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Action Description Memorandum

for the

FY 1991 Line Item:

Environmental, Safety and Health Upgrades, Phase III

February 1989

By: Frank S. Adams
Michael R. Hunter

E G & G Mound Applied Technologies
Miamisburg, Ohio 45343

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ADM - FY 1991, Line Item

1.0 CONCISE DESCRIPTION OF THE PROPOSED ACTION

This ADM documents the evaluation of the potential environmental impact hazards from the Environmental, Safety and Health Upgrades, Phase III project.

1.1 DESCRIPTION AND SCOPE OF PROJECT

Environmental, Safety and Health Upgrades, Phase III (ES&H, Phase III) is a \$3,810,000 Line Item project for FY 1991. The project is identified in the 1991 Budget submission documents as Project No. 91-DA-01.

ES&H, Phase III is a portion of a continuing effort to protect the environment, our neighbors and our employees from any adverse affects caused by the development and production missions of EG&G-Mound Applied Technologies. This project is composed of three separate subprojects, each of which is a solution to specific environmental problems at the site. The net result will be a considerable reduction in the risk of an incident which could violate a local, state or federal emission regulation.

1.2 SPECIFIC COMPONENTS OF THE PROJECT

The three subprojects comprising ES&H, Phase III are as follows:

- a. Solvent Waste Handling and Incineration. A solvent waste handling system will be provided to incinerate process waste solvents to assure compliance with hazardous waste management standards and eliminate the risks associated with the current practice of off-site disposal.
- b. Environmental Buffer Zone. By purchasing the land adjacent to the northwest boundary of the facility and by leaving the property undeveloped, Mound creates a much needed separation between land outside of the facility occupied by dwellings and buildings on the facility. This land will provide Mound with the means to monitor and control contamination on-site.
- c. Sanitary Treatment Plant Clarifier and Gas Cylinder Bank Upgrade. The proposed new clarifier will provide Mound with an increase in wastewater treatment capacity at the existing plant. Over the years, all other treatment plant components have been upgraded to meet

the treatment needs of a growing work force and expanding facility. This segment of the subproject will provide additional clarification capacity, will eliminate the clarifier as the limiting component in the treatment facility, and will provide greater assurance that the National Pollution Discharge Elimination Systems (NPDES) permit limits on suspended solids will be met. The new clarifier will also reduce the solids loading on the sand filter, thus increasing its effectiveness.

The gas cylinder bank upgrade will eliminate explosion and fire hazards resulting from improperly stored and improperly secured gas cylinders and manifolds. Implementation of this segment of the subproject will bring the gas cylinder banks in compliance with the National Fire Protection Association (NFPA) and Mound safety standards.

2.0 LOCATION OF THE ACTION

The 306-acre Mound site is located adjacent to the southern boundary of Miamisburg, Montgomery County, Ohio. Mound is approximately 10 miles south of metropolitan Dayton, Ohio. The locations of the three subprojects are shown on the site map, attached as Figure 1.

3.0 POTENTIAL ISSUES

3.1 MOUND'S FINAL ENVIRONMENTAL IMPACT STATEMENT (EIS)

There are no program/project elements known to be in conflict with Mound's site EIS. Mound's final EIS is formally documented in DOE/EIS-0014, dated June 1979.

3.2 HISTORIC AND NATIONAL LANDMARKS

The only historic landmark in the vicinity of Mound is the Miamisburg Mound, an ancient Indian mound located 120 m (380 ft.) east-southeast of the Mound facility site in the Mound State Memorial Park. No activity associated with this project will adversely impact this landmark.

Compliance by the Mound Facility with the National Historic Preservation Act (Public Law 89-665) was assured by an archaeological survey. This survey is documented as "Public Archaeology Report No. 18," Laboratory of Anthropology, Wright State University, Dayton, Ohio, December 1987.

3.3 FLOODPLAIN/WETLANDS

No facilities associated with this project are located on a floodplain or in areas considered as wetlands as defined in 10 CFR Part 1022. Detailed hydrology information can be found in Section 2.3.5 of the Mound's EIS (DOE/EIS-0014, June 1979). The estimated elevation of the adjacent Great Miami River during a maximum flood is 710 F.S.L. All parts of this project are above this elevation.

3.4 ENDANGERED AND THREATENED SPECIES

The Federal and the State of Ohio lists of endangered and threatened species have been reviewed, and personnel of the regional office of the U.S. Fish and Wildlife Service have been consulted on this matter. In consideration of the nature and habitats of those few species listed for the southwest Ohio area, the probability of endangered or threatened species occurring on-site is extremely remote. The 306-acre site has been greatly altered through construction and use, and does not provide such species an ideal habitat. There are no known records of endangered or threatened species for the site.

3.5 CONSTRUCTION AND OPERATIONS

Construction activities will be controlled, as required, to conform with Mound's Loss Prevention and Environmental Control (LP & EC) System requirements. Controls could include, for example, appropriate OSHA-approved construction practices and safeguards, seeding and sodding of disturbed earth for erosion control, grading to control drainage, and dikes around solvent tanks. If radioactive contaminated soil is encountered (anticipated to be a possibility only near the incinerator site) it will be removed and boxed by a Mound dedicated crew and shipped to the Nevada Test Site for disposal. All applicable DOT regulations will be followed.

3.6 THE PROJECT'S MAJOR ENVIRONMENTAL ISSUES

There are no major environmental issues. NEPA air and water effluent permits will be required.

The solvent waste handling and incineration subproject will eliminate the off-site transport and disposal with the risk of second-party mismanagement of hazardous waste (with attendant Mound liability). Repair of the deteriorated solvent waste collection system in Building 27 and the open drumming operation will greatly reduce the possibility of

explosive-containing hazardous waste solvent from entering the main storm drainage channel. This channel runs above the "sole-source" Buried Valley Aquifer, and we wish to reduce potential contamination. Pumping the waste solvent in above-ground lines (so any leaks will be quickly found and repaired) to a licensed hazardous waste incinerator reduces handling steps and spill possibilities. Off gas scrubbers and mist eliminators will protect the atmosphere and will be subject to review scrutiny during the NEPA air permit process. The solvent will be accumulated in metal storage tanks, diked to contain full tank contents, and protected from the weather and accidental contact by being in the new building. This subproject will reduce the volume and toxicity of Mound-generated waste sent off-site for disposal.

The Environmental Buffer Zone created by the acquisition of the property adjacent to the existing northwest boundary of the facility will provide Mound the opportunity to better control groundwater flow off-site and will allow unimpeded access for groundwater monitoring. Mound property has been developed up to the current property boundary along the northwest side of the facility, leaving no buffer zone between Mound and the neighboring properties, some of which contain inhabited dwellings. Groundwater monitoring facilities exist on the neighboring property. However, Mound personnel must obtain permission from the property owners before sampling or remedial actions can commence. This subproject will allow Mound personnel to quickly contain and remove any future contamination originating from the Mound site before any adverse environmental conditions develop off-site.

Upgrading of the STP clarifier will help meet the increasingly stringent, effluent requirements imposed by the EPA on the sanitary treatment plant. The existing STP clarifiers are the only treatment components which have not been upgraded to keep pace with the increase in employees and building additions at the facility. Because of the increase in sanitary flow to the treatment plant, the existing clarifiers are undersized and do not effectively provide the level of treatment required to produce an acceptable secondary effluent. The new clarifiers will remove more solids, thus unloading the sand filters, prolonging their effectiveness and their useful life.

In 1987, Factory Mutual and the EG&G Explosives Safety Group conducted inspections of gas cylinder banks and noted deficiencies in the storage methods and separation distances

between flammable gas cylinders and oxidizers. This subproject will provide safer gas cylinder storage by constructing fire-resistant barriers between flammables and oxidizers to prevent propagation of fires and subsequent explosions. A more positive means of securing the cylinders to prevent overturning and possible unrestricted discharge of gases from a broken regulator will also be provided, increasing compressed gas safety.