3822

# FCAB UPDATE

***Week of August 6, 2001***

**(Last update was dated July 2, 2001)**

## MEETING SCHEDULE

**DOE Cleanup Progress Briefing** — **Services Building Conference Room**
Tuesday, September 11, 2001, 6:30 p.m.

**Stewardship Committee Meeting** — **Services Building Conference Room**
Thursday, September 13, 2001, 6:30 p.m.

**Fernald Citizens Action Board Retreat** — **The Hamiltonian**
Saturday, September 15, 2001, 8:30 a.m.

## ATTACHMENTS

- 9/15/01 Draft Retreat Agenda
- Draft Minutes of the 7/12/01 FCAB meeting
- Draft summary of Stewardship Committee Meeting on July 9, 2001
- 07/12/01 Letter from Gene E. Willeke to the Fernald CAB on Silo 3
- 08/01/01 Letter from Steve McCracken to Jim Bierer on DOE's Fiscal Year 2002 Priorities for the FCAB
- 08/09/01 Letter from Jim Bierer to Joseph A. Steger, Ph.D., UC President inviting a UC representative to September 13th Stewardship Committee meeting
- FEMP's Opportunities for Accelerated Closure of Fernald
- News Clippings

## NEWS and ANNOUNCEMENTS

**NOTE MEETING DATES**

- The next Stewardship Committee meeting will be held on October 11th and the next full FCAB meeting is scheduled for October 13, 2001.

## FOR FURTHER INFORMATION

Contact Doug Sarno or Mildred Charles, Phoenix Environmental, a division of The Perspectives Group.
Phone: 513-648-6478 or 703-971- 0058 Fax: 513-648-3629 or 703-971-0006
E-Mail: djsarno@theperspectivesgroup.com

# DRAFT RETREAT AGENDA, 7/24/01



FERNALD CITIZENS ADVISORY BOARD

## Saturday, September 15, 2001
## The Plantation

| | |
|---|---|
| 8:30 a.m. | Continental Breakfast |
| 9:00 – 9:15 a.m. | Opening Remarks<br>Report on the SSAB Chair's Meeting |
| 9:15 – 10:00 a.m. | Self-Evaluation<br>*What have we done well?*<br>*Where can we improve?* |
| 10:00 – 10:15 a.m. | Ex-Officio Reports: Desired FCAB Goals for the Next Year<br>*DOE*<br>*Ohio EPA*<br>*USEPA* |
| 10:15 – 10:30 a.m. | Break |
| 10:30 – 11: 30 a.m. | FCAB Goals for the Next Year<br>*What are the key issues for the site?*<br>*What are the key issues for stakeholders?*<br>*What issues are left underserved from FHES and CRO?*<br>*Where can the FCAB be most useful?* |
| 11:30 – 12:00 p.m. | Agree to Goals for the Year<br>List of Key Actions and Deliverables for FY2001 |
| 12:00 – 1:00 p.m. | Lunch |
| 1:00 – 2:00 p.m. | FCAB Structure<br>*Should we maintain the full board schedule?*<br>*Should we maintain the stewardship committee schedule?*<br>*Set calendar for year* |
| 2:00 – 2:30 p.m. | Membership<br>*What is our long-term membership strategy?*<br>*How do we handle the need for expert input?*<br>*How should we approach the long-term involvement of UC?*<br>*Should we recruit? How and who?* |
| 2:30 – 3:00 p.m. | Leadership<br>*Jim, Tom, and Pam plans for 2002?* |
| 3:00 – 3:30 p.m. | Wrap Up and Adjourn |

FERNALD CITIZENS ADVISORY BOARD

# FULL BOARD MEETING
## Services Building Conference Room

## Thursday, July 12, 2001

# DRAFT MINUTES

The Fernald Citizens Advisory Board met from 6:00 p.m. until 9:00 p.m. on Thursday, July 12, 2001, at the DOE Fernald Site in Hamilton, Ohio. The meeting was advertised in local papers and was open to the public.

| | |
|---|---|
| Members Present | French Bell<br>Jim Bierer<br>Sandy Butterfield<br>Lisa Crawford<br>Lou Doll<br>Pam Dunn<br>Gene Jablonowski<br>Jane Harper<br>Steve McCracken<br>Graham Mitchell<br>Robert Tabor<br>Thomas Wagner<br>Gene Willeke |
| Members Absent | Marvin Clawson<br>Steve Depoe |
| Designated Federal Official | Gary Stegner |
| Phoenix Environmental Staff | Douglas Sarno<br>Mildred Charles |
| Fluor Fernald Staff | Tisha Patton |

Approximately 20 spectators also attended the meeting, including members of the public, the University of Cincinnati, the critical analysis team, and representatives from Department of Energy and Fluor Fernald.

## 1. Call to Order

Jim Bierer called the meeting to order at 6:05 p.m.

## 2. Remarks and Ex Officio Announcements

Jim Bierer made the following brief announcements immediately after calling the meeting to order. He began by announcing that he attended the Site Technology Coordination (STCG) meeting in June and received a status update on some of the programs that STGC is in the process of reviewing. Jim stated that EM 50 plans to fund various programs in the areas of mixed waste and nuclear materials that will result in budgetary savings. He also mentioned that Larry Stebbins provided an update at the same meeting about post stewardship technology, and how this program will help identify probable areas in technology that will allow the FCAB to carry on its long term stewardship plans.

In addition, Jim announced that the Fourth Annual Long-Term Stewardship Workshop will be held on July 30th – August 2nd at Grand Junction. Lou Doll, Pam Dunn, Bob Tabor, Tom Bierer, and Lisa Crawford plan to attend that event where Doug Sarno will serve as the main facilitator. He also went on to say that the workshop is a good opportunity to exchange ideas, network with people from other sites, and voice related concerns pertaining to Long-Term Stewardship. Jim closed his remarks by mentioning that he received a letter from the Department of Health & Human Services confirming their decision to conclude the work of the Fernald Health Effects Subcommittee (FHES). They did so because they believe the Subcommittee has completed much of their work. As a result, the FCAB will determine, if necessary, what they must do in order to ensure that health effects issues are addressed at some level for the community.

Steve McCraken followed Jim's remarks by providing an update on the following four topics:

1. validating proposed rebaselining efforts on schedule to be complete by October 1st
2. the Senate has passed supplemental appropriations in the amount of $21 million dollars for Ohio, the distribution between Fernald and Mound to be determined (breakdown TBA)
3. the pilot project for direct rail shipment to Nevada has been postponed due a lack of projected surplus
4. the public comment period concerning the final remediation levels for uranium in water at Fernald is scheduled to end on August 10th.

Gene Jablonowski stated that he will attend the June 17th meeting to serve as the representative for EPA for any suggestions regarding the rule change for uranium.



000004

French Bell confirmed that the final meeting for the Fernald Health Effects Subcommittee (FHES) will be held on August 22nd at The Plantation. Doug Sarno added that COSMOS will make a presentation at that meeting. The FCAB will discuss issues that will be orphaned when the Subcommittee ceases to exist at its annual retreat.

Gene Willeke acknowledged the presence of Lisa Blair who is a newly nominated board member and graduate student at Miami University. Doug Sarno introduced Mildred Charles as The Perspectives Group's newest staff member. He also noted that Mildred is a recent graduate of the American University in Washington, DC, where she earned her master's degree in Public Communications. Mildred will provide support for the FCAB, as well as take part in future public participation initiatives.

**3. University of Cincinnati Presentation and Dialogue**

Jim Bierer introduced three members from the University of Cincinnati: Paul Bishop, Stephen Kowel and Joe Steger. Dr. Steger, who is the president of UC, began by providing a brief presentation expressing UC's interest in developing a partnership with the FCAB in looking at the Future of Fernald. He noted that they were interested in positioning the University as one of the leading experts on restoration issues.

Paul Bishop made additional comments pertaining to UC's three basic missions: research, education and service. He also noted that the engineering department is interested in a collaborative effort that would enable them to provide the FCAB with additional expertise and resources. Doug Sarno followed their presentation by providing them with a brief background of the Fernald site, it's history, and how ongoing public participation has resulted in a consensus vision for the Future of Fernald. As a result, Doug requested the participation of a UC representative at subsequent FCAB Stewardship Committee meetings. Dr. Steger agreed and will send a UC representative to FCAB meetings as early as next month.

**4. Critical Analysis Team Update and Discussion on Site Issues**

All three CAT members were on hand to provide a status report concerning the Silos project. Todd Martin provided the initial update and expressed strong concerns about the project's management process in terms of its lengthy time procedures. He noted that he would like to see the DOE and Fluor work together to effectively produce good engineering design. Todd went on to discuss the five teams AWR assigned to work in the following areas: engineering, procurement subcontracting, EMMA, operation, and contract close outs. He also noted that the radon control system is preparing to conduct fieldwork with respect to the

construction phase. Todd also informed the FCAB that the EMMA remote arm will probably not be used in the final design.

Following the report, Gene Willeke raised a number of issues pertaining to airborne contamination. Both Todd and Gail Bingham replied by stating that airborne issues can in fact be resolved with the assistance of experts who are familiar with these specific areas. Todd maintained that the CAT was pretty confident that Fluor could respond fairly quickly to these areas if in fact complications should arise. Lastly, details about a future meeting that would enable stakeholders to participate were further considered. Gene Willeke distributed a memo that explained some of his concerns about the Silos project.

**5. Feasibility Study Issues for On-Site Facilities**

Doug Sarno called attention to the brainstorming report that was distributed as a handout prior to the start of the meeting. He noted that the report was generated at Monday night's Stewardship committee meeting to identify key issues for planning of the education center and trails. The brainstorming report contains a series of questions that address information needs for conceptual design and planning.

Doug stressed the importance of addressing fundraising initiatives in the near future to determine specific details that focus on facility needs such as space, location, timing, building design and infrastructure. Conceptual ideas about the design competition were also raised. In response, Jim noted that location should be the first priority and design should be the second.

Tom Wagner stressed the importance of establishing a realistic time frame in the near future to expedite the design competition. He also cautioned the FCAB to keep in mind that student designs will not be as sophisticated as those of practicing professionals. As a result, both Tom and Doug decided that the FCAB will contact UC in an effort to solicit their assistance and expertise in the conceptual planning phase for the design competition. It was also noted that the design competition should only focus on the building design.

Kathy Nickel (DOE) announced that Fernald was hosting a Stewardship technology workshop in October and they are hoping that FCAB members would participate in planning. Jim volunteered to participate.

**6. Issues for Annual Retreat Planning**

Doug noted that the retreat is a great opportunity to assess the FCAB's strengths and weakness during this past year. Jim added that we will identify specific goals and establish time lines for the upcoming year. He urged all members to make plans to attend the September 15th retreat. Membership issues will be discussed, as well as a critical analysis of the issues of the Health Effects Subcommittee

and the CRO. Ex officio members were asked to provide their priorities for the next year.

Lisa Crawford announced that FRESH would hold a formal meeting on July 26, 2001. She also noted that the database has been updated so that members will be able to receive current newsletters. Members who are not currently receiving the newsletter should contact Lisa to provide her with their updated information.

**7. Public Comment**
Jim Bierer opened the floor to public comment. There was none.

**8. Adjournment**
Jim Bierer adjourned the meeting at 8:50 p.m.

I certify that these minutes are an accurate account of the July 12, 2001 meeting of the Fernald Citizens Advisory Board.

_____

James Bierer, Chair Date
Fernald Citizens Advisory Board

_____

Gary Stegner Date
Deputy Designated Federal Official

Stewardship committee

# MEETING SUMMARY

**Date:** July 9, 2001

**Topics:**
- Brainstorming Session on the Feasibility of an Education Center

**Attendees:**

**Fernald Citizens Advisory Board**
Marvin Clawson
Lisa Crawford
Lou Doll
Steve Depoe
Pam Dunn
Bob Tabor
Tom Wagner

**Phoenix Environmental Corp**
Doug Sarno

**U.S. Department of Energy**
Ed Skintik
Gary Stegner
Ann Wickham

**Ohio Environmental Protection Agency**
Donna Bohannon
Kelly Kaletsky

**Fluor Fernald**
Tisha Patton
Eric Woods
Joseph Schomaker
Larry Stebbins

**FRESH**
Carol Schroer
Edwa Yocum

**FCRO**
Todd Trammel

FERNALD CITIZENS ADVISORY BOARD

Prior to the brainstorming session, Charles Knuckles introduced himself and briefly discussed his background. Mr. Knuckles stated that he is a retired teacher and school administrator who spent 30 years in the Cincinnati public school systems. He attended the meeting to share his expertise concerning alternative funding and was highly impressed with the work that the FCAB has done, particularly with the Future of Fernald vision statement. As a result, he identified a number of key contacts that he believes would consider sponsoring grants to help the FCAB meet costs for an education center and various programs.

According to Mr. Knuckles, who also sits on the trustee Board of the Ohio Historical Society, the society was successful in helping the federal government obtain the unidentified remains of Native-Americans that were formally in the possession of local agencies. He stated that he is fairly confident that the Historical Society would look favorably at a proposal submitted by the FCAB due to their mutual interest in Native American repatriations.

Joseph Schomaker noted that the Ohio Historical Society toured the site a few weeks ago and expressed an interest in playing an active role in repatriation.

Larry Stebbins announced that Fernald has secured funding for technology that will be used to measure water build up on top of the cell. A number of targets will also be placed in the layers of the cell above the liner systems to measure movement, temperature and water content in the soil. He also invited the FCAB to an upcoming meeting in October to discuss stewardship technology.

Eric Woods announced the DOE and OEPA have signed the natural resource restoration memorandum of understanding and they are awaiting signatures from U.S. Fish and Wildlife. The grading plan is also being finalized and should be available by September.

Doug Sarno facilitated the brainstorming session. Questions generated from the session are listed below and should serve as a conceptual framework to assist the FCAB in establishing goals and benchmarks for proposed facilities.

- **Education Center Space Requirements and Infrastructure Needs**

How much space will be needed to meet the reading room needs?
What is the scope of reading room materials that are needed post closure?
What site artifacts are expected to be preserved, what are the display needs?
How do we accommodate the cold war garden, are there other items to be preserved?
What are the needs of the Fernald Living History Project materials?
What additional requirements may be necessary to satisfy long-term community health issues?
What are the specific Needs and space requirements for Native American records, displays, artifacts, storage and curation?
How much non-specific use space is needed?
What are the specialized indoor climate and security needs?

## MEETING SUMMARY (continued)

What are the specific Technology needs for education and display activities?
What is required to build in flexibility to accept new technologies?
What is needed to connect the education facility real-time monitoring capabilities?
What type of documentation and display is needed for the environmental restoration?
What type of documentation and display is needed to ensure that the community history is preserved?
Who will be the curator and interpreter of local, cold war, issues and how do we ensure these issues are preserved prior to closure?
How do we ensure the library includes published works to create context of issues displayed, including Cold War, Native American, environmental restoration (how to obtain, who would pay, how to get the site to bolster its library in preparation)?
What is needed with regard to meeting/auditorium space, community program space, classrooms, labs, other needs?
What is the status of long-term fire/EMS plans for the site?
How do educational programs get designed and developed, how do we ensure the building is designed to meet the needs?
Will the building house the staff and facilities needed for site maintenance?
What is the process for determining who will be the long-term steward, how do we get them involved in the design phase?
What kind of food service is needed?
What are the standard infrastructure needs of a facility this size?
What are the needs regarding exhibit preparation laboratories, conservation space?
What are the needs regarding long term storage of exhibits, photos, with environmental controls?

**• Site Facility Space and Infrastructure Needs Between Now and Closure**
What facilities will be taken down on what schedule?
Who needs new space when and what are their specific needs?
How many people will need to be housed and for how long?
When does the last guy get out? Can there be a phased takeover of the building?
Is there a match between the education facility needs and site needs?
What are the new infrastructure needs of the site and can they be coordinated to serve the future education center?
How do space needs of the site compare with education facility?
Can buildings be built with the education center use in mind and fitted for temporary use?
Can we do more than a block building and how do we plan for a retrofit?
What are the design limitations for the short-term building (think outside the box)?
How does OEPA approval of the facility as per the settlement proposal impact overall planning and design?
How much will we be able to consider the end result in the short-term facility?
What are the security and access issues related to public use prior to closure?

**• Logistical Issues Related to Location of Facility**
Worker access and employee access, how to make sure it works, parking issues?
How close to Willey Road can the facility be located?
Are there any physical site restrictions for construction (siting, excavation, etc.)?

**• Remediation Issues Related to Early Construction**
What is the status of borrow needs and how would construction activity and access relate to that?
How is certification related to siting and construction issues, what is the timing of needed certifications?
What are the areas that are feasible for early construction?

**• Cost/funding Issues Related to Early Construction**
How much and what could the site actually fund without taking from remediation?
Is there the opportunity to augment that funding from other sources, how would that work?
How do we integrate multiple sources of funding?
How could we hire an architect to help with the design, how could that be paid for?

How can we integrate results of design competition into the planning process?
What are the timing restrictions for design and construction?

**• Opportunities for Public Use at the Education Center prior to Closure**
How quickly could the reading room be moved, could it be designed for its final configuration in that move?
Could some exhibits and displays be established in the near term, like at Rocky Flats?
Will there be near term space for promotional materials of education center, designs, models, etc...?
Will there be near term space for Native American materials and educational resources and records associated with the reinterment?
Could we begin developing some of the educational programs and delivering them with appropriate classroom space on nights and weekends?
Can we create space to house public meetings?
How do we create access and security to Native American areas in the near term (trails, bridge over Paddys Run)?
How do we balance between access and security of building and trails?
Can security be partitioned to allow public access to the public areas of the building without guards?
Can there be an auditorium that would allow public access (stadium seating)?

**• Cost and Technical Issues Related to Refitting Space for Education Center**
Where would the money come from, what are the options, what are the parameters for DOE assistance in that retrofit?
Can the retrofit be designed in advance to work with existing structure?
Which Foundations should be approached, by whom, and when (need a plan)?
How to integrate potential Fluor funding and actual potential and timing of those funds?
How do we plan for the high level of uncertainty of the Fluor funding?

**• Health/safety Issues Related to Site Use of Space Prior to Education Center**
How do we ensure the building remains clean, what kinds of safeguards can be put into place?
How do we balance community access needs and safety prior to closure?
How to ensure that visitors know complete residual contamination issues both during remediation and after closure?

**• Construction and Logistical Issues Related of Public Use of Fernald Land**
Can we create adequate parking for the education facility as part of near term use?
The more you put into the building, the more specialized the steward becomes and the more expensive it is to maintain, how do we select the steward?
How will this steward be selected, and who will make this decision, we need a process?
How will the steward pay to maintain the facility?
How do we set up a trust, who would manage it?
Who can answer all of these questions and how do we establish a plan to get them answered?

**• Possible Resources:**
Gary Ness, ED of Ohio Historical Society is willing to have Martha Otto, a state archeologist and member of his staff, help with advice. Additional human and organizational resources are as follows:

- Greater Cincinnati Foundation, for educational programs
- Jergens Foundation for Children
- Dan Hurley, local historian, Allied History Associates
- National Endowment for the Humanities (Ohio undeserved)
- Ohio Humanities Council
- Ohio Arts Council
- Ohio Historical Society

# MEMO

From: Gene E. Willeke, Fernald CAB

To: Fernald CAB

Cc: Dennis Carr, Nina Akgunduz, Doug Sarno, Tisha Patton

Subject: Silo 3

Date: July 12, 2001

The removal of the contents of Silo 3 has been a matter of some concern for several months. The proposed solution of breaching the wall of the silo, removing the contents with heavy equipment operated by remote control under negative pressure, has had too few details to thoroughly evaluate its risks and benefits. Now that it is entering design phase work, I would like to enumerate the issues of concern to me, and to others, surrounding this proposed solution.

Matters of Ultimate Concern

The principal matter of concern is the safety of workers and others in the vicinity of the removal operation. The constituent of concern is Thorium 230, which is reportedly contained in the silo in very fine particulate matter form. This radioactive substance is dangerous both because of its radioactivity and because of its potential for airborne transport, a pathway that can be very dangerous to people in the vicinity of the operation. Other chemicals present in the silo contents have significance from a regulatory standpoint, but do not possess the danger posed by Thorium 230.

Following these concerns are the apparent lack of monitoring equipment that can detect the presence of radioactivity on the clothing and persons of those in the vicinity of the removal operation.

Silo Materials

For the past several years, CAB members have been told, and there is no reason to believe it is not correct, that the silo contents are stratified. Reportedly, the top portion of the silo contains the most finely divided particulate matter; the bottom contains the most aggregated material; and the central portion is of undetermined character, although it has been thought to be more like the top than the bottom. Tests (presumably something like split spoon samples) are needed to determine the exact vertical characterization of the materials. The most dangerous materials are those at the top of the silo.

It has been reported to the CAB that the samples sent to potential contractors were drawn from the bottom portion of the silo, and were compacted to such an extent that the material had to be fractured before it could be removed. Thus, it was not characteristic of the material in the top portion of the silo.

Removal Methods

A high priority has been given to simplicity in removal of the materials. This is both understandable and laudable. The concern we have is whether the proposed solution is actually "simple". Remote operation is not simple. Negative pressure conditions are not simple to achieve.

Of particular concern is that with the silo breach being near the bottom of the silo–as I understand what has been proposed–there is a distinct possibility that this would make the operation vulnerable to a collapse of the material above the compacted lower levels, allowing the most dangerous, finely divided particulate matter at the top of the silo to fall into the lower portion of the silo where the removal operation will take place. In view of this possibility, we are left to wonder whether "simplicity" does not demand a dual solution. In a dual solution, an attempt would be made to remove the most dangerous material from the top of the silo first, before breaching the lower wall of the silo. After this finely divided material was removed, a breach of the silo wall might be done, at considerably lower risk.

Monitoring

Monitoring remains a concern. I sat on an STCG review session a couple years ago, at which monitoring equipment was discussed as an important need, and some work was done on the project. To the best of my knowledge, no such equipment has yet been built and made available for use on the site. This should remain a high priority, and such equipment should be available before silo contents removal begins.

Summary

I am fully aware that there may have been developments of which I am not up to speed. However, if there are any, they have not been brought to the attention of the CAB. We are very concerned about worker safety, we believe it can be achieved, and urge that every effort be made in the design of removal systems and procedures, as well is in the development and use of monitoring equipment to give a high degree of protection to those in the vicinity of the removal operation.

We urge frequent communication with the CAB on developments during the design process.

3822

**Department of Energy**

**Ohio Field Office**
**Fernald Area Office**
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

AUG 0 1 2001

Mr. James Bierer, Chair
Fernald Citizens Advisory Board
3371 Hamilton-Cleves Road
Hamilton, OH 45013

DOE-0765-01

Dear Jim:

**THE DEPARTMENT OF ENERGY'S FISCAL YEAR 2002 PRIORITIES FOR THE FERNALD CITIZENS ADVISORY BOARD**

Before addressing our Fiscal Year (FY) 2002 priorities for the Fernald Citizens Advisory Board (CAB), the Department of Energy (DOE) would like to thank the CAB for its many contributions to the successful remediation of the Fernald site. Over the past eight years, the CAB has played a pivitol role in developing policy and recommending solutions to the site's most fundamental cleanup issues. It has been stated repeatedly and remains true, the CAB is the model for effective public involvement within the DOE. We look forward to working with the CAB as we complete the remediation of Fernald.

Our priorities for the CAB are consistent with those outlined for 2001 with emphasis continuing on post closure stewardship and the Silos Project. Building on the Future of Fernald process, we ask the CAB to continue its focus on long-term stewardship issues. Specifically, emphasis should be placed in the following areas:

- Working with DOE and Fluor Fernald, Inc. on planning the design of a multi-use educational facility that will serve the post closure needs of the surrounding community.

- Since the decision on selecting a long-term steward is fundamental to any post closure stewardship planning effort, the CAB should initiate discussions with potential long-term stewards of the Fernald property during 2002.

- Review and comment on the draft Long-term Stewardship Plan that will be provided in early FY 2002.

Recycled and Recyclable

We will continue to involve the CAB with remediation issues, particularly the Silos Project, Waste Pits Project, Soil Excavation and On-site Disposal Facility, Aquifer Restoration, and Waste Management.

Again, we thank the members of the CAB for their past service to the DOE, and we look forward to continuing our work in 2002.

Sincerely,

Johnny Reising

for Stephen H. McCracken
Director

FEMP:Reising

cc:
G. Stegner, OH/FEMP
J. Bradburne, Fluor Fernald, Inc./MS1
D. Carr, Fluor Fernald, Inc./MS2
D. Sarno, FCAB

FERNALD CITIZENS ADVISORY BOARD

*Chair*
James C. Bierer

*Vice Chair*
Thomas E. Wagner

*Members*
Sandy Butterfield
Marvin W. Clawson
Lisa Crawford
Stephen P. Depoe
Louis Doll
Pamela Dunn
Jane Harper
Robert G. Tabor
Fawn Thompson
Gene E. Willeke

*Ex Officio Members*
L. French Bell
Gene Jablonowski
Stephen H. McCracken
Graham Mitchell

*Support Staff*
Phoenix Environmental
Douglas J. Sarno
Crystal M. Sarno
703-971-0030
703-971-0006 Fax

Joseph A. Steger, Ph.D.
Office of the President
University of Cincinnati
PO Box 210063
Cincinnati, OH 45221-0063

August 9, 2001

Dear Mr. Steger:

Thank you for taking time out of your busy schedule to attend the recent Fernald Citizens Advisory Board (FCAB) meeting on Thursday, July 12, 2001 with your distinguished colleagues. We are very pleased that UC has taken an interest in the future of the Fernald site and look forward to achieving the Future of Fernald vision with your active participation.

As you may recall from our discussion at the meeting, the FCAB is currently in the process of gathering information for a proposed education center and accompanying trails. Given the University of Cincinnati's expertise in the areas of planning, we would be grateful of any assistance UC could provide with a feasibility study and design charette we are planning with regard to space, location, building design and infrastructure.

With this in mind, I would like to invite a UC representative to join us at the next Stewardship Committee meeting on September 13, 2001 at the Fernald site beginning at 6:30 p.m. I have enclosed the results of a recent brainstorming session to identify issues for the feasibility study. If you have additional questions, please feel free to contact me or our Technical Facilitator Doug Sarno (513-648-6478) at your earliest convenience.

Thank you for your time and consideration. And again, welcome aboard.

Sincerely,

James C. Bierer

Jim Bierer
Chair



A Local Advisory Committee Chartered Under the Environmental Management Site-Specific Advisory Board
MS 76, Post Office Box 538704 Cincinnati, Ohio 45253-8704 513-648-6478 513-648-3629 Fax

FERNALD
Environmental Management Project

# OPPORTUNITIES FOR ACCELERATED CLOSURE OF FERNALD

| | Funding Level | * Estimated Cost From FY01 to Completion | Closure Date | Savings from Current Contract | |
|---|---|---|---|---|---|
| | | | | Dollars | Schedule |
| Fluor Closure Contract *without* Fluor Baseline Improvements | $290M Flat Funding | $2.9B | Dec. 2010 | - | - |
| Fluor Fernald Baseline Submitted May 2001 *with* Fluor Improvements | $290M Flat Funding | $2.24B | Dec. 2009 | $660M | 1 Year |
| Fluor Closure Contract Optional Funding Case *without* Fluor Baseline Improvements (Includes $30M per year option) | $290M in FY01<br>$320M in FY02 thru FY08 | $2.5B | Dec. 2008 | $230M | 2 Years |
| Supplemental Funding *with* Fluor Baseline Improvements | $290M with $20M supplement in FY01<br>$300M in FY02<br>$290M Flat Funding FY03 to Closure | $2.15B | Sept. 2008 | $750M | 2 Years + 3 Months |
| Optimal funding *with* Fluor Baseline Improvements | $290M with $20M supplement in FY01<br>$324M Funding FY02 to Closure | $2.0B | Sept. 2006 | $900M | 4 Years + 3 Months |
| Realistic Optimal Funding Case *with* Improvements | $290M with $20M supplement in FY01<br>$300M in FY02<br>$350M in FY03<br>$324M Funding FY04 to Closure | $2.08B | Apr. 2007 | $820M | 3 Years + 8 Months |

* Note - Does Not Include Historical Project Costs - 1996 thru 2000 - $1.55B

Graphic 6796. 10 7/01

000016

38222

FERNALD
Environmental Management Project

# FERNALD ACCELERATED CLOSURE

| | Total Project Cost Including Historical Project Costs | Closure Date |
|---|---|---|
| 1992 DOE Baseline | $7.4B | 2015 |
| Fluor 3/95 10 Year Plan | $4.0B | 2006 |
| Fluor Closure Contract *without* Fluor Baseline Improvements | $4.5B | 2010 |
| Fluor Fernald Baseline Submitted May 2001 *with* Fluor Improvements | $3.8B | 2009 |
| Fluor Closure Contract Optional Funding Case *without* Fluor Baseline Improvements (Includes $30M per year option) | $4.1B | 2008 |
| Supplemental Funding *with* Fluor Baseline Improvements | $3.7B | 2008 |
| Optimal Funding *with* Fluor Baseline Improvements | $3.5B | 2006 |
| Realistic Optimal Funding Case *with* Improvements | $3.6B | 2007 |

Graphic 6796. 11 7/01

090017

# FERNALD
Environmental Management Project

| Year | Funding Projection * | Actual Funding * | Delta * |
|---|---|---|---|
| 1996 | $264 | $243 | - $21 |
| 1997 | $272 | $258 | - $14 |
| 1998 | $280 | $268 | - $12 |
| 1999 | $289 | $279 | - $10 |
| 2000 | $297 | $286 | - $11 |
| 2001 | $306 | $310 | + $4 |
| 2002 | $315 | $300 (projected) | - $15 |
| 2003 | $325 | | |
| 2004 | $335 | | |
| 2005 | $345 | | |
| 2006 | $355 | | |
| Total | $3.383B | | - $79 |

* In Millions

Graphic 6796. 12 7/01

000018

3822

June 26, 2001
USA TODAY
Page 7A



3822

"Tainted uranium, danger widely distributed tons of material recycled from nuclear weapons program went to labs, universities, manufacturers"

# Tainted uranium, danger widely distributed Tons of material recycled from nuclear weapons program went to labs, universities, manufacturers

By Peter Eisler
USA TODAY

WASHINGTON -- In 1952, when federal officials began recycling uranium used in making nuclear weapons fuel, no one foresaw any health or environmental risks.

Tiny particles of plutonium, neptunium, technetium and other dangerous isotopes contained in the recovered material didn't add significantly to the radiation that would be expected from natural uranium, scientists reasoned. For the next 50 years, as the weapons program shipped thousands of tons of recycled uranium around the world, officials rarely even measured the contaminants.

It wasn't until 1999 that the contamination began getting serious attention, and the government acknowledged that federal plants in Paducah, Ky., Portsmouth, Ohio, and Oak Ridge, Tenn., had processed the recycled uranium in ways that concentrated its impurities. The government conceded that thousands of workers faced radiation risks from the contaminants that went well beyond those from normal uranium, raising their chances for cancer and other illnesses. And the worries didn't stop at plant fences: Evidence indicated that the contaminants also were polluting soil and water.

The Department of Energy, which had taken over the weapons program in the mid-1970s, shut down the recycling operation and launched a series of studies to assess the full scope of the contamination problem.

Now a USA TODAY review of new data from those studies reveals that recycled uranium circulated far more widely than first believed -- and so did the health risks.

The studies, released quietly this spring, show that more than 250,000 tons of the tainted uranium circulated among hundreds of government

plants, private manufacturers and university labs. The material handled at most of those sites contained only minute levels of impurities. However, some of the newly identified processing sites, such as the three government-owned plants where the contamination first surfaced, performed work that concentrated contaminants at dangerous levels.

The possibility that workers at those sites, which employed thousands, might face higher odds of cancer and other ailments linked to exposure to the contaminants has significant implications for a soon-to-begin federal program to compensate sick nuclear weapons workers. The government has promised to expedite claims for people who handled recycled uranium at the federal facilities where the contamination problem first surfaced, but officials have no plans to extend the same consideration to those who worked at newly identified processing sites.

The new data also suggest the potential for previously unanticipated pollution at some facilities that weren't thought to have handled the material. Some state regulators worry that plans to clean up uranium wastes at those sites might have to be expanded to account for more dangerous contaminants. That raises questions about federal liability for additional costs.

**New risks shown**

USA TODAY studied more than 1,000 pages of new reports and documents on recycled uranium, some obtained by requests under the Freedom of Information Act, to assess the impact of the contamination problem. Some findings:

* A dozen or more facilities beyond those initially identified appear to have processed the uranium in ways that concentrated its highly radioactive contaminants. Those include federal and private sites in Missouri, Ohio, Pennsylvania, New York and other states.

* Several thousand workers at those sites risked exposure to plutonium and other contaminants at levels that significantly increase their odds for cancer and other radiation-related illnesses.

* There has been little or no investigation to check for contaminants from recycled uranium in soil and groundwater at most of the higher-risk processing sites, though such elements might only be detected by special tests.

Ellen Livingston, senior environmental policy adviser at the Department of Energy, says the facilities where contaminants in recycled uranium posed serious hazards "were handling the material in different ways than most of the sites." At the vast majority of facilities, she says, "the contaminants did not present high health risks."

Energy officials, however, have no plans to assess exactly what was

done with the uranium at most of the newly identified processing sites, so it's difficult to know precisely how many might have processed the material in ways that concentrated its contaminants at dangerous levels.

**New pollution, old sources**

For years, state investigators wondered why radioactive technetium-99 was turning up in drinking water wells near the old Mallinckrodt Chemical uranium fuel-making plant in Hematite, Mo.

Now they think they have an answer: The plant was one of several in and around St. Louis where Mallinckrodt and its successors used thousands of tons of recycled uranium to fabricate metallic fuel rods for nuclear reactors.

"We believe the contamination we're now seeing at the site is related to the (recycling) program," says Ron Kucera of the Missouri Department of Natural Resources.

Plans to clean up extensive pollution from uranium wastes at Hematite are snagged by questions over who is responsible for the technetium. That element requires special disposal because it has a half-life of 213,000 years and moves easily into soil and water.

Technetium wasn't expected at Hematite because it is produced only when uranium is irradiated in a nuclear reactor -- and Hematite had no reactor.

"The Department of Energy has resisted efforts to become involved because even though they may have some liability, they don't want to pay anything," Kucera says.

The Hematite facility was part of a nationwide network of private and federally owned plants and labs that produced fuel and other components for the nearly 70,000 U.S. nuclear weapons built before production was phased out in the early 1990s. Many of them used recycled uranium.

The recycling began at the dawn of the Cold War. Officials in the weapons program were seeking ways to reuse the costly uranium that was irradiated in reactors to make plutonium and other fissionable explosives for bomb cores. In the early 1950s, scientists hit on a succession of chemical baths and filters to separate uranium from the stew of reactor wastes.

Most recycled uranium had its genesis at the weapons program's plutonium-production sites: the Hanford compound near Richland, Wash., and the Savannah River Site outside Aiken, S.C. Uranium recovered at those places was sent on for initial processing at the federally owned gaseous diffusion plants in Paducah, Portsmouth and

Oak Ridge. Those sites enhanced the material's radioactive properties to make reactor fuel.

Until now, the greatest health and environmental threats from the uranium's contaminants were thought to be limited to the five federal sites that initially handled most of the material. The impurities were progressively removed as the uranium moved through other facilities, particularly those involved in certain processing jobs that concentrated its contaminants in ash, residues and other wastes.

The uranium that emerged from the processing chain -- as reactor fuel, for example, or metal for tanks and munitions -- contained only minute levels of contaminants.

Now, the government's new studies show that a dozen or more newly identified processing sites were concentrating the uranium's contaminants in ways very similar to the five federal facilities that initially handled most of the recycled material. They include private and federal plants in New York, Pennsylvania, Ohio and Missouri.

Officials in New York plan to check soil and water for contaminants in residential areas near a former Sylvania-Corning plant in Hicksville on Long Island. The facility, newly identified as a major processing site for recycled uranium, is one of several in the state that handled the material.

"We'll have to evaluate each site individually to see if there's a need to check for contaminants," says Barbara Youngberg, radiation studies chief at the state Department of Environmental Conservation. "It's possible we wouldn't have seen it. You'd have to do specific tests."

Although soil and water tests can pinpoint environmental damage from the contaminants in recycled uranium, assessing threats to workers' health is more difficult.

Thousands of shipments of tainted material shuttled among more than 100 sites. Most landed at the weapons program's big plants, but tens of thousands of tons went to smaller, mostly private sites across the Northeast, around the Great Lakes and down the Ohio and Mississippi valleys. Some also ended up at universities, from the Massachusetts Institute of Technology and the University of California-Berkeley, which did substantial amounts of experimental processing, to Texas Tech, Utah State, Vanderbilt and dozens of others that did small-scale research.

Although the new studies found that the material typically contained very little contamination, that finding is largely speculative. Most of the impurities went unmeasured for decades, so many of the contamination estimates are extrapolated from readings taken in the 1970s and '80s -- long after the dirtiest shipments circulated.

Facilities that processed recycled uranium "frequently and deliberately concentrated the contaminant isotopes, diluted them and blended them with natural uranium," federal researchers concluded in one report. "The blending caused considerable uncertainty in the data. Also, data on (contaminant) levels are incomplete, and the data between sites is not consistent."

Contamination problems generally were most pronounced in the early years of the recycling operation, but it's hard to know which shipments were most contaminated -- or how workers handled them. Even so, there are clues.

**New hot spots**

In 1952, officials in the weapons program shifted initial treatment of some of the most contaminated batches of recycled uranium to Harshaw Chemical, a Cleveland contractor that had secretly processed normal uranium for weapons use since the mid-'40s. Harshaw already had a history of exposing unknowing workers to high levels of radiation and toxins. This would be its most dangerous job yet.

In 1952-54, Harshaw cooked the recycled uranium with fluorides and other chemicals in ways that would "remove the objectionable impurities," concentrating them in ash and other wastes, according to a now-declassified 1954 report. In all, the plant handled more than 1,700 tons of the stuff.

"We'd take a scoop and load (powdered uranium compounds) into trays that went into a furnace" says James Southern, 77, who worked at Harshaw. "The next morning, we'd unload the trays, scoop everything out. Nothing was said that this was hazardous to your health or anything like that."

Employees in similar jobs at Oak Ridge faced "high" threats of exposure to the uranium's impurities, according to one new federal report, which suggests "follow-on study to provide a more detailed assessment" of their risks. No similar assessment has been considered for Harshaw workers, though it might help predict increased odds of cancer and other ailments.

"We already knew conditions at Harshaw were terrible. This just adds to that," says Arjun Makhijani, a specialist in radiation risks at the Institute for Energy and Environmental Research, a non-profit think tank. Monitoring of Harshaw workers "should be pursued with some urgency. The government owes that to them as much as it does to workers in government facilities."

Harshaw isn't the only newly identified processing site where contaminants were concentrated.

Records show, for example, that "special shipments" of highly fouled ash and residues from processing at Paducah were shipped to the government's Fernald treatment complex in Cincinnati. Smaller batches also appear to have gone to Vitro Manufacturing in Canonsburg, Pa. At both sites, workers manually loaded the waste into trays and casks for more processing. Former Vitro employees recall chipping out residues by hand after mixing jobs.

Investigators at Fernald reported in March that such jobs "represent a higher potential source of exposure to recycled uranium and its constituents." No effort is planned to assess risks at Vitro.

**Looking ahead**

The contamination of recycled uranium got its first public attention in 1999, when workers at the Paducah gaseous diffusion plant filed a lawsuit alleging illnesses from exposure to the plutonium and other stray elements. The resulting disclosures prompted the Department of Energy to shut down the recycling operation.

Officials quickly concluded that workers at the government's three diffusion plants were exposed to plutonium and other contaminants at levels that brought significant health risks. A monitoring program was set up, and 4,500 workers have been checked for lung cancer and other problems. Also, when Congress passed legislation last fall to compensate thousands of ill nuclear weapons workers, people at the diffusion plants were put in a "special cohort" with streamlined access to benefits. The processing of claims is set to begin later this year.

The government also launched environmental investigations for contaminants in soil and groundwater at the diffusion plants.

In the fall of 1999, then-assistant Energy secretary David Michaels told Congress that at least 13 federal facilities used the tainted uranium. "We are committed to getting accurate information," he testified. He vowed to identify sites where the material was used and to assess pollution and health risks.

Now, despite findings that the number of facilities that processed recycled uranium is 10 times what was anticipated, the new administration plans no additional study.

Energy officials say the existing compensation plan for sick weapons workers offers sufficient redress. Consequently, they say, there is no need to further define risks at newly identified facilities where contaminants were concentrated.

Similarly, no effort is planned to check for pollution at those sites, where cleanup responsibilities lie with private owners, states or the Army Corps of Engineers.

The Department of Energy's Livingston says, "We will make our records available, and we'll provide people to help interpret them."

Some lawmakers and interest groups say the department isn't doing enough to account for previously unknown risks to workers and the environment, especially at sites that handled the recycled uranium in early years.

"That's the part of the stream you have to be most concerned about," says Steve Fetter, a physicist and public policy professor at the University of Maryland. "Some of that stuff was quite hot. There might be unidentified problems at some of these sites that you'd learn about if you followed this up."

July 2, 2001
Weapons Complex Monitor
Pages 2-3
"House Troubled By Pace Of Cleanup At Closure Sites"

## HOUSE TROUBLED BY PACE OF CLEANUP AT "CLOSURE SITES"

The House of Representatives is concerned that the Energy Dept.'s flagship "Closure Project" sites—Rocky Flats, Fernald, and Mound—may be slipping from their scheduled 2006 closure dates and has urged cleanup program officials to take all necessary steps to keep those projects on track. The challenge at Rocky Flats, the House concedes, is that other sites in the complex, such as the Savannah River Site and the Waste Isolation Pilot Plant, require adequate funding and strong project management to conduct the critical-path work necessary to allow Rocky Flats to ship materials out of Colorado. As a result, the House declares in its FY 2002 Energy and Water Development Appropriations legislation, DOE "must ensure that complex-wide policy and funding issues are addressed as they relate to the closure of the Rocky Flats site."

At Fernald and Mound, the House asserts, the problems are more site-specific. "While it is not surprising that cleanups are encountering some unexpected conditions, it is very discouraging that the Federal program managers and contractors appear to be unable to maintain the schedules—rather than meeting challenges with innovations, the solution always seems to be increase the cost and slip the schedule," the House bill reads. Cleanup at the Fernald site has been slowed by the failure of several projects, but the House bill notes there are incentives in Fluor Fernald's contract to close the site by 2006, an approach the House says it "strongly supports." DOE and Fluor Fernald, the bill reads, should "demonstrate during fiscal year 2002 that the site schedule can actually be accelerated to 2006."

The situation at the Mound site in Miamisburg is particularly troubling, the House asserts, noting that the closure schedule "now appears to extend significantly beyond fiscal year 2006." The House bill would require DOE to "develop a baseline closure plan that supports the 2006 closure date" and proposes there are "clearly many steps that can be taken at this site to accelerate cleanup activities and reduce managerial, bureaucratic, and worker inefficiencies while still protecting the health and safety of the workers and the community." The House urges DOE to explore alternative approaches to the Mound cleanup that are "truly innovative and will restore the schedule and reduce overall costs," including "other" health and safety regulatory oversight processes that could reduce costs and accelerate the site cleanup. The House acknowledges that additional funding may be needed to meet the 2006 closure date at Mound, but states it "will not consider additional funding until the Department demonstrates that substantial changes have been made to current operations to ensure successful cleanup by 2006."«

July 19, 2001
Journal News (Hamilton, OH)
Page A3
"Fernald monitoring report produces positive discoveries"

3822

# Fernald monitoring report produces positive discoveries

By Kristin McAllister
Journal-News

ROSS TOWNSHIP

The findings of a 2000 Fernald environmental monitoring report suggest minimal contamination of the farming community surrounding the former uranium processing plant.

Fernald officials on Tuesday presented the findings of the soon to be released Integrated Site Environmental Report during a cleanup progress briefing at the site.

A key result of the cleanup is the reduction in groundwater contamination, said Kathi Nickel, a Department of Energy representative.

"We're seeing a general decrease of uranium in the aquifer," she said.

Because the U.S. Environmental Protection Agency recently relaxed the drinking water standard for the amount of uranium permitted in drinking water — from 20 parts per billion to 30 ppb — site officials scheduled an Aug. 15 public meeting to discuss the possibility of Fernald following suit.

Citing four out of five wells crippled due to residual plugging, Bill Hertel, a groundwater specialist, said the problem has rapidly increased since June 2000.

"We had to begin shutting them down one by one since January," he said.

Outside experts have been called in to determine the feasibility of chemical intervention to unclog the wells, Hertel said.

"Afterward, we may have to re-evaluate the entire reinjection program," he said, also stressing that no contamination entered the aquifer as a result of the well failures.

"We hope to have it worked out by the fall," Hertel said.

Uranium discharges into surface water did not exceed the federal limit, Nickel said, adding that the amount was actually well under the requirement.

The air monitoring program includes bi-weekly testing for thorium, uranium and radium.

Although air particulate emissions increased since 1999, Nickel said that emissions are still within the limit and due mostly to the waste pits remedial action project now under way.

Radon levels at the site fence line, she said, also are well below the federal limit.

As for area produce, common vegetables are collected from nearby farms and residential gardens for sampling every three years per a federal requirement. Results from recent testing are deemed satisfactory, Nickel said.

Eric Woods, a Fluor Fernald Natural Resources expert, said the federally endangered Indiana brown bat and the state threatened Sloan's crayfish are present in the northern portion of Paddy's Run — the creek that runs through the 1050-acre site.

Woods said his department will have completed by year's end two reports — one detailing the status of natural resources on site, including wildlife, and a second report pertaining to the wetland mitigation project.

He added that Miami University is conducting two research projects for Fernald — one regarding the American chestnut restoration project and another pertaining to invasive plant control.

The latter study also examines which types of vegetation are most inviting to wildlife — an ongoing goal at the site.

## CLOSE "CLOSURE SITES" ON TIME, SENATE WARNS ENERGY DEPT.

The Senate, echoing warnings in the House version of the FY 2002 Energy and Water Development legislation, has cautioned the Energy Dept. it will not blindly fund closure projects which are no longer on schedule for completion by 2006. In its Energy and Water Development Appropriations report, the Senate notes that several projects in both the defense and non-defense closure accounts are in danger of not meeting their 2006 deadlines, and recommends that when Department officials determine a closure project's schedule has slipped beyond 2006, they "propose moving the project into a post-2006 account." Such an approach, the Senate asserts, will ensure adequate attention and resources are available for projects which can meet the 2006 schedule. The House included similar language in its report, urging program officials to find solutions to problems at the closure sites rather than falling back on cost increases and schedule slippage *(WC Monitor*, Vol. 12 No. 26).

The Senate's FY 2002 appropriation for closure projects is $1.08 billion, $30 million more than the Administration's request. The additional $30 million is earmarked for the cleanup of the Fernald, Ashtabula and Columbus sites. The House provided $1.09 for the Closure Projects account.«

July 25, 2001
Journal News (Hamilton, OH)
Page A3
"Public invited to view Fernald drinking water document"



# Public invited to view Fernald drinking water document

The public is invited to review and comment on the Fernald Environmental Management Project final draft Explanation of Significant Differences for Operable Unit 5 document through Aug. 10.

The U.S. Environmental Protection Agency recently established the final maximum contaminant level for uranium in drinking water at 30 mg/L, changing the final remediation level for uranium in the Great Miami Aquifer to 30 mg/L and changing the treated effluent discharge to the Great Miami River from a monthly average of 20 mg/L to 30 mg/L.

The document is available at the Public Environmental Information Center, 10995 Hamilton-Cleves Highway.

Comments should be submitted to: Gary Stegner, Department of Energy Public Affairs, P.O. Box 538705, Cincinnati, Ohio 45253-8705.

August 2001
*Cincinnati Magazine*
Page 32 - Legal Special Advertising Section
"Cases of the Century"



cases OF THE century

PHOTO COURTESY DOE-FERNALD SITE PHOTOGRAPHY

TWO CIVIL LAWSUITS AGAINST THE OPERATORS OF A GOVERNMENT NUCLEAR WEAPONS PLANT DROP A BOMB ON GOVERNMENT ACCOUNTABILITY

# ongoing fernald litigation case 10

BY ELISSA SONNENBERG

[redacted]a Crawford and her husband rented a [redacted]osby Township house in 1979 that was [redacted]ated on a dairy farm because they wanted [redacted]where their two-year-old son [redacted] like many of their neighbors in the rural countryside just 18 miles northwest of downtown Cincinnati, the Crawfords believed that the factory next door, with its red-and-white checkerboard water towers, made dog food. Six years later, Crawford discovered that the plant, Fernald, had been manufacturing nuclear weapons for decades, and the well supplying all of her family's water was contaminated with uranium levels that the Ohio Environmental Protection Agency declared unfit for drinking.

"I went on a rampage," says Crawford, who with her husband Ken initiated a class action lawsuit in 1985 against National Lead of Ohio (NLO), the operators of Fernald. The suit eventually included 14,000 defendants and cost the U.S. government $78 million to settle; clean-up efforts, which are ongoing at Fernald, will cost more than $3.7 billion. Fernald, which ceased operations in 1989, helped draw international attention to the dangers of nuclear waste and its damaging effect on human health and the environment.

NLO, under contract with the Department of Energy (DOE), shrouded Fernald's operations in secrecy from its groundbreaking in 1951. Officers called the plant the Feed Materials Production Center, which led the community to believe that workers were making animal food. During peak years, NLO employed 3,000 workers at the sprawling 1,050-acre facility, turning uranium ore into the elements of nuclear weapons. A combination of Cold War fears and patriotic duty kept employees quiet about their jobs even with their closest family members.

Fernald took root in the conservative, rural Hamilton County community during a top-secret quest by the United States to build a working atomic bomb—the result of fears from Hitler's Germany and the Cold War. Though production dwindled and number of employees fell to only 650 workers, by the early 1980s when the Cold War reheated, work increased once more. The facilities were not equipped to meet the demand, much less modern environmental regulations.

Neighbors started asking serious questions in 1984, when the DOE reported that Fernald had released close to 300 pounds of enriched uranium oxide into the environment through a failed dust collector. In the same year, the DOE released information about contamination in off-site wells. Crawford soon learned that her family's well, which she'd never known was monitored, had been contaminated with uranium and other toxins for four years. In February 1985, Crawford, who was labeled a troublemaker by some neighbors and a savior by others, filed suit against NLO.

Two legal innovations helped shape Crawford vs. NLO into a landmark case that not only shed light on secret government operations, it also demanded accountability for their impact. First: Crawford's lawyer, Stanley M. Chesley, decided to sue NLO, the contractor that operated Fernald, instead of the federal government. Second: U.S. District Judge Arthur Spiegel made the decision to hold a summary trial, which eventually led to a non-binding jury decision in favor of the residents. Though the jury's decision wasn't official, the government got a glimpse of the likely outcome of a full trial. Within a month, the NLO and the government agreed to settle the case with the residents.

August 2001
*Cincinnati Magazine*
Page 32 - Legal Special Advertising Section
"Cases of the Century"



Before Crawford vs. NLO, government contractors lived in a protective bubble, well-cushioned from the needles of litigation. NLO assumed that any legal action taken related to Fernald would be directed at the DOE. But as part of the federal government, the DOE was immune from such lawsuits, and could claim that national defense operations necessitated any and all activities at Fernald. Hence, no one would be legally accountable to residents or employees for any contamination. But by suing NLO, Chesley left the government out of the case and claimed the contractor alone was accountable for the plant's daily operations. Since NLO's contract with the DOE stipulated that the government was responsible for all claims and charges against the contractor, it fell to the DOE to defend NLO. Chesley had crafted an innovative strategy that allowed Crawford and her neighbors to sue the government indirectly. "It turned out to be the biggest single piece of the puzzle," says Chesley.

Despite extensive documentation of contamination surrounding Fernald—from high rates of cancer in the community and tons of toxic, radioactive materials stored in leaky, corroded barrels to three-legged frogs in a nearby creek—the government continued to resist a settlement with residents, and spent millions of dollars in legal fees to sustain the suit.

Four years into the litigation, in 1989, Judge Arthur Spiegel launched an innovation of his own. Both sides presented their opening and closing arguments before a real jury and outlined their cases without witnesses, taking only two months of court time. The jury quickly delivered their non-binding decision: $136 million against NLO, including compensatory and punitive damages as well as money for a medical monitoring fund. Within a month, the DOE had agreed to pay $73 million for residential and property losses, emotional distress and medical monitoring, plus make an additional $5 million available to property owners within five miles of the plant.

After the plant finally shut down, also in 1989, its workers filed a similar suit against NLO, which they settled for $20 million and lifetime medical monitoring.

More than 15 years after Crawford's suit was filed, it continues to break ground, and not only because it was the first time the government admitted that one of its weapons plants could have seriously harmed its neighbors. Her case, and the workers' case after it, revived the national dialogue about the dangers of nuclear waste and opened the doors for similar cases against government contractors. In addition, the comprehensive medical monitoring program has made more than 100 major diagnoses, including early stages of cancer, while promoting wellness among its thousands of participants and offering them reassurance about their health and their futures.

Crawford, who is thankful that she and her family have remained healthy, continues to go to court regularly to assist with settlement distribution and works to keep most of the waste onsite. "I think we've come through the roughest waters," she says. "After 15 long years, we're seeing the light at the end of the tunnel."

*Elissa Sonnenberg is Special Projects Associate Editor for* Cincinnati Magazine.

**Fernald took root in the conservative, rural Hamilton County community during a top-secret quest by the United States to build a working atomic bomb—the result of fears from Hitler's Germany and the Cold War.**