



## Department of Energy

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JAN 27 2000

Mr. Bruce Means  
Chair, Remedy Review Board  
United States Environmental Protection Agency  
401 M Street, SW/5202G  
Washington, D.C. 20460

DOE-0358-00

Dear Mr. Means:

### RECOMMENDATION FOR REVISED REMEDY FOR OPERABLE UNIT 4 SILOS 1 AND 2 REMEDIAL ACTION

Reference: Letter, Johnny W. Reising, DOE-FEMP, to Gene Jablonowski, U.S. EPA, and Tom Schneider, OEPA, "Operable Unit 4 Draft Feasibility Study/Proposed Plan," dated December 21, 1999 (DOE-0277-00)

The purpose of this letter is to provide the Department of Energy, Fernald Environmental Management (DOE-FEMP) recommendation for Remedy Review Board concurrence with the draft revised Feasibility Study/Proposed Plan (FS/PP) for Silos 1 and 2. The draft Revised FS/PP was submitted for the U.S. Environmental Protection Agency (U.S. EPA) review and approval in the referenced letter. The extensive input and involvement from the U.S. EPA, Ohio Environmental Protection Agency (OEPA), and the public during preparation of the draft FS/PP is summarized below.

The original Record of Decision (ROD) for Operable Unit 4 (OU4), approved in December 1994, identified removal, on-site vitrification, and off-site disposal at the Nevada Test Site (NTS) as the remedy for the Silos 1 and 2 material. The revised FS/PP was prepared to reevaluate the treatment component of the selected remedy for Silos 1 and 2 material. Other components of the OU4 remedy selection decision documented the OU4 ROD was not reevaluated as part of the revised FS/PP.

In the first stage of the revised FS, DOE screened a wide range of potential alternatives for treatment of Silos 1 and 2 material. In December 1998, DOE presented its proposed initial screening of alternatives to the U.S. EPA, OEPA, and key stakeholders for input. Based upon this initial screening and the input received from stakeholders, DOE selected vitrification and chemical stabilization for detailed analysis.

JAN 27 2000

Mr. Bruce Means

-2-

DOE's evaluation of vitrification and chemical stabilization against the criteria specified by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), was supported by pilot-scale Proof of Principle (POP) testing of representative processes for each technology. The POP testing, which was completed in May 1999, was conducted by commercial vendors with expertise in implementation of the technologies. After reaching alignment with the U.S. EPA, OEPA, and key stakeholders on the conclusions to be drawn from the evaluation, DOE recommended in the PP that the remedy for Silos 1 and 2 be changed to retrieval, treatment by chemical stabilization, and off-site disposal at the NTS.

DOE's remedy proposal is based upon its determination that the remedy satisfies the statutory requirements of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the conclusion that chemical stabilization has an overall advantage over vitrification when evaluated against the five primary balancing criteria prescribed by the NCP. Specifically, the advantages of chemical stabilization in implementability and short-term effectiveness are judged to outweigh the advantages of vitrification due to its lower treated waste volume.

DOE maintained extensive public involvement throughout preparation of the revised FS/PP. The U.S. EPA, OEPA, independent technical experts and key stakeholders, both locally and in the vicinity of NTS, were provided with the opportunity for input throughout the identification and evaluation of treatment alternatives, review of POP testing results, and development of the proposed remedy. As a result of this public involvement, key stakeholders have expressed support for DOE's proposed remedy. The Fernald Citizens Advisory Board (FCAB) has issued a formal recommendation endorsing DOE's proposed remedy (enclosed).

DOE will continue the public involvement process during finalization of the remedy selection decision for Silos 1 and 2 as prescribed by the NCP. Based upon the input received from the extensive interactions with the public to date, DOE anticipates public acceptance of the currently proposed revised remedy for Silos 1 and 2. DOE recommends the U.S. EPA approve the proposed revised remedy for Silos 1 and 2 in order to allow initiation of the formal public review process as soon as possible.

If you have any questions, please contact Nina Akgündüz at (513) 648-3110.

Sincerely,



Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FEMP:Yockman

Enclosure 

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Mr. Bruce Means

-3-

JAN 27 2000

cc w/enclosure:

S. Fauver, EM-42/CLOV  
J. Saric, USEPA-V, SRF-5J  
G. Jablonowski, USEPA-V, SRF-5J  
T. Schneider, OEPA-Dayton  
F. Bell, ATSDR  
M. Schupe, HSI GeoTrans  
R. Vandegrift, ODH  
F. Barker, Tetra Tech  
AR Coordinator, FDF/78

cc w/o enclosure:

N. Akgündüz, OH/FEMP  
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S. Hinnefeld, FDF/31  
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January 20, 2000

Jack Craig  
Fernald Environmental Management Project  
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Dear Mr. Craig:

Enclosed please find the Fernald Citizens Advisory Board Recommendation number 00-1, entitled Recommendation on Silos 1 and 2 Technology Selection. Because of the FCAB's ongoing involvement and knowledge of this decision, formal feedback to this recommendation is not required. As noted in the recommendation, we will continue to monitor the progress of this decision and provide additional input during the formal comment period.

If you have any questions or concerns or you would like to discuss this matter further, please contact me at 513-863-1251.

Thank you.

Sincerely,

James Bierer  
Chair

- Support Staff*
- Phoenix Environmental
- Douglas J. Sarno
- Cristal M. Sarno
- 703-971-0000
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cc: Martha Crosland, EM-22  
Susan Brechbill, DOE-Ohio  
SSAB Chairs

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**RECOMMENDATION #00-1****RECOMMENDATION ON SILOS 1 AND 2 TECHNOLOGY SELECTION**

January 15, 2000

2 pages

Presented to: Jack Craig, DOE Fernald

**Source of Recommendation:**

- Full Board
- Remediation Committee
- Stewardship Committee
- Steering Committee

**Type of Recommendation:**

- Initial
- Follow-on to Recommendation

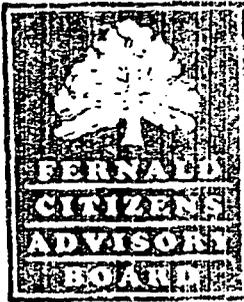
Response Requested by: n/a

The Fernald CAB believes that it is important to provide DOE with an endorsement of a technology to assist in moving the Silos remedy selection process forward. At its January 15, 2000 meeting, the FCAB endorsed the selection of the chemical stabilization family of technologies by a vote of 11 to 2. The primary reason stated by the majority was the desire to select a technology that presents the greatest chance of successful implementation, provides the best opportunities for recovery from any initial failures, and minimizes worker risk.

Regardless of the technology selected, there are a number of overriding issues that the FCAB feels are important in the implementation of the Silos project. While many of these issues are redundant to the CERCLA nine criteria, our concern is that they be firmly entrenched in the implementation of the project, not just the decision-making. These concerns, not necessarily in priority order, are listed below.

- The ability to move forward with the project successfully including overall implementation and successful completion of the project.
- The ability to identify and implement a backup plan, should the primary technology fail.
- The overall protection of workers at Fernald, during transport, and at the ultimate disposal site (currently NTS).
- The overall protection of the public at Fernald, during transport, and at the ultimate disposal site (currently NTS).
- The safety of transportation operations.
- The qualifications and capabilities of the vendor selected.
- The volume, treatment requirements, and disposal requirements of secondary wastes.
- The ability to minimize the volume of waste and maximize recycling.
- The long-term stability of the waste form at the disposal location.

8090

**RECOMMENDATION #00-1****RECOMMENDATION ON SILOS 1 AND 2 TECHNOLOGY SELECTION**

January 15, 2000  
Page 2 of 2

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The FCAB will take a continuing interest and role in the Silos decision and would like to be involved to the maximum extent possible in the process of planning, selecting vendors, and designing the ultimate remedy as these are the activities which will determine success. Because additional stakeholder comments are still expected during the formal public comment period, especially those of the Nevada Test Site CAB and stakeholders, the Fernald CAB expects to provide additional comments and recommendations at that time.

The minority position favors vitrification for the following reasons:

- Waste minimization reduces volume--stabilization results in a 3 to 1 increase in volume of waste.
- The resulting increase in waste volume increases the potential transportation risk due to the increase in the number of trucks needed to ship the waste.
- The vitrification waste form provides greater long term stability.
- Vitrification provides better containment of Radon gas that will continue to be emitted from the waste form.

The minority does not wish to be remembered as a negative part of the Cold War legacy as a result of a decision to use a technology that was easier to implement over one that reduces the amount of waste and could potentially provide more long-term protections of human health and the environment.