $26 million for the cleanup and health evaluations. The extra funding should help, but Gov. Paul Patton probably was close to the mark when he said $100 million a year was needed to get the slow-moving cleanup on the fast track.

The federal government has spent $400 million since 1989 on cleaning up the Paducah plant site without making noticeable progress.

Some recent discoveries should lend a sense of urgency to the cleanup operation. A special Department of Energy investigative team determined that several environmental problems at the site need immediate attention. One of the most pressing problems the team identified was the deterioration of

and ask (the DOE to issue) an Environmental Impact Statement. This will help to identify the health and environmental risks we face.

KRISTI HANSON
Brookport, Ill.

Both political parties driving America down the road to socialism

EDITOR:

What's the fuss? Democrats and Republicans alike are all in a tizzy over State Sen. Bob Leeper's apparent party switch. I stress the word apparent because in reality there's not a dime's bit of difference between the two.

Sen. Leeper has done what many self-serving politicians have done throughout the country since the 1994 elections. He has placed his political finger in the wind and he has noticed the shift in direction. He has set his unprincipled disloyal sails to the new tack of self-promotion.

In today's political world all the parts are interchangeable. Both parties are driving this country down the road to socialism. The only difference is how fast. Democrats have their pedal to the metal and are racing towards socialism at 100 mph, while the Republicans choose to cruise at 80 mph. The end result of both will be the same proven failure, but the drivers will change.

By his switch, Sen. Leeper has just taken his foot off the gas. He'll continue the socialist's creed of

buildings that were abandoned because of heavy radioactive contamination.

The Sun reported last week that a contract worker was exposed to noxious fumes while he was taking groundwater samples on the plant grounds. Officials are investigating the source of the fumes, but the incident underscores that contamination from radioactive substances and toxic chemicals still poses a potential health threat at the site.

Perhaps the greatest current health concern associated with the plant is the plume of contaminated groundwater that has moved two miles from the site and is threatening the Ohio River. The water is contaminated with trichloroethylene, a chemical that was used to clean equipment at the plant.

Clearly, it's going to take a major funding commitment from the federal government to deal with all the consequences of the government's use of the uranium enrichment facility in Cold War weapons programs. The $63 million allocation is a start, but this is a long-term obligation that will require substantial funding over a period of many years.

REGULATION NEEDED

City moves to protect neighborhoods

The Paducah residents who spoke at a city commission meeting Tuesday night gave eloquent voice to the need for an ordinance regulating rental property.

Homeowners described deteriorating rental units that bred crime and social decay in once-thriving neighborhoods. One woman talked about bullets from a recent drive-by shooting penetrating her house. "I've lost the use of our streets," said Pat

taxing everything that moves and everything that doesn't. It matters little to either party that the average citizen has to work until mid-May before he earns a dime for himself or his family. It matters even less that the average American now pays more in taxes than she does on food, shelter or clothing for her family.

The average American now works more for less as our gas-guzzling government grows ever larger. Sen. Leeper can now use the illogical Republican rationalization that since he's now driving slower he is actually saving us money even though the destinations are the same.

We've ceased to be a republic and we've allowed ourselves to become serfs to socialists. As we continue to believe the spin, we have no one to blame but ourselves.

BERNARD F. KENNETZ JR.
Paducah

Public deserves balanced reporting on problems at gaseous diffusion plant

EDITOR:

As a 40-year former employee of the Paducah Gaseous Diffusion Plant, I would like to caution your readers, as well as readers of other publications and television viewers, that they need to realize most of the information in the stories related to contamination in or near the plant has been furnished to the media by a very small number of activists who are hoping to get rich from the publicity.

Why is it that the vast majority of the information in the media are quotes from these few activists and almost nothing from the several

Mills, who lives near Carson Park.

City Inspector Joel Scarborough spoke of visiting a house that was filled with trash, dog excrement and dangling electrical cords.

It's up to city government to do something about these appalling conditions, a fact that has been recognized by Mayor Albert Jones and the commission. Jones said only about 5 percent of Paducah's landlords were "slum lords," but there's no doubt that small percentage can do great damage to neighborhoods and to the image of the city as a whole.

The proposed ordinance is a natural extension of Jones' campaign to spruce up the city by eliminating dilapidated housing. That campaign has proved controversial at times; nevertheless, the ordinance, which calls for regular inspections of rental property and a business license fee for landlords, deserves broad support.

The inspection program will allow the city to exert legitimate pressure on landlords to keep their property in good condition. However, the proposed ordinance does not impose unreasonable requirements on rental property owners, and it probably won't have much impact on responsible landlords.

Jones also is pushing for an ordinance allowing the city to confiscate "drug houses" where tenants have been repeatedly arrested for selling drugs. This proposal also deserves consideration, but the city needs to adopt appropriate legal safeguards to ensure the seizure authority isn't abused.

We believe the mayor and the commission are on the right track in pursuing measures that will protect neighborhoods and enhance the city's overall quality of life.

thousand people who have worked at the Paducah Gaseous Diffusion Plant over the last 49 years?

The public deserves to hear some balanced reporting on the alleged Paducah plant problems rather than distorting them more with each media report.

E.P. LARSON
Farragut, Tenn.

Head of plant guard union shows apparent ignorance of harassment laws

EDITOR:

John Driskill's claim Sept. 25 ("Whistleblower 'lied' says guard union president") is factually wrong and proves that Mr. Driskill just doesn't get it.

Whether an admitted "hole" in the forehead of a posted picture of whistleblower Ron Fowler was created by a real bullet or by a punch simulating a bullet is irrelevant to this clear (and illegal) attempt to induce fear and single out Mr. Fowler for humiliation. Mr. Driskill's defense of this act as a mere "joke" illustrates precisely what Ron Fowler's testimony was all about - the culture of indifference to worker protection laws and the defective management culture that still exists at the Paducah plant.

As the head of a guard union at a major federal weapons plant, Mr. Driskill's apparent ignorance or indifference regarding laws protecting workers from intimidation and harassment is appalling.

Federal authorities have yet to complete their investigations of this incident, contrary to Mr. Driskill's claim. We fully expect Mr. Fowler will prevail.

JOSEPH R. EGAN
Attorney for Mr. Fowler
Washington, D.C.

WRITE YOUR REPRESENTATIVES

Here are the addresses and phone numbers of your officials in Washington:

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Washington office: 202-224-4343

U.S. SEN. MITCH McCONNELL
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-Letter and E-Mail Guidelines-

The Paducah Sun welcomes letters and E-mail from readers. Published letters must include a phone number, signature and address for purposes of verification (we will not publish your phone number or street address, but we will call you to verify that the letter or message we received is yours). All are subject to editing for clarity and brevity. We try to give broad leeway to writers, but obviously we will not publish communications that strike us as possibly libelous, unduly personal, mean-spirited, or racially inflammatory. In addition, we ask that you adhere to the following guidelines:

First - sign your name on any written communication. Don't send a photocopy of a letter or of your signature.

Second - include your complete address and telephone number where we can reach you in the daytime.

Third, - be brief.

Fourth - except in unusual circumstances, don't ask us to withhold your name. The object of all this is to give readers a forum for full and fair discussion of public issues. Sometimes we have not enforced one or another of these rules where no harm seemed to result, but writers who adhere are those most likely to be published. Letters are published pretty much on a first-come, first-serve basis. We cannot guarantee publication dates.

The Courier-Journal
Friday, Oct. 1, 1999 LOCAL NEWS

Paducah cleanup bill signed by Clinton

Agency pledges to find money for more health tests

By JAMES R. CARROLL, The Courier-Journal

WASHINGTON -- President Clinton has signed legislation that increases spending for cleanup of radioactive contamination at the Paducah Gaseous Diffusion Plant, but the measure does not set aside enough money to expand health testing of employees.

The Department of Energy pledged yesterday that it would find money in its budget to increase the number of current and former Paducah workers it will monitor for health problems from 350 to about 2,000. Energy Secretary Bill Richardson promised the expanded testing when he visited Paducah two weeks ago.

"The president signed a bill which does not contain funding to fulfill the commitments the secretary of energy made," said Richard Miller, policy analyst for the Paper, Allied-Industrial, Chemical and Energy Workers International Union, which represents many employees at the Paducah plant.

But a spokesman for Richardson sought to reassure the union.

"Secretary Richardson is absolutely committed to do the (medical testing) work and we will find the money for the work," said Jeff Sherwood.

Earlier this week, the House and the Senate approved a package totaling about $63 million for cleanup at Paducah as part of the $22 billion fiscal 2000 energy and water bill. Nearly $40 million was spent on cleanup at Paducah in the fiscal year that ended yesterday.

The measure also included language directing the Department of Energy to expand medical testing of current and former workers at Paducah, and the House and Senate conferees added $8 million to a department program for studying health effects.

In essence, Congress asked the department to do what Richardson already said his department would do.

Within hours, however, differences emerged over what the conference panel had produced.

The conferees' staff and department representatives had worked closely on the final shape of the spending bill, and members of the Kentucky congressional delegation hailed what was achieved.

Richardson, on the other hand, put out a little-noticed statement on Monday attacking the bill on a number of fronts. In the second-to-last sentence of his statement, the secretary said: "Finally, I am dismayed that the conference

committee did not provide the full budget request made to Congress for Paducah, (and two other uranium-enrichment facilities in) Portsmouth (in Ohio) and Oak Ridge (in Tennessee), leaving us short of our commitment to worker health and safety at the gaseous diffusion plants."

That did not sit well with Sen. Mitch McConnell, R-Ky., who as a conference committee member had carried the department's requests for budget add-ons for Paducah.

"I wish Secretary Richardson would spend less time pointing fingers and more time fixing the problem," the senator said in a statement yesterday. "The people of Paducah don't benefit from a blame game. That's why the Kentucky congressional delegation and Governor (Paul) Patton are working together to ensure adequate funding is secured, and to force the Department of Energy to get its cleanup efforts in gear."

Richardson did not specify what he did not get from Congress, and Sherwood was unable to provide details late yesterday. "I am confirming his concerns," the department spokesman said, but reiterated that "we'll find the money."

House conferees refused to accept a McConnell amendment earmarking a specific amount of money for health testing. Instead, the conferees agreed to direct the department to use money already in the budget.

"From within available funds," the bill states, "the department should reprioritize the funding of health effects studies to address the health concerns of current and former workers for the purpose of early identification of work-related diseases at the gaseous diffusion plants in Paducah, Portsmouth, Oak Ridge."

But Miller said the program from which the testing was to be funded was "precommitted" for other purposes, even after Congress transferred $8 million from another program to enhance the health-effects study program.

As a result, only the testing of about 350 former Paducah workers can be paid for out of the new budget, Miller said.

He said he and department officials were talking about possible solutions.

"The bill was just signed by the president," Sherwood said. "Our budget people will have to look at it and sort out that kind of thing."

Previous stories on the Paducah plant are online at:
www.courier-journal.com/cjextra/uranium

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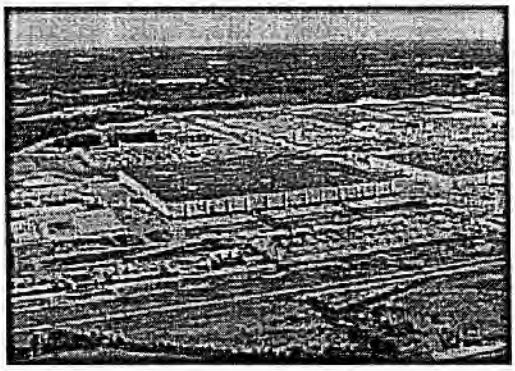
Plant's Plutonium Threat May Be Overshadowed



DOE Findings on Exposures Points to Harm From Other Contaminant

The radioactive contaminant neptunium may have posed a greater threat than plutonium at three Energy Department plants where the government has acknowledged workers were exposed to toxic material. The Paduca plant, shown here, is one of those involved. (ABCNEWS)

By James Prichard
The Associated Press

EVANSVILLE, Ind., Sept. 30 — The radioactive contaminant neptunium may have posed a greater threat than plutonium at three Energy Department plants where the government has acknowledged workers were exposed to toxic material.

"I've been focused very much on the neptunium and it's a little dismaying to me all the attention that's given to plutonium," said David Michaels, the agency's assistant secretary for environment, safety and health.

He said neptunium posed a greater danger simply because there was so much more of it.

Michaels on Wednesday announced preliminary findings from a review of the handling of recycled uranium years ago at the gaseous diffusion plants in Paducah, Ky., Oak Ridge, Tenn., and Piketon, Ohio.

The uranium was used in military or commercial applications before being recycled by the plants, which now enrich uranium solely for fuel in nuclear reactors.

The review is being performed in conjunction with an investigation ordered by Energy Secretary Bill Richardson into health, safety and environmental concerns at the plants. The government has acknowledged that workers at the plants were unwittingly exposed to plutonium and other toxic materials.

The Paducah plant apparently processed most of

SUMMARY

The DOE has found that another contaminant may have been more harmful than the plutonium that workers were exposed to at three government plants.

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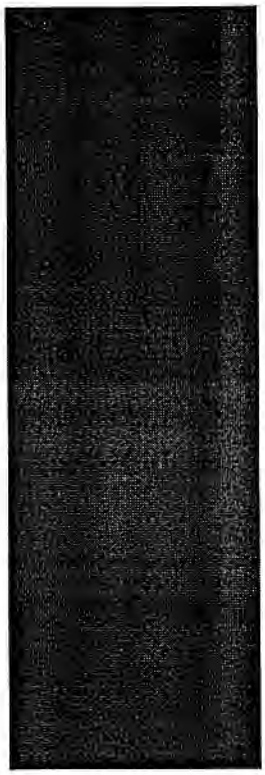

The Paducah plant apparently processed most of the agency's recycled uranium — about 100,000 tons of the material, which contained an estimated 12 ounces of plutonium, compared with 41 pounds of neptunium.

The Energy Department said the information will allow it to determine whether more extensive reviews of exposures among plant workers or environmental contamination are required. Exposure to radiation has been linked to forms of cancer.

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DOE NEWS

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FOR IMMEDIATE RELEASE
September 27, 1999

Energy Department Investigation Team Seeks Health and Safety Help from Paducah Plant Workers

Paducah, KY – The U.S. Department of Energy (DOE) independent investigation team is seeking information from current and former employees of the Paducah Gaseous Diffusion Plant as a part of its continuing investigation of environment, safety and health issues at the plant.

During his recent visit to Paducah, Secretary Bill Richardson encouraged residents, workers and retirees to share information that could help the Energy Department's investigation team. The Department's investigation is now looking at historical practices dating to the beginning of the Paducah operations in the early 1950's. Former workers and supervisors with specific operational knowledge of cascade, feed, chemical, metal plant and environmental waste operations between 1950 and 1990 are encouraged to share any information with members of the investigative team, who will return to Paducah in early October.

Individuals involved in operations, maintenance, cascade modifications, waste management or disposal, or monitoring of environment, safety and health who believe they can provide information of value to the investigation should call **1-800-556-5415** by October 5, 1999. Calls will be returned by the Department's Office of Oversight, who will schedule times for interviews.

Advertisements describing the Department's request for participation appeared in Paducah area newspapers beginning Sunday, September 26.

-DOE-

R-99-P13

The Courier-Journal
Thursday, Sept. 23, 1999 LOCAL NEWS

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Witness: Safety lax at Paducah

Congress told plant problems are continuing

By JAMES R. CARROLL, The Courier-Journal

WASHINGTON -- As Congress sent more money to the Paducah Gaseous Diffusion Plant to keep cylinders of radioactive waste from leaking, whistle-blowers from the facility warned yesterday that problems still existed despite the renewed federal emphasis on safety.

At a House subcommittee hearing, Ronald Fowler, a health physicist employed by the United States Enrichment Corp. at the Paducah plant and one of the whistle-blowers, told of recent incidents. None of them were mentioned in a preliminary investigation by a Department of Energy team that issued findings just last week.

The incidents Fowler described are:

* A computer from the plant that was supposed to be donated to a school was discovered to be contaminated by radiation. The discovery was made almost at the moment it was to be shipped.

* Some members of a work team on a radioactive site failed their training because, it turned out, they were functionally illiterate and could not read posted hazard signs.

* A cleanup team was sent into a contaminated building without protective breathing equipment. The team was withdrawn and sent to training. While that team was in training, a second group was sent into the building, also without breathing equipment.

* There are no monitoring devices in places like cafeterias to ensure that workers who may have been exposed to radiation do not bring contamination with them.

"I know that problems persist to this day," Fowler told the House Commerce Committee's investigations and oversight subcommittee.

But Joseph Nemec, president of Bechtel Jacobs Co. LLC, which is running the environmental cleanup program at the plant, said Paducah has seen dramatic safety and health improvements over the past six years.

"The programs we have in place, we feel comfortable do protect our workers," he said.

Lawmakers showed a bipartisan front of skepticism about such assurances. The House members appeared especially taken aback by a Sept. 8 internal e-mail from Paducah site manager Jimmy Massey, written the day before a safety stand-down

ordered by the Energy Department. It said: "I still have season's tickets to the circus for sale if anyone . . . still needs one."

"What I hope it doesn't imply is that this matter is being taken lightly," a stern-faced Rep. Ted Strickland, D-Ohio, said to Nemec, whose company employs Massey.

"That statement by Mr. Massey was an inappropriate statement," Nemec answered, adding that his company takes the safety issues at Paducah "very seriously."

REP. ED

Whitfield, R-1st District, which includes Paducah, announced at the start of more than five hours of testimony about the plant's safety problems that $1.96 million had been redirected by the Energy Department in the current federal budget to keep thousands of cylinders containing uranium hexafluoride from leaking.

The money will go to cleaning and repainting some of the 37,745 cylinders stored in the open at Paducah. Many of the containers are rusting, and a repainting program was halted after money ran out, according to the department. So far, 3,370 cylinders have been cleaned and painted.

Meanwhile, Kentucky Gov. Paul Patton made a one-day trip to the nation's capital to meet with Whitfield, Sen. Mitch McConnell, R-Ky., Energy Secretary Bill Richardson and White House budget officials to urge that additional money be appropriated to clean up the Paducah facility.

At the House subcommittee hearing, Fowler and fellow whistle-blower and plant employee Garland "Bud" Jenkins were joined by Thomas Cochran, director of nuclear programs for the Natural Resources Defense Council, in laying out a picture of a facility with no effective radiation controls as recently as 1991.

THE WITNESSES

told of questioning policies and being rebuffed -- and sometimes even being harassed by colleagues.

Fowler said the contaminated computer that was supposed to go to a school was discovered after the wife of a whistle-blower, who also works at the plant, gave the computer a second scan for contamination.

Fowler declined through a spokesman to speak with reporters to provide details about the recent incidents.

M. Brad Graves, who works for Lockheed Martin Energy Systems in Oak Ridge, Tenn., said that when he was sent to Paducah in 1989 as a health physicist, every radiological control program and procedure "was non-compliant."

He said he found "widespread contamination across the facility."

"It was quite a shock to me," Graves told the panel.

But it was more than a year before he learned that radioactive plutonium and neptunium were among the contaminants.

Fowler, Jenkins and Cochran are among a group of employees who have charged in a suit that former plant operators Lockheed Martin Corp. and its predecessor, Martin Marietta Energy Systems, lied to the government about efforts to protect workers against radiation and about how much contamination was in and around the plant.

"THERE IS

a need for a radical change in the culture of the plant," Cochran insisted, adding that the Energy Department's finding last week that the facility posed no "imminent hazard" to the public or workers was "unfortunate."

"An imminent hazard means a nuclear explosion or a meltdown," he said. "We're talking about chronic exposure to workers (from radioactive materials). Those problems still exist."

Jenkins said he agreed with Jim Key, the environment, safety and health representative for Local 5-550 of the Paper, Allied Industrial, Chemical and Energy Workers Union, that the plant now "is safe."

"But there's always room for improved safety," Key added.

Rep. Fred Upton, R-Mich., chairman of the subcommittee, said he found the department's two-week probe of the plant "insufficient."

"Two weeks is not enough time to get your hands around 10 years of mismanagement," he said.

Later, confronting Nemec, Upton asked: "Do you believe the radiation protection program is broken?"

"No, I do not," Nemec replied.

Rep. Richard Burr, R-N.C., raised questions with plant operators and federal officials about why an appendix to a 1991 Lockheed Martin report on contamination at Paducah failed to see the light of day until reporters, the subcommittee and the whistle-blowers' attorneys asked for it.

THAT APPENDIX

for the first time included sample sites outside the plant that showed readings of significant plutonium contamination, although Burr said that an environmental report to the department written after the date of the appendix made no mention of plutonium.

Burr asked John Jay Hummer, Lockheed Martin's director of corporate environment, safety and health, whether his company had ever been asked by the Energy Department to falsify or alter records.

"To my knowledge, that has never happened," Hummer said.

As for the whistle-blowers' charges that Lockheed Martin illegally dumped radioactive waste without telling Kentucky or federal regulators, Hummer said: "To the best of my knowledge, that did not happen."

"There is no way the plant management, Martin Marietta or Lockheed Martin

management, would have approved it," Hummer added.

David Michaels, the Energy Department's assistant secretary for environment, safety and health, told the lawmakers that his agency would attempt to resolve all outstanding issues regarding safety at Paducah.

Malcolm Knapp, deputy executive director for materials, research and state programs at the Nuclear Regulatory Commission, said the plant's current operator, United States Enrichment Corp., was operating the facility "safely and in accordance" with federal requirements.

He revealed the company has been cited by the Nuclear Regulatory Commission 104 times for violations, but said most of them were not serious. One led to a $55,000 civil penalty.

Whitfield, who asked for the hearing, said he expected additional ones.

The Paducah workers, he said, "expect their employers and their government to be honest with them, to provide them with a safe place to work, to pay them a fair wage and to compensate them for medical expenses incurred because of irresponsibility by the government or its contractors."

"The entire Paducah community," he said, "is entitled to answers about the plan to clean up this area and to correct past wrongs."

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SSAB MEETING
October 21, 1999
Please Sign In

1) Carl R. Froede Jr. - U.S. EPA Region 4
2 Al Pickett - ANA
3 Kristi Hanson
4. Mark Donham - SSAB
5. Ed Duff SSAB.
6. Kit [illegible]
7. Todd Adams State
8. Debbie Wattier, Bechtel Jacobs Co.
9. Myrna E. Redfield, DOE
10. Jon Maybrier, KDWM
11. Gaye Brewer KDWM
12. [illegible]
13. J. Dale Jackson
14. Nola Courtney
15. Judy Ingram
16. Walter Perry
17. Linda Long SSAB
18. Jim Smart
19. Vicki Jones
20 Bill [illegible]
21 David [illegible]

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October 21, 1999
Please Sign In

22. Norman A. Vetta Vortec Corp.
23. Gregory Waldrop
24 Ronald Land SSAB
25. Jackie Kittrell, AEHSP, Oak Ridge area.
26 Brian Baker KDWM
27. Craig Rhodes SSAB

PADUCAH GASEOUS DIFFUSION PLANT
SITE SPECIFIC ADVISORY BOARD
CONSENSUS RECOMMENDATION

DATE: September 20, 1999

NUMBER: 99-2

RESPONSE REQUESTED BY (date): October 20, 1999

REGARDING: Vortec Draft Environmental Assessment

TO: Jimmie Hodges, DOE

CC: Carl Froede, Jr., EPA
Tuss Taylor, KDEP
Dr. John Volpe, Radiation Control Branch
Wayne Davis, Kentucky Department of Fish & Wildlife Resources
Regular members — Kit Atkinson, Nola Courtney, Mark Donham, Edward Duff, Angela Farmer, David Fuller, Judy Ingram, Vicki Jones, Merryman Kemp, Ronald Lamb, Linda Long, Doug Raper, Craig Rhodes, Rosa Scott, Dr. Jim Smart, Pat Stephenson, Bill Tanner, and Rev. Gregory Waldrop.

At a regular meeting of the Site Specific Advisory Board (SSAB) held September 16, 1999, the board identified comments on the PGDP's draft Environmental Assessment of the potential impacts from construction and operation of the Vortec Corporation Cyclone Melting System technology. With thirteen regular members present, the board approved by consensus in favor of this recommendation.

RECOMMENDATION:

The board members present at the September 16, 1999, SSAB meeting recommends that the Department of Energy not use a Finding of No Significant Impact to proceed with the Vortec project's 30-day pilot test. Instead, the board proposes an Environmental Impact Statement that will include cumulative impacts from other sources.

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New Chairman Craig Rhodes (elected at September 16, 1999, SSAB meeting.)