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THE IMPORTANCE OF STAKEHOLDER INVOLVEMENT IN A SUCCESSFUL
WASTE MANAGEMENT PROGRAM

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ABSTRACT

The Fernald Environmental Management Project has been transporting legacy low-level radioactive waste to the Nevada Test Site for disposal since 1985. Additionally, several records of decision have been issued regarding Fernald Environmental Management Project remediation waste disposal on-site, at the Nevada Test Site, or at a permitted commercial disposal facility. Under the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, one of the criteria that must be evaluated prior to issuance of a record of decision is public acceptance. The Fernald Environmental Management Project has made a concerted effort to gain stakeholder support both locally and in Nevada for these records of decision. The Fernald Environmental Management Project's approach towards stakeholder interaction can provide a valuable framework for other sites that need to dispose of operations or remediation waste at remote, off-site locations. This approach has also been invaluable in allowing the public to understand the actual effects of waste management incidents.

BACKGROUND

The Fernald Environmental Management Project (FEMP) is a U.S. Department of Energy (DOE) - owned, contractor-operated facility located in southwestern Ohio. It is located north of the small community of Fernald, Ohio, approximately 20 miles northwest of Cincinnati, Ohio. Formerly known as the Feed Materials Production Center, the facility was in operation from 1951 through 1989 to produce metallic uranium fuel elements, target cores, and other uranium products for use in weapons, production reactors, and other DOE programs.

To facilitate site remediation, Fernald was divided into five operable units (OUs) based on their locations or the potential for similar technologies to be used in the ultimate cleanup. As allowed by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), removal actions were used to expedite field remediation activities until records of decision (RODs) could be issued. A total of six RODs were subsequently issued for the five OUs (this includes one ROD for Interim Remedial Action for the building decontamination and dismantlement OU). The OUs are:

- OU 1 - waste pits 1-6, a burn pit, and a clearwell.
- OU 2 - other waste units, including the sanitary landfill, lime sludge ponds, fly ash piles, and the South Field Area. An On-Site Disposal Facility (OSDF) was constructed under the OU 2 ROD.
- OU 3 - the 136-acre former production area encompassing all former process buildings, structures, and equipment; inventoried hazardous materials; scrap metal piles; and the fire training area.

- OU 4 - K-65 silos (Silos 1 and 2 contain radium-bearing wastes, Silo 3 contains dried uranium-bearing wastes, and Silo 4 is empty).
- OU 5 - environmental media (groundwater, surface water, soil, sediments, air, vegetation, and wildlife at and around Fernald).

WASTE MANAGEMENT PROGRAM

A legacy of the years of operations was the generation of millions of pounds of waste materials and nuclear products. In the mid-1980's, drums of wastes were in areas not suitable for long-term storage. Measures were then taken to improve the management of these materials. Beginning in 1985, Fernald has shipped low-level radioactive wastes to the Nevada Test Site (NTS) for disposal in NTS' radioactive waste management areas. Subsequently, in 1991, DOE-FEMP issued Removal Action 9 (RvA 9), "Removal of Waste Inventories", to address the safe, off-site disposal of existing and newly-generated waste inventories. The program is defined by various procedures which include the characterization, treatment, packaging, and transportation of waste in a manner that ensures full compliance with DOE Orders, the Resource Conservation and Recovery Act as appropriate for hazardous waste, U.S. Department of Transportation shipping requirements, and NTS waste acceptance criteria (WAC). RvA 9 encompasses low-level radioactive waste, mixed waste, and polychlorinated biphenyl waste disposition; it was subsequently adopted by and incorporated into the OU 3 ROD for Final Remedial Action.

PUBLIC INVOLVEMENT

In July 1986, DOE and the U.S. Environmental Protection Agency signed the Federal Facilities Compliance Agreement which initiated the Remedial Investigation/Feasibility Study (RI/FS) process for the Fernald site. An initial community assessment was conducted to identify issues of concern among the neighboring public, and the original *Community Relations Plan* for the site was developed. The Fernald Citizens Task Force (FCTF) was formed in 1993 to develop public consensus about cleanup solutions and future courses of action at Fernald. This group, now known as the Fernald Citizens Advisory Board (FCAB), has been instrumental in developing the RODs by making key recommendations on cleanup levels and potential remediation measures.

In addition to FCTF/FCAB meetings, other significant public involvement methods are used:

- Informational meetings that have covered topics from RI/FS progress and key decisions through cleanup progress briefings.
- Envoy program, where Fernald employees meet regularly with their assigned groups and inform them about Fernald activities; listen to their groups' opinions, suggestions, or questions; and return feedback to Fernald decision makers.

There has been a long-standing recognition of potential equity issues in local public involvement activities. Decisions have been made at Fernald consistent with this recognition.

FEMP RELATIONSHIP WITH NEVADA

When the Fluor Daniel team was awarded the contract to manage the remediation of the Fernald site, the importance of material disposition to the success of the project was recognized, and a vice-president level position was created. A key function of this position was liaison with the NTS - both the DOE and contractor organizations and the stakeholder groups. A representative of the Fernald site has attended essentially all of the meetings of the Community Advisory Board for Nevada Test Site Programs (NTS CAB) to assure that NTS CAB members are knowledgeable of FEMP activities, especially those involving the shipments of materials to the NTS for disposal. Attendance at these meetings also helps ensure that Fernald decision makers are aware of the key concerns and issues that people in Nevada have pertinent to these activities.

Additionally, for key decisions involving waste disposition at NTS, Fernald is conducting public meetings in Nevada. These meetings provide the same briefings and information for stakeholders

in Nevada as for stakeholders in Ohio. For example, as a different approach was being considered for treatment and ultimate disposal of Silo 3 material (OU 4), a series of workshops was conducted to evaluate the efficacy of potential treatment technologies. These workshops were presented both in the immediate Fernald area and in Las Vegas. The input from these led to the development of an Explanation of Significant Differences (ESD) to modify the OU 4 ROD. Although not required by regulation, a public review period was provided for the ESD, with public hearings to enable the public to offer comments held in both the immediate Fernald area and in Las Vegas. The final ESD was issued incorporating comments and addressing issues received from all stakeholders.

BENEFITS OF AGGRESSIVE PUBLIC INVOLVEMENT

Fernald has received invaluable input and understanding of issues and concerns as a result of the public involvement program, and has been able to make better decisions regarding waste management as a result. For example, interactions between Fernald and its stakeholders, both locally and in Nevada, led to the development of a site-wide remediation strategy that incorporated what is referred to as the "balanced approach to waste disposition". This approach recognizes the technical and economic impracticability of removing and shipping all contaminated FEMP materials to an off-site disposal facility. Concerns about equity and transportation risk were heavily considered in developing the balanced approach. Under this approach, materials with higher levels of contamination, deemed to represent the principal threat at the site, will be treated, if required, and shipped off-site for disposal in accordance with the disposal facility's WAC. Material exhibiting lower contaminant concentrations distributed over a larger volume, termed a secondary threat, will be permanently dispositioned at the Fernald site in an engineered on-site disposal facility. Obtaining approval for this OSDF required the issuance of a waiver from an Ohio regulation that prohibits construction of such facilities over sole-source aquifers. Stakeholder support of this waiver was instrumental in the granting of this waiver.

This aggressive public involvement program has helped build trust and credibility between Fernald and its stakeholders. This was especially evident after a transportation incident where a truck transporting white metal boxes containing low-level radioactive waste to the NTS was found to be leaking near Kingman, Arizona. Two of the seven boxes on the truck had developed cracks allowing water in the boxes to escape onto the wooden truck bed, as well as five boxes from other shipments had arrived at the NTS without signs of leaking en route. Full briefings were provided at the earliest opportunity in both Ohio and Nevada. Although there were no environmental or safety impacts from the leak, DOE initiated an investigation of the incident because of potential programmatic impacts; upon completion of the investigation, additional briefings were provided in both locations detailing the findings and corrective actions. Because of the trust that had been established, the results of the review were readily accepted; some members of the NTS CAB even questioned the need to conduct such an extensive investigation and corrective actions.

CONCLUSIONS

An aggressive public involvement program is essential to conducting a successful waste management program. To be effective, the public involvement program must recognize that stakeholders include people who reside in distant locations that may serve as disposal sites, and their needs and concerns must be incorporated into the decision making process. Trust and credibility will be built, leading to decisions that are acceptable to all parties. This communication with both local and remote area stakeholders must be held during good times, not just at decision points or when problems arise. The public must be viewed as critical to success of the project.

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