

August 9, 2002

The Honorable Baron P. Hill  
House of Representatives  
1201 E. 10th Street, Suite 107  
Jeffersonville, Indiana 47130

Dear Congressman Hill:

This letter is in response to your July 2, 2002, request to investigate statements contained in a letter from one of your constituents, Mr. Steven F. Collier, regarding alleged safety hazards and mismanagement at the Department of Energy's (DOE) Fernald site in Hamilton, Ohio.

Mr. Collier inquired if the Defense Nuclear Facilities Safety Board (Board) is aware of safety issues, including nuclear safety issues, with respect to the Waste Pits Remedial Action Project (WPRAP) and the Silos project at the Fernald site. He also questioned what the Board is doing to ensure that DOE provides proper oversight of safety issues at Fernald.

In response to Mr. Collier's questions, the Board is aware of and has acted upon safety issues with respect to the WPRAP and Silos projects. Safety violations are reported in DOE Occurrence Reports. The Board has discussed reported safety violations with DOE and contractor management personnel at the site. The Board's staff has also conducted site reviews of the work authorization programs for the WPRAP and Silos projects, and reviewed the safety oversight programs of DOE and the primary contractor, Fluor Fernald. The staff concluded that more attention by both DOE and Fluor Fernald needs to be paid to worker safety and proper conduct of operations on most site projects, including the WPRAP and Silos projects.

The Board has also discussed methods to improve safety on all projects, including the WPRAP and Silos projects, with DOE and Fluor Fernald. In June 2002, at the request of the Fluor Fernald management, each project developed ideas to improve safety, which are being shared across the site. With this and other initiatives, it appears that Fluor Fernald management is attempting to take positive steps to improve worker safety at the site. In addition, the Board continues to emphasize the need for DOE to be actively involved in the safety oversight of activities at the Fernald site.

Additional information on the Board's safety oversight activities at Fernald, and more detailed responses to Mr. Collier's inquiries, are contained in the enclosure.

Please contact me if you would like additional information, or if I can be of further assistance.

Sincerely,

John T. Conway  
Chairman

Enclosure

## Enclosure

### **Information to Address July 2, 2002, Inquiry from Congressman Baron P. Hill**

**Introduction.** The Defense Nuclear Facilities Safety Board (Board) is an independent Federal agency established by Congress in 1988. The Board's mandate under the Atomic Energy Act is to provide safety oversight of defense nuclear facilities operated by the U.S. Department of Energy (DOE). The Board's responsibilities include oversight of activities to clean up and remove nuclear materials from facilities which are undergoing closure, such as the Fernald site in Hamilton, Ohio.

**Board Oversight at Fernald.** The Board has a technical staff of engineers and scientists who obtain information and perform reviews of activities at sites under the Board's jurisdiction, including Fernald. The Board's staff obtains information on site activities at Fernald from several sources, including weekly contact with the DOE site office. The staff also reviews daily occurrence reports and weekly activity reports sent to DOE Headquarters by Fernald. The staff also requests and reviews numerous other site documents and reports, including: work procedures, safety documentation, contractor and DOE assessment reports, and accident investigation reports. The staff also reviews reports on Fernald issued by other organizations, such as the General Accounting Office.

The Board's staff performs oversight reviews of safety aspects of activities conducted at the Fernald site, including work on the seven major site closure projects: Deactivation and Decommissioning (D&D), Waste Pits Remedial Action Project (WPRAP), Waste Management, Soils and Disposal Facility, Aquifer Restoration, Silos, and Maintenance and Infrastructure Support. Appropriate DOE and contractor management and technical personnel are involved in these reviews. When issues are identified by the Board's staff, the Board communicates the information to DOE Headquarters and the Ohio Field Office by letter, typically accompanied by a staff report. Less significant findings are verbally communicated to DOE and contractor management at the site. DOE and contractor management often take actions on their own to address issues identified by the Board's staff without the formal exchange of correspondence. A summary of the results of major reviews that have been performed at Fernald are included in the Board's Annual Report.

**Recent Reviews at Fernald.** The Board reviews activities involving former defense nuclear facilities and remnant materials at Fernald, but focuses review activities primarily on new projects and existing projects or activities with known or potential safety problems. The Board has performed recent reviews of the work authorization programs, DOE and contractor oversight, and the Silos Project. These are discussed in more detail below.

*Work Authorization Programs*—The Board’s staff recently completed an on-site review of the work authorization programs at Fernald. The work authorization programs specify how work is to be performed on individual projects. The staff’s observations were communicated to

DOE and contractor management personnel at Fernald on April 23, 2002. The staff made the following principal observations:

- ! Based on reviews of a sample of work documents on the major projects, the work authorization programs appear to be adequate to allow the work to be performed safely.
- ! The workforce is changing as the number of salaried personnel is reduced and new workers are hired on many projects. Factors such as inexperience and lack of training may make new workers more vulnerable to accidents. Work schedules on some projects are being accelerated, with the WPRAP project now working around-the-clock. There have been recent occurrence reports on the D&D and WPRAP projects involving uranium contaminations and industrial safety problems, including some events in which workers could have been seriously injured. The staff concluded that more attention needs to be paid to worker safety and proper conduct of operations on most site projects, including the D&D, WPRAP, and Silos projects.
- ! Fluor Fernald personnel reductions have resulted in the elimination or consolidation of some internal oversight functions. DOE safety oversight reviews have been combined in the interest of improving efficiency. Combining reviews can result in less time or attention devoted to the areas to be reviewed. In view of the increase in radioactive contaminations and industrial safety events, reductions in contractor and DOE oversight may not be appropriate.
- ! A marked variability (from marginally adequate to very good) was observed in the quality of job briefings on the various projects. The staff believes that improvement could be made in job briefings on some projects. Communication between projects on operational topics and sharing best practices were not apparent and ought to be improved across the site.

*Silos Project*—The Board’s staff is also reviewing the Silos Project at Fernald. The purpose of the Silos Project is to remove radioactive waste that has been stored in three concrete silos for approximately 50 years and ship the material off-site. The staff made the following principal observations:

- ! The details of the contractor design review process are not clearly described in the Engineering Execution Plan. The Board’s staff believes that the responsibilities of the contractors, DOE, and the DOE-sponsored Critical Analysis Team in the engineering design and review process need to be documented clearly.

- ! The staff had several specific questions and comments on various pieces of equipment, design features, and planned testing on the Radon Control System, Advanced Waste Retrieval Project, Silos 1 and 2 Treatment Facility, and the Silo 3 Project.
- ! On July 3, 2002, DOE approved a Fluor Fernald request to reclassify the Silos Project as an environmental restoration activity as defined in 10 CFR 830, *Nuclear Safety Management*. This allows the project to develop a Health and Safety Plan instead of a more comprehensive Safety Analysis Report. Readiness for start up would be evaluated using a contractor Standard Startup Review instead of a more rigorous and independent Readiness Assessment. The staff is currently reviewing the basis for the revised approach and the safety implications.

*DOE and Fluor Oversight*—The Board’s staff has recently reviewed both the DOE and Fluor Fernald safety oversight programs at Fernald. Most recently, the Board’s staff also reviewed DOE and Fluor oversight programs for the D&D, WPRAP, and Silos projects during an onsite review on June 27, 2002. The staff made the following principal observations:

- ! The staff found that DOE and Fluor Fernald have implemented safety oversight programs consistent with DOE requirements. DOE and Fluor Fernald conduct scheduled assessment reviews of various activities on all of the site projects. Both DOE and Fluor Fernald have reporting and tracking systems for assessments, non-conformances, and commitments. In addition, DOE has Facility Representatives who oversee site projects on a daily basis and produce formal records of their reviews. The staff found that in most oversight activities, DOE and Fluor Fernald are consolidating reviews and conducting some reviews in parallel. This may save time, but it will be important to ensure that independence is maintained between DOE and Fluor.
- ! On May 3, 2002, Fluor announced that the functions of several safety committees were being combined into a new Safety Review Committee (SRC). The number of personnel has been reduced compared to the former committees. Since the purpose of the SRC is to provide direct support to projects and programs when requested, it is not clear that the SRC will be as independent as the former committees.
- ! In January 2001, the Board issued a letter to DOE identifying weaknesses in the fire protection program for a Tension Support Structure used for radioactive material storage at Fernald. DOE and Fluor Fernald acted promptly to resolve the weaknesses, resulting in improved fire safety at the site.

**Issues Identified in Constituent’s Letter.** Mr. Collier requested that the Board address two issues. The Board’s evaluation of the issues is summarized below.

*Issue No. 1: Safety Concerns on the WPRAP and Silos Projects*—Mr. Collier asks if the Board is aware of safety issues, including nuclear safety issues, with respect to the WPRAP and Silos projects.

The Board is aware of safety issues, including nuclear safety issues, with respect to the WPRAP and Silos projects. All safety issues, both nuclear safety issues and issues not directly related to nuclear safety, of which the Board has become aware have been referred to the appropriate DOE offices. In regard to the WPRAP project, the Board has previously reviewed the DOE Occurrence Reports and the Price Anderson Act Notice of Violation that were issued on WPRAP and the “near-miss” that occurred on April 25, 2002, in which a worker was injured by being pinned between a railcar and a metal platform in the Rail Loadout Building. The staff held follow-up telephone discussions with the site and reviewed the investigation report, including corrective actions. As discussed earlier, based upon an April 2002 site visit, the Board’s staff informed DOE and Fluor Fernald that more attention needs to be paid to worker safety and proper conduct of operations on most site projects, including the D&D, WPRAP, and Silos projects.

The Board’s staff has discussed safety on all Fernald projects, including the WPRAP project, with DOE and the contractor. In June 2002, at the request of the Fluor Fernald management, each project developed ideas to improve safety which have been shared across the site. With this and other initiatives it appears that Fluor Fernald management is attempting to take positive steps to improve worker safety at the site.

The Silos Project consists of several sub-projects which are in various stages of design and construction. Some workers have received minor injuries in construction accidents, and there have been construction near-misses. The Board’s staff has discussed project safety with DOE and the contractor. As mentioned previously, in June 2002 each project developed ideas to improve safety which have been shared across the site. It appears that Fluor Fernald management is attempting to improve worker safety on all projects, including the Silos Project.

*Issue No. 2: What is the Board doing to ensure that DOE provides proper oversight of safety issues at Fernald?*

As a key element of the Board’s ongoing oversight at Fernald, the Board continues to emphasize the need for DOE to be actively involved in the safety oversight of its contractors at Fernald. Coupled with the Board’s oversight of DOE efforts, the Board also closely reviews Fluor Fernald’s conduct of safety programs, self-assessment programs, and resolution of safety issues. The Board will closely monitor both DOE and Fluor Fernald oversight of Silos Project startup activities.