

RCRA PART B 5715
PERMIT APPLICATION

REVISION 9.1



OCTOBER 2004

FERNALD CLOSURE PROJECT

U.S. EPA Identification No. OH6890008976

5719

SECTION F - PROCEDURES TO PREVENT HAZARDS

TABLE OF CONTENTS

F-1	SECURITY.....	1
F-1a	Security Procedures and Equipment.....	1
F-1a(1)	24-Hour Surveillance System.....	2
F-1a(2)	Barrier and Means to Control Entry.....	2
F-1a(2)(a)	Barrier.....	2
F-1a(2)(b)	Means to Control Entry.....	3
F-1a(3)	Warning Signs.....	3
F-1b	Waiver.....	3
F-2	INSPECTION SCHEDULE.....	4
F-2a	General Inspection Requirements.....	4
F-2a(1)	Types of Problems.....	5
F-2a(2)	Frequency of Inspections.....	5
F-2b	Specific Process Inspection Requirements.....	5
F-2b(1)	Container and Storage Area Inspections.....	5
F-2b(2)	Tank System Inspection.....	6
F-2b(3)	Waste Pile Inspection.....	6
F-2b(4)	Surface Impoundment Inspection.....	6
F-2b(5)	Incinerator Inspection.....	6
F-2b(6)	Landfill Inspection.....	6
F-2b(7)	Land Treatment Facility Inspection.....	6
F-2b(8)	Miscellaneous Unit Inspection.....	6
F-2b(9)	Subpart AA Inspection.....	6
F-2b(10)	Subpart BB Inspection.....	7
F-2b(11)	Subpart CC Inspection.....	7
F-2c	Remedial Action.....	8
F-2d	Inspection Forms.....	8

SECTION F - PROCEDURES TO PREVENT HAZARDS

TABLE OF CONTENTS (Continued)

F-3	PREPAREDNESS AND PREVENTION REQUIREMENTS	9
F-3a	Equipment Requirements	9
	F-3a(1) Internal Communications	9
	F-3a(2) External Communications	10
	F-3a(3) Emergency Equipment	11
	F-3a(4) Water for Fire Control	12
F-3b	Aisle Space Requirements	13
F-4	PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT	13
F-4a	Prevent Hazards in Loading/Unloading Operations	13
F-4b	Prevention of Run-Off to Other Areas	14
F-4c	Prevent Contamination of Water Supplies	15
F-4d	Equipment and Power Failure	15
F-4e	Personnel Protection Equipment	15
F-4f	Prevent Releases to Atmosphere	16
F-5	PREVENTION OF REACTION OF IGNITABLE, REACTIVE AND INCOMPATIBLE WASTES	16
F-5a	Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes	16
F-5b	General Precautions for Handling Ignitable or Reactive Wastes and Mixing Incompatible Wastes	18
F-5c	Management of Ignitable or Reactive Wastes in Containers	19
F-5d	Management of Incompatible Wastes in Containers	19
F-5e	Management of Ignitable or Reactive Wastes in Tank Systems	19
F-5f	Management of Incompatible Wastes in Tank Systems	20
F-5g	Management of Ignitable or Reactive Wastes Placed in Waste Piles	20

F-5715

SECTION F - PROCEDURES TO PREVENT HAZARDS

TABLE OF CONTENTS (Continued)

F-5h	Management of Incompatible Wastes Placed in Waste Piles	20
F-5i	Management of Ignitable or Reactive Wastes Placed in Surface Impoundments.....	20
F-5j	Management of Incompatible Wastes Placed in Surface Impoundments	20
F-5k	Management of Ignitable or Reactive Wastes Placed in Landfills	20
F-5l	Management of Incompatible Wastes Placed in Landfills.....	20
F-5m	Management of Ignitable or Reactive Wastes Placed in Land Treatment Units.....	20
F-5n	Management of Incompatible Wastes Placed in Land Treatment Units	20

LIST OF FIGURES

- Figure F-1 Facility 50 Foot Boundary Drawing
- Figure F-2 Hazardous Waste Compatibility Chart

LIST OF ATTACHMENTS

- Attachment F-1 Facility Inspection Schedule
- Attachment F-2 Inspection Forms

SECTION F - PROCEDURES TO PREVENT HAZARDS

RCRA Part B Permit Application Fernald Closure Project Fernald, Ohio

The information provided in this section is submitted in accordance with the requirements of the Ohio Administrative Code (OAC) 3745-50-44(A)(4) and Title 40 of the Code of Federal Regulations (CFR) Part 270.14(b)(4). Other regulations addressed to complete this section include OAC 3745-54-14, 3745-54-15, 3745-54-17, 3745-54-32, 3745-54-35, 3745-55-74, and 3745-55-76 (40 CFR 264.14, 264.15, 264.17, 264.32, 264.35, 264.174, and 264.176).

The FCP is not required to comply with Federal and Ohio hazardous waste laws and hazardous waste regulations, with regard to mixed waste, where compliance will increase the risk to human safety and health or the environment, as stated in Section 3.1 of the Consent Decree and its Stipulated Amendment. In these circumstances the FCP will, in consultation with the Ohio EPA, handle the hazardous or mixed waste in a manner protective of human health and safety and the environment as if the hazardous waste requirement had been applied.

F-1 SECURITY

F-1a Security Procedures and Equipment

General security at the Fernald Closure Project (FCP) is provided by fencing, gates, and security officers as discussed in Section F-1a(1). The following features also contribute to the safety and security of the hazardous waste storage ~~lockers~~ buildings and the entire facility:

- Ample lighting is provided throughout the site.
- Communication devices are available for personnel accessing these units, for emergency notification purposes.
- Employees and contractors are required to show identification badges when reporting for work. Visitors must complete an access request form when entering the site. The request form must be signed by an authorized manager.

F-1a(1) 24-Hour Surveillance System

The FCP is under 24 hour surveillance by security officers on mobile and foot patrols. Entry into the facility is monitored through three access points: the South Access Control Point located on the south access road, Post 2 located near the east entrance to the east parking lot and Post 4 located off of Route 126 which permits access to railyard and On-Site Disposal Facility (OSDF) operations. The South Access Control Point serves as the site's primary access point and is manned 24 hours a day.

F-1a(2) Barrier and Means to Control Entry

F-1a(2)(a) Barrier

The former FCP production area, which includes ~~three of the hazardous waste storage lockers~~ ~~the active hazardous waste management areas~~, is surrounded by a physical barrier and monitored 24 hours a day by security. ~~Note that these lockers are planned to be moved to an area south of Cell 8 in November 2004.~~ ~~Two~~ At that point, all of the hazardous waste storage lockers ~~will be~~ are located outside of the former production area. These lockers are locked when they are being used for hazardous waste storage.

The facility's vehicular access ~~point~~ ~~points~~ to the ~~hazardous waste storage lockers in the~~ former production area are ~~is~~ through the ~~Building 82 (former RIMIA) entrance located at the east side of the facility,~~ ~~an entrance located east of the Advanced Waste Water Treatment Facility (AWWT) facility.~~ ~~T-50, a radiological control access point located at the south entrance of the production facility.~~

The security check point at the South Access Control Point at the south entrance is manned 24 hours a day to control access. All other access points are manned from 0530 until 1800 (except during construction season) to allow project-required ingress and egress of employees. At the conclusion of daily operations, access points are secured and the corresponding gates are locked.

F-1a(2)(b) Means to Control Entry

The vehicular entrance point points to the hazardous waste storage lockers in the former production area of the facility are the Building 82 (former RIMIA) entrance, is through an entry located east of AWWT. T-50 located at the south entrance of the production facility, as discussed in Section F-1a(2)(a). The Building 82 entry is monitored controlled by a Radiological Technician, 10 hours a day. T-50 is a radiological control access point for vehicular access.

Personnel access is controlled during ingress/egress as dictated by project working hours. Employees and contractors are required to present an identification badge when reporting to work. Visitors must sign an access sheet and obtain a visitor's pass. Visitors are permitted to enter the former production area only if escorted by facility personnel. These practices restrict unauthorized visitors from entering the main facility.

F-1a(3) Warning Signs

Signs legible from a distance of 25 feet are posted at the entrance(s) to the individual hazardous waste storage units within the facility.

The signs state:

"Danger -- Authorized Personnel Only"

No languages other than English are necessary for the signs at this facility.

~~Additional signs are posted on the entrances and/or gates into the former production area of the facility.~~

F-1b Waiver

A waiver of the security procedures and equipment requirements is not requested by the FCP at this time, therefore this section is not applicable.

F-2 INSPECTION SCHEDULE

The information provided in this section is submitted in accordance with the requirements of OAC 3745-50-44(A)(5) and 3745-54-14 and 40 CFR 270.14(b)(5) and 264.15.

The FCP is not required to comply with Federal and Ohio hazardous waste laws and hazardous waste regulations, with regard to mixed waste, where compliance will increase the risk to human safety and health or the environment, as stated in Section 3.1 of the Consent Decree and its Stipulated Amendment. In these circumstances the FCP will, in consultation with the Ohio EPA, handle the hazardous or mixed waste in a manner protective of human health and safety and the environment as if the hazardous waste requirement had been applied.

F-2a General Inspection Requirements

In addition to inspection of the RCRA storage units, the FCP conducts inspections of safety and emergency equipment, operating equipment, and general conditions of the structures. An informational example of the current FCP Inspection Schedule is provided as Attachment F-1. The Inspection Schedule is updated as needed and maintained in the FCP's RCRA Operating Record.

Deteriorations or malfunctions revealed by the inspection are remedied as soon as possible. Where a hazard is imminent, or has already occurred, remedial action is taken immediately. If the hazard involving hazardous waste is declared to be an "Operational Emergency", as defined in the Contingency Plan, Section G of this permit application, the contingency plan is implemented.

Inspections are documented by recording results on inspection forms. The completed inspection forms are maintained for a minimum of three years from the date of inspection. Examples of the inspection forms currently in use are provided in Attachment F-2. The inspection forms are updated as needed and maintained in the FCP's RCRA Operating Record.

F-2a(1) Types of Problem

Types of problems that may be encountered during inspections are listed on the Facility Inspection Schedule provided as an example in Attachment F-1. Generally, the inspection verifies the adequacy of emergency equipment and the operating condition of the facility as identified on the inspection schedule.

F-2a(2) Frequency of Inspections

The frequency of inspections at the FCP is based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if deterioration goes undetected between inspections. The frequency of inspections at the FCP conforms to accepted industry practices, RCRA guidance information and the Consent Decree and its Stipulated Amendment. The frequency of inspection for each item can be found on the Facility Inspection Schedule (example provided as Attachment F-1).

The emergency and personnel protection equipment discussed in Section F-3 is inspected weekly. Inspection of the hazardous waste storage units takes place weekly.

F-2b Specific Process Inspection Requirements

F-2b(1) Container and Storage Area Inspections

The container storage areas are inspected weekly as per the Facility Inspection Schedule (Attachment F-1). Each storage area is inspected for proper aisle spacing, stacking, pallet condition, evidence of leaks or spills and condition of the floor and dikes. Containers of hazardous waste are inspected weekly for evidence of damage or deterioration, and container labels. The inspector immediately reports to the supervisor if a hazardous waste release is observed.

Completed inspection forms for the RCRA Storage Areas are maintained in the FCP's RCRA Operating Record. Examples of RCRA Container Storage Area Inspection Forms are provided in Attachment F-2 and are subject to change.

5715

F-2b(2) Tank System Inspection

The FCP is not seeking a RCRA permit to operate a hazardous waste tank.

F-2b(3) Waste Pile Inspection

The FCP is not seeking a RCRA permit to operate a hazardous waste pile.

F-2b(4) Surface Impoundment Inspection

The FCP is not seeking a RCRA permit to operate a hazardous waste surface impoundment.

F-2b(5) Incinerator Inspection

The FCP is not seeking a RCRA permit to operate a hazardous waste incinerator.

F-2b(6) Landfill Inspection

The FCP is not seeking a RCRA permit to operate a hazardous waste landfill.

F-2b(7) Land Treatment Facility Inspection

The FCP is not seeking a RCRA permit to operate a hazardous waste land treatment facility.

F-2b(8) Miscellaneous Unit Inspection

The FCP is not seeking a RCRA permit to operate a miscellaneous hazardous waste unit.

F-2b(9) Subpart AA Inspection

The FCP has no process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction or air or steam stripping managing hazardous wastes with organic concentrations at least 10 parts per million (ppm). Therefore the FCP is not subject to the requirements of this subpart.

5715

F-2b(10) Subpart BB Inspection

The FCP has no equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight that are managed in:

- Units that are subject to the permitting requirements of 40 CFR 270, or
- Hazardous waste recycling units that are located on hazardous waste management facilities otherwise subject to the permitting requirements of 40 CFR 270.

Therefore the FCP is not subject to the requirements of this subpart.

F-2b(11) Subpart CC Inspection

Subpart CC air emission standards require facilities to control emissions of volatile organic compounds (VOC) from containers if the hazardous waste in these containers contains an average VOC concentration of greater than or equal to 500 parts per million by weight. Subpart CC emissions standards do not apply to:

- A waste management unit that holds hazardous waste placed in the unit before December 6, 1996, and in which no hazardous waste is added to the unit on or after December 6, 1996.
- A waste management unit that is used solely for on-site storage of hazardous waste that is placed in the unit as a result of implementing remedial activities required under CERCLA authorities.
- A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act.
- A container that has a design capacity less than or equal to 0.1 m³.

If a FCP hazardous waste container does not meet one of the Subpart CC exemptions,

it will be managed in accordance with the applicable Subpart CC container level standard. If a DOT container is used to meet these standards, no additional testing, inspection, or monitoring requirements apply (59 FR 62899; December 6, 1994).

F-2c Remedial Action

Repairs or other actions taken to remediate problems identified during an inspection are recorded on the inspection forms. Deficiencies are reported to the supervisor and arrangements for prompt, appropriate remediation of the problem are made.

Repairs are made in a timely manner so that a situation does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately. Items identified as missing or present in insufficient quantities such as emergency equipment are obtained promptly and placed in the proper location. The remedial response to deficiencies is to restore an item to proper working order, or to restock an item to ensure its availability in an emergency.

Leaking, damaged, or deteriorating containers identified during an inspection are managed in accordance with OAC 3745-55-71. Once mitigated and if repair is not feasible, the containers are overpacked in place where practicable. Drums are overpacked by placing the leaking container into a larger-size container.

Repackaging is accomplished by transferring the contents of the damaged drum into a different container. ~~Repackaging of hazardous waste containers is conducted in Building 79. This area is equipped with spill pallets or other containment, spill cleanup materials, and scales. All overpacking and repackaging activities are controlled by procedure.~~

F-2d Inspection Forms

Attachment F-2 (RCRA Container Storage Area Inspection Forms) provides examples of the current inspection forms. These examples are subject to change. The inspection forms have been designed to readily identify those areas routinely checked for acceptability and highlight conditions which potentially could cause problems.

5715

Inspection forms include at a minimum, the following information:

- Date of inspection
- Time of inspection
- Name of the inspector
- Notation of the observation(s) made
- Corrective action(s) taken
- Date corrected.

F-3 PREPAREDNESS AND PREVENTION REQUIREMENTS

The FCP does not wish to request a waiver of the preparedness and prevention requirements under OAC 3745-54-30 (40 CFR 264 Subpart C). Requirements of this Subpart are also discussed in further detail in Section D, Process Information, and Section G, Contingency Plan, of this application.

F-3a Equipment Requirements

A detailed discussion of the FCP emergency equipment and communications systems and the capabilities of each item is provided in Section G, Contingency Plan.

F-3a(1) Internal Communications

Communications within a Unit

Voice communication is used within any single RCRA storage unit. Voice communication is adequate to provide immediate emergency instruction to personnel within the storage areas because of the sizes and open configurations of the storage units.

Communications to the Communications Center

Communication devices are available for personnel accessing RCRA storage units for emergency notification purposes. The communication devices are used to contact:

- 1) the Communications Center,
- 2) other personnel who, in turn, can contact the Communications Center, or
- 3) the area supervisor to report any emergency.

The Communications Center summons additional on-site and off-site assistance as needed.

Signals from manual fire alarm boxes, automatic fire monitoring, and/or suppression systems located within the operating units throughout the facility are automatically transmitted to the Communications Center.

On-site Emergency Warning System

The FCP has an extensive on-site emergency alarm and communications system for notifying employees and on-site emergency response personnel. This system provides facility-wide, building, and off-site warning systems.

The facility alarm system is controlled in the Communications Center, which operates 24 hours per day. The facility alarm system, which includes electronic alarm bells or air horn signals, can be activated from the Communications Center. A voice message, following the sounding of a warning signal, is broadcast throughout the facility to transmit appropriate instructions and other important information to FCP personnel.

F-3a(2) External Communications

Communications Center

External communications are managed by the Communications Center which is staffed 24 hours per day. The Communications Center has the ability to summon additional emergency assistance from local police departments, fire departments, or state and local emergency response teams as needed.

The Communications Center has the following equipment for contacting off-site assistance organizations:

- Conventional and special phone systems capable of summoning off-site emergency assistance including wired phones connected to the local telephone company.

- Two-way radios capable of internal communications and direct contact with the Hamilton and Butler County Dispatch Centers, the Butler County Emergency Management Agency (BCEMA) and the Hamilton County Emergency Management Agency (EMA).

Off-site Emergency Warning System

The off-site emergency warning system warns citizens within a two-mile radius of the site, when emergencies may affect people outside facility boundaries. Activating the sirens alerts residents to seek shelter immediately and tune to a radio or TV station for an Emergency Broadcast System message for information.

F-3a(3) Emergency Equipment

The FCP hazardous waste container storage areas are equipped with supplies, materials, and equipment for responding to emergencies (e.g. portable fire extinguishers and materials for spill response and cleanup). This equipment is inspected at least weekly. Additional fire protection, spill control, and decontamination equipment is maintained on-site. See Section F-2 for further inspection information.

The emergency equipment at the FCP is described in detail in Section G, Contingency Plan.

Fire Control Equipment

~~Plant 6 Warehouse (Building 79) is protected with a sprinkler system, in addition to portable fire extinguishers.~~ Each of the hazardous waste storage lockers has a dry pipe sprinkler system plumbed to an outside Fire Department connection. The system can be activated by connection to a fire truck. Fire extinguishers are also placed in locations that are accessible to the storage lockers.

Spill Control Equipment

Protective clothing, boots, gloves, respirators, and face shields are stored in a central location and are readily accessible in the event of a spill. Spill cleanup equipment and

9715

material such as shoe covers, booties, gloves, absorbent pads/"PIGS", radiological drum liner bags, caution/banner tape, and duct tape are stored in each storage location.

Decontamination Equipment

A full complement of decontamination equipment is maintained on-site in addition to the spill equipment. This equipment is described in detail in Section G, Contingency Plan.

Alarm Systems

The facility alarm and communications horn system is tested in accordance with NFPA-72 National Fire Alarm Code schedules. The Emergency Message System is tested daily. Failure of any component of the system results in immediate remedial action or implementation of a back-up system.

F-3a(4) Water for Fire Control

Water for fire protection is available from the following source:

Ground Level/Domestic Fire Water Tank	400,000 gallons
---------------------------------------	-----------------

The system for fire control is described below.

High Pressure Distribution System

The High Pressure Distribution System provides water to the high pressure hydrants, located outside each storage unit, and to building sprinkler systems. A static pressure of 114 psi (gauge) is maintained in the system by a jockey pump. The fire pump system is activated when the pressure in the system drops. The fire pump system consists of one electric and one-diesel powered pump, rated at 1,250 gallons per minute (gpm) at 125 psig. The electric pump and the diesel pump start automatically as the result of low water pressure. The fire pumps obtain water from the ground level tank. The fire pumps take suction at the bottom of the tank and have access to all 400,000 gallons, while the domestic water pumps take suction approximately eight feet from the bottom of the tank. This limits the domestic water pumps to the top

300,000 gallons and reserves the bottom 100,000 gallons strictly for the fire pumps only. This system is capable of providing sufficient water at sufficient volume and pressure for sprinkler systems.

F-3b Aisle Space Requirements

An aisle space of a minimum of 22 inches is maintained between pallets of drums or between containers not stored on pallets (e.g., boxes). A four foot main aisle is also provided in the Plant 6 Warehouse to allow the unobstructed movement of personnel, fire protection equipment, and spill control equipment.

The 22 inch minimum inspection aisle space is adequate because the aisles are adequate for personnel to inspect drums for leaks and deterioration. and

• For the Plant 6 Warehouse, a main equipment aisle is provided to allow for unobstructed movement of emergency equipment.

F-4 PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT

F-4a Prevent Hazards in Loading/Unloading Operations

After a hazardous waste container has been filled, labeled and closed, it is transferred to a storage area. Small containers can be moved by equipment such as, but not limited to, handcarts or handtrucks. Large containers may be moved by equipment such as, but not limited to, forklifts, trucks or trailers.

Containers of non-radiologically contaminated hazardous waste are loaded for off-site shipment from the two hazardous waste storage lockers located on the south end of the East Parking Lot. Beginning in November 2004, these lockers will be moved to an area south of Cell 8 north of the West Parking Lot. Building 77 has a loading dock and is used to stage containers of mixed waste prior to off-site transport. Containers of mixed waste may be staged in this building for up to two weeks in order to prepare the containers for off-site shipment.

Mixed waste shipments may be temporarily staged in truck trailers in the southern portion of the West Parking Lot. These containers are staged in order to conduct the final inspections of

5715

the loaded trailers prior to notifying the receiving facility (via a five day notice) that the containers are ready to ship and to call in the carrier to transport the shipment. Although it is anticipated that the containers would be staged for no longer than one week, the FCP would initiate weekly inspections of any trailers which exceed this time frame. Copies of these inspections forms would be retained in the RCRA Operating Record.

In addition, Ohio EPA will be contacted for further discussions regarding the management of these containers should these containers be staged in the parking lot for longer than two weeks. If these containers are not shipped within a reasonable time frame, one option would be to move the containers back into a storage unit identified in the FCP's RCRA Part B Permit Application.

F-4b Prevention of Run-Off to Other Areas

Hazardous Wastes With Free Liquids

Hazardous wastes with free liquids are stored in diked areas capable of holding a minimum of 10 percent of the maximum storage capacity of the unit. Storage areas for hazardous waste containing free liquids are enclosed within hazardous waste storage lockers ~~structures or buildings~~ preventing accumulation of precipitation within the diked areas.

Hazardous Wastes Without Free Liquids

Hazardous wastes without free liquids are stored (as described in Section D) inside the hazardous waste storage lockers, ~~and the Plant 6 Warehouse~~. Indoor storage areas are not subject to precipitation and therefore do not produce precipitation runoff.

Prevention of Flooding

Flooding created by run-on from other areas is prevented from entering the hazardous waste storage lockers ~~and the Plant 6 Warehouse~~ by ensuring that there is adequate drainage and/or using topography which slopes away from these areas.

The hazardous waste storage units are in areas outside of the 100-year flood plains for the Great Miami River and Paddy's Run.

5-5715

F-4c Prevent Contamination of Water Supplies

Contamination of water supplies by hazardous wastes or hazardous waste constituents is prevented by storing the hazardous waste in enclosed structures and by controlling run-off as described in Section F-4b. Container management practices as described in Section D, Process Information, provide an integral aspect of water supply contamination prevention.

F-4d Equipment and Power Failure

~~Electrical power is used primarily for lighting in the Plant 6 Warehouse. Flashlights and natural lighting are used in the hazardous waste storage lockers to see inside the unit. Battery powered lighting can be used if needed during a power failure.~~ Powered equipment involved in handling materials includes fork lift trucks, barrel stackers and gantry cranes. Since this equipment is internally powered by electric battery or internal combustion engine, it is not subject to a site-wide power failure. A replacement is available, in the event of a mechanical failure of the fork lift and/or barrel stacker, as the facility maintains a large operating supply.

~~Normal operations at the RCRA storage units are suspended if there is a site-wide power outage.~~ Portable generators are available in case of emergencies. Generators are not permitted within areas where ignitable hazardous wastes are stored, unless proper precautions are taken. Precautions may include the use of an explosion-proof generator, or placement of the generator at a safe distance or location from the ignitable hazardous wastes.

F-4e Personnel Protection Equipment

Personnel exposure to hazardous waste is minimized through the use of protective equipment, as well as by safe handling practices. The protective equipment appropriate for employees working in the storage areas is specified by the ~~area supervisor,~~ and health and safety personnel at the FCP. Protective equipment can include coveralls, boots, gloves, face shields, and respirators.

Personnel involved in management of hazardous wastes receive training in the use of protective equipment and the proper handling of hazardous wastes. Annual fit-testing of respirators and RCRA refresher training are also provided, as described in Section H, Personnel Training.

F-4f Prevent Releases to Atmosphere

The FCP is required to prevent release to the atmosphere from process vents and equipment leaks under Subpart AA and BB regulations (40 CFR 264). Currently, the FCP has no equipment that is subject to these rules.

Hazardous wastes generated at the FCP which are subject to Subpart CC standards are placed into DOT-approved containers which have a design capacity of less than or equal to 0.46 m³. These containers are equipped with a cover and remain closed except when adding or removing waste, sampling or conducting a visual inspection.

F-5 PREVENTION OF REACTION OF IGNITABLE, REACTIVE AND INCOMPATIBLE WASTES

F-5a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes

Containers of hazardous waste are inspected for corrosion and other defects to minimize the possibility of ignition or reaction of ignitable or reactive hazardous wastes. Stored containers remain closed except when a sample must be obtained, during visual inspections as a part of waste characterization, or during addition or removal of hazardous waste. Some containers are equipped with filter vent plugs (maximum size of two inches) to prevent the build-up of pressure within the container.

Hazardous wastes are acceptable if placed in compatible drums meeting DOT performance standards. The FCP has some containers that were in use prior to the promulgation of the DOT performance-oriented standards. These containers are inspected on the same schedule as all other containers to ensure their integrity.

The hazardous waste container storage areas are inspected at the frequency identified in the Facility Inspection Schedule (example provided as Attachment F-1). Any leaks or spills are cleaned up immediately, reducing the possibility of adverse reactions. Drums may be overpacked or repacked to correct a leak or to improve the integrity of the container to preclude future leaks.

Prevention of Ignition

Containers that hold ignitable hazardous waste are stored in areas protected from accidental ignition sources. Smoking is not permitted in these areas. "NO SMOKING" signs are conspicuously posted.

Waste characterization as described in Section C, Waste Characteristics, is performed to provide sufficient information to select the safest hazardous waste storage containers, appropriate hazardous waste storage areas and to accurately characterize the hazardous physical and chemical properties of each waste stream.

The following precautionary measures are enforced to prevent fires and/or the release of hazardous waste constituents:

- Hazardous waste containers are identified by Reactivity Group Codes (RGCs) to ensure that ignitable and reactive hazardous wastes are appropriately stored.
- Approved work permits are required before welding is performed.
- Surveys for combustible gases and vapors are performed by health and safety personnel before performing certain work involving ignition sources such as open flames, and heating elements.
- "NO SMOKING" signs are conspicuously placed at the entrances to the hazardous waste storage areas.
- Non-sparking tools are used to open and close containers which contain ignitable hazardous waste.
- Fire protection systems and equipment (e.g. fire extinguishers, sprinkler systems) are available to extinguish small fires.

Prevention of Reaction

Hazardous wastes are marked, separated and segregated according to the Reactivity Group Code (RGC) system maintained at the facility. Figure F-2 is the current RGC Hazardous Waste Compatibility Chart used to determine the segregation of incompatible hazardous waste. PCB compatibility is also provided in Figure F-2.

Waste characterization as described in Section C, Waste Characteristics, is performed to provide sufficient information to select the safest hazardous waste storage containers, appropriate hazardous waste storage areas and to accurately characterize the hazardous physical and chemical properties of each waste stream.

F-5b General Precautions for Handling Ignitable or Reactive Wastes and Mixing

Incompatible Wastes

Hazardous waste containers stored at the FCP remain closed during storage and may be opened when a sample must be obtained, for visual inspection as part of the waste characterization, or during addition or removal of hazardous waste. Some containers are equipped with filter vent plugs (maximum size of two inches) to prevent the build-up of pressure in the container. These vent plugs are primarily installed to provide ventilation to drums of wastes containing free reactive uranium metal that has the potential to generate hydrogen gas. Vent plugs are also installed in drums containing unpunctured aerosol cans, bulging or pressurized containers and containers of biological gas-generating waste. Vent plugs are not used when drums contain mixed waste with RCRA organics unless it is one of the waste types identified above. The filter vent plug contains a charcoal filter. The filter vent plug is inserted into the bung opening of the drum lid. The plugs are also installed on outer drums if the vented drums are overpacked.

Accidental ignition or mixing of ignitable or incompatible hazardous waste types is unlikely. As discussed in the previous section, the FCP uses a Reactivity Group Code (RGC) marking system to segregate incompatible hazardous wastes. Incompatible hazardous wastes are separated by ~~diked areas or other devices~~ (e.g. stored on separate spill pallets) and/or stored in separate units. At the present time the FCP is not seeking a permit for any treatment processes which may require mixing of incompatible hazardous wastes.

Some examples of mixing of hazardous wastes at the FCP are listed below:

- Consolidation of the same or similar hazardous wastes into larger containers; and
- Consolidation of lab samples into larger containers.

These practices are only allowed for hazardous wastes which are compatible.

F-5c Management of Ignitable or Reactive Wastes in Containers

Ignitable and reactive hazardous wastes are stored at least 50 feet from the FCP property line. Figure F-1 (Facility 50 Foot Boundary Line) shows the location of the FCP hazardous waste storage areas relative to the property line.

The storage practices followed by the FCP include the use of ~~lockers, buildings and structures~~. Storage areas for hazardous wastes with free liquids are designed with a secondary containment system capable of holding at least 10 percent of the maximum waste volume stored in the area. FCP container management practices are discussed further in Section D, Process Information.

Inspections are performed at least at the frequency identified in the Inspection Schedule (Attachment F-1), to ensure the proper management of hazardous wastes. Inspection procedures are discussed in Section F-2.

A Reactivity Group Coding system (Figure F-2) has been developed to ensure the compatibility of hazardous wastes stored in the same area. The system incorporates "letter code signs" in storage areas. Incompatible wastes are separated ~~by means of a dike, berm, or other device~~ (e.g. stored on separate spill pallets).

F-5d Management of Incompatible Wastes in Containers

Facility personnel responsible for the management, transfer and storage of hazardous waste at the FCP are trained in proper hazardous waste handling procedures. Hazardous waste containers are approved for storage after confirmation that the containers are closed, properly labeled and are in good condition. Previously used containers are cleaned before reuse. Combining of waste from different sources into the same container is not allowed without review.

F-5e Management of Ignitable or Reactive Wastes in Tank Systems

The FCP is not seeking a RCRA permit to operate a hazardous waste tank system.

F-5f Management of Incompatible Wastes in Tank Systems

The FCP is not seeking a RCRA permit to operate a hazardous waste tank system.

F-5g Management of Ignitable or Reactive Wastes Placed in Waste Piles

The FCP is not seeking a RCRA permit to operate a hazardous waste pile.

F-5h Management of Incompatible Wastes Placed in Waste Piles

The FCP is not seeking a RCRA permit to operate a hazardous waste pile.

F-5i Management of Ignitable or Reactive Wastes Placed in Surface Impoundments

The FCP is not seeking a RCRA permit to operate a hazardous waste surface impoundment.

F-5j Management of Incompatible Wastes Placed in Surface Impoundments

The FCP is not seeking a RCRA permit to operate a hazardous waste surface impoundment.

F-5k Management of Ignitable or Reactive Wastes Placed in Landfills

The FCP is not seeking a RCRA permit to operate a hazardous waste landfill.

F-5l Management of Incompatible Wastes Placed in Landfills

The FCP is not seeking a RCRA permit to operate a hazardous waste landfill.

F-5m Management of Ignitable or Reactive Wastes Placed in Land Treatment Units

The FCP is not seeking a RCRA permit to operate a hazardous waste land treatment unit.

F-5n Management of Incompatible Wastes Placed in Land Treatment Units

The FCP is not seeking a RCRA permit to operate a hazardous waste land treatment unit.

SECTION G - CONTINGENCY PLAN

TABLE OF CONTENTS

G-1 GENERAL INFORMATION 1

 G-1a Emergency Organization 4

 G-1b Distribution 7

G-2 EMERGENCY COORDINATION 7

G-3 IMPLEMENTATION 9

G-4 EMERGENCY RESPONSE PROCEDURES 11

 G-4a Notification 12

 G-4b Identification of Hazardous Materials 15

 G-4c Assessment 16

 G-4d Control Procedures 19

 G-4e Prevention of Recurrence or
 Spread of Hazardous Waste Fires, Explosions or Releases 23

 G-4f Storage and Treatment of Released Waste 23

 G-4g Incompatible Wastes 23

 G-4h Post-Emergency Equipment Maintenance 24

 G-4i Container Spills and Leakage 25

 G-4j Tank Spills and Leakage 27

G-5 EMERGENCY SUPPORT AND EQUIPMENT 27

 G-5a Fire Protection Equipment 32

 G-5a(1) Plant Water Supplies and Fire Loop Water Supply 32

 G-5a(2) Automatic Sprinklers 32

 G-5a(3) Fire Extinguishers 33

 G-5a(4) FCP Emergency Response Equipment 34

 G-5b Spill Control and Monitoring Equipment 36

 G-5c Alarm and Electronic Monitoring Systems 37

 G-5d Communication System 38

 G-5e First Aid and Medical Supplies 39

 G-5e(1) Emergency Treatment 39

 G-5e(2) Ambulance Service - General 40

 G-5e(3) Ambulance Service, 2nd and 3rd Shifts,
 Weekends, Holidays, Vacation Shutdown 40

G-6 COORDINATION AGREEMENTS 40

G-7 EVACUATION PLAN 41

G-8 REPORTS 42

 G-8a Required Written Reports 42

G-9 AMENDING THE CONTINGENCY PLAN 42

SECTION G - CONTINGENCY PLAN

**TABLE OF CONTENTS
(Continued)**

LIST OF TABLES

Table G-1	Emergency Operation Personnel & Organizations
Table G-2	The FCP Emergency Organization Roster
Table G-3	Emergency Respiratory Equipment
Table G-4	Types of Pressurized Fire Extinguishers

LIST OF FIGURES

Figure G-1	RCRA Units
Figure G-2	FCP Emergency Response Organization
Figure G-3	Emergency Coordination
Figure G-3.1	Emergency Response Training Requirements
Figure G-4	Implementation & Notification
Figure G-5.2	Emergency Action Level Guide
Figure G-7	Interorganizational Links
Figure G-9	Form A - Ohio Hazardous Waste Release Fire, Explosion Report to Ohio EPA
Figure G-10	Form B - Notification of Ohio EPA of Implementation of Contingency Plan
Figure G-11	Form C - Written Notice to Ohio EPA and Appropriate Local Authorities of Resumption of Hazardous Waste Operations

LIST OF ATTACHMENTS

Attachment G-1	Emergency Procedures, Site Layout and Equipment Information
Attachment G-3	Agreements

SECTION G - CONTINGENCY PLAN

RCRA Part B Permit Application

Fernald Closure Project
Fernald, Ohio

This Contingency Plan is required by Ohio Administrative Code (OAC) 3745-50-44(A)(7) and Title 40 of the Code of Federal Regulations (CFR) 270.14 (b)(7) in order to provide planned procedures to be followed in an emergency at any hazardous waste facility. This information is submitted for the Fernald Closure Project (FCP), formerly the Feed Materials Production Center (FMPC), in accordance with OAC 3745-54-50 to 56 and 40 CFR 264.50 to 56 as well as other applicable parts of the Ohio Administrative Code. This Contingency Plan addresses the actions to be taken to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

The FCP manages both hazardous waste and mixed waste. Mixed waste is defined as waste that contains both a hazardous component regulated under RCRA and a radioactive component consisting of source, special nuclear, or by-product material regulated under the Atomic Energy Act. Any information included in this section on the radioactive portion of mixed wastes generated or stored at the FCP is included for informational purposes only and is not intended to be part of the facility's RCRA permit.

NOTE: THE CONTINGENCY PLAN HAS BEEN UPDATED TO REFLECT CURRENT SITE CONDITIONS AND EMERGENCY RESPONSE ACTIVITIES AS OF OCTOBER 2004 AND TO INCLUDE INFORMATION ON ANTICIPATED CHANGES WHICH WOULD IMPACT THIS PLAN. HOWEVER, RAPID CHANGES IN SITE CONDITIONS AS REMEDIATION PROCEEDS WILL HAVE CONTINUING IMPACTS ON THE CONTINGENCY PLAN. THE FCP WILL MAINTAIN A CURRENT COPY OF THIS PLAN WITH SECURITY PERSONNEL AT THE SECURITY CHECK POINT AT THE SOUTH ENTRANCE TO THE FACILITY. THIS COPY WILL BE MADE AVAILABLE TO OFF-SITE EMERGENCY RESPONSE ORGANIZATIONS IN THE EVENT OF AN EMERGENCY.

G-1 GENERAL INFORMATION

The FCP is a former production facility which produced uranium metal used in the fabrication of fuel cores for nuclear reactors operated by the United States Department of Energy. During production,

several types of hazardous wastes were produced from virgin materials, including (but not limited to): toxic halogenated solvents (from parts cleaning), ignitable oil and lubricants (from machining operations), ignitable and metal-bearing paint residues (from drum reconditioning), corrosive acids and alkalis (from metal and ore digestion and extraction), and pyrophoric non-nuclear metals (from foundry operations). In addition, some non-hazardous materials such as cleaning rags and wastewater sump cakes were contaminated with hazardous wastes, and thus became hazardous wastes themselves.

All production activities at the facility have ended. Current activities include waste management operations, site remediation, and miscellaneous operations such as wastewater treatment. More specifically, waste storage operations are allocated as follows:

HWMU No. 37 (Plant 6 Warehouse/Bldg. 79)

Location: E Street between 1st and 2nd Street

Maximum Capacity: 230,780 gallons / 4,196 55-gallon drums

Waste Types: Combustible and flammable liquids, solids, trash, PCBs. The FCP is also storing ignitables/PCBs in bulk tanks located outside, north of the Plant 6 Warehouse.

Hazardous Waste Storage Lockers (9 lockers, 4 locations)

Location:

3 lockers are located in the Silos Truck Staging Area south of the AWWT (Advanced Waste Water Treatment) facility;

1 locker is located at the Silos Project, north of the Radon Control System Building; 4 lockers are located north of the Plant 6 Warehouse (Bldg. 79);

3 lockers are located east of AWWT (Advanced Waste Water Treatment) facility; and

2 lockers are located in the south west corner of the East Parking Lot north of the West Parking Lot (near the slab of the former Industrial Relations Bldg.)

NOTE: Beginning in November, 2004, the 3 lockers located east of AWWT and the 2 lockers located in the south west corner of the East Parking Lot will be moved - their new location will be on the east side of the site, south of Cell 8.

Maximum Capacity: 2,640 gallons / 48 55-gallon drums per locker

Waste Types: Combustible and flammable liquids, solids, trash, PCBs.

Building 60 (Quonset Hut #1)

Location: West of B Street; North of 3rd Street

Waste Types: Soil (bulk treatment/storage)

Mixed waste shipments are also temporarily staged in trailers in the south half of the West Parking Lot and beginning in November through December 2004, the FCP will use an enclosure in the East Bay of the Boiler Plant (Building 93A) for repackaging of mixed waste containers.

The FCP site and mailing addresses are:

Fernald Closure Project - Site Address
7400 Willey Road
Fernald, Ohio 45030
(513) 648-3000

Fernald Office - Mailing Address
U. S. Department of Energy
P.O. Box 638706
Cincinnati, Ohio 45263-8706
175 Tri-County Parkway
Cincinnati, Ohio 45246-3222
(513) 648-3000

Operation missions and program direction are administered through the U.S. Department of Energy (DOE) Office of Environmental Management (EM). The name, address, and telephone number of this office are:

U. S. Department of Energy
Office of Environmental Management
1000 Independence Avenue Southwest
Washington, D. C. 20585
(202) 586-5000

This plan describes the actions facility personnel must take in response to a hazardous waste event or emergency such as fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water. This plan applies to all areas of the facility where hazardous waste is being handled or stored. Therefore, in addition to the ten storage units (9 lockers and 1 building) the FCP is seeking to permit, hazardous waste treatment/storage areas operated under the site's CERCLA remediation program are discussed in this plan. The location of areas managing hazardous waste at the FCP is shown in Figure G-1. Evacuation routes and lists of safety and emergency equipment assigned to each of these areas are included in Attachment G-1. A copy of this Contingency Plan is readily accessible to anyone entering these areas.

10/04

G-1a Emergency Organization

The Emergency Coordinator/ Assistant Emergency Duty Officer (AEDO) may request support and allocate resources under the responsibilities of any or all of the Emergency Response Support Organizations discussed in this section. Table G-2 provides a roster of the FCP Emergency Organization. Figure G-2 provides an organizational chart of the FCP Emergency Response Organization. A contract has been awarded to the Crosby Township Fire Department and Life Squad to provide emergency services at the FCP. This agency is responsible for the emergency response at the site when facility response can not mitigate the event. Any mutual aid agreements are the responsibility of the Subcontracted Community Emergency Response Organization (Crosby Township). The Subcontracted Community Emergency Response Organization has signed mutual aid agreements with other agencies and/or has agreed to provide needed assistance to the FCP at local, county, state and federal levels. Information regarding the contract with the Crosby Township Fire Department and Life Squad is provided in Attachment G-3.

Fernald Closure Project

Emergency Management

The Emergency Director (the operating contractor President or his designee) has designated an AEDO/Emergency Coordinator who is responsible for emergency responses at the FCP. The AEDO is the primary Emergency Coordinator.

The Emergency Coordinator/AEDO manages and controls the response to any event at the FCP until subcontracted community response forces arrive on-scene. A minimum of one Emergency Coordinator/AEDO is present onsite at all times. Through an extensive Emergency Duty Officer training program coordinated by Emergency Preparedness, the Emergency Coordinator/AEDO is knowledgeable of this Contingency Plan, operations and activities at the FCP, the locations and characteristics of hazardous waste at the facility, the location of records within the FCP, and the facility layout. Figure G-3.1 illustrates the range of training requirements for the Emergency Coordinator/AEDO.

The Emergency Coordinator/AEDO, as Incident Commander, can activate the FCP emergency response organizations including, but not limited to, the Subcontracted Community Emergency Response Personnel, Monitoring Team, medical staff, security personnel, and the Emergency

Operations Center. Figure G-7 provides a table showing the activation methods for all elements of the Emergency Response Organization.

The Subcontracted Community Emergency Response Officer In Charge will assume the Incident Commander responsibilities once they have arrived on-scene. Additional support and mutual aid may be summoned at any time by the Incident Commander.

Subcontracted Community Emergency Response Organization

The Subcontracted Community Emergency Response Organization is responsible for on-scene emergency event mitigation, rescue, damage control, firefighting, and medical assistance.

Security Response Organization

The Security Response Organization maintains the security and integrity of the FCP. The FCP security staff consists of qualified security inspectors. The security staff provides surveillance and control at the incident location and the entire facility during an emergency.

Emergency Operations Center (EOC) Staff

The Emergency Operations Center (EOC) Staff is a functional organization which works with the Emergency Coordinator/AEDO to oversee and direct emergency response actions. The Emergency Operations Center, located in T-214, assesses the incident, coordinates protective actions, and coordinates personnel accountability. The Emergency Operations Center also supports and directs protective actions, allocating additional resources as needed and providing notifications and information to employees, appropriate authorities, and the general public. The EOC Staff is composed of three primary teams, the Policy Team, Operations Team, and the Information Management Team. Primary and alternate staff members have been selected for each position.

Public Information Response

The Manager of Public Affairs has overall responsibility for the emergency public information program and serves as the designated spokesperson at the FCP during emergencies. News and information about an emergency is provided to the media through the Public Affairs Department Offices or a Media Information Area which is activated for a major event.

Medical Response Organization

The Medical Response Organization provides treatment and stabilization for injuries. At least one state certified Emergency Medical Technician is on duty at all times.

Communications Center Staff

Site-based communications are operated by the FCP Communications Center. The Communications Center coordinates the dispatch of equipment and personnel to emergency events. The Communications Center provides communication links between the Emergency Coordinator/AEDO and support groups, implements systems instructions, and makes appropriate notifications when instructed.

Monitoring Team

The FCP monitoring organization consists of Radiological Safety and Industrial Hygiene personnel for on-site and off-site monitoring of chemicals and radiological materials.

Monitoring data is provided to the Emergency Coordinator/AEDO. The State of Ohio provides monitoring and assessment support to the counties as requested.

U.S. Department of Energy (DOE)

DOE-Fernald Closure Project (DOE- FCP)

The DOE-Fernald Closure Project (DOE- FCP) provides oversight, ensures an effective response, conducts investigations, makes appropriate notifications, and coordinates interactions with the media and requests for assistance during an incident. The DOE-FCP is responsible for notifying state and federal governmental agencies of an incident as necessary.

DOE Headquarters (DOE-HQ)

DOE Headquarters (DOE-HQ) Office of Environmental Management has overall responsibility for emergency operations at the FCP and designates response authority to the Emergency Coordinator to act as the primary AEDO. The FCP is delegated specific responsibilities for implementing event response and for notifying the DOE Emergency Operations Center (DOE-HQ EOC).

State of Ohio

Ohio Emergency Management Agency (OEMA)

The Ohio Emergency Management Agency (OEMA) coordinates disaster response for all state agencies. OEMA also procures support and assistance from the Federal government as necessary.

Hamilton and Butler Counties

Hamilton and Butler counties may activate their respective Emergency Operations Centers (Emergency Management Agencies) in an emergency. The counties provide emergency medical service and fire protection support through mutual aid agreements. The county law enforcement organizations provide additional support as needed.

G-1b Distribution

Copies of this Contingency Plan and all revisions to this Plan are maintained at the FCP EOC and submitted to the following off-site organizations via certified mail (return receipt) or overnight delivery service:

- Crosby Township Fire Department
- Hamilton County Emergency Management Agency
- Hamilton County Sheriff
- Ohio Emergency Management Agency
- Ohio State Highway Patrol, Post 9
- Mercy Franciscan Hospital – Mount Airy
- Butler County Emergency Management Agency
- Butler County Sheriff
- Colerain Township Fire Department
- University Hospital
- Ohio EPA
- U.S. EPA

G-2 EMERGENCY COORDINATION

The FCP Emergency Services staff is in charge of the preparation for an emergency at the FCP. The

Emergency Coordinator/AEDO is in charge of emergency response. Figure G-3 depicts the relationships between the key FCP Emergency Services Staff. Figure G-3.1 describes the qualifications for the staff.

The Emergency Operation Personnel & Organizations list in Table G-1 provides emergency phone or pager contact information. Individuals or organizations on this list are contacted through the Communications Center as required.

FCP Emergency Services Staff

Emergency Coordinator/AEDO

The Emergency Coordinator/AEDO is the Utility Engineer on shift. The Emergency Coordinator/AEDO has authority to initiate all necessary response actions. The Emergency Coordinator/AEDO responds to the event site, assesses and categorizes the event as an emergency or lesser event.

There are currently four personnel assigned to the position of Emergency Coordinator/AEDO. This group works a four-person rotating shift schedule. A status board which lists the Emergency Coordinator/AEDO is established for each shift at the Communications Center. At least one Emergency Coordinator/AEDO is on site at all times, who can be reached by radio, telephone or pager. If the shift AEDO should be unavailable for duty, an Alternate AEDO will be summoned. Table G-1 lists the pertinent contact information for the designated Emergency Coordinator/AEDO.

As stated in Section G-1, the Emergency Coordinator/AEDO is fully knowledgeable of this Contingency Plan, operations and activities at the FCP, the locations and characteristics of hazardous waste at the facility, the location of records within the FCP, and the facility layout. Required training for the Emergency Coordinator/AEDO is listed in Figure G-3.1.

The Emergency Coordinator/AEDO has the authority to activate the FCP Offsite Emergency Warning System at any time. The Emergency Coordinator/AEDO is a representative of the Emergency Operations Center (EOC) staff and may activate the EOC for response support. Mandatory activation of the EOC is required for all emergencies. All EOC staff members are supplied with personal pagers that can be activated by a group page. Off-duty Emergency Coordinator/AEDO, Security Lieutenants, and Medical personnel may also be summoned in this manner.

Emergency Duty Officer

The Emergency Duty Officer is the designated, on-call representative of the Emergency Operations Center and senior facility management. The Emergency Duty Officer reviews the emergency assessment with the Emergency Coordinator/AEDO and coordinates the Emergency Operations Center staff in support of the Emergency Coordinator/AEDO. The Emergency Duty Officer is responsible for proper notification of off-site response organizations.

The Emergency Duty Officer is in control of response operations until the Deputy Emergency Director approves and assumes control of the response organization. Designated senior staff managers rotate as the Emergency Duty Officer.

The Emergency Duty Officer may be reached through the 24-hour-staffed FCP Communications Center by:

- personal digital display pager; or
- conventional telephone service.

Required training for the Emergency Duty Officer is listed in Figure G-3.1 and Section H.

Release Evaluator

A Release Evaluator evaluates regulatory requirements for reporting hazardous waste releases. The Release Evaluator is on call on a 24-hour basis through a personal digital pager and assists the Emergency Coordinator/AEDO and Emergency Duty Officer in determining the need for regulatory reporting and notifications.

G-3 IMPLEMENTATION

The first step taken during any incident involves its observance by employees and supervisors on the scene. Actions to be taken in reporting an explosion, fire, or release are described in Attachment G-1.

The Emergency Coordinator/AEDO categorizes the event according to increasing levels of severity as listed below:

- 1) SIGNIFICANCE CATEGORY 5

- 2) SIGNIFICANCE CATEGORY 4
- 3) SIGNIFICANCE CATEGORY 3
- 4) SIGNIFICANCE CATEGORY 2
- 5) RECURRING EVENT CATEGORY
- 6) SIGNIFICANCE CATEGORY 1
- 7) OPERATIONAL EMERGENCY

An event greatest in magnitude is categorized as an Operational Emergency. Categorization of a hazardous waste incident as an Operational Emergency activates the Emergency Operations Center (EOC) and thereby implements this Contingency Plan.

The following implementation plan is used to respond to a hazardous waste event. Contingency Plan implementation and notification actions are diagramed in Figure G-4. Implementation of the Contingency Plan is initiated for potential or actual events involving hazardous wastes or hazardous waste constituents.

The Emergency Coordinator/AEDO after categorizing an event as an Operational Emergency, begins evaluation and classification of the event per Figure G-5.2, the Emergency Action Level Guide, and advises the Emergency Duty Officer as necessary. By increasing order of severity, the action levels for Operational Emergencies are:

- 7a) ALERT
- 7b) SITE AREA EMERGENCY
- 7c) GENERAL EMERGENCY

The Emergency Coordinator/AEDO or the Emergency Duty Officer activates the Emergency Operations Center as necessary. The emergency action level may be changed by the Emergency Operations Center staff, based on information provided by the Emergency Coordinator/AEDO at the scene and on an assessment of potential health effects or environmental impacts by the Emergency Operations Center staff.

The Incident Commander and the Emergency Coordinator/AEDO retain responsibility for directing and coordinating all efforts to resolve the emergency at the field command post with the assistance of the Emergency Operation Center once it is declared operational. Such actions may include, but are not limited to, the following:

- Responding, and assuring the response of others, to all alarms sent over the site-wide alarm system, radiation detection alarm, and emergency message systems;
- Coordinating all emergency response groups;
- Instituting any operational changes necessary to control the emergency, including shut-down of operations as required;
- Directing the Communications Center to send out the necessary alarms and messages for personnel evacuation and accountability;
- Instructing the Communications Center, when necessary, to obtain assistance such as rescue and fire fighting equipment and crews.

All assistance from the FCP's Subcontracted Community Emergency Response Organization can be summoned by:

Telephone: 911 or 825-2280

- Requesting further assistance, as necessary, from the Butler County and the Hamilton County emergency response agencies. Each agency has prepared a "Response Plan for a Hazardous Materials Emergency at the Feed Materials Production Center".
- Terminating the state of emergency as conditions permit and instructing the Communications Center to sound the appropriate signal.

G-4 EMERGENCY RESPONSE PROCEDURES

The following procedures are the responsibility of the Emergency Coordinator/AEDO or his designee whenever the Contingency Plan is implemented.

G-4a Notification

General Notification Activities

- 1) The Emergency Coordinator/AEDO informs Communications Center that the Contingency Plan has been implemented and is classified as an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY involving hazardous waste.
- 2) The Communications Center (or Emergency Coordinator (AEDO)) notifies the Subcontracted Community Emergency Response Organization and Emergency Duty Officer (EDO) of the event categorization.
- 3) The Emergency Duty Officer notifies Emergency Director (ED) and DOE Site Manager, or designee(s), of the event categorization.
- 4) The Communications Center completes County Event Report¹ as directed by the Emergency Coordinator/AEDO.
- 5) The Communications Center Operator activates site-wide alarm system, the site-wide message system, and/or the off-site Emergency Warning System, as directed.
- 6) The Emergency Coordinator/AEDO begins identification of the character, source, amount, and extent of any released materials by observation, for example hazardous waste labels on the container, review of facility records, interaction with facility personnel, and if necessary, by chemical analyses.
- 7) The Communications Center Operator in coordination with the Emergency Operations Center completes all required notifications to:
 - DOE-HQ EOC,
 - State of Ohio Emergency Management Agency (OEMA), who then notifies the

¹ County Event Reports notify both Butler and Hamilton counties for events categorized as Alert or Higher.

appropriate offsite agency(ies) listed in Table G-1, according to the type of incident,

- Butler and Hamilton counties' 24-hour notification points,
- Director, Ohio Environmental Protection Agency
- FCP Release Evaluator,
- DOE- FCP Duty Officer,
- Appropriate local organizations, if not notified by OEMA,
- Federal and State regulatory agencies, if not notified by OEMA.

The first three agencies listed above are notified within 15 minutes of any hazardous waste emergency.

- 8) The DOE- FCP Duty Officer provides FCP Communications Center, as soon as possible, with a written record documenting that the appropriate regulatory agencies have been verbally contacted.
- 9) The DOE-FCP Duty Officer is responsible for making and verifying any follow-up notifications communicated to them by the FCP, Emergency Coordinator/AEDO, Emergency Duty Officer or Emergency Operations Center.

Initial Oral Notification for Hazardous Waste Emergencies

The Emergency Coordinator/AEDO or the Emergency Operations Center immediately reports to DOE-HQ when the facility has had a release, fire, or explosion which could threaten human health or the environment.

The FCP Emergency Operations Center notifies appropriate local authorities to advise whether protective actions are required. The FCP Emergency Operations Center provides oral notification immediately to the Ohio Emergency Management Agency. The DOE-FCP Duty Officer will provide oral notification immediately to the Ohio EPA Emergency Response Center.

The verbal report will contain the following information²:

- name, address, and telephone number of the reporter;
- name and address of the facility;
- the time and date of the incident;
- type of incident (e.g., fire, spill, etc.);
- identification of material(s) involved to the extent known;
- quantity of each material included;
- extent of injuries, if any;
- potential hazards to human health or the environment, outside of the facility; and
- date and time that call was made and person contacted.

Local Evacuation Notices

Local agencies are responsible for protective actions required for the population surrounding the FCP. The FCP Communications Center will activate the Off-site Emergency Warning System for emergency events that could have significant off-site impact. The FCP Off-Site Emergency Warning System is utilized to inform the population within a two-mile radius of the FCP to seek shelter and tune to an Emergency Broadcast System Station for further instructions.

Written Notification

A written report notifying Ohio EPA that this Contingency Plan was implemented is submitted to the Ohio EPA by the FCP within 15 days after an occurrence of an incident that requires implementation of this Contingency Plan. The report will include the following information:

- name, address, and telephone number of the owner or operator of the facility;
- name, address, and telephone number of the facility;
- date of incident;
- time of incident;
- type of incident (e.g. fire, spill);
- type of material(s) involved;
- quantity of material(s) involved;
- the extent of injuries, if any;

² Form A may be used as a guideline to facilitate this verbal reporting (Figure G-9).

- an assessment of actual or potential hazards to human health or the environment, where this is applicable;
- estimated quantity and disposition of recovered material that resulted from the incident; and
- an outline or description of procedures or measures that will be taken to prevent or mitigate such incidents in the future.

Cessation/Resumption of Activities

The Emergency Coordinator/AEDO must take the preventive measures described in Section G-4e, if the event causes the affected area of the facility to cease activities.

The equipment in the affected area of the facility will be returned to a clean and serviceable condition after an emergency. Waste generated during spill cleanup will be managed in accordance with all applicable regulatory requirements. Ohio EPA regulatory authorities will be notified by the Department of Energy of the readiness to resume hazardous waste activities.

G-4b Identification of Hazardous Materials

The Emergency Coordinator/AEDO immediately begins identification of the character, exact source, amount, and extent of the event or release.

The Emergency Coordinator/AEDO will begin identification of the hazardous material by using the following procedure:

- 1) Visual inspection of the container labeling will be the initial identification method. The labeling includes all pertinent waste characterization information.
- 2) If labels are obscured or not easily read, site records such as the Material Movement Record or Container Tracking Log may be used to identify the composition and quantity of stored or released material. A detailed inventory of the location of every drum of hazardous waste is maintained and readily available from the Sitewide Waste Information, Forecasting and Tracking System (SWIFTS) Database.

- 3) Samples will be taken for analysis and characterization if the released material cannot be identified by the above methods.

G-4c Assessment

The Emergency Coordinator/AEDO will assess potential hazards to human health or the environment from the incident. The assessment will consider both direct and indirect effects of the release such as the effects of any hazardous fumes released. The Emergency Coordinator (AEDO) assesses the event by evaluating:

- The population at risk (both on- and off-site);
- The environmental conditions contributing to the seriousness of the event such as wind speed and direction, precipitation, ground moisture, and temperature;
- Potential radionuclide hazards;
- Protective Action Guide (PAG) or Emergency Response Planning Guideline (ERPG) exposure levels; and
- The capabilities of available equipment.

The existing DOE event categorization system used by the FCP provides a uniform, shared understanding of event severity. The emergency categorization system classifies emergency events based on the potential or actual impact of the event on facility safety, facility personnel health and safety, and on public health and safety. The site Emergency Plan provides for predetermined responses by the Emergency Coordinator/AEDO based upon the incident categorization criteria.

Categorization Systems

Events that operationally involve or affect the FCP are grouped into eight categories, by relative ranking of the assessed facility status, to ensure that the urgency of notification is readily identifiable and appropriate response actions are directed immediately. Inputs to the event categorization system include the status of systems, the observation of operating personnel, and the levels of radiological or hazardous materials in areas of the facility or in facility effluent. Incident severity defines the categorization level providing a uniform, shared understanding of event severity common to all involved groups.

The eight categories in order of increasing severity are as follows: Significance Category 6, Significance Category 5, Significance Category 4, Significance Category 3, Significance Category 2, Recurring Event Category, Significance Category 1, and Operational Emergency. The Operational Emergency level has been further subdivided for hazardous material and radiological events into three classes: Alert, Site Area Emergency, and General Emergency. Each are discussed below with detailed definition, classifications of emergencies, and appropriate emergency responses to be taken provided in DOE 151.1 and in the Emergency Action Levels of the FCP Emergency Plan.

Operational Emergency Classification

Base Program Events

Operational Emergencies are unplanned significant events or conditions that require time-urgent response from outside the immediate/affected site/facility or area of the incident. Such emergencies are caused by, involve, or affect DOE facilities, sites, or activities and represent, cause, or have the potential to cause the events or conditions describe below. Incidents that can be controlled by employees or maintenance personnel in the immediate/affected facility or area are not Operational Emergencies. Incidents that do not pose a significant hazard to safety, health, and/or the environment and that do not require a time-urgent response are not Operational Emergencies. Note that the initiating events described are not all-inclusive. Other initiating events that warrant categorization as Operational Emergencies shall be included in site/facility-specific procedures. Less severe events are reported through the Occurrence Reporting process.

An **Operational Emergency** for a Base Program Event shall be declared when events that represent a significant degradation in the level of safety at a site/facility and that require time-urgent response efforts from outside the site/facility occur. These events do not require further classification (i.e., as Alert, Site Area Emergency, or General Emergency).

Hazardous Materials Program Events (Radiological and Non-Radiological)

Operational Emergencies for a Hazardous Materials Program Event shall be classified as either an Alert, Site Area Emergency, or General Emergency, in order of increasing severity, when events occur that represent a specific threat to workers and the public due to the release or

potential release of significant quantities of radiological and non-radiological hazardous materials. Classification aids in the rapid communication of critical information and the initiation of appropriate time-urgent emergency response actions.

Alert (LEPC Level I Emergency Conditional Level): An Alert shall be declared when events are predicted, are in progress, or have occurred that result in one or more of the following:

1. An actual or potential substantial degradation in the level of control over hazardous materials (radiological and non-radiological).
2. The radiation dose from any release to the environment of radioactive material or a concentration in air of other hazardous material is expected to exceed either:
 - a. The applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond 30 meters from the point of release to the environment or;
 - b. a site-specific criterion corresponding to a small fraction of the applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond the facility boundary or exclusion zone boundary.
 - c. It is not expected that the applicable Protective Action Guide or Emergency Response Planning Guideline will be exceeded at or beyond the facility boundary or exclusion zone boundary.
 - d. An actual or potential substantial degradation in the level of safety or security of a facility or process that could, with further degradation, produce a Site Area Emergency or General Emergency.

Site Area Emergency (LEPC Level II Emergency Condition Level): A Site Area Emergency shall

be declared when events are predicted, in progress, or have occurred that result in one or more of the following situations.

1. An actual or potential major failure of functions necessary for the protection of workers or the public. The radiation dose from any release of radioactive material or concentration in air from any release of other hazardous material is expected to exceed the applicable Protective Action Guide or Emergency Response Planning Guideline beyond the facility boundary or exclusion zone boundary. The Protective Action Guide or Emergency Response Planning Guideline is not expected to be exceeded at or beyond the site boundary.
2. Actual or potential major degradation in the level of safety or security of a facility or process that could, with further degradation, produce a General Emergency.

General Emergency (LEPC III Emergency Condition Level): A General Emergency shall be declared when events are predicted, in progress, or have occurred that result in one or more of the following situations.

1. Actual or imminent catastrophic reduction of facility safety or security systems with potential for the release of large quantities of hazardous materials (radiological or non-radiological) to the environment.
2. The radiation dose from any release of radioactive material or a concentration in air from any release of other hazardous material is expected to exceed the applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond the site boundary.

G-4d Control Procedures

Emergencies involving hazardous waste will fall under three general classifications for the purpose of this Contingency Plan:

- explosion
- fire
- spills or material release.

The FCP is prepared for timely response to fires, explosions, and spills at all times. Personal protective clothing, pumps, generators, and respiratory equipment are noted in Section G-5; containment supplies and procedures in Section G-5(b); and major self-propelled and other "heavy" equipment in Section G-5(a)(4).

The following Emergency Response Team members respond to fire alarms as needed:

- Emergency Coordinator (AEDO) with vehicle
- Subcontracted Community Emergency Response Organization with appropriate emergency apparatus
- Security Officer with vehicle
- Monitoring Personnel with appropriate equipment

Rescue of persons from an evacuated building or area will be undertaken only by the Subcontracted Community Emergency Response Organization under the direction of the Incident Commander.

Response procedures for trained personnel are summarized below:

- 1) Immediately notify personnel to evacuate the danger area and activate the local evacuation alarm while taking action to ensure own personal safety.
- 2) Report urgent situations directly to the Communications Center via the Emergency Phone Number 911, pull manual fire alarm, or have the report relayed to the Communications Center over the site-wide FM radio network, if a person with a portable radio is nearby. Otherwise, report information to a local supervisor who will relay the report to the Communications Center or Emergency Coordinator/AEDO.

- 3) Report the following information to the Emergency Coordinator/AEDO:
 - Location;
 - Type of emergency; fire, explosion, chemical release, and personnel, equipment, and chemicals or hazardous wastes involved and amounts if known;
 - The magnitude of the emergency, such as an estimate of the extent, size, quantity, volume, intensity, area, etc.; and
 - Emergency actions taken.
- 4) If possible, the facility personnel encountering the emergency should remain in the vicinity to direct emergency service groups to the scene.
- 5) Determine need for emergency service groups and summon them by calling 911, pulling manual fire alarms, or relaying the information to the Communications Center via the FM radio network.
- 6) Shut off all operation equipment, air, water, steam, gas, and electricity.
- 7) Remove and segregate all non-burning combustible or otherwise hazardous wastes from the vicinity of the incident, depending on the location of the incident.
- 8) Unlock all doors.
- 9) Evacuate all personnel in the vicinity of the incident not actively involved in responding to the emergency.
- 10) Account for all personnel at location or at the Rally Point.
- 11) Assist the Emergency Coordinator/AEDO if called upon.
- 12) Assess possible human health and environmental hazards of the event and define or assess the hazard impact including:

- Identify the involved substance and its source;
 - Determine the extent and the amount of materials involved.
- 13) Assess the emergency and establish the initial event categorization.
 - 14) If not already done, authorize the request for assistance from the Subcontracted Community Emergency Response Organization.
 - 15) Notify the EDO of significant actions prior to EOC being declared operational.
 - 16) Set up a field command post to ensure coordination of all EOC instructions. The field command post shall formulate and forward requests for additional resources.
 - 17) Initiate the "All Clear" signal when the emergency is under control and/or resolved.
 - 18) Initiate necessary precautions to ensure that further fires, explosions and releases do not occur, recur or spread to other hazardous waste or materials.
 - 19) Initiate appropriate monitoring for leaks, pressure build up, gas generation or rupture in valves, pipes, or other equipment.
 - 20) Initiate reentry activities including recovery, treatment, storage, and/or disposal of any recovered waste, contaminated soil, surface water, or other materials resulting from the emergency.
 - 21) Ensure that all emergency equipment is returned to normal status when the event has been terminated.

Should the Incident Commander determine that a fire is out of control and additional personnel are required, the Incident Commander will direct the activation of the Subcontracted Emergency Response Organization's mutual aid agreements.

Fire fighting support can be requested from surrounding community fire departments. The members of the arriving mutual aid fire departments will be met at a staging area or at the gate by FCP personnel, given any pertinent instructions, supplied with Thermal Luminescent Dosimeter (TLD) badges as needed, and escorted to the location of the fire.

The personnel responding from off-site departments will be under FCP direction. They will be responsible for their own equipment and to their senior officer who will report to the Emergency Coordinator/AEDO for instructions.

G-4e Prevention of Recurrence or Spread of Hazardous Waste Fires, Explosions or Releases

Actions to prevent the recurrence or spread of releases or fires include; immediately determining the cause of the incident, stopping of processes and operations where applicable, cleaning up all debris from the incident and maintaining good housekeeping, containing and collecting released waste, recovering and isolating affected containers, ensuring fires are completely extinguished, and decontaminating affected areas and equipment. Procedures and policies will be reviewed and revised as necessary to prevent a recurrence, upon determining the cause of the incident.

G-4f Storage and Treatment of Released Waste

The Emergency Coordinator/AEDO or his designee will immediately collect representative samples of all recovered wastes for analysis and characterization after an emergency. Waste will be placed in a compatible container. All waste materials generated during the emergency response will be handled, treated, stored, and/or disposed of in accordance with the applicable hazardous waste regulations.

Methods for containment, cleanup, and decontamination of the affected areas are discussed in Sections G-4i, Container Spills and Leakage, and G-4j, Tank Spills and Leakage.

G-4g Incompatible Wastes

Containers are marked with Reactivity Group Codes (RGCs) based upon the results of waste characterizations. The RGC chart is readily available to personnel accessing the RCRA storage units, and is provided as Figure F-2 in Section F, Procedures to Prevent Hazards. Adherence to

the codes provides a convenient, reliable system to assure that incompatible wastes will be separated by means of a dike, berm, or other device (e.g. stored on separate spill pallets) stored in separately bermed areas or stored in separate buildings, to prevent mixing in the event of a spill or leak. In addition, since water might commonly be used for flushing or fire suppression, waste material that is incompatible with water is clearly marked as such.

Thus, in the event of (large) spills or leaks, the Emergency Coordinator/AEDO can ensure against the mixing of incompatible substances by maintaining separation of the incompatible wastes the integrity of the berms, or by creating temporary dikes to divert flow. As necessary, storage unit inventory records will be examined and facility owners consulted to identify released material. As described in Section G-4b, samples will be taken for analysis and characterization if identification proves impossible due to obliterated drum labels or inaccessible site records.

The recovered materials or wastes generated during cleanup will be characterized and stored in accordance with all applicable regulatory requirements.

G-4h Post-Emergency Equipment Maintenance

Emergency equipment which has been used in the affected area will be decontaminated, cleaned and readied for its intended use before operations are resumed in the affected area(s) of the FCP. Depleted stocks of materials will be replenished. Self-contained breathing apparatus, protective clothing, and other emergency equipment which cannot be successfully cleaned, repaired, or decontaminated will be replaced as necessary. An inspection of all safety equipment will be conducted by response personnel before operations are resumed in the affected area(s) of the facility.

The State regulatory authorities shall be notified of the readiness of the facility to resume hazardous waste operations after the equipment is returned to a clean and serviceable condition.

G-4i Container Spills and Leakage

The FCP has developed specific criteria to facilitate the prioritization of mitigation activities for deteriorated/leaking containers. Consistent with the SACD, the FCP has classified its containers based upon the container condition. As a result of these classifications, those containers of hazardous, mixed and uncharacterized waste that are described as Type I containers are subject to Section 3.8 (c) of the SACD.

The classifications are:

Type 1

Type 1 containers are any container that has actually leaked in such a manner as to allow wastes to be released onto the pallet or the pad floor.

The following actions will be initiated in response to a Type I container:

- Notify supervisor
- Immediately stop or contain leak. (Note: Employees without the specific training or knowledge of the released material or equipment should not take action to control the spill which may put their safety or that of others at risk).
- Supervisor notifies AEDO
- Complete additional cleanup as necessary
- Identify on inspection form as Type I container requiring further action

After the initial leak is contained, the container will be managed in accordance with OAC 3745-66-71, as soon as possible after detection, but in no event more than 24 hours after discovery unless safety issues require a longer time period. Safety issues to be considered include Nuclear Criticality guidelines, radiological exposure, and/or personnel safety in handling, lifting and movement activities. Safety concerns which impact the completion of these actions within the required time frame will be documented. Once these concerns have been resolved, the final corrective actions will be completed.

If there are no safety concerns or the concerns are resolved, corrective action will be accomplished by repairing the container or repacking/overpacking it. If repair is not possible or not effective, repacking or overpacking will be done. The container will be staged in an individual secondary containment area such as a spill pallet until this has been accomplished. Type 1 containers take priority over other work activities.

Type II

Type II containers exhibit localized evidence of material on the exterior of the container but no material has been released onto the pallet or the pad floor.

The following actions will be initiated in response to a Type II container:

- Notify supervisor
- Immediately stop or contain leak. (Note: Employees without the specific training or knowledge of the released material or equipment should not take action to control the spill which may put their safety or that of others at risk).
- Complete additional cleanup as necessary
- Identify on inspection form as Type II container requiring further action

After the initial leak is contained, the container will be managed in accordance with OAC 3745-66-71, as soon as practicable after detection, unless safety concerns prevent this. Safety issues to be considered include Nuclear Criticality guidelines, radiological exposure, and/or personnel safety in handling, lifting and movement activities. Safety concerns which impact the completion of these actions will be documented. Once these concerns have been resolved, the final corrective actions will be completed. These may include container repair, overpack or repack.

Type III

Type III containers exhibit severe corrosion without evidence of a release.

The following actions will be initiated in response to a Type III container:

- Evaluate container condition through required inspections to assess further actions

- Overpack/repack container prior to off-site disposition

If a container's condition causes its classification to change (e.g. Type III to Type II), it will be managed in accordance with the container management procedures for the new classification.

Very large spills involving the release of hazardous waste are unlikely in the container storage areas. Secondary containment structures in areas storing hazardous waste with free liquids are capable of holding at least 10% of the maximum volume of hazardous waste stored in that structure. If several drums are spilled simultaneously, the spilled material will be pumped from the containment area and re-containerized to prevent overflow of the containment area before attempting to use absorbent materials. Spilled hazardous waste will be treated, stored, and disposed of in accordance with the appropriate regulatory requirements.

G-4j Tank Spills and Leakage

The FCP does not have any hazardous waste tanks remaining on-site. The FCP has dismantled all tanks classified as HWMUs, and the Liquid Mixed Waste Project Bulk Tanks are considered to be containers in accordance with the Liquid Mixed Waste Project Work Plan.

G-5 EMERGENCY SUPPORT AND EQUIPMENT

The Emergency Coordinator/AEDO when notified of an event involving hazardous waste or hazardous waste constituents, may utilize the emergency resources, support and equipment summarized below. The facilities and equipment available for use in an emergency at the FCP are the Emergency Operations Center (EOC), and the Communications Center. Supporting equipment and resources include warning systems (on-site and off-site), response vehicles, personnel decontamination equipment, medical support, radiological monitoring, and industrial hygiene monitoring equipment. The FCP also maintains a contract with a local emergency response organization as described in Section G-6.

Emergency Operations Center (EOC)

The EOC is located in Trailer T-214. The dose assessment area is located in Trailer T-76. EOC staffing and responsibilities are outlined in Section G-2. Resources available in the EOC include maps, engineering drawings, and other emergency reference materials. The EOC is equipped with a backup power generator.

A comprehensive communications system in the EOC includes telephones, telefax, computers, and portable radios. A paging system links response personnel with the Communications Center. All response personnel can be alerted simultaneously or individually, in case of an event.

Computer support systems in the EOC maintain a historical record, perform meteorological and heavy gas modeling, aid in reporting current event status information to local county officials, and aid in drafting and transmitting press releases.

In the event of an emergency, ~~the T-1 Conference Room~~ or the Springdale office can also serve as an alternate location for the EOC.

Communications Center/Security

Security maintains the safeguard and integrity of the FCP and provides communications, as needed in an emergency. The Communications Center is typically the first to be advised of an emergency via plant alarm or personnel.

The Communications Center includes a full complement of one-way and two-way radio communications facilities, including a mobile and portable FM radio network, scanners, special telephone system, and a paging system. Special monitoring systems include a computerized emergency monitoring system. On-site Security Inspectors are equipped with emergency vehicles with lights and siren, portable communications equipment, a mobile radio-telephone, and a bullhorn.

Warning Systems

There are on-site, local building, and off-site warning systems at the FCP.

Facility Alarm System

This system is centered in the Communications Center. Signals from manual fire alarm boxes and automatic fire monitoring and/or extinguishing systems located throughout the plant are transmitted to the Communications Center and monitored by a Honeywell Delta 1000 system. The Communications Technician, using the control panel, activates alarms located throughout the facility.

Each alarm system is tested by ~~Firefighter/Emergency Response Specialist (FF/ERS)~~ qualified personnel according to the following schedule, and the results are recorded:

Manual alarm boxes: Every six months

Emergency Message System

The Emergency Message System is a one-way system used by the Communications Center to transmit verbal instructions and important information to facility personnel following the sounding of a warning signal.

Local Evacuation Alarm

All process areas are linked to a Honeywell Evacuation Alarm (loudspeaker) system. In the event of an emergency in any location, dialing 911 or calling "CONTROL" by radio will alert Emergency Preparedness via the Control Center. Appropriate evacuation and other messages will be broadcast over the loudspeakers in affected and adjacent locations. The speaker system is tested daily.

Ambulance Alarm

Primary response personnel are notified from the Communications Center via special Alert Pagers. The pagers alert assigned ERT members that a call has been made for the ambulance and the off-site contract fire department is notified to respond to the FCP.

Offsite Emergency Warning System

In emergencies with offsite implications the Offsite Emergency Warning System warns citizens within the 2-mile immediate notification zone surrounding the FCP. Activating the sirens alerts residents to take shelter immediately, tune to a radio or TV station and listen for an Emergency Broadcast System (EBS) message for information.

The warning system consists of ten electronic sirens (seven offsite and three onsite) and numerous tone-alert radio receivers. The sirens are located within or just outside the 2-mile immediate notification zone. This system is tested on the first Wednesday of each month at noon.

Fire and Rescue

Fire and rescue equipment furnished by the Subcontracted Community Emergency Response Organization include vehicles with forcible entry tools, communications equipment, electric lights and generators, portable pumps, protective equipment, and heavy equipment.

Fire protection and extinguishing equipment at the FCP includes building sprinkler systems (both wet-pipe and dry-pipe), fire and smoke alarm systems, hand-held fire extinguishers, and fire hydrants.

Decontamination Equipment

Decontamination equipment is stored in the mobile emergency spill response vehicle. This equipment consists of brushes, soap, diking devices and recovery containers. All of the equipment is designed to be used in conjunction with a portable water supply or water supplied from emergency equipment (pumpers/tankers). The mobile emergency spill response vehicle is described in further detail in Section G-5a(4).

Medical

Medical Services, located in T195, is staffed by physicians, nurses, and technicians. ~~Medical vehicles for emergency use include one fully equipped ambulance vehicle at this time.~~ There are also various pieces of diagnostic equipment, hospital wards, and other equipment. Detailed information on medical equipment appears in Section G-5e.

Environmental Radiological Monitoring

Environmental radiological monitoring equipment includes dosimeters, stack alarms, friskers, and other radiation survey instruments and monitors. Multimedia baselines are continuously established in all areas using airborne radioactivity air sampling pumps and friskers. Should an incident occur, changing and/or radiologically hazardous conditions can be monitored by direct reading dosimeters, swipes, friskers, and personal contamination monitors. This information can be used to establish boundaries of the contaminated area, and to provide control point monitoring of personnel and equipment involved in

the incident.

Industrial Hygiene Equipment

Industrial hygiene equipment includes devices for detecting multimedia hazardous materials and hazardous conditions. Sampling of large or small air spaces for chemical contaminants is accomplished by means such as: photoionization detector, combustible gas analyzer, oxygen meter, hang-on personal dosimeter (for nitrogen dioxide, sulfur dioxide, carbon monoxide, ammonia), direct-reading colorimetric (Draeger) tubes, and mercury vapor monitors. The output from the first two can be analyzed in the field by a portable gas chromatograph or a MIRAN infrared gas analyzer, the latter of which is also a direct-reading analyzer. Non-chemical hygiene hazards can be detected/determined by: sound level meter, microwave survey meter, low-frequency electromagnetic radiation meter, and a light-scattering (airborne) dust monitor.

Emergency Power System

Dedicated emergency generators supply emergency power for lighting, communications, and for certain designated facilities. The emergency generators are tested at least once each week by the Emergency Coordinator/AEDO according to established procedures. Records of these tests are maintained at the facility. A portable unit is available when a power failure affects the Communications Center and the emergency generator fails to start.

Additional Emergency Equipment

The following additional emergency equipment is maintained at the FCP:

- Self-contained breathing apparatus (SCBA) and other respiratory equipment
- Chemically resistant clothing, boots, and gloves;
- Showers and eye wash stations in fixed locations, and as portable units (as needed) throughout the plant
- Emergency power and lighting equipment, including power-failure lighting
- Submersible electric pumps
- Portable electric generators
- Portable gasoline-powered pumps (to 250 gpm)
- Mobile gasoline-powered pump (trailer-mounted, @ 500 gpm)

A list of FCP emergency respiratory equipment and their typical applications and limitations is provided in Table G-3. A summary of pressurized fire extinguishers is provided in Table G-4.

G-5a Fire Protection Equipment

G-5a(1) Plant Water Supplies and Fire Loop Water Supply

The FCP water systems and related equipment provide the FCP with the first line of defense in fighting fires, and supply the primary means of fire extinguishment.

High Pressure Distribution System

The High Pressure Distribution System provides water to the high pressure hydrants, ~~located outside each storage unit~~, and to building sprinkler systems. A static pressure of 114 psi (gauge) is maintained in the system by a jockey pump. The fire pump system is activated when the pressure in the system drops. The fire pump system consists of one electric and one-diesel powered pump, rated at 1,250 gallons per minute (gpm) at 125 psig. The electric pump and the diesel pump start automatically as the result of low water pressure. The fire pumps obtain water from the ground level tank. The fire pumps take suction at the bottom of the tank and have access to all 400,000 gallons, while the domestic water pumps take suction approximately eight feet from the bottom of the tank. This limits the domestic water pumps to the top 300,000 gallons and reserves the bottom 100,000 gallons strictly for the fire pumps only. This system is capable of providing sufficient water at sufficient volume and pressure for sprinkler systems.

G-5a(2) Automatic Sprinklers

Automatic sprinklers are an effective means of fire protection, and will extinguish or contain most fires. Major buildings and processing areas are protected by heat-activated automatic sprinkler systems. The automatic sprinklers release water when heat at the sprinkler head reaches a predetermined temperature. Emergency response personnel will immediately proceed to the area where an automatic sprinkler system is activated and take appropriate actions.

The following ~~building is~~ ~~buildings are~~ fully equipped with dry pipe sprinkler systems:

● Building 79 Warehouse

● Building 77 (Used to stage shipments of hazardous waste)

● Boiler Plant (Building 93A - will be used from November through December

2004 to repackaging containers of mixed waste)

Dry pipe sprinklers located inside each hazardous waste storage locker are plumbed to an outside Fire Department connection. The system can be activated by connection to a fire truck.

G-5a(3) Fire Extinguishers

CLASSES OF FIRE EXTINGUISHERS

Fires are placed in one of four classes according to the type of fuel involved. The class of fire determines the method of extinguishment and, for this reason, all fire extinguishers are marked according to class. The various classes of fires are as follows:

- **Class A** fires involve ordinary combustibles such as wood or paper. These are most readily extinguished by removing the heat. Water extinguishers are best suited here. All-purpose dry chemical extinguishers may also be used.
- **Class B** fires involve flammable liquids such as gasoline or alcohol. Since these are liquid fires, the application of water may tend to "float" the fire away. The best method of extinguishment here is to remove the oxygen. Carbon dioxide, foam, or dry chemical extinguishers are best suited for Class B fires.
- **Class C** fires involve energized electrical equipment. Since some extinguishing agents conduct electricity and the best method of extinguishment is to remove the oxygen, carbon dioxide and dry chemicals are recommended here. An electrical fire, if the electricity can be turned off, is usually **Class A** and can be easily extinguished.

- Class D fires involve certain combustible metals such as magnesium which require specific extinguishing compounds to put them out.

Table G-4, Types of Pressurized Fire Extinguishers, describes the four types of pressurized fire extinguishers used at the FCP and lists typical applications and limitations for each type of extinguisher.

G-5a(4) FCP Emergency Response Equipment

~~The facility also has emergency response vehicles and equipment in addition to the automatic fire protection already described. The fire trucks and equipment are discussed below.~~

FIRE AND SAFETY RESCUE 27

~~This unit is a 1993 Ford F-350 service body equipped with a two-way 32-channel radio, fire extinguishers, self-contained breathing apparatus, explosimeters, tools, protective clothing, and medical supplies. This vehicle is in daily use for routine purposes and is driven by emergency response personnel.~~

TANKER 227

~~One Mack 2, 600-gallon tanker is available, equipped with a 500-gpm centrifugal pump, two-way 32-channel radio, protective clothing, tools, fire extinguishers, two SCBAs, and hose. Tanker 227 is planned to be removed from service in July 2004.~~

ENGINE 227

~~This 1993 Boardman custom fire truck is fully equipped with a 1,250-gpm single-stage centrifugal water pump, 500-gallon booster tank, two-way 32-channel radio, SCBAs, protective clothing, extension ladders, deluge gun, tools, and hose. Engine 227 is planned to be removed from service in July 2004.~~

AMBULANCE

~~One fully equipped ambulance meeting federal specifications is operated and maintained onsite. This ambulance is planned to be removed from service in July~~

2004.

SPILL RESPONSE VEHICLE - HAZ MAT 27

~~This Chevrolet 30 Series van, is stocked with a full array of ERT Spill Response Equipment, an on-board communications system. Other types of emergency response equipment stored in this vehicle include:~~

~~Personal Protective Equipment: a full range of shoe covers, gloves (nitrile, neoprene, latex, leather, etc), chemically resistant suits (Saranex, Tyvek, etc), cover suits, SCBAs, respirators (with all potentially needed cartridges), hard hats, boots, goggles, ear-plugs, confined space entry hardware and supplies;~~

~~Environmental Monitoring Equipment: Combustible gas monitor, sampling containers, charcoal tubes, pH meter, flashlights;~~

~~Spill Control and Clean-up Materials: Absorbent pillows, pigs, and pads, wet vacuum, Spill X spill guns (solvent, acid, caustic), waste storage drum, traffic cones, soap, small tool kit (hammers, wrenches, pliers, etc);~~

~~Communications: Computer and Printer, fax, cellular phone; and, a set of reference books (ACGIH, NIOSH, etc).~~

~~Additionally, the Spill Response Vehicle can pull a trailer, which is equipped with renewal supplies and additional equipment, such as: brushes, mops, shovels; spill stoppers, leak plugs, sponges; decon showers and stations; buckets, overpack drums.~~

MOBILE AIR UNIT

~~This unit consists of a trailer mounted 9 bottle, high pressure cascade system with air-line capability capable of filling up to 70 low pressure SCBA units or 45 high pressure units.~~

HEAVY EQUIPMENT

The following equipment, although not designated specifically for emergency use, is available to support emergency response activities if needed:

- flatbed trucks
- dump trucks
- tow tractors
- semi-trailers
- semi-tractors
- tank truck
- industrial trucks
- industrial hand stackers
- locomotive engine
- front end loaders
- bulldozers
- road grader
- cranes
- back hoe
- cement mixer
- portable generator
- numerous tractors, pickup trucks, and small vehicles
- vacuum tanker truck, "Super Sucker"
- water sprayer truck

G-5b Spill Control and Monitoring Equipment

Spill Control and Emergency Spill Response Equipment

Spill response equipment is available for use at the FCP. Stockpiles of absorbent material (such as clay absorbent and spill booms or absorbent pillows called "PIGS") along with shovels are located at each storage facility and at certain satellite accumulation points. Runoff can be diverted by temporary diking to prevent entry into the storm sewer. Contents from the storm sewer system can be diverted and held in

the Stormwater Retention Basin to control offsite releases.

~~The FCP also maintains a mobile emergency spill response vehicle, as described in Section G-5a(4). This vehicle is stocked with appropriate emergency absorbent material and protective equipment.~~

MONITORING EQUIPMENT

Equipment used to monitor for contamination, explosive atmospheres, and hazardous releases is located ~~on various emergency vehicles~~ in specific locations within the various remediation projects. This equipment includes; detector tubes, air sampling equipment, explosive gas detectors, chemical analyzers and personal dosimeters.

G-5c Alarm and Electronic Monitoring Systems

Descriptions of alarm systems for areas used to manage hazardous waste are included in Attachment G-1. Automatic electronic alarm and monitoring systems consist of the Honeywell D-1000 System and the Meteorological Tower Monitors.

HONEYWELL D-1000 SYSTEM

This centralized, computer-controlled system has two main parts:

- (A) Multiplex, Digital Alarm System
 - (1) Remotely monitors activation of alarm sensors throughout the plant.
 - (2) Signals are converted by the Delta-1000 microprocessor to plain language messages.
 - (3) The CRT display includes:
 - Alarm type
 - Signal number
 - Location

- Action to be taken by Communications Center personnel

(4) Alarm sensors monitor the following:

- Fire alarms
- Sprinkler system
- Smoke alarms
- Radiation detection alarms
- Supervisory alarms, including tampering, equipment, malfunction, and pressure varieties
- Process alarms for temperature and gas detection

(B) Audible Alarm System

- (1) Activated by Communications Center or Honeywell System automatically.

METEOROLOGICAL TOWER MONITORS

- (A) Meteorological information collected includes wind speed and direction.
- (B) Information is used to calculate plume direction during a radiological or gaseous hazardous materials emergency.
- (C) Monitors displaying near real-time conditions are located in the Communications Center and Trailer T-76 along with computer plume models.
- (D) Communications Center personnel can relay the information to the Emergency Coordinator (AEDO). National Weather Service information is available in case back-up data is needed.

G-5d Communication System

The FCP utilizes other special radios, receivers, telephones and monitoring equipment, in addition to the Alarm Systems described in the previous section. The following

communications and monitoring equipment is located in the FCP Communication Center and is operated by Communications Center personnel on duty, seven days a week:

TWO-WAY RADIOS

The FCP utilizes eight separate high-band radio frequencies.

RADIO RECEIVERS

These include the following:

- Radio receiver to monitor Crosby Township Fire Department, and
- ~~Radio receiver to monitor Ross Township Fire Department~~

SPECIAL TELEPHONES AND TELEPHONE SERVICE

These include the following:

- Emergency telephone number 911 (also 6511)
- Emergency message system through which the Communications Center furnishes information to onsite personnel relative to emergencies and general information.
- Mobile and cellular radio telephones utilized by the Security vehicles.

G-5e First Aid and Medical Supplies

G-5e(1) Emergency Treatment

Personnel are provided first aid treatment in the emergency treatment room in T195. A doctor is normally on duty and nurses are always on duty during the day shift, Monday through Friday. First aid and/or arrangements for transporting ill or injured personnel for treatment is provided at other times, by Subcontracted Community Emergency Response Organization (who are state certified Emergency Medical Technicians). A minimum of one state certified Emergency Medical Technician is scheduled for each shift on site. Emergency personnel may be summoned by calling the Communications Center in an emergency.

G-5e(2) Ambulance Service - General

Injured or ill employees will be transported by FCP Subcontracted Community Emergency Response Organization's ambulance or through their mutual aid equipment to pre-designated area hospitals.

G-5e(3) Ambulance Service, 2nd and 3rd Shifts, Weekends, Holidays, Vacation Shutdown

Ambulance service is provided during second and third shifts, weekends, and holidays in the same manner as during regular day shift hours.

G-6 COORDINATION AGREEMENTS

A contract has been awarded to a local off-site emergency response agency. This agency is responsible for the emergency response at the site when facility response can not mitigate the event. Any mutual aid agreements are the responsibility of the Subcontracted Emergency Response Organization. The Subcontracted Community Emergency Response Organization has signed mutual aid agreements with other agencies and/or have agreed to provide needed assistance to the FCP at local, county, state and federal levels. Attachment G-3 contains information regarding the contract with the Crosby Township Fire Department and Life Squad and the current letters of agreement with Mercy Franciscan Hospital-Mount Airy (formerly Providence Hospital) and University Hospital.

Off-site organizations have been provided information of facility layouts, associated hazardous areas, entrances to the facility and primary evacuation routes to facilitate emergency response. Hospitals have been familiarized with the types of injuries and illnesses which may potentially occur at the facility. In addition, off-site responders are provided with annually updated facility layouts, evacuation routes, floor plans, etc., and are invited to participate in joint emergency exercises conducted every three years (more often if changing conditions warrant). ~~The FCP holds a quarterly meeting to ensure an adequate level of integrated planning among the FCP and the off-site emergency organizations.~~

The Incident Commander will request the call-in of additional mutual aid assistance as needed. Equipment dispatched for such requests operate under the immediate supervision of the responder's senior on-scene official, but under the general direction of the requester's senior on-site official.

The Communications Center Operator, in the event of Contingency Plan Implementation and at the request of the Emergency Coordinator/AEDO, shall request additional assistance by calling one or more of the off-site organizations' telephone numbers listed in Table G-1; see Figure G-4 for interrelationships between these organizations.

G-7 EVACUATION PLAN

EVACUATION OF RCRA FACILITIES

Personnel will respond to voice warnings from a supervisor, audible alarms, or (when alone without supervision) to their own cognition of the events without the benefit of signals. As determined by the Emergency Coordinator/AEDO, personnel may have to evacuate to their rally point. Personnel will be instructed as to what action to take, if further movement is necessary. A discussion and maps of the evacuation routes and rally points are provided for each area used to manage hazardous waste in Attachment G-1.

GENERAL EVACUATION

All major emergencies require prompt and deliberate action. Following an established set of procedures is required, in the event of any major emergency, for the safe evacuation of personnel. In specific emergency situations, however, the Emergency Coordinator/AEDO may deviate from the procedures to provide a more effective plan for bringing the situation under control. The Emergency Coordinator/AEDO is responsible for advising Management of the necessity for any evacuation.

The following actions, in the event that a facility evacuation is required, will be taken by those present:

- (A) The Sitewide Alarm System will be activated at the Communications Center followed by an announcement over the emergency message system.
- (B) Employees shall carry out assigned responsibilities during an emergency shutdown. For example, individuals may have assignments to shut off fuel gas, water, steam, electricity and/or perform other special duties.
- (C) All employees will report to their predetermined rally point for accountability and further

instruction. Should the emergency involve a nuclear criticality, all employees will report instead to the specific locations indicated in the Site Criticality Procedure.

G-8 REPORTS

Certain notifications and reports may be required by the regulatory authorities, in the event of an emergency that requires implementation of the Contingency Plan. Section G-4a describes the oral notifications and written reports required upon the implementation of the Contingency Plan. Any one or more of these reports may be required depending on the nature and extent of the emergency. Current record keeping/reporting procedures are maintained in the Operating Record.

G-8a Required Written Reports

GENERAL INCIDENT REPORTING

The FCP will note in its operating and event reporting records, the time, date, and details of any incident that requires implementation of this Contingency Plan. Within 15 days after an occurrence of an incident, a written report describing the implementation of the Contingency Plan (Form B Notification to Ohio EPA of Implementation of Contingency Plan) is required to be submitted to the Ohio EPA by the FCP as outlined in Section G-4a. An example of Form B is shown in Figure G-10.

RESUMPTION OF OPERATIONS REPORTING

The State regulatory authority shall be notified of the readiness to resume hazardous waste operations by using Form C (Written Notice to Ohio EPA and Appropriate Local Authorities of Resumption of Hazardous Waste Operations). Prior to notification, the equipment must be returned to a clean and serviceable condition (as described in Section G-4h). An example of Form C is shown in Figure G-11.

G-9 AMENDING THE CONTINGENCY PLAN

The FCP will amend the plan and distribute amended copies, when any of the following occur:

- a) The plan fails in an emergency; or,
- b) The list of emergency coordinators changes; or,
- c) The list of emergency equipment changes; or,

- d) Changes in the facility increase the potential for fires, explosions, or releases of hazardous waste, or change the response necessary in an emergency.

3715

Table G-1
Emergency Operation Personnel & Organizations

EMERGENCY COORDINATORS/ASSISTANT EMERGENCY DUTY OFFICERS

<u>NAME</u>	<u>HOME PAGER*</u>	<u>OFFICE</u>	<u>HOME ADDRESS</u>	<u>TELEPHONE</u>
Sharon Kohler**		4165		
David L. Jackson**		4036		
Duckworth, R.		4749		
Bierman, J		4749		
McCool, D.		4749		
Stacey, E.		4749		

* The most effective means for reaching the on-site Emergency Coordinator/AEDO is via pager, or Radio #202. The on duty Emergency Coordinator/AEDO may also be reached by:

- o radio through the 24-hour-staffed FEMP Communications Center
- o office, (513) 648-4749,
- o portable cellular telephone, (513) 484-2294, or
- o mobile vehicle cellular telephone, (513) 484-2295, or (513) 484-2296

There is an Emergency Coordinator/AEDO on-site at all times, 24 hours per day, 365 days per year. The home addresses and telephone numbers of all Emergency Coordinator/AEDOs (and other Emergency Operations personnel as well) are available on-site from the Communications Center or the Emergency Operations Center, if, for some reason, an off-duty Emergency Coordinator/AEDO would need to be reached.

** S. Kohler D. Jackson is the Safety and Health Program Manager. The on-site/on-duty Emergency Coordinator/AEDO at the time of an incident will be the primary incident commander for that incident.

Table G-1

OTHER

All Emergencies	(513) 648-6511
FEMP Communications Center.....	(513) 648-4444
DOE Site Office.....	(513) 648-3155
Security Office.....	(513) 648-5614
Fire & Safety Vehicle #301.....	(513) 484-2210
Industrial Hygiene Office (Waste Management Activities).....	(513) 648-4924
Radiological Control Techs Portable.....	(513) 648-4987
Medical Office	(513) 648-4433
Release Evaluator (Pager).....	(513) 303-3880
US EPA Region 5	(312) 353-2318
US EPA RCRA Hotline	(800) 424-9346

3715

Table G-1

Off-Site Emergency Operation Organizations

OFF-SITE NOTIFICATION

DEPARTMENT OF ENERGY

DOE Headquarters, Washington, D.C.....(202) 586-5000
DOE Headquarters Emergency Operations Center (202) 586-8100
DOE Ohio Field Office (513) 246-0021

STATE OF OHIO

Ohio Emergency Management Agency (614) 889-7150
Ohio EPA Emergency Response Center (Spill Reporting Hotline) (800) 282-9378
Ohio EPA Columbus (Division Emergency Remedial Response) (614) 644-2924
Ohio EPA Southwest District Office (937) 285-6357
or (800) 686-8930
Ohio Department of Health (614) 466-3543
Ohio State Highway Patrol (513) 863-4606
Ohio State Fire Marshall (800) 686-0736

HAMILTON COUNTY

Communications Center Emergency - 911
..... (513) 825-2280
Emergency Management Agency (Emergency Operations Center)..... (513) 851-7080
Hamilton Cty. Dept. of Environ. Svces., Air Quality Pgms. (513) 946-7777
Southwest Local School District (513) 367-4139
Sheriff's Department (513) 825-2280

BUTLER COUNTY

Sheriff Dispatch..... (513) 887-3010
Emergency Management Agency (Emergency Operations Center).....(513) 785-5810

9715

Table G-1

Off-Site Emergency Operation Organizations

LOCAL FIRE DEPARTMENTS

Crosby Township	911 or (513) 385-8338
Ross Township	911 or (513) 728-2023
Colerain Township	911 or (513) 825-6143

EMERGENCY MEDICAL SERVICE

Colerain Township Fire Department.....	(513) 825-6143
Crosby Township Fire Department.....	(513) 385-8338
Franciscan MediCenter.....	(513) 367-2222
Mercy Franciscan Hospital – Mount Airy.....	(513) 853-5000
Mercy Hospital – Fairfield.....	(513) 870-7001
University Hospital.....	(513) 584-4571
University Air Care.....	(800) 826-8100 or (513) 584-7522

OTHER AGENCIES

Chemical Referral Center, CMA	(800) 262-8200
Coast Guard/DOT National Response Center	(800) 424-8802
N.O.A.A.....	(513) 283-3195
RCRA/EPCRA Superfund Call Center.....	(800) 424-9346
American Red Cross	(513) 579-3000
Chemtrec	(800) 424-9300

Table G-2

The FCP Emergency Organization Roster

EMERGENCY RESPONSE TEAM

Assistant Emergency Duty Officer/Emergency Coordinator
Subcontracted Community Emergency Response Personnel
Firefighters
Driver Operators
Emergency Medical Technicians

ADDITIONAL SUPPORT PERSONNEL to the EMERGENCY RESPONSE TEAM

Radiological Safety Technicians (As Needed)
Industrial Hygiene Technicians (As Needed)

ADDITIONAL FIELD PERSONNEL

Operations Response

Plant Supervisors
Facility Owner
Operations Personnel

Security Response

Shift Lieutenant
Security Officers
Security Support Group

COMMUNICATIONS CENTER

Communication Technician
~~Honeywell Alarm Technician~~

EMERGENCY OPERATIONS CENTER

Emergency Duty Officer
DOE Site Manager
Emergency Director
Emergency Management Advisor
Deputy Emergency Director
Safety and Health Advisor
~~Safety and Health Support~~
~~Meteorologist~~
Operations Advisor
Environmental Advisor
Public Information Advisor
~~Public Information Support~~
Security Advisor
DOE Liaison
Off-site Notification Officer (2)

FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: TABLE G-2

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
PAGE 2 OF 2

The FCP Emergency Organization Roster
(continued)

EMERGENCY OPERATIONS CENTER (Continued)

- Field Communicator
- Information Plotters
- Runners
- Historian
- Administrative Support

FERNALD CLOSURE PROJECT
 FERNALD, OHIO
 EPA ID NO. OH6890008976
 SECTION G: TABLE G-3

RCRA PART B PERMIT APPLICATION
 FCP REVISION 9.1 10/04
 PAGE 1 OF 1

Table G-3
Emergency Respiratory Equipment

<u>DESCRIPTION</u>	<u>TYPICAL APPLICATION</u>	<u>LIMITATIONS</u>
<p>Air-purifying full-face MSA Ultratwin respirator equipped with cartridges approved for HF, organic vapors, acid gases, ammonia, amines, formaldehydes, radionuclide aerosols not exceeding 100 times DOE limits in 10 CFR 835 or other highly toxic particulates.</p>	<p>Environments containing relatively low HF concentrations, radionuclides or other highly toxic particulate contaminants including UF₆.</p>	<p>Only approved for relatively low concentrations of gases, vapors, and particulate contaminants. Wearers must be satisfactorily fit-tested prior to use.</p>
<p>Airline full-face mask respirator or hooded airline respirator.</p>	<p>Environments containing relatively high but not immediately dangerous to life and health (IDLH) concentrations of contaminants.</p>	<p>Requires CGA-Grade D breathing air supply. Length of airline hose station and wearer must not exceed 300 feet. May only be used in confined spaces when equipped with 5-minute compressed air escape bottle.</p>
<p>Full-faced self-contained breathing apparatus (SCBA) or positive pressure supplied air respirator equipped with 5-minute compressed air escape bottle.</p>	<p>Environments with IDLH or unknown concentrations of air contaminants.</p>	<p>Air supply in (SCBA) air bottle is limited to 30 or 60 minutes. This equipment must be used in 2-man teams, with at least one additional worker outside IDLH area (two workers outside area for fire-fighting). Wearer must be judged physically fit enough to wear 40 pound SCBA and protective clothing. Wearers must also be trained and drilled in use of this equipment.</p>

NOTE: All personnel must be fit-tested for the proper size of respirator before use. A training session must also be attended prior to fit-testing on the types and uses of equipment available.

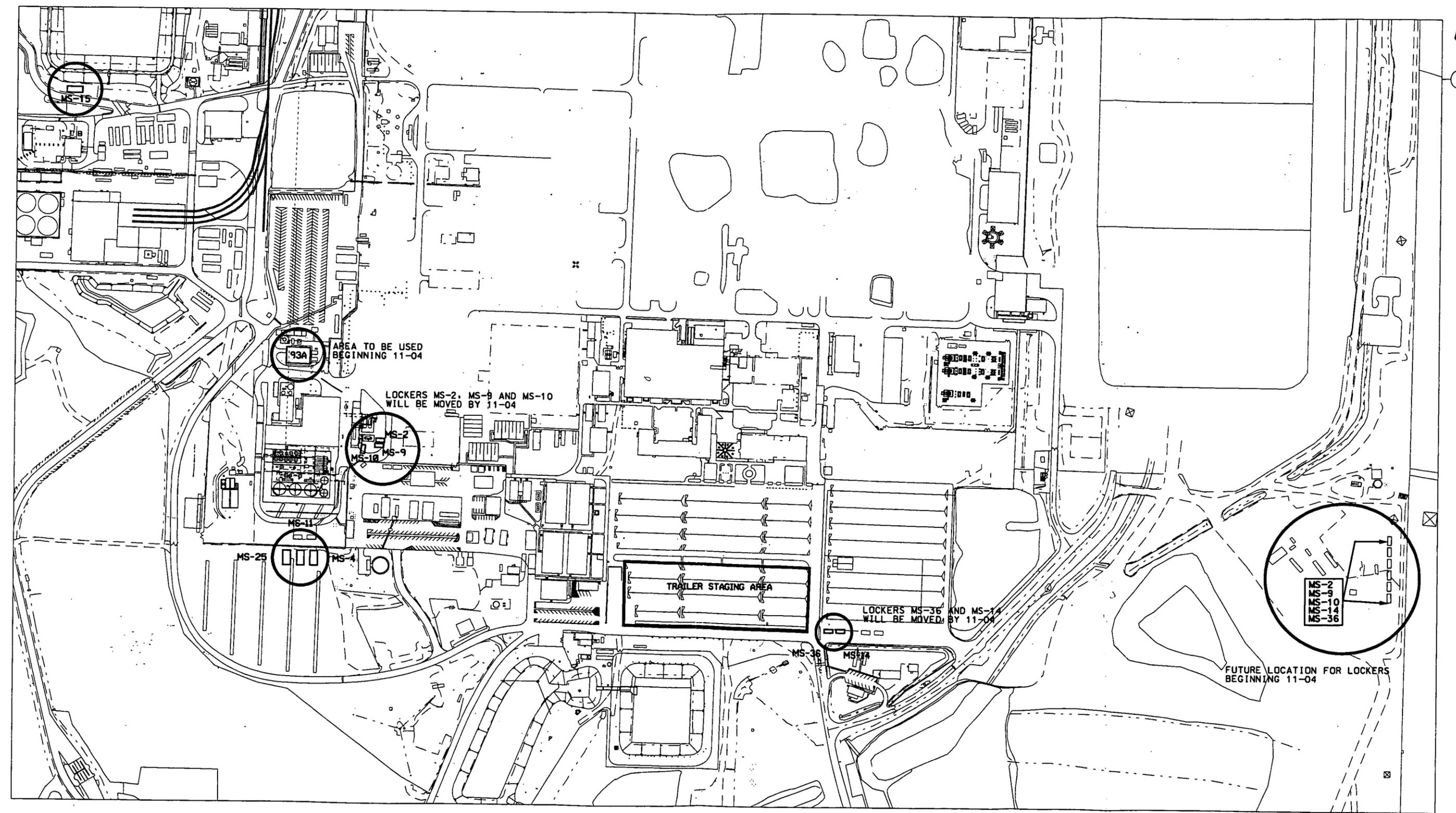
FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: TABLE G-4

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
PAGE 1 OF 1

Table G-4

Types of Pressurized Fire Extinguishers

<u>DESCRIPTION</u>	<u>TYPICAL APPLICATION</u>	<u>LIMITATIONS</u>
Pressurized water	Class A fires including wood, paper, trash, etc.	Not suitable for flammable liquid (Class B), electrical (Class C), or metal (Class D) fires.
Pressurized CO ₂	Flammable liquid (Class B) and electrical (Class C) fires.	Not suitable for Class A or Class D fires.
Pressurized dry chemical	Paper, wood, some plastics (Class A) Flammable liquid (Class B) and electrical (Class C) fires.	Not suitable for Class D fires.
Pressurized MetL-X	Metal (Class D) fires.	For metal fires only.



DRAFT

FIGURE G-2

FCP EMERGENCY RESPONSE ORGANIZATION

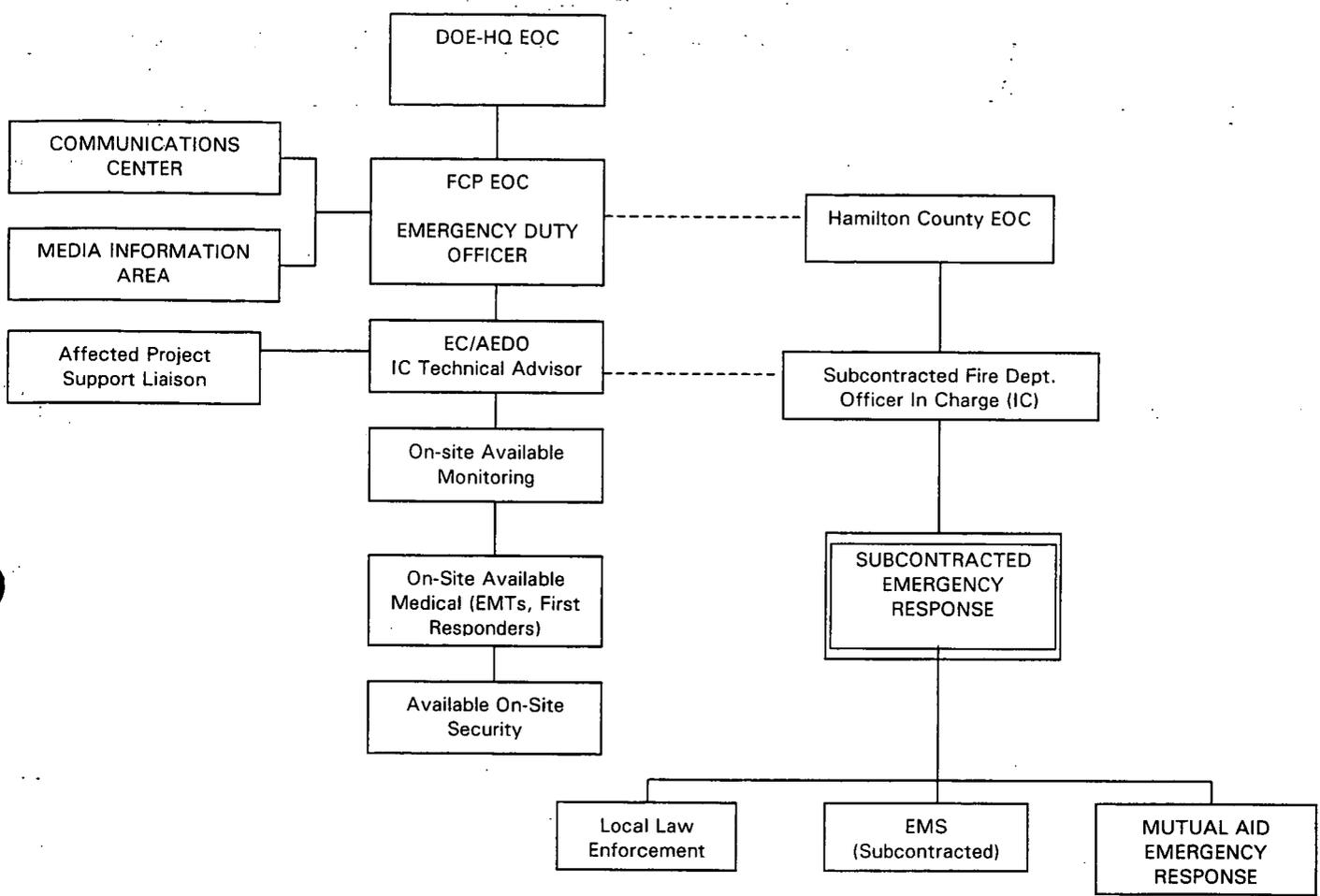


FIGURE G-3

EMERGENCY COORDINATION FLOW

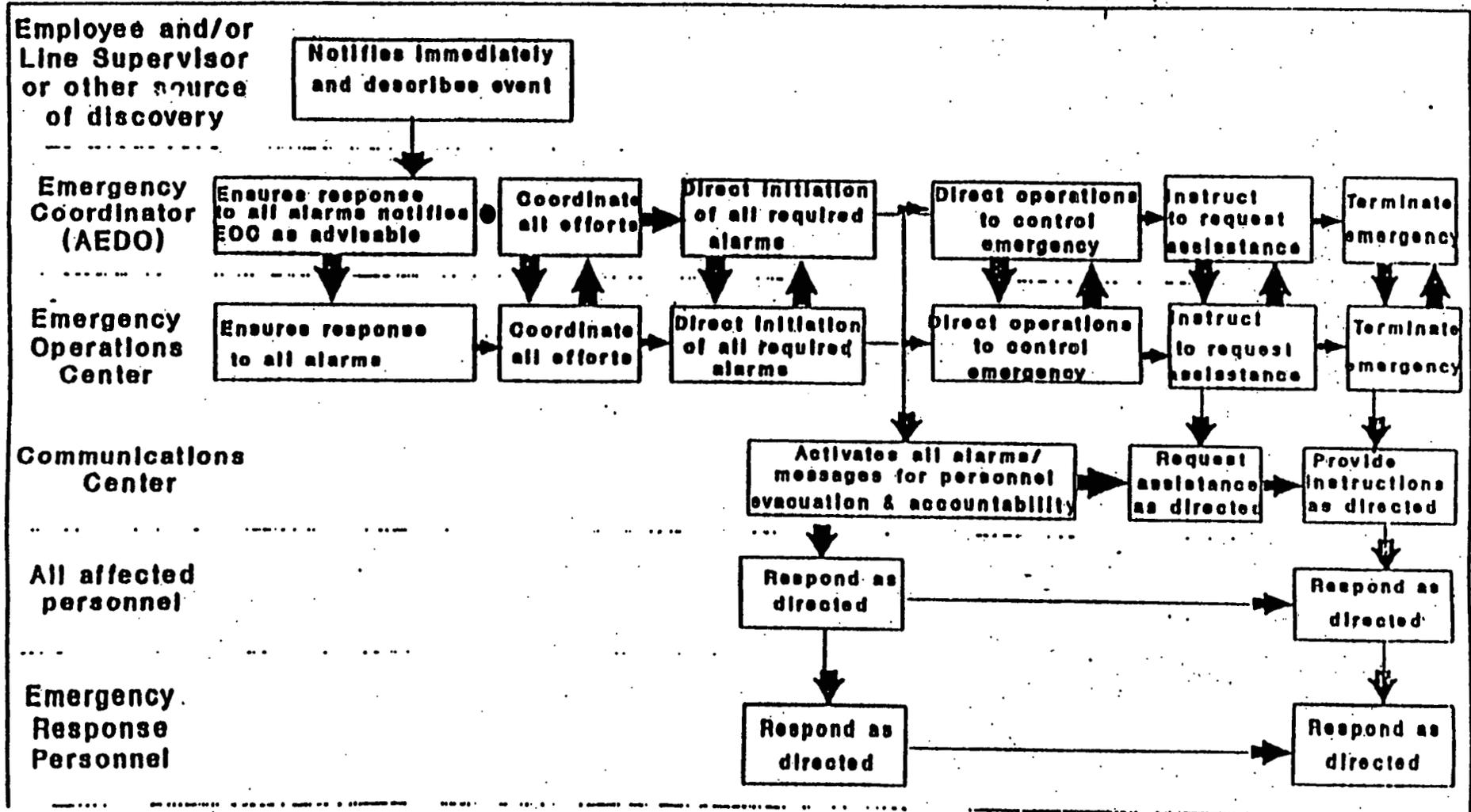


FIGURE G-3.1

Training and Participation Requirements

	Drills & Exercises	EMT - State of Ohio	Firefighter -NFPA	HazMat -NFPA	Incident Command	GET/HAZ WOPER	EOC Staff
Administrative Support							
AEDO							
Comm Center Staff							
Emergency Chief							
Emergency Director							
Emer. Mgmt. Advisor							
Employees							
Deputy Emergency							
DOE-FCP Manager							
DOE Liaison							
Environmental Advisor							
EOC (County & State)	Invited					Invited	
Field Communicator							
Historian							
Information Officer							
Medical Staff							
Meteorologist							
Monitoring Teams							
Responders	Invited	Invited	Invited	Invited	Invited		
Off-Site Notification							
Operations							
Plotter							
Public Information							
Safety & Health							
S & H Support							
Security							
Visitors							
Key	Full participation req'd			Some participation			Invited

Figure IS NOT intended to be inclusive of all training that may be required for each position.

FIGURE G-4

5715

Requirements for Notification and Reporting

Notifications and Reporting	Non-Emergency			Emergency		
	Loggable Event	Off Normal	Unusual	Alert	Site Area	General
Notification Requirements						
AEDO	Consults with EDO			Activates EOC		
Butler County	Notification by Agreement			15 Minutes		
DOE-Fernald			2 Hours			
DOE-HQ						
DOE-OH						
EDO	Consults with AEDO			Activates EOC		
Hamilton County	Notification by Agreement			15 Minutes		
Occurrence Reporting Team				6 Working hours		
Public Affairs	24 Hours or next working day			EOC		
Release Evaluator	Notified Immediately for Spills only					
State of Ohio				15 Minutes		
Reporting Requirements						
AEDO Log	All events entered in daily log	Required for all events				
Notification Report						
Daily Operations Report						
Final Report						

FIGURE G-5.2

GENERAL DESCRIPTION

Operational Emergency levels and four types of actions are described in the FEMP EAL Guides:

Radiological Events - Criteria

Radiological Events	Alert	Site Area	General
Criteria	<p>Loss of accountable special nuclear material</p> <p>Unplanned release of radioactive material projected to result in an exposure at the facility boundary ≥ 100 mrem TEDE but < 1 rem TEDE</p> <p>Unplanned breach of Silos 1, 2, or 3 resulting in a projected exposure at the facility boundary ≥ 100 mrem TEDE but < 1 rem TEDE</p>	<p>Unplanned release of radioactive material projected to result in an exposure at the facility boundary ≥ 1 rem TEDE</p> <p>Unplanned breach of Silos 1, 2, or 3 resulting in a projected exposure at the facility boundary ≥ 1 rem TEDE</p>	<p>Unplanned release of radioactive material projected to result in an exposure at the site boundary ≥ 1 rem TEDE or ≥ 5 rem thyroid.</p>
Onsite - Protective Actions	<p>Shelter in place if possible, evacuate immediate danger area</p> <p>Rally point accountability</p> <p>Employee announcement</p> <p>Bioassay at termination</p>		
Offsite - Protective Actions	<p>Update counties and state regularly</p> <p>Monitoring onsite and/or offsite</p>		<p>Activate offsite warning system</p> <p>Issue Protective Active Recommendations</p> <p>Implement RCRA plan applicable</p>
Event Mitigation Actions	<p>Contain event</p> <p>Isolate area</p> <p>Terminate release</p> <p>Monitor onsite/offsite</p> <p>Clean up</p>		
Response Groups	<p>Emergency Duty Officers</p> <p>Emergency Operations Center</p> <p>Monitoring teams</p> <p>Security (Recall)</p> <p>Medical (Recall)</p> <p>Emergency Response Team (Recall)</p> <p>Mutual Aid (as needed)</p>		

FIGURE G-5.2

5715

Hazardous Material Events - Criteria

Hazardous Material Events	Alert	Site Area	General
<p>Criteria</p>	<p>Unplanned release of a hazardous substance resulting in a projected airborne concentration at the facility boundary \geq ERPG-1 and $<$ ERPG-2. If ERPG values are not available, projected airborne concentration at the facility boundary \geq TEEL-1 and $<$ TEEL-2 values.</p>	<p>Unplanned release of a hazardous substance resulting in a projected airborne concentration between the facility boundary and the site boundary is \geq ERPG-2. If ERPG values are not available, \geq TEEL-2.</p>	<p>Unplanned release of a hazardous substance resulting in a projected airborne concentration at the site boundary is \geq ERPG-2. If ERPG values are not available, \geq TEEL-2.</p>

FIGURE G-5.2

5715

Hazardous Material Events - Actions

Hazardous Material Events	Alert	Site Area	General
Onsite - Protective Actions	Shelter in place if possible, evacuate immediate danger area. Rally point accountability. Employee announcement. Bioassay at termination.		
Offsite - Protective Actions	Update counties and state regularly. Monitoring onsite and/or offsite.		Activate offsite warning system. Issue Protective Active Recommendations.
Event Mitigation Actions	Contain event. Isolate area. Terminate release. Monitor onsite/offsite. Implement RCRA plan applicable. Clean up.		
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)		

FIGURE G-5.2

Health & Safety - Criteria

Health & Safety	Operational Emergency
Criteria	<p>The following events or conditions represent, cause, or have the potential to cause serious health and safety impacts to workers or members of the public.</p> <p>Radioactive or other hazardous material contamination that is causing or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria.</p> <p>An offsite hazardous material event not associated with DOE operations that is observed to have or is predicted to have an impact on a DOE site such that protective actions are required for onsite DOE workers.</p> <p>An occurrence that causes or can reasonably be expected to cause significant structural damage to DOE facilities, with confirmed or suspected personnel injury or death or substantial degradation of health and safety.</p> <p>Any facility evacuation in response to an actual occurrence that requires time-urgent response by specialist personnel, such as hazardous material responders or mutual aid groups not normally assigned to the affected facility.</p> <p>Any non-transportation-related mass casualty event.</p>

FIGURE G-5.2

Health & Safety - Actions

Health & Safety	Operational Emergency	
Onsite - Protective Actions	Shelter in place if possible, evacuate immediate danger area Rally point accountability Employee announcement Bioassay at termination	
Offsite - Protective Actions	Update counties and state regularly Monitoring onsite and/or offsite	Activate offsite warning system Issue Protective Active Recommendations Implement RCRA plan applicable
Event Mitigation Actions	Contain event Isolate area Terminate release Monitor onsite/offsite Clean up	
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)	

FIGURE G-5.2

Environmental - Criteria

Environmental	Operational Emergency
<p>Criteria</p>	<p>The following events or conditions represent, cause, or have the potential to cause serious detrimental effects on the environment.</p> <p>Any actual or potential release of dispersible hazardous material or regulated pollutant to the environment, in a quantity greater than five times the Reportable Quantity (RQ) specified for such material in 40 CFR 302, that could result in significant offsite consequences such as major wildlife kills, wetland degradation, aquifer contamination, or the need to secure downstream water supply intakes.</p> <p>Any release of greater than 1,000 gallons (24 barrels) of oil to inland waters; greater than 10,000 gallons (238 barrels) of oil to coastal waters; or a quantity of oil that could result in significant off-site consequences (e.g., need to relocate people, major wildlife kills, wet-land degradation, aquifer contamination, need to secure downstream water supply intakes, etc.) [Oil as defined by the Clean Water Act (33 U.S.C. 1321) means any kind of oil and includes petroleum.]</p>

Environmental - Actions

Environmental	Operational Emergency	
<p>Onsite - Protective Actions</p>	<p>Shelter in place if possible, evacuate immediate danger area Rally point accountability Employee announcement Bioassay at termination</p>	
<p>Offsite - Protective Actions</p>	<p>Update counties and state regularly Monitoring onsite and/or offsite</p>	<p>Activate offsite warning system Issue Protective Active Recommendations Implement RCRA plan applicable</p>
<p>Event Mitigation Actions</p>	<p>Contain event Isolate area Terminate release Monitor onsite/offsite Clean up</p>	
<p>Response Groups</p>	<p>Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)</p>	

FIGURE G-5.2

Offsite Transportation Events - Criteria

Offsite Transportation Events	Operational Emergency
Criteria	Transportation accident involving a shipment of hazardous or radiological material originating from the FEMP in which the integrity of the shipment is in doubt or cannot readily be determined.

Offsite Transportation Events - Actions

Offsite Transportation Events	Operational Emergency
Protective Actions	Offer Protective Action Recommendations to IC Update counties and state regularly in appropriate jurisdiction. Monitoring at event scene (if requested)
Event Mitigation Actions	Support local jurisdictions Public Information Officer Monitoring at event scene (if requested) Contain event (local event) Isolate area (local event) Terminate release (local event) Clean up (local event)
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Medical (local event) Emergency Response Team (local event)

FIGURE G-5.2

Safeguards & Security Events - Criteria

Safeguards & Security Events	Operational Emergency
Criteria	<p>The following events or conditions represent, cause, or have the potential to cause degradation of security or safeguards conditions with actual or potential direct harm to people or the environment.</p> <p>Actual unplanned detonation of an explosive device or a credible threatened detonation resulting from the location of a confirmed or suspicious explosive device.</p> <p>Any actual confirmed dissemination/contamination or a credible threat to the site by the use of biological or chemical agents resulting from a malevolent act.</p> <p>An actual terrorist attack or sabotage event involving a DOE site/facility or operation.</p> <p>Kidnapping or the taking of hostage(s) involving a DOE site/facility or operation.</p> <p>Actual theft or loss of a Category I or II quantity of Special Nuclear Materials or other hazardous material that, if released, could endanger workers, the public, or the environment.</p> <p>Damage or destruction of a site or facility by natural or malevolent means sufficient to expose classified information to unauthorized disclosure.</p>

Safeguards & Security Events - Actions

Safeguards & Security Events	Operational Emergency
Onsite - Protective Actions	<p>Shelter in place if possible, evacuate immediate danger area. Rally point accountability. Employee announcement. Implement search procedures. Restrict radio communications.</p>
Offsite - Protective Actions	None
Event Mitigation Actions	Implement PL-3055 Fernald Physical Protection Security Plan Isolate area.
Response Groups	<p>Emergency Duty Officers Emergency Operations Center Security (Recall) Assistance from local law enforcement or FBI</p>

FIGURE G-5.2

Other Events - Criteria

Other Events	Operational Emergency
Criteria	Anytime the AEDO/EDO or DED/ED determine that conditions warrant the declaration of an Operational Emergency

Other Events - Actions

Other Events	Operational Emergency	
Onsite - Protective Actions	Shelter in place if possible, evacuate immediate danger area Rally point accountability Employee announcement Bioassay at termination	
Offsite - Protective Actions	Update counties and state regularly Monitoring onsite and/or offsite	Activate offsite warning system Issue Protective Active Recommendations Implement RCRA plan applicable
Event Mitigation Actions	Contain event Isolate area Terminate release Monitor onsite/offsite Clean up	
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)	

Figure G-7

Activation methods for all elements of the Emergency Response Organization

Emergency Response Organization Elements	Pager Group(s)	Activation Method		Approximate Response Time	
		Primary	Backup	Onsite	Offsite
AEDO	All	ERT Pager or radio	Pager, EMS or telephone	Immediate upon notification	Variable, < 45 minutes
EDO	1 & 2	Pager	Telephone		
EOC Staff	1 and/or 2				
Emergency Response Team	3	ERT Pager or radio	Pager, EMS or telephone		
Medical	3				
Security and Accountability	4				
Monitoring Team	5	Pager	Telephone		
Release Evaluator	None	Pager	Telephone		
Public Affairs	1 & 2	Pager	Telephone		
Offsite Responder	N/A	Crosby Twp. Radio otherwise telephone request	Radio request	Onsite in 10 to 30 minutes	

5715

FORM A

Figure G-9

OHIO HAZARDOUS WASTE RELEASE
FIRE, EXPLOSION REPORT TO OHIO EPA
OAC 3745-54-56(D)(2)

Ohio EPA

800-282-9378

1. Name of Reporter _____
2. Telephone Number of Reporter _____
3. Date of Incident _____
4. Time of Incident _____
5. Type of Incident _____
6. Name of Materials to Extent Known _____
7. Quantity of Materials to Extent Known _____
8. Extent of Injuries, If Any _____
9. Possible Hazards to Human Health or the Environment Outside Facility _____

EXAMPLE

DATE AND TIME OF CALL AND PERSON RECEIVING CALL

Ohio EPA

Date _____ Time _____ Person _____

NOTIFICATION OF OHIO EPA OF IMPLEMENTATION OF CONTINGENCY PLAN
OAC 3745-54-56(J)

(Date)

, Director
Ohio EPA
1800 WaterMark Drive
P. O. Box 1049
Columbus, Ohio 43266-0149

SUBJECT: NOTIFICATION OF IMPLEMENTATION OF FEMP OHIO HAZARDOUS
WASTE CONTINGENCY PLAN - OAC 3745-54-56(J)

Dear :

The following information is being submitted by the U.S. Department of Energy (DOE) pursuant to OAC 3745-54-56(J). On _____, an incident occurred at the Fernald Environmental Management Project (FEMP) which required the implementation of the site's Ohio Hazardous Waste Contingency Plan. The contents of this notice are based on the best available information known at this time.

1. Name, Address, Telephone Number of Owner

U. S. Department of Energy
Office of Environmental Restoration and Waste Management
1000 Independence Avenue Southwest
Washington, D. C. 20585
(202) 586-5000

2. Name, Address, Telephone Number of Facility

Fernald Environmental Management Project - Site Address
7400 Willey Road
Fernald, Ohio 45030
(513) 738-6200

Fernald Office - Mailing Address
U. S. Department of Energy
P.O. BOX 398705
Cincinnati, Ohio 45239-8705
(513) 738-6200

3. Date of Incident _____

4. Time of Incident _____

- 5. Type of Incident _____
- 6. Name of Materials Involved _____

- 7. Quantity of Materials Involved _____
- 8. Extent of Injuries, If Any _____

- 9. Assessment of Actual or Potential Hazards to Human Health or the Environment, If Applicable

- 10. Estimated Quantity and Disposition of Recovered Material that Resulted from the Incident

EXAMPLE

Signature

Title

WRITTEN NOTICE TO OHIO EPA AND APPROPRIATE LOCAL AUTHORITIES
OF RESUMPTION OF HAZARDOUS WASTE OPERATIONS
OAC 3745-54-56(F)

(Date)

(Ohio EPA, Hamilton & Butler County Planning Committees)

SUBJECT: NOTIFICATION OF RESUMPTION OF HAZARDOUS WASTE
OPERATIONS - OAC 3745-5456(F)

This notice is being made to comply with the requirements of OAC 3745-54-56. On _____, there was an OAC 3745-54-56 Emergency Incident at the Federal Environmental Management Project (FEMP) site. The U.S. Department of Energy (DOE) expects to resume operation in the affected areas of the facility _____.

No waste which was incompatible with the released materials was treated, stored or disposed of until clean-up procedures were completed. All emergency equipment used in the affected area listed in the contingency plan has been cleaned and fit for its intended use.

Signature

Title

ATTACHMENT G-1

Emergency Procedures, Site Layout and Equipment Information

Attachment G-1 contains the description of evacuation procedures and general procedures to be followed in the event of an explosion, fire or spill, and a description of the evacuation routes and a listing of safety and emergency equipment for each area currently being used to manage hazardous waste.

These areas include the following:

- ~~Plant 6 Warehouse (Building 79)~~
- Hazardous Waste Storage Lockers (9 lockers; ~~4~~ 3 locations) (Note: Beginning in November 2004, 5 of these lockers will be moved to one location -> so this will become 9 lockers, 3 locations)
- ~~Liquid Mixed Waste Bulk Tanks~~
- ~~Quonset Hut #1 (Building 60)~~
- ~~Finished Products Warehouse (Building 77)~~
- Trailer Staging Area
- Boiler Plant (Building 93A)

General Information

Emergency procedures for areas used to manage hazardous waste are described specifically in this section. Responses to an event are identical for each unit and the details are given for the response to the three types of events:

- 1) an explosion;
- 2) a fire; or
- 3) a spill of hazardous waste

A response involves the action that endangered personnel must take when encountering an actual or potential explosion, fire, or spill. Personnel may have the knowledge and judgement to discern the severity of the situation. Personnel lacking knowledge sufficient to discern the severity of the situation should immediately move to a safe location and contact the Emergency Coordinator/AEDO. The categorization level of an EVENT may not reach an OPERATIONAL EMERGENCY level, and thus will not

cause the implementation of this Contingency Plan. The situation may nevertheless warrant a protective and remediation response. For example, an incident that does not involve the Subcontracted Community Emergency Response Organization may be handled by personnel properly trained under the RCRA training curriculum; small spills or fires may be handled by immediate action of the individuals discovering the event. Even events that involve response by the Subcontracted Community Emergency Response Organization, if the Emergency Coordinator/AEDO so determines, may not require implementation of this Contingency Plan. See Section G-3 and G-4c for guidelines the Emergency Coordinator/AEDO uses in determining implementation of this Contingency Plan. See Section G-4 of this Contingency Plan for general emergency response procedures.

EVACUATION & SAFETY PLAN

1. Purpose and Scope of the Contingency Plan

To protect the lives and property of all personnel inside and in the vicinity of an event at the FCP, and the prevention of environmental damage.

2. Reason for Activating the Contingency Plan

2.1 Explosion

2.1.1 Any employee who detects an actual or potential explosive situation in the vicinity should immediately alert all nearby workers unless the situation is self evident.

2.1.2 Pull the nearest fire alarm. Report the exact location of the explosion to the Communication Center by two-way radio or telephone (Direct line - call 911 or cell phone - call 648-6511), if an alarm box is not near.

2.1.3 Leave the area promptly by the least dangerous and most direct or designated route. Continue the escape by evacuating to the designated rally point (Figure G-1) before trying to make a radio report to summon emergency response personnel.

2.1.4 Using nearby emergency equipment may not be possible if it is in what appears to be the danger zone.

2.1.5 Report the nature of the problem and exact location to the Communication Center by two-way radio or telephone and wait for assistance from the emergency response personnel.

2.1.6 Supervisor or senior person in charge should take account of all personnel and summon immediate medical attention to seriously injured personnel.

2.1.7 Continue evacuation to the next safe rally point before taking account of all personnel, if it is evident that the explosion poses a threat to the designated Rally Point or if this rally point is downwind in the path of smoke or vapors.

2.1.8 Use any available and appropriate emergency equipment such as eyewash and shower, if exposed to fumes, smoke, or other hazardous physical irritations. Notify your supervisor and report to medical personnel in T195 immediately. Anyone who is aware of any exposure to a fellow worker should request immediate medical help for that person.

2.2 **FIRE**

2.2.1 Any employee who detects an actual or potential fire situation in the vicinity should immediately alert all nearby workers.

2.2.2 Pull the nearest fire alarm. Report the exact location of the fire to the Communication Center by two-way radio or telephone (Direct line - call 911 or cell phone - call 648-6511), if an alarm box is not near.

2.2.3 Use available fire fighting equipment to fight the fire until the Fire Department arrives if there is no immediate danger involved and you have proper training.

2.2.4 Immediately use available emergency equipment to provide first aid for burns and other minor injuries.

2.2.5 Supervisor or senior person in charge should take account of all personnel and summon immediate medical attention to seriously injured personnel.

- 2.2.6** Leave the building quickly and calmly by the least dangerous and most direct or designated route.
- 2.2.7** Evacuate to the designated rally point. Supervisor or senior person in charge should take account of all personnel.
- 2.2.8** Continue evacuation to the next safe rally point, if this rally point is downwind in the path of smoke or fumes, before taking account of all of the personnel.
- 2.2.9** Use any available and appropriate emergency equipment such as eyewash and shower, if exposed to vapors, smoke, or other hazardous physical irritations. Notify your supervisor and report to medical personnel in T195 as soon as possible. Anyone who is aware of any exposure to a fellow worker should see that medical help is provided to that person.

2.3 HAZARDOUS WASTE SPILL INCIDENT

Initial Response

- 2.3.1** Any employee who detects an actual or potential hazardous waste spill situation in the vicinity should immediately alert all nearby workers.

NOTE: If exposed to waste materials, use appropriate emergency equipment such as eyewash and shower. Notify supervisor and report to Medical.

- 2.3.2** If time and conditions permit, conduct an initial evaluation, to determine the extent and seriousness of the event. Take immediate steps, if possible (without risk of injury), to control the source of the discharge, spill, or leak, or to prevent it from migrating. (This may involve such actions as shutting off equipment, closing valves, or using absorbent pads or pigs for blocking/diking).

NOTE: Employees without specific training or knowledge of the released material or equipment, should not take action to control the spill, which may put their safety, or that of others, at risk.

2.3.3 In the event of an emergency incident, contact the Emergency Coordinator/AEDO immediately and evacuate the area.

Hazardous Waste Spill Incident Notification

2.3.4 Promptly notify immediate supervision or Emergency Coordinator/AEDO in supervisor's absence, of the magnitude, location, status, and type of material spilled, as well as any other pertinent information.

2.3.5 For routine spill events/incidents, contact Radiological Safety and/or Industrial Hygiene technicians to perform monitoring and analyses of the spill incident, as necessary, in order to determine material hazards, monitor the extent of contamination, or to specify PPE requirements.

2.3.6 Initiate spill incident reporting/recording.

Hazardous Waste Spill Incident Cleanup

2.3.7 Ensure spill incident cleanup is conducted in accordance with Emergency Coordinator/AEDO's direction and guidance contained in procedures.

SAFETY EQUIPMENT

Areas used to manage hazardous waste are supplied with varying levels and amounts of safety equipment depending upon the use, occupancy, and contents of the unit. The remainder of Attachment G-1 lists the locations of safety and emergency equipment designated for each area. Only personnel with the appropriate training and experience shall utilize the specified safety equipment: fire extinguishers, respirators and protective clothing, and spill clean-up equipment.

QUONSET HUT #1 (BUILDING 60)

~~Quonset Hut #1 is a pre-engineered, single-level structure located in the northern portion of the site. It is being used for the bulk storage/treatment of mixed organically contaminated soil.~~

~~Quonset Hut #1 is located inside a remediation area. Personnel should evacuate to the nearest Control Point.~~

HAZARDOUS WASTE STORAGE LOCKERS BY ADVANCED WASTE WATER TREATMENT FACILITY

Three hazardous waste storage lockers (MS-2, MS-6 and MS-10) are located east of the Advanced Waste Water Treatment Facility. These lockers may be used for the storage of containers of hazardous waste with and without free liquids and ignitable wastes.

Personnel should evacuate to Rally Point No. 12, located south of the Advanced Waste Water Treatment Facility (Building 51). ~~The Alternate Rally Point is No. 13, located by T-207, west of the Building 15 (Laboratory) slab.~~

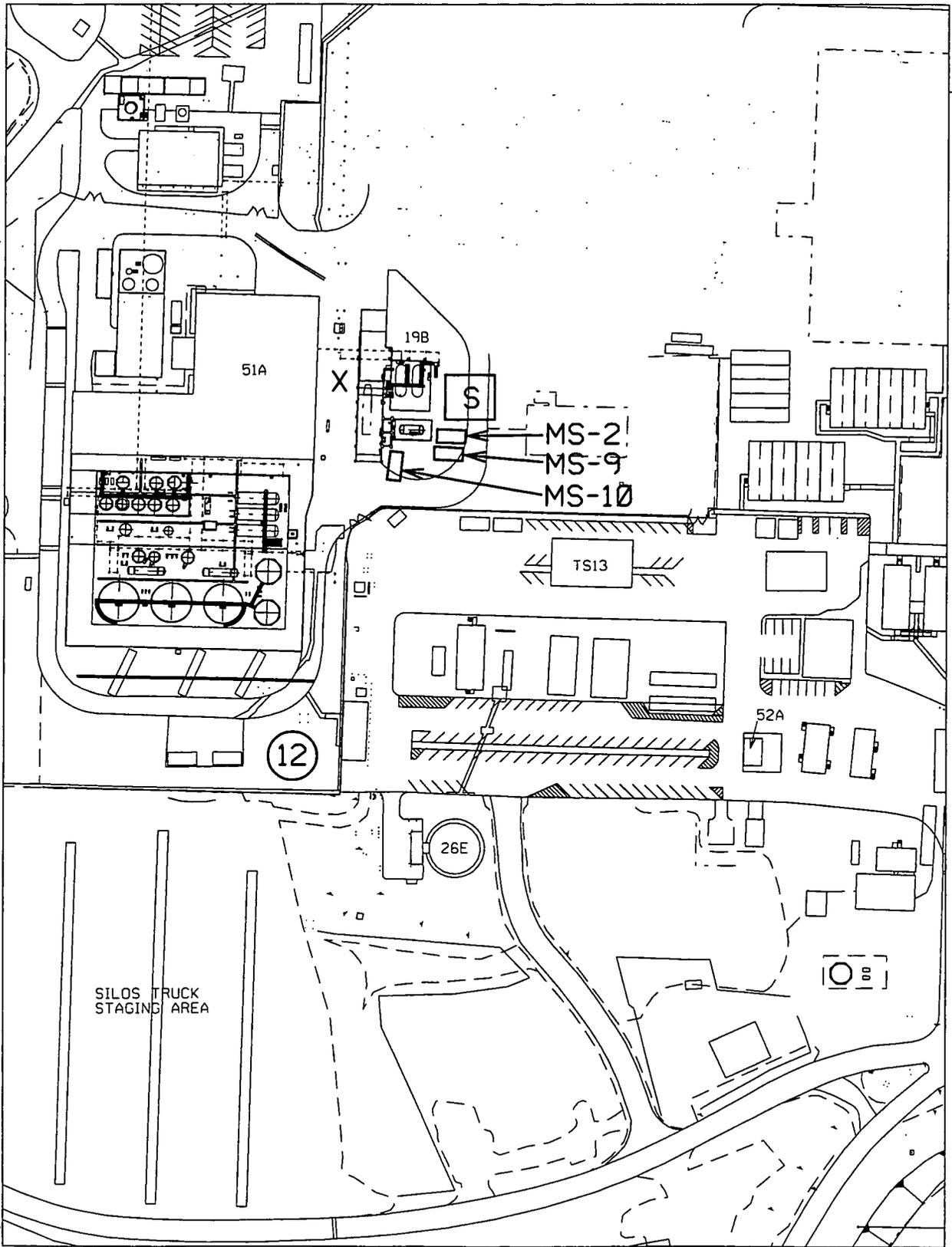
The following is a list of safety equipment assigned to this unit:

- Fire Extinguisher
 - 1) 10# ABC posted outside, west of the storage lockers

- Portable Eye Wash Station
 - 1) Available to personnel during operations

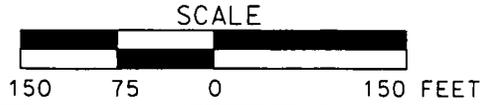
- Spill Cleanup Equipment
 - 1) One Portable spill kit located outside, north of MS-2

NOTE: These lockers are planned to be moved from this area in November 2004. The new location for these lockers will be on the east side of the site, south of Cell 8.



LEGEND:

- X FIRE EXTINGUISHER
- [S] SPILL CLEANUP EQUIPMENT
- (12) RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS BY AWWT

CLEAN-SIDE HAZARDOUS WASTE STORAGE LOCKERS

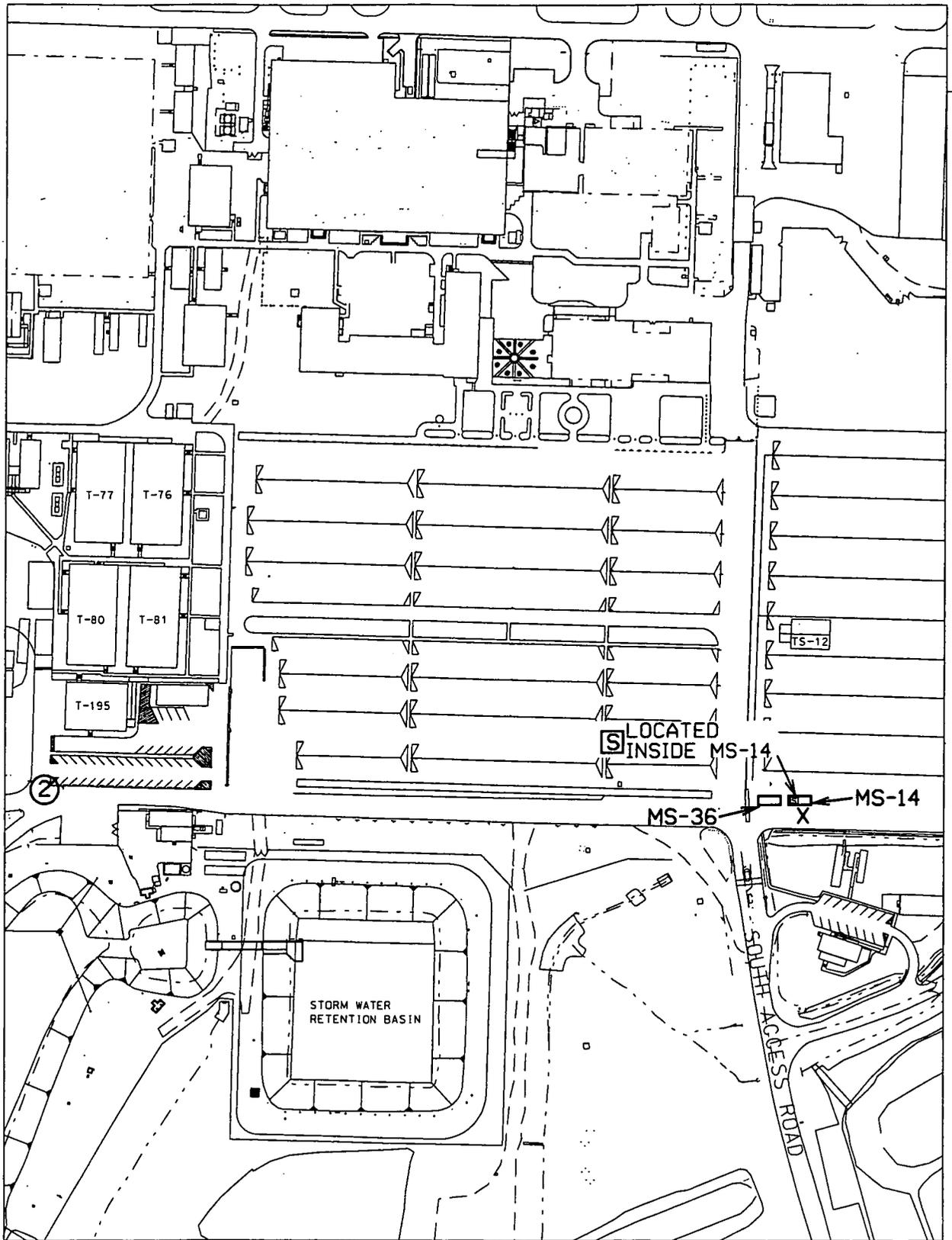
Two hazardous waste storage lockers (MS-14 and MS-36) are located ~~at the southwest corner of the East Parking Lot north of the West Parking Lot.~~ These lockers may be used for the storage of containers of hazardous waste with and without free liquids, PCBs and ignitable wastes.

Personnel should evacuate to ~~Rally Point No. 2, Rally Point No. 1, which is located by the east parking lot, south of trailer T 75. The Alternate Rally Point is No. 2, located south of the Medical trailer (T-195).~~

The following is a list of safety equipment assigned to this unit:

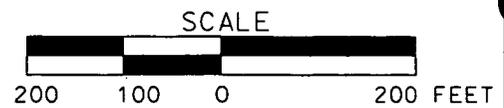
- Fire Extinguisher
 - 1) 10# ABC posted outside, on the south wall of MS-14
- Portable Eye Wash Station
 - 1) Available to personnel during operations
- Spill Cleanup Equipment
 - 1) One Portable spill kit located inside MS-14

NOTE: These lockers are planned to be moved from this area in November 2004. The new location for these lockers will be on the east side of the site, south of Cell 8.



LEGEND:

- . X FIRE EXTINGUISHER
- [S] SPILL CLEANUP EQUIPMENT
- ② RALLY POINT



CLEAN-SIDE HAZARDOUS WASTE STORAGE LOCKERS

~~LIQUID MIXED WASTE PROJECT BULK TANKS AND HAZARDOUS WASTE STORAGE LOCKERS~~

~~The Liquid Mixed Waste Project Bulk Tanks are located north of Plant 6 Warehouse (HWMU #37). These tanks are used to bulk PCBs/ignitable waste.~~

~~Four hazardous waste storage lockers (MS 4, MS 11, MS15 and MS 25) are located northwest of Plant 6 Warehouse. These lockers are used to store containers of hazardous waste with and without free liquids, ignitable waste and PCBs.~~

~~Personnel should evacuate to Rally Point No. 5. Rally Point No. 5 is located at the intersection of 1st Street and "D" Street.~~

~~The Alternate Rally Point is No. 11. Rally Point No. 11 is located at "E" Street (North), outside the gate of the OSDF Facility Transfer Area.~~

~~The following is a list of safety equipment assigned to the lockers and the bulk tanks:~~

~~• Fire Extinguisher~~

- ~~1) 20# ABC posted south of the bulk tanks~~

~~• Eye Wash Station~~

- ~~1) Portable, brought from Building 79~~

~~• Spill Cleanup Equipment~~

- ~~1) Portable, brought from Building 77~~
- ~~2) Additional Cleanup equipment is available in Building 79~~

~~FINISHED PRODUCTS WAREHOUSE (BUILDING 77)~~

~~The Finished Products Warehouse (Building 77) is located at the northeast corner of E Street and 2nd Street. The building is used to stage containers of hazardous waste prior to off site shipment.~~

~~Personnel should evacuate to Rally Point No. 5. Rally Point No. 5 is located at the intersection of 1st Street and "D" Street.~~

~~The Alternate Rally Point is No. 11. Rally Point No. 11 is located at "E" Street (North), outside the gate of the OSDF Facility Transfer Area.~~

~~The following is a list of safety equipment assigned to this building:~~

- ~~• Automatic sprinkler system with automatic fire alarms to an attended location~~
- ~~• Manual Fire Alarms~~
 - ~~1) By South entrance door~~
 - ~~2) By Northeast entrance door~~
- ~~• Fire Extinguisher~~
 - ~~1) #20 ABC on a column in the south side of the building~~
- ~~• Eye Wash Station~~
 - ~~1) There is one Portable Eye Wash Unit in the building~~
- ~~• Spill Cleanup Equipment~~
 - ~~1) There is one portable spill kit in the building~~

~~HWMU No. 37 - PLANT 6 WAREHOUSE (BLDG. 79)~~

~~The Plant 6 Warehouse is a pre-engineered, ribbed, unheated building covered by metal roofing. Plant 6 Warehouse is designed to store hazardous waste with and without free liquids, PCBs and ignitable wastes. The Liquid Mixed Waste Project Bulk Tanks, which are used to bulk PCBs/ignitable wastes, are currently located northwest of the Plant 6 Warehouse.~~

~~Personnel should evacuate to Rally No. 5. Rally Point No. 5 is located at the intersection of 1st Street and "D" Street.~~

~~The Alternate Rally Point is No. 11. Rally Point No. 11 is located at "E" Street (North), outside the gate of the OSDF Facility Transfer Area.~~

~~The following is a list of safety equipment assigned to this unit:~~

- ~~• Automatic sprinkler system with automatic fire alarms to an attended location~~
- ~~• Manual Fire Alarms~~
 - ~~1) By Southwest entrance door~~
 - ~~2) By Northwest entrance door~~
 - ~~3) North entrance door at Loading Dock~~
 - ~~4) Inside Sprinkler Control Room. Sprinkler Control Room is located in the Southeast corner of Building 79.~~
- ~~• Fire Extinguishers~~
 - ~~1) 20# ABC on the North wall in the center~~
 - ~~2) 20# ABC on the South Wall in the center~~
 - ~~3) 20# ABC on the West wall near the North end~~
 - ~~4) 20# ABC on the West wall near the South end~~
 - ~~5) 20# ABC on a column in the center of building (towards North end)~~
 - ~~6) 20# ABC on a column in the center of building (towards South end)~~
 - ~~7) 20# ABC outside, north, near the Bulking Tanks~~

~~HWMU No. 37 - PLANT 6 WAREHOUSE (BLDG. 79) (cont.)~~

~~• Eye Wash/Safety Shower Station~~

- ~~1) There are two (2) Portable Eye Wash Units in the building~~

~~• Spill Cleanup Equipment~~

- ~~1) West side of Bay A~~
- ~~2) By southwest door~~

MIXED WASTE TRAILER STAGING AREA

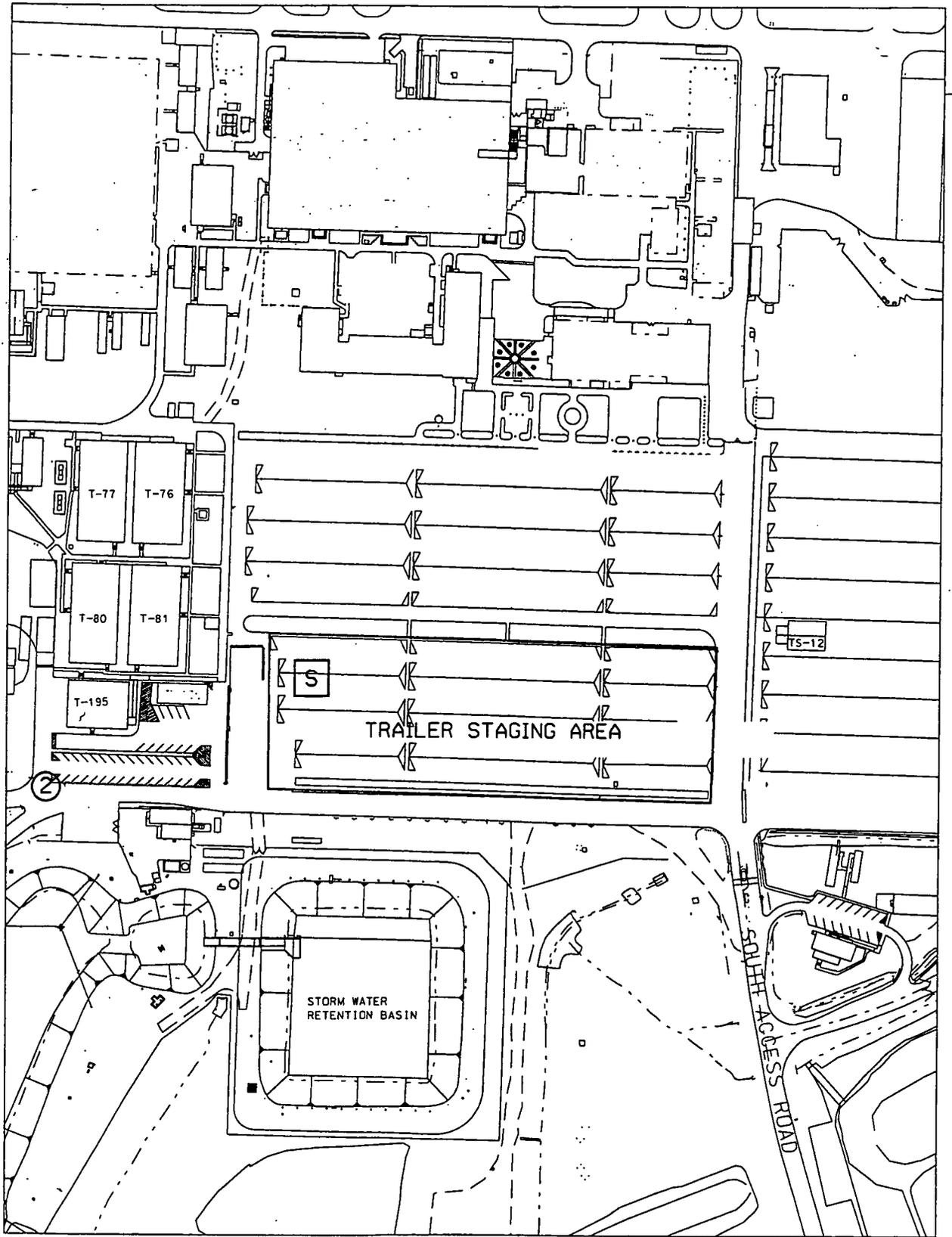
Mixed waste containers may be temporarily staged in truck trailers in the southern half of the West Parking Lot prior to shipment. These trailers may contain mixed waste with and without free liquids, PCBs and ignitable wastes.

Personnel should evacuate to Rally Point No. 2, located south of the Medical trailer (T-195).

The following is a list of safety equipment assigned to this unit:

• **Spill Cleanup Equipment**

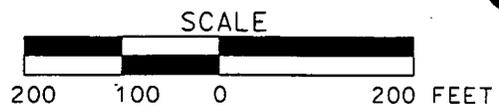
- 1) One Portable spill kit located in the Trailer Staging Area



LEGEND:

[S] SPILL CLEANUP EQUIPMENT

(2) RALLY POINT



MIXED WASTE TRAILER STAGING AREA

HAZARDOUS WASTE STORAGE LOCKERS IN SILOS TRUCK STAGING AREA

Three hazardous waste storage lockers (MS-4, MS-11 and MS-25) are located in the northeast corner of the Silos Truck Staging Area. These lockers may be used for the storage of containers of hazardous waste with and without free liquids, PCBs and ignitable wastes.

Personnel should evacuate to Rally Point No. 4, located at the west end of the former Building 30/45 parking lot.

The following is a list of safety equipment assigned to this unit:

• **Fire Extinguishers**

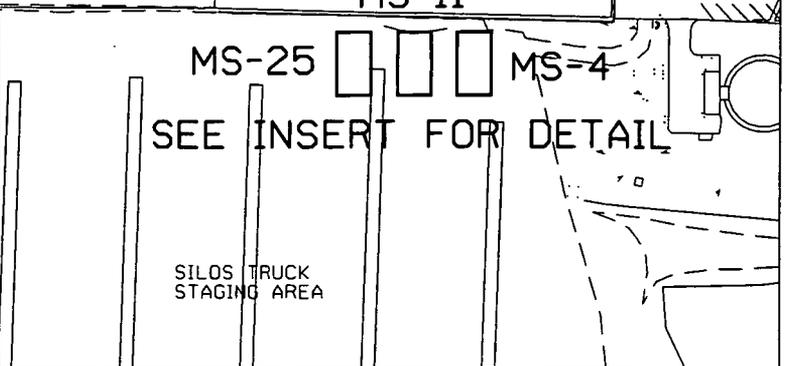
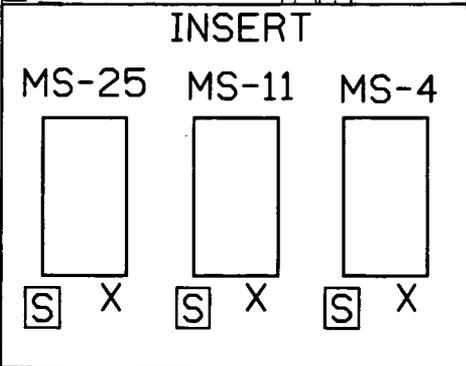
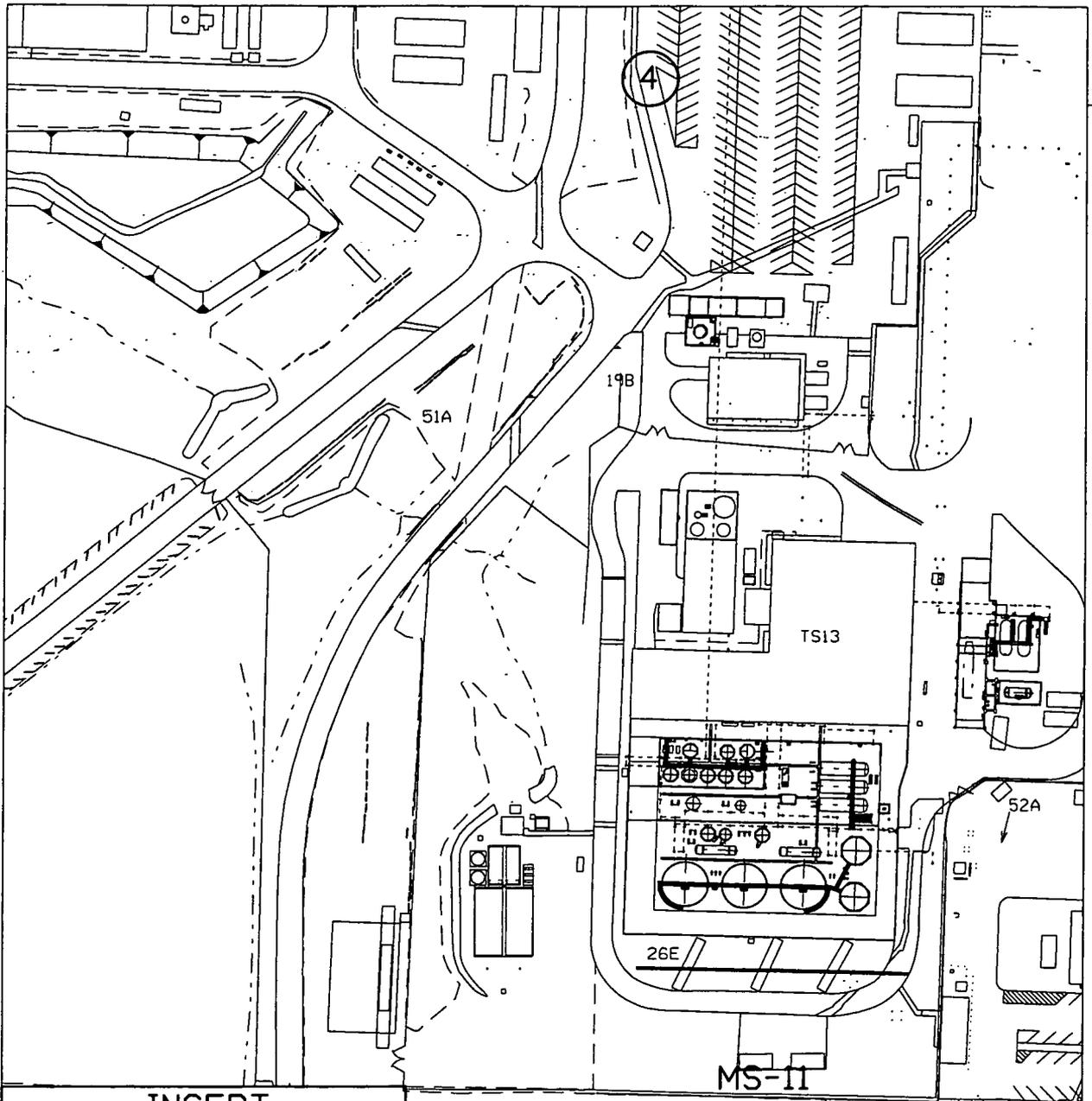
- 1) 10# ABC posted outside, on the south wall of MS-4.
- 2) 10# ABC posted outside, on the south wall of MS-11.
- 3) 10# ABC posted outside, on the south wall of MS-25.

• **Portable Eye Wash Station**

- 1) Available to personnel during operations.

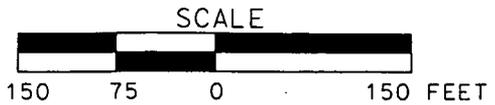
• **Spill Cleanup Equipment**

- 1-3) A portable spill kit is located outside, on the south end of each Hazardous Waste Storage Locker (3 total).



LEGEND:

- X FIRE EXTINGUISHER
- SPILL CLEANUP EQUIPMENT
- RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS IN SILOS TRUCK STAGING AREA

HAZARDOUS WASTE STORAGE LOCKER BY SILOS

One hazardous waste storage locker (MS-15) is located near the Silos, north of the Radon Control System Building (Building 94A). This locker may be used for the storage of containers of hazardous waste with and without free liquids and ignitable wastes.

Personnel should evacuate to Rally Point No. 4, located at the west end of the former Building 30/45 parking lot.

The following is a list of safety equipment assigned to this unit:

- Fire Extinguisher

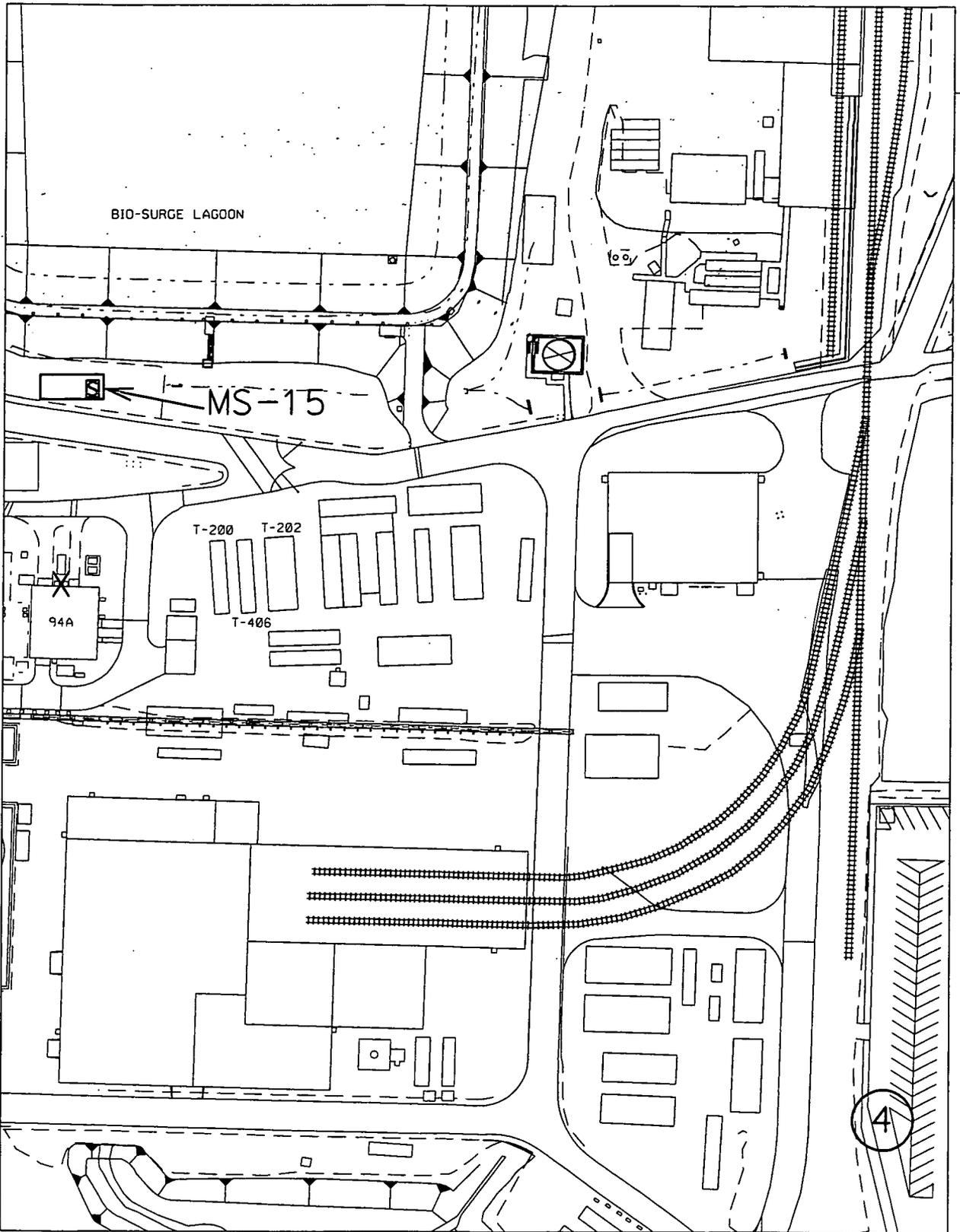
1) 10# ABC posted inside, on the north wall of Building 94A

- Portable Eye Wash Station

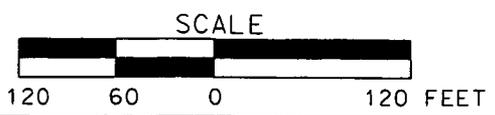
1) Available to personnel during operations

- Spill Cleanup Equipment

1) One Portable spill kit located inside MS-15



- LEGEND:**
- X FIRE EXTINGUISHER
 - S SPILL CLEANUP EQUIPMENT
 - 4 RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS BY SILOS

HAZARDOUS WASTE STORAGE LOCKERS SOUTH OF CELL 8 (FUTURE LOCATION - BEGINNING IN NOVEMBER 2004)

Beginning in November 2004, five hazardous waste storage lockers (MS-14, MS-36, MS-2, MS-9 and MS-10) will be located south of Cell 8. These lockers may be used for the storage of containers of hazardous waste with and without free liquids and ignitable wastes. Note that a sixth locker is also located in this area (MS-5) but it is not being used for the storage of containers of hazardous waste.

Personnel should evacuate to the Rally Point located at the entrance to T-139.

The following is a list of safety equipment assigned to this unit:

• **Fire Extinguishers**

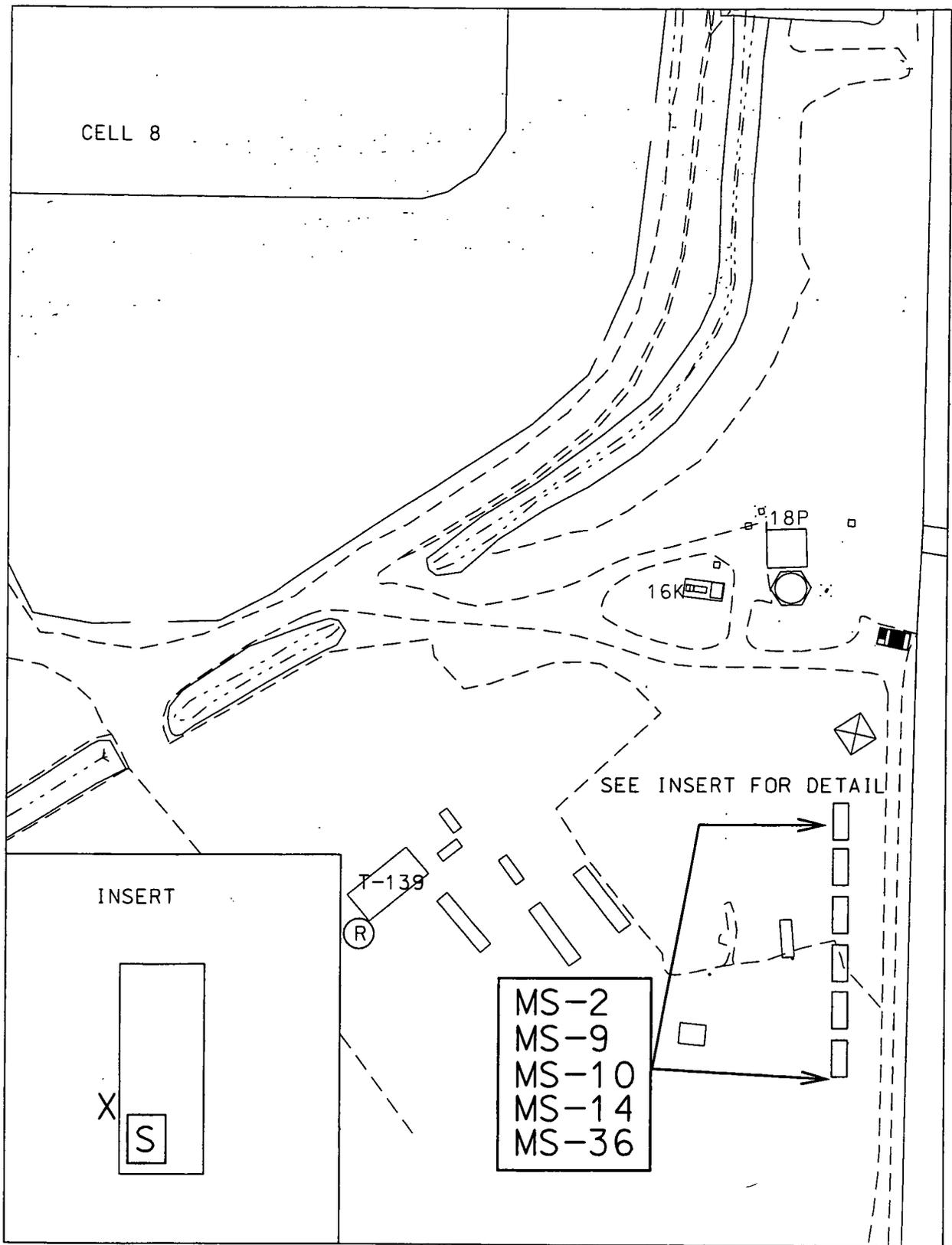
1-5) 10# ABC posted on the outside wall of each locker

• **Portable Eye Wash Station**

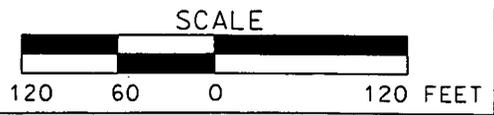
1) Available to personnel during operations

• **Spill Cleanup Equipment**

1-2) Two portable spill kits are assigned to this area



- LEGEND:**
- X FIRE EXTINGUISHER
 - S SPILL CLEANUP EQUIPMENT
 - R RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS SOUTH OF CELL 8

HAZARDOUS WASTE REPACKAGING AREA IN BOILER PLANT (BUILDING 93A)

Beginning in November 2004 to the end of December 2004 (under current plans), the FCP will utilize the east bay of the Boiler Plant (Building 93A) to repackaging hazardous waste containers for off-site shipment. These operations will occur in an enclosure which will be constructed in the north east corner of the building.

Personnel should evacuate to Rally Point No. 12, located south of the Advanced Waste Water Treatment Facility (Building 51).

The following is a list of safety equipment assigned to this building:

- Automatic sprinkler system with automatic fire alarms to an attended location

- Manual Fire Alarms

- 1) By South east door
- 2) Middle bay, along North wall

- Fire Extinguishers

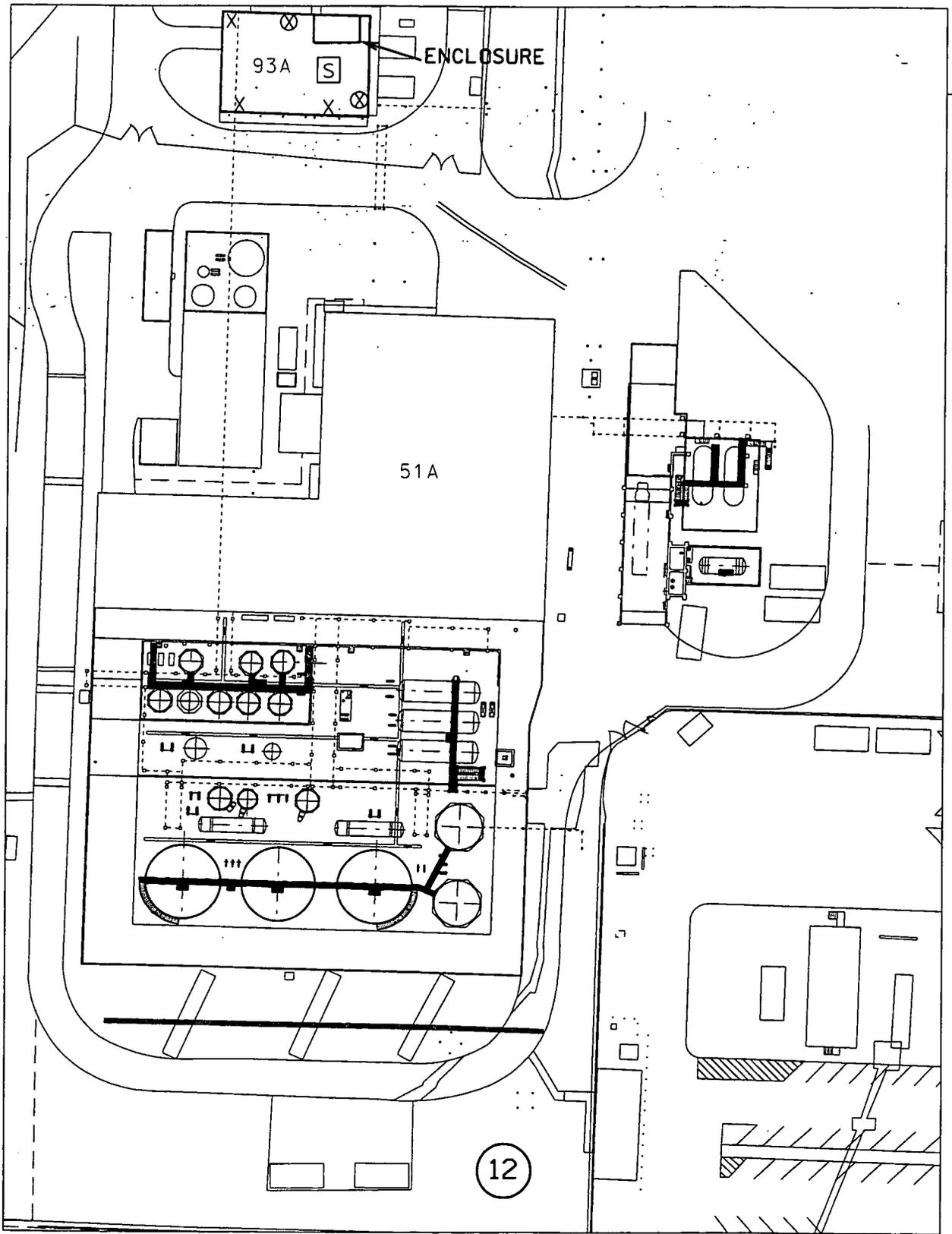
- 1) 20# ABC posted on column in East bay, near the South wall
- 2) 20# ABC posted on the North wall near the West corner
- 3) 20# ABC posted on South wall near the West end

- Portable Eye Wash Station

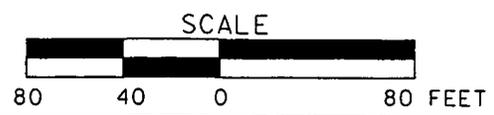
- 1) Available to personnel during operations

- Spill Cleanup Equipment

- 1) At least one portable spill kit is assigned to this building



- LEGEND:**
- X FIRE EXTINGUISHER
 - S SPILL CLEANUP EQUIPMENT
 - Ⓜ RALLY POINT
 - ⊗ MANUAL FIRE ALARM



HAZARDOUS WASTE REPACKAGING AREA IN BOILER PLANT (BUILDING 93A)

The following chart depicts the number of on-site runs that have been experienced since 1999:

YEAR	EMS	FIRE / HAZ MAT / OTHER
1999	38	36
2000	26	28
2001	25	27
2002	40	30

Fluor Fernald will provide information during the transition period and as required thereafter, designed to give fire department members a general familiarization of site activities, hazards, Emergency Plan contents, Emergency Coordinator responsibilities, communication mechanisms, and Radiation Worker Training. Fluor Fernald will also provide current and updated information for the Seller to use in keeping their pre response plans current and accurate.

The site maintains its own water distribution system for water supplied by the Cincinnati Water Works. This system has a 400,000-gallon ground storage tank, and 2 automatic fire pumps (one electric and one diesel, both rated at 1250 gallons per minute). The underground firemain system has post indicator valves (PIV) and functional fire hydrants, which are located throughout the site. The hydrant and PIV locations are depicted on existing pre fire plans. The various system components are maintained and tested by Fluor Fernald in accordance with National Fire Protection Association (NFPA) criteria.

C.2 Scope of Work:

C.2.1 The Seller must be technically capable of providing the services as stated in this document 24 hours a day, 7 days a week. This capability must include: trained / certified personnel, all required personnel protective equipment, extinguishing agents and application equipment, vehicles for the delivery of extinguishing agents and application equipment, transportation vehicles for personnel, transportation vehicles for patients (injured / sick), necessary medical supplies, specialty rescue equipment, and auxiliary breathing air supplies. If the Seller is not available for whatever reason, contingency plans must be in place to furnish the listed services through alternate means. Such contingency plans must be automatically implemented by the Seller's primary dispatch center.

C.2.2 The primary function of this contract is to ensure the safety of personnel and preservation of property at the FCP. This is achieved through effective manual fire fighting / suppression, basic and advanced emergency medical care, hazardous materials mitigation/clean-up and technical rescue. Seller response protocols must be such that they sufficiently limit undue hazards to employees, threat to the public welfare, adverse effects to the environment and loss of DOE property. Performance of the services required herein shall be in compliance with applicable state and local requirements governing emergency services response. NFPA standards are only applicable to the extent required by the state.

C.2.3 Fluor Fernald and the Seller will respond to FCP site emergencies in accordance with the response concepts described in the FCP Emergency Plan. The Emergency Plan is not designed or intended to direct fire department or Emergency Response operations. However, it does serve as the basic framework for incident management in all emergencies. The use of an incident command system by the Seller shall be required; the size and complexity of the event will determine the structure and size of the command. The Seller will utilize the pre fire plans for their initial response.

C.3 Requirements**C.3.1 The five (5) categories of work/services included in this contract:**

- 1) Basic & Advanced Life Support - Emergency Medical Services (field treatment and transport)
- 2) Fire Suppression and Search & Rescue
- 3) Mass Casualty Response & Coordination
- 4) Technical Rescue (high angle, low angle, trench rescue, surface water, vehicle and heavy rescue / extrication) and Confined Space Stand-by.
- 5) Hazardous Materials Mitigation.

C.3.1.1 Basic & Advanced Life Support – Emergency Medical Services

The Seller shall provide Basic Life Support (BLS), Intermediate Life Support (ILS) and Advanced Life Support (ALS) services [as defined in the Ohio Revised Code 4765.37 (BLS), 4765.38 (ILS), and 4765.39 (ALS)] for the FCP including transportation to licensed medical treatment facilities. Therefore, the cost to transport an individual to an off site licensed medical treatment facility shall be at no additional cost to the individual being transported.

Although remote, there is the possibility that ambulances, equipment and personnel could become contaminated with radiological or chemical contaminants while providing EMS care at the FCP. Emergency decontamination facilities for non-life threatening injuries / illness are currently available at the site medical treatment facility. Site radiological safety technicians with the appropriate monitoring equipment will address specific radiological concerns and assist emergency responders as needed. Technicians may accompany the contaminated injured / ill person to the hospital or follow in a separate vehicle to limit the spread of contamination and perform radiological monitoring of the ambulance and hospital facility.

C.3.1.2 Fire Suppression and Search & Rescue

The Seller shall provide all equipment and personnel necessary to safely conduct the activities involved in controlling or extinguishing fires that may occur at the FCP. Fire suppression includes all activities performed at the scene of a fire incident or adjacent locations that expose Seller personnel to the dangers of heat, flame, smoke, or other products of combustion, explosion, or structural collapse.

If personnel are reported missing as the result of an emergency or evacuation, the FCP Emergency Coordinator will notify the responding officer in charge. It will be the responding Seller's responsibility to conduct a complete search of affected area(s) to determine if missing personnel are within that area and if possible remove them to a safe location.

C.3.1.3 Mass Casualty Response & Coordination

The Seller shall maintain the equipment and training necessary to mitigate mass casualty response and the coordination of qualified personnel and equipment necessary to mitigate such an event.

C.3.1.4 Technical Rescue and Confined Space Stand-by

The Seller shall maintain equipment and training to conduct technical rescue (high angle, low angle, trench rescue, surface water, vehicle & heavy rescue extrication) or have the capability to access qualified personnel and equipment.

Confined Space - A "confined space," is defined as an area that is large enough and so configured that a worker can bodily enter the space and perform assigned work, has limited or restricted means for entry and exit, and is not designed for continuous occupancy and is subject to the accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere. Confined Spaces are identified at the FCP and a listing of these locations will be available for inclusion in the Seller's pre fire plans.

The officer in charge shall ensure that fire fighters entering and/or conducting rescue inside a permit required confined space are properly protected to assure that individual's safety. Entries into Immediately Dangerous to Life & Health (IDLH) atmospheres can only be made at the direction of the Seller's officer in charge and with the appropriate personal protective equipment.

C.3.1.5 Hazardous Materials Mitigation

The Seller's hazardous materials team (Haz-Mat Team) shall be responsible for the stabilization of chemical releases and/or spills that may or may not contain radioactive constituents that may occur at the site. Fluor Fernald will supply technical guidance relating to the released chemical and it's compatibility with other materials. If radioactive constituents are present, FCP Radiological Technicians will be available to support the Haz Mat team's activities.

FCP personnel will supply the Seller's Haz Mat Team with technical expertise, monitoring equipment and personnel, and available neutralizers and absorbents. Fluor Fernald will be fully responsible for the final clean up, transfer, and remediation of all spills / releases and disposal of used materials and equipment.

C.3.2 Project Specific Activities

C.3.2.1 Required Drills

Fluor Fernald will initiate and the Seller shall participate in approximately 4 drills/exercises each calendar year conducted at the FCP with the involvement of the FCP Emergency Coordinator and FCP Emergency Operations Center. These drills /exercises will be coordinated in advance with the Seller. The time estimated for preparation and participation in each drill is 6 hours.

C.3.2.2 Confined Space Standbys

Scheduled work activities at the FCP require that site personnel enter permit required confined spaces for maintenance or other work activities. Such access may require the standby of emergency equipment and emergency personnel. Normally such a standby can be scheduled. The Supplier shall plan for this to occur four (4) times during a year. No time estimate is available for this activity.

C.3.2.3 Refilling Breathing Air Bottles

Fluor Fernald will retain approximately 25 self-contained breathing apparatus units and spare air bottles for non emergency use; the Seller will be requested to fill these air bottles as necessary.

C.3.2.4 Fire Hydrants

It will be the responsibility of Fluor Fernald to maintain and service the fire hydrants on site. As the project moves to closure the hydrant system will be greatly reduced or eliminated. Fluor Fernald will notify the Seller whenever changes are made to the water supply system.

C.3.2.5 Equipment Monitoring & Decontamination

Fluor Fernald will be responsible for the monitoring, decontamination and or replacement of any contaminated equipment utilized during emergency response activities at site.

C.3.2.6 Bioassay Program

Individuals who respond to an emergency may be required to participate in Fluor Fernald's Bioassay Program. This could result from a suspected exposure to a radionuclide contaminate or as a precautionary measure based on the event that occurred. When necessary, personnel will be required to leave a urine sample prior to their departure from the site. Analysis of the sample will be conducted by Fluor Fernald and the results furnished directly to the individual that furnished the sample.

If TLDs (thermo-lucent dosimeter) are required they will be supplied to the individuals responding to the emergency by Fluor Fernald's on-duty Emergency Coordinator.

As standard practice, individuals are restricted from entering a radiologically controlled area if total (external plus internal) exposures, in any one calendar year, exceed 1,000 mrem Total Effective Dose Equivalent (TEDE).

The University Hospital

Health Alliance™

234 Goodman Street
Cincinnati, OH
45219-2316
513-584-1000

Feb. 29, 2000

Jack Craig, Director
Department of Energy
Fernald Environmental Management Project
P.O. Box 538705
Cincinnati, OH 45253-8705

FERNALD
LOG... ASSISTA
MAR 6 8 36 AM '00
FILE: 5488
LIGN: 307

Dear Mr. Craig:

This letter will serve to acknowledge our continued commitment to provide emergency medical care to your employees in the event of a medical emergency arising at the Fernald Environmental Management Project (FEMP), located near Fernald, Ohio.

This commitment is a further extension of the letter of agreement, last revised in December 1992 (Terry White to Milan Marshall, Dec. 29, 1992). While our management has changed from the University of Cincinnati to the University Hospital, Inc. (a part of the Health Alliance of Greater Cincinnati), we will continue to honor this commitment. In the case of an emergency that requires our support, University Hospital will provide treatment in our Center for Emergency Care. If deemed necessary and appropriate, care and/or transport can be made by our University Air Care emergency air medical helicopters.

University Hospital is a verified Level I Trauma Center and Level I Burn Center. As such we are committed to serving the needs of the ill and injured throughout the tri-state, including the employees and visitors at the FEMP site. We are pleased to have this opportunity to provide our services to you and your staff should the need arise.

Sincerely,



Elliot G. Cohen
Senior Vice President

LETTER OF AGREEMENT

THIS LETTER OF AGREEMENT, is effective on the 1st day of December, 1992, by and between Flour Daniel Environmental Restoration Management Company, hereinafter called "FERMCO" and Providence Hospital and Franciscan MediCenter at Harrison, 2446 Kipling Avenue, Cincinnati, Ohio 45239, hereinafter called "Providence".

1. This letter of agreement delineates the areas of responsibility of FERMCO and Providence concerning emergency medical services to be provided by Providence Hospital to FERMCO employees in the event of a medical emergency at employee's place of employment, the Fernald Environmental Restoration Project, Fernald, Ohio hereinafter called "FEMP".
2. Providence agrees to provide emergency medical treatment to FERMCO employees in the Franciscan MediCenter at Harrison or the Emergency Room of Providence Hospital in case of sickness or accident.
3. FERMCO agrees to monitor all employees prior to admission to the Providence Emergency Room to determine the level of radioactivity present, if any, on the employee's skin or clothing. Efforts will be made by FERMCO to reduce contamination, if present, to a level as low as practical. If serious injuries or sickness is/are present and the need for immediate emergency treatment precludes decontamination, FERMCO will give Providence medical personnel appropriate precautionary instructions. All FERMCO employees who have not been decontaminated shall be sent directly to Providence Hospital as the Franciscan MediCenter at Harrison does not have decontamination equipment.
4. If Providence equipment or supplies become contaminated with radioactive or toxic materials as a direct result of radioactive or toxic materials which may be carried into the Emergency Room by the FERMCO employee being treated, FERMCO will provide for the decontamination or replacement thereof at no charge to Providence.
5. This Agreement may be terminated by either party upon 30 days written notice to the other party. Providence and FERMCO can modify this Letter of Agreement by mutual written consent.
6. Providence shall act as an independent contractor in the delivery of emergency services. FERMCO shall neither have nor exercise any control over the methods by which Providence delivers such services. The sole interest of FERMCO is to assure that Providence services shall be performed in a competent, efficient, and satisfactory manner.

Providence Hospital of Cincinnati

By: [Signature]
Title: Vice President
Date: 11-7-92

Flour Daniel Environmental Restoration Management Company

By: [Signature]
Title: V. P. Acquisition & Finance
Date: 11/7/92

RCRA PART B PERMIT APPLICATION

REVISION 9.1



SECTION G: CONTINGENCY PLAN

OCTOBER 2004

FERNALD CLOSURE PROJECT

U.S. EPA Identification No. OH6890008976

SECTION G - CONTINGENCY PLAN

TABLE OF CONTENTS

G-1	GENERAL INFORMATION	1
	G-1a Emergency Organization	3
	G-1b Distribution	7
G-2	EMERGENCY COORDINATION	7
G-3	IMPLEMENTATION	9
G-4	EMERGENCY RESPONSE PROCEDURES	11
	G-4a Notification	11
	G-4b Identification of Hazardous Materials	15
	G-4c Assessment	15
	G-4d Control Procedures	19
	G-4e Prevention of Recurrence or Spread of Hazardous Waste Fires, Explosions or Releases	23
	G-4f Storage and Treatment of Released Waste	23
	G-4g Incompatible Wastes	23
	G-4h Post-Emergency Equipment Maintenance	24
	G-4i Container Spills and Leakage	24
	G-4j Tank Spills and Leakage	27
G-5	EMERGENCY SUPPORT AND EQUIPMENT	27
	G-5a Fire Protection Equipment	31
	G-5a(1) Plant Water Supplies and Fire Loop Water Supply	31
	G-5a(2) Automatic Sprinklers	32
	G-5a(3) Fire Extinguishers	32
	G-5a(4) FCP Emergency Response Equipment	33
	G-5b Spill Control and Monitoring Equipment	34
	G-5c Alarm and Electronic Monitoring Systems	35
	G-5d Communication System	36
	G-5e First Aid and Medical Supplies	37
	G-5e(1) Emergency Treatment	37
	G-5e(2) Ambulance Service - General	37
	G-5e(3) Ambulance Service, 2nd and 3rd Shifts, Weekends, Holidays, Vacation Shutdown	37
G-6	COORDINATION AGREEMENTS	37
G-7	EVACUATION PLAN	38
G-8	REPORTS	39
	G-8a Required Written Reports	39
G-9	AMENDING THE CONTINGENCY PLAN	40

5715

5715

FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: CONTINGENCY PLAN

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
PAGE ii OF ii

SECTION G - CONTINGENCY PLAN

**TABLE OF CONTENTS
(Continued)**

LIST OF TABLES

Table G-1	Emergency Operation Personnel & Organizations
Table G-2	The FCP Emergency Organization Roster
Table G-3	Emergency Respiratory Equipment
Table G-4	Types of Pressurized Fire Extinguishers

LIST OF FIGURES

Figure G-1	RCRA Units
Figure G-2	FCP Emergency Response Organization
Figure G-3	Emergency Coordination
Figure G-3.1	Emergency Response Training Requirements
Figure G-4	Implementation & Notification
Figure G-5.2	Emergency Action Level Guide
Figure G-7	Interorganizational Links
Figure G-9	Form A - Ohio Hazardous Waste Release Fire, Explosion Report to Ohio EPA
Figure G-10	Form B - Notification of Ohio EPA of Implementation of Contingency Plan
Figure G-11	Form C - Written Notice to Ohio EPA and Appropriate Local Authorities of Resumption of Hazardous Waste Operations

LIST OF ATTACHMENTS

Attachment G-1	Emergency Procedures, Site Layout and Equipment Information
Attachment G-3	Agreements

FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: CONTINGENCY PLAN

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
PAGE 1 OF 40

SECTION G – CONTINGENCY PLAN

RCRA Part B Permit Application

Fernald Closure Project
Fernald, Ohio

This Contingency Plan is required by Ohio Administrative Code (OAC) 3745-50-44(A)(7) and Title 40 of the Code of Federal Regulations (CFR) 270.14 (b)(7) in order to provide planned procedures to be followed in an emergency at any hazardous waste facility. This information is submitted for the Fernald Closure Project (FCP), formerly the Feed Materials Production Center (FMPC), in accordance with OAC 3745-54-50 to 56 and 40 CFR 264.50 to 56 as well as other applicable parts of the Ohio Administrative Code. This Contingency Plan addresses the actions to be taken to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

The FCP manages both hazardous waste and mixed waste. Mixed waste is defined as waste that contains both a hazardous component regulated under RCRA and a radioactive component consisting of source, special nuclear, or by-product material regulated under the Atomic Energy Act. Any information included in this section on the radioactive portion of mixed wastes generated or stored at the FCP is included for informational purposes only and is not intended to be part of the facility's RCRA permit.

NOTE: THE CONTINGENCY PLAN HAS BEEN UPDATED TO REFLECT CURRENT SITE CONDITIONS AND EMERGENCY RESPONSE ACTIVITIES AS OF OCTOBER 2004 AND TO INCLUDE INFORMATION ON ANTICIPATED CHANGES WHICH WOULD IMPACT THIS PLAN. HOWEVER, RAPID CHANGES IN SITE CONDITIONS AS REMEDIATION PROCEEDS WILL HAVE CONTINUING IMPACTS ON THE CONTINGENCY PLAN. THE FCP WILL MAINTAIN A CURRENT COPY OF THIS PLAN WITH SECURITY PERSONNEL AT THE SECURITY CHECK POINT AT THE SOUTH ENTRANCE TO THE FACILITY. THIS COPY WILL BE MADE AVAILABLE TO OFF-SITE EMERGENCY RESPONSE ORGANIZATIONS IN THE EVENT OF AN EMERGENCY.

G-1 GENERAL INFORMATION

The FCP is a former production facility which produced uranium metal used in the fabrication of fuel cores for nuclear reactors operated by the United States Department of Energy. During production,

2-178

FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: CONTINGENCY PLAN

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
PAGE 2 OF 40

several types of hazardous wastes were produced from virgin materials, including (but not limited to): toxic halogenated solvents (from parts cleaning), ignitable oil and lubricants (from machining operations), ignitable and metal-bearing paint residues (from drum reconditioning), corrosive acids and alkalis (from metal and ore digestion and extraction), and pyrophoric non-nuclear metals (from foundry operations). In addition, some non-hazardous materials such as cleaning rags and wastewater sump cakes were contaminated with hazardous wastes, and thus became hazardous wastes themselves.

All production activities at the facility have ended. Current activities include waste management operations, site remediation, and miscellaneous operations such as wastewater treatment. More specifically, waste storage operations are allocated as follows:

Hazardous Waste Storage Lockers (9 lockers, 4 locations) -
Location:

3 lockers are located in the Silos Truck Staging Area, south of the AWWT (Advanced Waste Water Treatment) facility;

1 locker is located at the Silos Project, north of the Radon Control System Building;

3 lockers are located east of AWWT (Advanced Waste Water Treatment) facility; and

2 lockers are located in the south west corner of the East Parking Lot

NOTE: Beginning in November, 2004, the 3 lockers located east of AWWT and the 2 lockers located in the south west corner of the East Parking Lot will be moved – their new location will be on the east side of the site, south of Cell 8.

Maximum Capacity: 2,640 gallons / 48 55-gallon drums per locker
Waste Types: Combustible and flammable liquids, solids, trash, PCBs.

Mixed waste shipments are also temporarily staged in trailers in the south half of the West Parking Lot and, beginning in November through December 2004, the FCP will use an enclosure in the East Bay of the Boiler Plant (Building 93A) for repackaging of mixed waste containers.

The FCP site and mailing addresses are:

Fernald Closure Project - Site Address
7400 Willey Road
Fernald, Ohio 45030
(513) 648-3000

**Fernald Office - Mailing Address
U. S. Department of Energy
175 Tri-County Parkway
Cincinnati, Ohio 45246-3222
(513) 648-3000**

Operation missions and program direction are administered through the U.S. Department of Energy (DOE) Office of Environmental Management (EM). The name, address, and telephone number of this office are:

**U. S. Department of Energy
Office of Environmental Management
1000 Independence Avenue Southwest
Washington, D. C. 20585
(202) 586-5000**

This plan describes the actions facility personnel must take in response to a hazardous waste event or emergency such as fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water. The location of areas managing hazardous waste at the FCP is shown in Figure G-1. Evacuation routes and lists of safety and emergency equipment assigned to each of these areas are included in Attachment G-1. A copy of this Contingency Plan is readily accessible to anyone entering these areas.

G-1a Emergency Organization

The Emergency Coordinator/ Assistant Emergency Duty Officer (AEDO) may request support and allocate resources under the responsibilities of any or all of the Emergency Response Support Organizations discussed in this section. Table G-2 provides a roster of the FCP Emergency Organization. Figure G-2 provides an organizational chart of the FCP Emergency Response Organization. A contract has been awarded to the Crosby Township Fire Department and Life Squad to provide emergency services at the FCP. This agency is responsible for the emergency response at the site when facility response can not mitigate the event. Any mutual aid agreements are the responsibility of the Subcontracted Community Emergency Response Organization (Crosby Township). The Subcontracted Community Emergency Response Organization has signed mutual aid agreements with other agencies and/or has agreed to provide needed assistance to the FCP at local, county, state and federal levels. Information regarding the contract with the Crosby Township Fire Department and Life Squad is provided in Attachment G-3.

Fernald Closure Project

Emergency Management

The Emergency Director (the operating contractor President or his designee) has designated an AEDO/Emergency Coordinator who is responsible for emergency responses at the FCP. The AEDO is the primary Emergency Coordinator.

The Emergency Coordinator/AEDO manages and controls the response to any event at the FCP until subcontracted community response forces arrive on-scene. A minimum of one Emergency Coordinator/AEDO is present onsite at all times. Through an extensive Emergency Duty Officer training program coordinated by Emergency Preparedness, the Emergency Coordinator/AEDO is knowledgeable of this Contingency Plan, operations and activities at the FCP, the locations and characteristics of hazardous waste at the facility, the location of records within the FCP, and the facility layout. Figure G-3.1 illustrates the range of training requirements for the Emergency Coordinator/AEDO.

The Emergency Coordinator/AEDO, as Incident Commander, can activate the FCP emergency response organizations including, but not limited to, the Subcontracted Community Emergency Response Personnel, Monitoring Team, medical staff, security personnel, and the Emergency Operations Center. Figure G-7 provides a table showing the activation methods for all elements of the Emergency Response Organization.

The Subcontracted Community Emergency Response Officer In Charge will assume the Incident Commander responsibilities once they have arrived on-scene. Additional support and mutual aid may be summoned at any time by the Incident Commander.

Subcontracted Community Emergency Response Organization

The Subcontracted Community Emergency Response Organization is responsible for on-scene emergency event mitigation, rescue, damage control, firefighting, and medical assistance.

Security Response Organization

The Security Response Organization maintains the security and integrity of the FCP. The FCP security staff consists of qualified security inspectors. The security staff provides surveillance

and control at the incident location and the entire facility during an emergency.

Emergency Operations Center (EOC) Staff

The Emergency Operations Center (EOC) Staff is a functional organization which works with the Emergency Coordinator/AEDO to oversee and direct emergency response actions. The Emergency Operations Center, located in T-214, assesses the incident, coordinates protective actions, and coordinates personnel accountability. The Emergency Operations Center also supports and directs protective actions, allocating additional resources as needed and providing notifications and information to employees, appropriate authorities, and the general public. The EOC Staff is composed of three primary teams, the Policy Team, Operations Team, and the Information Management Team. Primary and alternate staff members have been selected for each position.

Public Information Response

The Manager of Public Affairs has overall responsibility for the emergency public information program and serves as the designated spokesperson at the FCP during emergencies. News and information about an emergency is provided to the media through the Public Affairs Department Offices or a Media Information Area which is activated for a major event.

Medical Response Organization

The Medical Response Organization provides treatment and stabilization for injuries. At least one state certified Emergency Medical Technician is on duty at all times.

Communications Center Staff

Site-based communications are operated by the FCP Communications Center. The Communications Center coordinates the dispatch of equipment and personnel to emergency events. The Communications Center provides communication links between the Emergency Coordinator/AEDO and support groups, implements systems instructions, and makes appropriate notifications when instructed.

Monitoring Team

The FCP monitoring organization consists of Radiological Safety and Industrial Hygiene

personnel for on-site and off-site monitoring of chemicals and radiological materials.

Monitoring data is provided to the Emergency Coordinator/AEDO. The State of Ohio provides monitoring and assessment support to the counties as requested.

U.S. Department of Energy (DOE)

DOE-Fernald Closure Project (DOE- FCP)

The DOE-Fernald Closure Project (DOE- FCP) provides oversight, ensures an effective response, conducts investigations, makes appropriate notifications, and coordinates interactions with the media and requests for assistance during an incident. The DOE-FCP is responsible for notifying state and federal governmental agencies of an incident as necessary.

DOE Headquarters (DOE-HQ)

DOE Headquarters (DOE-HQ) Office of Environmental Management has overall responsibility for emergency operations at the FCP and designates response authority to the Emergency Coordinator to act as the primary AEDO. The FCP is delegated specific responsibilities for implementing event response and for notifying the DOE Emergency Operations Center (DOE-HQ EOC).

State of Ohio

Ohio Emergency Management Agency (OEMA)

The Ohio Emergency Management Agency (OEMA) coordinates disaster response for all state agencies. OEMA also procures support and assistance from the Federal government as necessary.

Hamilton and Butler Counties

Hamilton and Butler counties may activate their respective Emergency Operations Centers (Emergency Management Agencies) in an emergency. The counties provide emergency medical service and fire protection support through mutual aid agreements. The county law enforcement organizations provide additional support as needed.

G-1b Distribution

Copies of this Contingency Plan and all revisions to this Plan are maintained at the FCP EOC and submitted to the following off-site organizations via certified mail (return receipt) or overnight delivery service:

- Crosby Township Fire Department
- Hamilton County Emergency Management Agency
- Hamilton County Sheriff
- Ohio Emergency Management Agency
- Ohio State Highway Patrol, Post 9
- Mercy Franciscan Hospital – Mount Airy
- Butler County Emergency Management Agency
- Butler County Sheriff
- Colerain Township Fire Department
- University Hospital
- Ohio EPA
- U.S. EPA

G-2 EMERGENCY COORDINATION

The FCP Emergency Services staff is in charge of the preparation for an emergency at the FCP. The Emergency Coordinator/AEDO is in charge of emergency response. Figure G-3 depicts the relationships between the key FCP Emergency Services Staff. Figure G-3.1 describes the qualifications for the staff.

The Emergency Operation Personnel & Organizations list in Table G-1 provides emergency phone or pager contact information. Individuals or organizations on this list are contacted through the Communications Center as required.

FCP Emergency Services Staff

Emergency Coordinator/AEDO

The Emergency Coordinator/AEDO is the Utility Engineer on shift. The Emergency Coordinator/AEDO has authority to initiate all necessary response actions. The Emergency Coordinator/AEDO responds to the event site, assesses and categorizes the event as an emergency or lesser event.

There are currently four personnel assigned to the position of Emergency Coordinator/AEDO. This group works a four-person rotating shift schedule. A status board which lists the Emergency Coordinator/AEDO is established for each shift at the Communications Center. At least one Emergency Coordinator/AEDO is on site at all times, who can be reached by radio, telephone or pager. If the shift AEDO should be unavailable for duty, an Alternate AEDO will be summoned. Table G-1 lists the pertinent contact information for the designated Emergency Coordinator/AEDO.

As stated in Section G-1, the Emergency Coordinator/AEDO is fully knowledgeable of this Contingency Plan, operations and activities at the FCP, the locations and characteristics of hazardous waste at the facility, the location of records within the FCP, and the facility layout. Required training for the Emergency Coordinator/AEDO is listed in Figure G-3.1.

The Emergency Coordinator/AEDO has the authority to activate the FCP Offsite Emergency Warning System at any time. The Emergency Coordinator/AEDO is a representative of the Emergency Operations Center (EOC) staff and may activate the EOC for response support. Mandatory activation of the EOC is required for all emergencies. All EOC staff members are supplied with personal pagers that can be activated by a group page. Off-duty Emergency Coordinator/AEDO, Security Lieutenants, and Medical personnel may also be summoned in this manner.

Emergency Duty Officer

The Emergency Duty Officer is the designated, on-call representative of the Emergency Operations Center and senior facility management. The Emergency Duty Officer reviews the emergency assessment with the Emergency Coordinator/AEDO and coordinates the Emergency Operations Center staff in support of the Emergency Coordinator/AEDO. The Emergency Duty Officer is responsible for proper notification of off-site response organizations.

The Emergency Duty Officer is in control of response operations until the Deputy Emergency Director approves and assumes control of the response organization. Designated senior staff managers rotate as the Emergency Duty Officer.

The Emergency Duty Officer may be reached through the 24-hour-staffed FCP Communications Center by:

- personal digital display pager; or
- conventional telephone service.

Required training for the Emergency Duty Officer is listed in Figure G-3.1 and Section H.

Release Evaluator

A Release Evaluator evaluates regulatory requirements for reporting hazardous waste releases. The Release Evaluator is on call on a 24-hour basis through a personal digital pager and assists the Emergency Coordinator/AEDO and Emergency Duty Officer in determining the need for regulatory reporting and notifications.

G-3 IMPLEMENTATION

The first step taken during any incident involves its observance by employees and supervisors on the scene. Actions to be taken in reporting an explosion, fire, or release are described in Attachment G-1.

The Emergency Coordinator/AEDO categorizes the event according to increasing levels of severity as listed below:

- 1) SIGNIFICANCE CATEGORY 5
- 2) SIGNIFICANCE CATEGORY 4
- 3) SIGNIFICANCE CATEGORY 3
- 4) SIGNIFICANCE CATEGORY 2
- 5) RECURRING EVENT CATEGORY
- 6) SIGNIFICANCE CATEGORY 1
- 7) OPERATIONAL EMERGENCY

An event greatest in magnitude is categorized as an Operational Emergency. Categorization of a hazardous waste incident as an Operational Emergency activates the Emergency Operations Center (EOC) and thereby implements this Contingency Plan.

The following implementation plan is used to respond to a hazardous waste event. Contingency Plan implementation and notification actions are diagramed in Figure G-4. Implementation of the

Contingency Plan is initiated for potential or actual events involving hazardous wastes or hazardous waste constituents.

The Emergency Coordinator/AEDO after categorizing an event as an Operational Emergency, begins evaluation and classification of the event per Figure G-5.2, the Emergency Action Level Guide, and advises the Emergency Duty Officer as necessary. By increasing order of severity, the action levels for Operational Emergencies are:

- 7a) ALERT
- 7b) SITE AREA EMERGENCY
- 7c) GENERAL EMERGENCY

The Emergency Coordinator/AEDO or the Emergency Duty Officer activates the Emergency Operations Center as necessary. The emergency action level may be changed by the Emergency Operations Center staff, based on information provided by the Emergency Coordinator/AEDO at the scene and on an assessment of potential health effects or environmental impacts by the Emergency Operations Center staff.

The Incident Commander and the Emergency Coordinator/AEDO retain responsibility for directing and coordinating all efforts to resolve the emergency at the field command post with the assistance of the Emergency Operation Center once it is declared operational. Such actions may include, but are not limited to, the following:

- Responding, and assuring the response of others, to all alarms sent over the site-wide alarm system, radiation detection alarm, and emergency message systems;
- Coordinating all emergency response groups;
- Instituting any operational changes necessary to control the emergency, including shut-down of operations as required;
- Directing the Communications Center to send out the necessary alarms and messages for personnel evacuation and accountability;
- Instructing the Communications Center, when necessary, to obtain assistance such as rescue and fire fighting equipment and crews.

All assistance from the FCP's Subcontracted Community Emergency Response Organization can be summoned by:

Telephone: 911 or 825-2280

- Requesting further assistance, as necessary, from the Butler County and the Hamilton County emergency response agencies. Each agency has prepared a "Response Plan for a Hazardous Materials Emergency at the Feed Materials Production Center".
- Terminating the state of emergency as conditions permit and instructing the Communications Center to sound the appropriate signal.

G-4 EMERGENCY RESPONSE PROCEDURES

The following procedures are the responsibility of the Emergency Coordinator/AEDO or his designee whenever the Contingency Plan is implemented.

G-4a Notification

General Notification Activities

- 1) The Emergency Coordinator/AEDO informs Communications Center that the Contingency Plan has been implemented and is classified as an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY involving hazardous waste.
- 2) The Communications Center (or Emergency Coordinator (AEDO)) notifies the Subcontracted Community Emergency Response Organization and Emergency Duty Officer (EDO) of the event categorization.
- 3) The Emergency Duty Officer notifies Emergency Director (ED) and DOE Site Manager, or designee(s), of the event categorization.

- 4) The Communications Center completes County Event Report¹ as directed by the Emergency Coordinator/AEDO.
- 5) The Communications Center Operator activates site-wide alarm system, the site-wide message system, and/or the off-site Emergency Warning System, as directed.
- 6) The Emergency Coordinator/AEDO begins identification of the character, source, amount, and extent of any released materials by observation, for example hazardous waste labels on the container, review of facility records, interaction with facility personnel, and if necessary, by chemical analyses.
- 7) The Communications Center Operator in coordination with the Emergency Operations Center completes all required notifications to:
 - DOE-HQ EOC,
 - State of Ohio Emergency Management Agency (OEMA), who then notifies the appropriate offsite agency(ies) listed in Table G-1, according to the type of incident,
 - Butler and Hamilton counties' 24-hour notification points,
 - Director, Ohio Environmental Protection Agency
 - FCP Release Evaluator,
 - DOE- FCP Duty Officer,
 - Appropriate local organizations, if not notified by OEMA,
 - Federal and State regulatory agencies, if not notified by OEMA.

The first three agencies listed above are notified within 15 minutes of any hazardous waste emergency.

- 8) The DOE- FCP Duty Officer provides FCP Communications Center, as soon as possible, with a written record documenting that the appropriate regulatory agencies have been

¹ County Event Reports notify both Butler and Hamilton counties for events categorized as Alert or Higher.

verbally contacted.

- 9) The DOE-FCP Duty Officer is responsible for making and verifying any follow-up notifications communicated to them by the FCP, Emergency Coordinator/AEDO, Emergency Duty Officer or Emergency Operations Center.

Initial Oral Notification for Hazardous Waste Emergencies

The Emergency Coordinator/AEDO or the Emergency Operations Center immediately reports to DOE-HQ when the facility has had a release, fire, or explosion which could threaten human health or the environment.

The FCP Emergency Operations Center notifies appropriate local authorities to advise whether protective actions are required. The FCP Emergency Operations Center provides oral notification immediately to the Ohio Emergency Management Agency. The DOE-FCP Duty Officer will provide oral notification immediately to the Ohio EPA Emergency Response Center.

The verbal report will contain the following information²:

- name, address, and telephone number of the reporter;
- name and address of the facility;
- the time and date of the incident;
- type of incident (e.g., fire, spill, etc.);
- identification of material(s) involved to the extent known;
- quantity of each material included;
- extent of injuries, if any;
- potential hazards to human health or the environment, outside of the facility; and
- date and time that call was made and person contacted.

Form A (Figure G-9) may be used as a guideline to facilitate this verbal reporting.

Local Evacuation Notices

Local agencies are responsible for protective actions required for the population surrounding the FCP. The FCP Communications Center will activate the Off-site Emergency Warning System for emergency events that could have significant off-site impact. The FCP Off-Site Emergency Warning System is utilized to inform the population within a two-mile radius of the FCP to seek shelter and tune to an Emergency Broadcast System Station for further instructions.

Written Notification

A written report notifying Ohio EPA that this Contingency Plan was implemented is submitted to the Ohio EPA by the FCP within 15 days after an occurrence of an incident that requires implementation of this Contingency Plan. The report will include the following information:

- name, address, and telephone number of the owner or operator of the facility;
- name, address, and telephone number of the facility;
- date of incident;
- time of incident;
- type of incident (e.g. fire, spill);
- type of material(s) involved;
- quantity of material(s) involved;
- the extent of injuries, if any;
- an assessment of actual or potential hazards to human health or the environment, where this is applicable;
- estimated quantity and disposition of recovered material that resulted from the incident; and
- an outline or description of procedures or measures that will be taken to prevent or mitigate such incidents in the future.

Cessation/Resumption of Activities

The Emergency Coordinator/AEDO must take the preventive measures described in Section G-4e, if the event causes the affected area of the facility to cease activities. The equipment in the affected area of the facility will be returned to a clean and serviceable condition after an

emergency. Waste generated during spill cleanup will be managed in accordance with all applicable regulatory requirements. Ohio EPA regulatory authorities will be notified by the Department of Energy of the readiness to resume hazardous waste activities.

G-4b Identification of Hazardous Materials

The Emergency Coordinator/AEDO immediately begins identification of the character, exact source, amount, and extent of the event or release.

The Emergency Coordinator/AEDO will begin identification of the hazardous material by using the following procedure:

- 1) Visual inspection of the container labeling will be the initial identification method. The labeling includes all pertinent waste characterization information.
- 2) If labels are obscured or not easily read, site records such as the Material Movement Record or Container Tracking Log may be used to identify the composition and quantity of stored or released material. A detailed inventory of the location of every drum of hazardous waste is maintained and readily available from the Sitewide Waste Information, Forecasting and Tracking System (SWIFTS) Database.
- 3) Samples will be taken for analysis and characterization if the released material cannot be identified by the above methods.

G-4c Assessment

The Emergency Coordinator/AEDO will assess potential hazards to human health or the environment from the incident. The assessment will consider both direct and indirect effects of the release such as the effects of any hazardous fumes released. The Emergency Coordinator (AEDO) assesses the event by evaluating:

- The population at risk (both on- and off-site);
- The environmental conditions contributing to the seriousness of the event such as wind speed and direction, precipitation, ground moisture, and temperature;

- Potential radionuclide hazards;
- Protective Action Guide (PAG) or Emergency Response Planning Guideline (ERPG) exposure levels; and
- The capabilities of available equipment.

The existing DOE event categorization system used by the FCP provides a uniform, shared understanding of event severity. The emergency categorization system classifies emergency events based on the potential or actual impact of the event on facility safety, facility personnel health and safety, and on public health and safety. The site Emergency Plan provides for predetermined responses by the Emergency Coordinator/AEDO based upon the incident categorization criteria.

Categorization Systems

Events that operationally involve or affect the FCP are grouped into eight categories, by relative ranking of the assessed facility status, to ensure that the urgency of notification is readily identifiable and appropriate response actions are directed immediately. Inputs to the event categorization system include the status of systems, the observation of operating personnel, and the levels of radiological or hazardous materials in areas of the facility or in facility effluent. Incident severity defines the categorization level providing a uniform, shared understanding of event severity common to all involved groups.

The eight categories in order of increasing severity are as follows: Significance Category 6, Significance Category 5, Significance Category 4, Significance Category 3, Significance Category 2, Recurring Event Category, Significance Category 1, and Operational Emergency. The Operational Emergency level has been further subdivided for hazardous material and radiological events into three classes: Alert, Site Area Emergency, and General Emergency. Each are discussed below with detailed definition, classifications of emergencies, and appropriate emergency responses to be taken provided in DOE 151.1 and in the Emergency Action Levels of the FCP Emergency Plan.

Operational Emergency Classification

Base Program Events

Operational Emergencies are unplanned significant events or conditions that require time-urgent response from outside the immediate/affected site/facility or area of the incident. Such emergencies are caused by, involve, or affect DOE facilities, sites, or activities and represent, cause, or have the potential to cause the events or conditions described below. Incidents that can be controlled by employees or maintenance personnel in the immediate/affected facility or area are not Operational Emergencies. Incidents that do not pose a significant hazard to safety, health, and/or the environment and that do not require a time-urgent response are not Operational Emergencies. Note that the initiating events described are not all-inclusive. Other initiating events that warrant categorization as Operational Emergencies shall be included in site/facility-specific procedures. Less severe events are reported through the Occurrence Reporting process.

An **Operational Emergency** for a Base Program Event shall be declared when events that represent a significant degradation in the level of safety at a site/facility and that require time-urgent response efforts from outside the site/facility occur. These events do not require further classification (i.e., as Alert, Site Area Emergency, or General Emergency).

Hazardous Materials Program Events (Radiological and Non-Radiological)

Operational Emergencies for a Hazardous Materials Program Event shall be classified as either an Alert, Site Area Emergency, or General Emergency, in order of increasing severity, when events occur that represent a specific threat to workers and the public due to the release or potential release of significant quantities of radiological and non-radiological hazardous materials. Classification aids in the rapid communication of critical information and the initiation of appropriate time-urgent emergency response actions.

Alert (LEPC Level I Emergency Conditional Level): An Alert shall be declared when events are predicted, are in progress, or have occurred that result in one or more of the following:

1. An actual or potential substantial degradation in the level of control over hazardous materials (radiological and non-radiological).

2. The radiation dose from any release to the environment of radioactive material or a concentration in air of other hazardous material is expected to exceed either:
 - a. The applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond 30 meters from the point of release to the environment or;
 - b. a site-specific criterion corresponding to a small fraction of the applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond the facility boundary or exclusion zone boundary.
 - c. It is not expected that the applicable Protective Action Guide or Emergency Response Planning Guideline will be exceeded at or beyond the facility boundary or exclusion zone boundary.
 - d. An actual or potential substantial degradation in the level of safety or security of a facility or process that could, with further degradation, produce a Site Area Emergency or General Emergency.

Site Area Emergency (LEPC Level II Emergency Condition Level): A Site Area Emergency shall be declared when events are predicted, in progress, or have occurred that result in one or more of the following situations.

1. An actual or potential major failure of functions necessary for the protection of workers or the public. The radiation dose from any release of radioactive material or concentration in air from any release of other hazardous material is expected to exceed the applicable Protective Action Guide or Emergency Response Planning Guideline beyond the facility boundary or exclusion zone boundary. The Protective Action Guide or Emergency Response Planning Guideline is not expected to be exceeded at or beyond the site boundary.

2. Actual or potential major degradation in the level of safety or security of a facility or process that could, with further degradation, produce a General Emergency.

General Emergency (LEPC III Emergency Condition Level): A General Emergency shall be declared when events are predicted, in progress, or have occurred that result in one or more of the following situations.

1. Actual or imminent catastrophic reduction of facility safety or security systems with potential for the release of large quantities of hazardous materials (radiological or non-radiological) to the environment.
2. The radiation dose from any release of radioactive material or a concentration in air from any release of other hazardous material is expected to exceed the applicable Protective Action Guide or Emergency Response Planning Guideline at or beyond the site boundary.

G-4d Control Procedures

Emergencies involving hazardous waste will fall under three general classifications for the purpose of this Contingency Plan:

- explosion
- fire
- spills or material release.

The FCP is prepared for timely response to fires, explosions, and spills at all times. Personal protective clothing, pumps, generators, and respiratory equipment are noted in Section G-5; containment supplies and procedures in Section G-5(b); and major self-propelled and other "heavy" equipment in Section G-5(a)(4).

The following Emergency Response Team members respond to fire alarms as needed:

- Emergency Coordinator (AEDO) with vehicle
- Subcontracted Community Emergency Response Organization with appropriate emergency apparatus
- Security Officer with vehicle
- Monitoring Personnel with appropriate equipment

Rescue of persons from an evacuated building or area will be undertaken only by the Subcontracted Community Emergency Response Organization under the direction of the Incident Commander.

Response procedures for trained personnel are summarized below:

- 1) Immediately notify personnel to evacuate the danger area and activate the local evacuation alarm while taking action to ensure own personal safety.
- 2) Report urgent situations directly to the Communications Center via the Emergency Phone Number 911, pull manual fire alarm, or have the report relayed to the Communications Center over the site-wide FM radio network, if a person with a portable radio is nearby. Otherwise, report information to a local supervisor who will relay the report to the Communications Center or Emergency Coordinator/AEDO.
- 3) Report the following information to the Emergency Coordinator/AEDO:
 - Location;
 - Type of emergency; fire, explosion, chemical release, and personnel, equipment, and chemicals or hazardous wastes involved and amounts if known;
 - The magnitude of the emergency, such as an estimate of the extent, size, quantity, volume, intensity, area, etc.; and
 - Emergency actions taken.

- 4) If possible, the facility personnel encountering the emergency should remain in the vicinity to direct emergency service groups to the scene.
- 5) Determine need for emergency service groups and summon them by calling 911, pulling manual fire alarms, or relaying the information to the Communications Center via the FM radio network.
- 6) Shut off all operation equipment, air, water, steam, gas, and electricity.
- 7) Remove and segregate all non-burning combustible or otherwise hazardous wastes from the vicinity of the incident, depending on the location of the incident.
- 8) Unlock all doors.
- 9) Evacuate all personnel in the vicinity of the incident not actively involved in responding to the emergency.
- 10) Account for all personnel at location or at the Rally Point.
- 11) Assist the Emergency Coordinator/AEDO if called upon.
- 12) Assess possible human health and environmental hazards of the event and define or assess the hazard impact including:
 - Identify the involved substance and its source;
 - Determine the extent and the amount of materials involved.
- 13) Assess the emergency and establish the initial event categorization.
- 14) If not already done, authorize the request for assistance from the Subcontracted Community Emergency Response Organization.

- 15) Notify the EDO of significant actions prior to EOC being declared operational.
- 16) Set up a field command post to ensure coordination of all EOC instructions. The field command post shall formulate and forward requests for additional resources.
- 17) Initiate the "All Clear" signal when the emergency is under control and/or resolved.
- 18) Initiate necessary precautions to ensure that further fires, explosions and releases do not occur, recur or spread to other hazardous waste or materials.
- 19) Initiate appropriate monitoring for leaks, pressure build up, gas generation or rupture in valves, pipes, or other equipment.
- 20) Initiate reentry activities including recovery, treatment, storage, and/or disposal of any recovered waste, contaminated soil, surface water, or other materials resulting from the emergency.
- 21) Ensure that all emergency equipment is returned to normal status when the event has been terminated.

Should the Incident Commander determine that a fire is out of control and additional personnel are required, the Incident Commander will direct the activation of the Subcontracted Emergency Response Organization's mutual aid agreements.

Fire fighting support can be requested from surrounding community fire departments. The members of the arriving mutual aid fire departments will be met at a staging area or at the gate by FCP personnel, given any pertinent instructions, supplied with Thermal Luminescent Dosimeter (TLD) badges as needed, and escorted to the location of the fire.

The personnel responding from off-site departments will be under FCP direction. They will be responsible for their own equipment and to their senior officer who will report to the Emergency Coordinator/AEDO for instructions.

G-4e Prevention of Recurrence or Spread of Hazardous Waste Fires, Explosions or Releases

Actions to prevent the recurrence or spread of releases or fires include; immediately determining the cause of the incident, stopping of processes and operations where applicable, cleaning up all debris from the incident and maintaining good housekeeping, containing and collecting released waste, recovering and isolating affected containers, ensuring fires are completely extinguished, and decontaminating affected areas and equipment. Procedures and policies will be reviewed and revised as necessary to prevent a recurrence, upon determining the cause of the incident.

G-4f Storage and Treatment of Released Waste

The Emergency Coordinator/AEDO or his designee will immediately collect representative samples of all recovered wastes for analysis and characterization after an emergency. Waste will be placed in a compatible container. All waste materials generated during the emergency response will be handled, treated, stored, and/or disposed of in accordance with the applicable hazardous waste regulations.

Methods for containment, cleanup, and decontamination of the affected areas are discussed in Sections G-4i, Container Spills and Leakage, and G-4j, Tank Spills and Leakage.

G-4g Incompatible Wastes

Containers are marked with Reactivity Group Codes (RGCs) based upon the results of waste characterizations. The RGC chart is readily available to personnel accessing the RCRA storage units, and is provided as Figure F-2 in Section F, Procedures to Prevent Hazards. Adherence to the codes provides a convenient, reliable system to assure that incompatible wastes will be separated (e.g. stored on separate spill pallets) or stored in separate buildings, to prevent mixing in the event of a spill or leak. In addition, since water might commonly be used for flushing or fire suppression, waste material that is incompatible with water is clearly marked as such.

Thus, in the event of (large) spills or leaks, the Emergency Coordinator/AEDO can ensure against the mixing of incompatible substances by maintaining separation of the incompatible wastes. As necessary, storage unit inventory records will be examined and facility owners

consulted to identify released material. As described in Section G-4b, samples will be taken for analysis and characterization if identification proves impossible due to obliterated drum labels or inaccessible site records.

The recovered materials or wastes generated during cleanup will be characterized and stored in accordance with all applicable regulatory requirements.

G-4h Post-Emergency Equipment Maintenance

Emergency equipment which has been used in the affected area will be decontaminated, cleaned and readied for its intended use before operations are resumed in the affected area(s) of the FCP. Depleted stocks of materials will be replenished. Self-contained breathing apparatus, protective clothing, and other emergency equipment which cannot be successfully cleaned, repaired, or decontaminated will be replaced as necessary. An inspection of all safety equipment will be conducted by response personnel before operations are resumed in the affected area(s) of the facility.

The State regulatory authorities shall be notified of the readiness of the facility to resume hazardous waste operations after the equipment is returned to a clean and serviceable condition.

G-4i Container Spills and Leakage

The FCP has developed specific criteria to facilitate the prioritization of mitigation activities for deteriorated/leaking containers. Consistent with the SACD, the FCP has classified its containers based upon the container condition. As a result of these classifications, those containers of hazardous, mixed and uncharacterized waste that are described as Type I containers are subject to Section 3.8 (c) of the SACD.

The classifications are:

Type 1

Type 1 containers are any container that has actually leaked in such a manner as to allow wastes to be released onto the pallet or the floor.

The following actions will be initiated in response to a Type I container:

- Notify supervisor
- Immediately stop or contain leak. (Note: Employees without the specific training or knowledge of the released material or equipment should not take action to control the spill which may put their safety or that of others at risk).
- Supervisor notifies AEDO
- Complete additional cleanup as necessary
- Identify on inspection form as Type I container requiring further action

After the initial leak is contained, the container will be managed in accordance with OAC 3745-66-71, as soon as possible after detection, but in no event more than 24 hours after discovery unless safety issues require a longer time period. Safety issues to be considered include Nuclear Criticality guidelines, radiological exposure, and/or personnel safety in handling, lifting and movement activities. Safety concerns which impact the completion of these actions within the required time frame will be documented. Once these concerns have been resolved, the final corrective actions will be completed.

If there are no safety concerns or the concerns are resolved, corrective action will be accomplished by repairing the container or repacking/overpacking it. If repair is not possible or not effective, repacking or overpacking will be done. The container will be staged in an individual secondary containment area such as a spill pallet until this has been accomplished. Type 1 containers take priority over other work activities.

Type II

Type II containers exhibit localized evidence of material on the exterior of the container but no material has been released onto the pallet or the floor.

The following actions will be initiated in response to a Type II container:

- Notify supervisor

- Immediately stop or contain leak. (Note: Employees without the specific training or knowledge of the released material or equipment should not take action to control the spill which may put their safety or that of others at risk).
- Complete additional cleanup as necessary
- Identify on inspection form as Type II container requiring further action

After the initial leak is contained, the container will be managed in accordance with OAC 3745-66-71, as soon as practicable after detection, unless safety concerns prevent this. Safety issues to be considered include Nuclear Criticality guidelines, radiological exposure, and/or personnel safety in handling, lifting and movement activities. Safety concerns which impact the completion of these actions will be documented. Once these concerns have been resolved, the final corrective actions will be completed. These may include container repair, overpack or repack.

Type III

Type III containers exhibit severe corrosion without evidence of a release.

The following actions will be initiated in response to a Type III container:

- Evaluate container condition through required inspections to assess further actions
- Overpack/repack container prior to off-site disposition

If a container's condition causes its classification to change (e.g. Type III to Type II), it will be managed in accordance with the container management procedures for the new classification.

Very large spills involving the release of hazardous waste are unlikely in the container storage areas. Secondary containment structures in areas storing hazardous waste with free liquids are capable of holding at least 10% of the maximum volume of hazardous waste stored in that structure. If several drums are spilled simultaneously, the spilled material will be pumped from the containment area and re-containerized to prevent overflow of the containment area before

attempting to use absorbent materials. Spilled hazardous waste will be treated, stored, and disposed of in accordance with the appropriate regulatory requirements.

G-4j Tank Spills and Leakage

The FCP does not have any hazardous waste tanks remaining on-site. The FCP has dismantled all tanks classified as HWMUs.

G-5 EMERGENCY SUPPORT AND EQUIPMENT

The Emergency Coordinator/AEDO when notified of an event involving hazardous waste or hazardous waste constituents, may utilize the emergency resources, support and equipment summarized below. The facilities and equipment available for use in an emergency at the FCP are the Emergency Operations Center (EOC), and the Communications Center. Supporting equipment and resources include warning systems (on-site and off-site), response vehicles, personnel decontamination equipment, medical support, radiological monitoring, and industrial hygiene monitoring equipment. The FCP also maintains a contract with a local emergency response organization as described in Section G-6.

Emergency Operations Center (EOC)

The EOC is located in Trailer T-214. The dose assessment area is located in Trailer T-76. EOC staffing and responsibilities are outlined in Section G-2. Resources available in the EOC include maps, engineering drawings, and other emergency reference materials. The EOC is equipped with a backup power generator.

A comprehensive communications system in the EOC includes telephones, telefax, computers, and portable radios. A paging system links response personnel with the Communications Center. All response personnel can be alerted simultaneously or individually, in case of an event.

Computer support systems in the EOC maintain a historical record, perform meteorological and heavy gas modeling, aid in reporting current event status information to local county officials, and aid in drafting and transmitting press releases.

In the event of an emergency, the Springdale office can also serve as an alternate location for the EOC.

Communications Center/Security

Security maintains the safeguard and integrity of the FCP and provides communications, as needed in an emergency. The Communications Center is typically the first to be advised of an emergency via plant alarm or personnel.

The Communications Center includes a full complement of one-way and two-way radio communications facilities, including a mobile and portable FM radio network, scanners, special telephone system, and a paging system. Special monitoring systems include a computerized emergency monitoring system. On-site Security Inspectors are equipped with emergency vehicles with lights and siren, portable communications equipment, a mobile radio-telephone, and a bullhorn.

Warning Systems

There are on-site, local building, and off-site warning systems at the FCP.

Facility Alarm System

This system is centered in the Communications Center. Signals from manual fire alarm boxes and automatic fire monitoring and/or extinguishing systems located throughout the plant are transmitted to the Communications Center and monitored by a Honeywell Delta 1000 system. The Communications Technician, using the control panel, activates alarms located throughout the facility.

Each alarm system is tested by qualified personnel according to the following schedule, and the results are recorded:

Manual alarm boxes: Every six months

Emergency Message System

The Emergency Message System is a one-way system used by the Communications Center to transmit verbal instructions and important information to facility personnel following the sounding of a warning signal.

Local Evacuation Alarm

All process areas are linked to a Honeywell Evacuation Alarm (loudspeaker) system. In the event of an

emergency in any location, dialing 911 or calling "CONTROL" by radio will alert Emergency Preparedness via the Control Center. Appropriate evacuation and other messages will be broadcast over the loudspeakers in affected and adjacent locations. The speaker system is tested daily.

Ambulance Alarm

Primary response personnel are notified from the Communications Center via special Alert Pagers. The pagers alert assigned ERT members that a call has been made for the ambulance and the off-site contract fire department is notified to respond to the FCP.

Offsite Emergency Warning System

In emergencies with offsite implications the Offsite Emergency Warning System warns citizens within the 2-mile immediate notification zone surrounding the FCP. Activating the sirens alerts residents to take shelter immediately, tune to a radio or TV station and listen for an Emergency Broadcast System (EBS) message for information.

The warning system consists of ten electronic sirens (seven offsite and three onsite) and numerous tone-alert radio receivers. The sirens are located within or just outside the 2-mile immediate notification zone. This system is tested on the first Wednesday of each month at noon.

Fire and Rescue

Fire and rescue equipment furnished by the Subcontracted Community Emergency Response Organization include vehicles with forcible entry tools, communications equipment, electric lights and generators, portable pumps, protective equipment, and heavy equipment.

Fire protection and extinguishing equipment at the FCP includes building sprinkler systems (both wet-pipe and dry-pipe), fire and smoke alarm systems, hand-held fire extinguishers, and fire hydrants.

Decontamination Equipment

Decontamination equipment is stored in the mobile emergency spill response vehicle. This equipment consists of brushes, soap, diking devices and recovery containers. All of the equipment is designed to be used in conjunction with a portable water supply or water supplied from emergency equipment (pumpers/tankers). The mobile emergency spill response vehicle is described in further detail in Section

G-5a(4).

Medical

Medical Services, located in T195, is staffed by physicians, nurses, and technicians. There are also various pieces of diagnostic equipment, hospital wards, and other equipment. Detailed information on medical equipment appears in Section G-5e.

Environmental Radiological Monitoring

Environmental radiological monitoring equipment includes dosimeters, stack alarms, friskers, and other radiation survey instruments and monitors. Multimedia baselines are continuously established in all areas using airborne radioactivity air sampling pumps and friskers. Should an incident occur, changing and/or radiologically hazardous conditions can be monitored by direct reading dosimeters, swipes, friskers, and personal contamination monitors. This information can be used to establish boundaries of the contaminated area, and to provide control point monitoring of personnel and equipment involved in the incident.

Industrial Hygiene Equipment

Industrial hygiene equipment includes devices for detecting multimedia hazardous materials and hazardous conditions. Sampling of large or small air spaces for chemical contaminants is accomplished by means such as: photoionization detector, combustible gas analyzer, oxygen meter, hang-on personal dosimeter (for nitrogen dioxide, sulfur dioxide, carbon monoxide, ammonia), direct-reading colorimetric (Draeger) tubes, and mercury vapor monitors. The output from the first two can be analyzed in the field by a portable gas chromatograph or a MIRAN infrared gas analyzer, the latter of which is also a direct-reading analyzer. Non-chemical hygiene hazards can be detected/determined by: sound level meter, microwave survey meter, low-frequency electromagnetic radiation meter, and a light-scattering (airborne) dust monitor.

Emergency Power System

Dedicated emergency generators supply emergency power for lighting, communications, and for certain designated facilities. The emergency generators are tested at least once each week by the Emergency Coordinator/AEDO according to established procedures. Records of these tests are maintained at the facility. A portable unit is available when a power failure affects the Communications Center and the

emergency generator fails to start.

Additional Emergency Equipment

The following additional emergency equipment is maintained at the FCP:

- Self-contained breathing apparatus (SCBA) and other respiratory equipment
- Chemically resistant clothing, boots, and gloves;
- Showers and eye wash stations in fixed locations, and as portable units (as needed) throughout the plant
- Emergency power and lighting equipment, including power-failure lighting
- Submersible electric pumps
- Portable electric generators
- Portable gasoline-powered pumps (to 250 gpm)
- Mobile gasoline-powered pump (trailer-mounted, @ 500 gpm)

A list of FCP emergency respiratory equipment and their typical applications and limitations is provided in Table G-3. A summary of pressurized fire extinguishers is provided in Table G-4.

G-5a Fire Protection Equipment

G-5a(1) Plant Water Supplies and Fire Loop Water Supply

The FCP water systems and related equipment provide the FCP with the first line of defense in fighting fires, and supply the primary means of fire extinguishment.

High Pressure Distribution System

The High Pressure Distribution System provides water to the high pressure hydrants, and to building sprinkler systems. A static pressure of 114 psi (gauge) is maintained in the system by a jockey pump. The fire pump system is activated when the pressure in the system drops. The fire pump system consists of one electric and one-diesel powered pump, rated at 1,250 gallons per minute (gpm) at 125 psig. The electric pump and the diesel pump start automatically as the result of low water pressure. The fire pumps obtain water from the ground level tank. The fire pumps take suction at the bottom of the tank and have access to all 400,000 gallons, while the domestic water

pumps take suction approximately eight feet from the bottom of the tank. This limits the domestic water pumps to the top 300,000 gallons and reserves the bottom 100,000 gallons strictly for the fire pumps only. This system is capable of providing sufficient water at sufficient volume and pressure for sprinkler systems.

G-5a(2) Automatic Sprinklers

Automatic sprinklers are an effective means of fire protection, and will extinguish or contain most fires. Major buildings and processing areas are protected by heat-activated automatic sprinkler systems. The automatic sprinklers release water when heat at the sprinkler head reaches a predetermined temperature. Emergency response personnel will immediately proceed to the area where an automatic sprinkler system is activated and take appropriate actions.

The following building is fully equipped with a dry pipe sprinkler system:

- Boiler Plant (Building 93A – will be used from November through December 2004 to repackage containers of mixed waste)

Dry pipe sprinklers located inside each hazardous waste storage locker are plumbed to an outside Fire Department connection. The system can be activated by connection to a fire truck.

G-5a(3) Fire Extinguishers

CLASSES OF FIRE EXTINGUISHERS

Fires are placed in one of four classes according to the type of fuel involved. The class of fire determines the method of extinguishment and, for this reason, all fire extinguishers are marked according to class. The various classes of fires are as follows:

- **Class A** fires involve ordinary combustibles such as wood or paper. These are most readily extinguished by removing the heat. Water extinguishers are best suited here. All-purpose dry chemical extinguishers may also be used.
- **Class B** fires involve flammable liquids such as gasoline or alcohol. Since these are liquid fires, the application of water may tend to "float" the fire away. The best method of extinguishment here is to remove the oxygen. Carbon dioxide, foam, or dry chemical extinguishers are best suited for Class B fires.
- **Class C** fires involve energized electrical equipment. Since some extinguishing agents conduct electricity and the best method of extinguishment is to remove the oxygen, carbon dioxide and dry chemicals are recommended here. An electrical fire, if the electricity can be turned off, is usually **Class A** and can be easily extinguished.
- **Class D** fires involve certain combustible metals such as magnesium which require specific extinguishing compounds to put them out.

Table G-4, Types of Pressurized Fire Extinguishers, describes the four types of pressurized fire extinguishers used at the FCP and lists typical applications and limitations for each type of extinguisher.

G-5a(4) FCP Emergency Response Equipment

HEAVY EQUIPMENT

The following equipment, although not designated specifically for emergency use, is available to support emergency response activities if needed:

- flatbed trucks
- dump trucks
- tow tractors
- semi-trailers

- semi-tractors
- tank truck
- industrial trucks
- industrial hand stackers
- locomotive engine
- front end loaders
- bulldozers
- road grader
- cranes
- back hoe
- cement mixer
- portable generator
- numerous tractors, pickup trucks, and small vehicles
- vacuum tanker truck, "Super Sucker"
- water sprayer truck

G-5b Spill Control and Monitoring Equipment

Spill Control and Emergency Spill Response Equipment

Spill response equipment is available for use at the FCP. Stockpiles of absorbent material (such as clay absorbent and spill booms or absorbent pillows called "PIGS") are located at each storage facility and at certain satellite accumulation points. Runoff can be diverted by temporary diking to prevent entry into the storm sewer. Contents from the storm sewer system can be diverted and held in the Stormwater Retention Basin to control offsite releases.

MONITORING EQUIPMENT

Equipment used to monitor for contamination, explosive atmospheres, and hazardous releases is located in specific locations within the various remediation projects. This equipment includes; detector tubes, air sampling equipment, explosive gas detectors, chemical analyzers and personal dosimeters.

G-5c Alarm and Electronic Monitoring Systems

Descriptions of alarm systems for areas used to manage hazardous waste are included in Attachment G-1. Automatic electronic alarm and monitoring systems consist of the Honeywell D-1000 System and the Meteorological Tower Monitors.

HONEYWELL D-1000 SYSTEM

This centralized, computer-controlled system has two main parts:

- (A) Multiplex, Digital Alarm System
 - (1) Remotely monitors activation of alarm sensors throughout the plant.
 - (2) Signals are converted by the Delta-1000 microprocessor to plain language messages.
 - (3) The CRT display includes:
 - Alarm type
 - Signal number
 - Location
 - Action to be taken by Communications Center personnel
 - (4) Alarm sensors monitor the following:
 - Fire alarms
 - Sprinkler system
 - Smoke alarms
 - Radiation detection alarms
 - Supervisory alarms, including tampering, equipment, malfunction, and pressure varieties
 - Process alarms for temperature and gas detection

- (B) Audible Alarm System
 - (1) Activated by Communications Center or Honeywell System automatically.

METEOROLOGICAL TOWER MONITORS

- (A) Meteorological information collected includes wind speed and direction.
- (B) Information is used to calculate plume direction during a radiological or gaseous hazardous materials emergency.
- (C) Monitors displaying near real-time conditions are located in the Communications Center and Trailer T-76 along with computer plume models.
- (D) Communications Center personnel can relay the information to the Emergency Coordinator (AEDO). National Weather Service information is available in case back-up data is needed.

G-5d Communication System

The FCP utilizes other special radios, receivers, telephones and monitoring equipment, in addition to the Alarm Systems described in the previous section. The following communications and monitoring equipment is located in the FCP Communication Center and is operated by Communications Center personnel on duty, seven days a week:

TWO-WAY RADIOS

The FCP utilizes eight separate high-band radio frequencies.

RADIO RECEIVERS

These include the following:

- Radio receiver to monitor Crosby Township Fire Department, and

SPECIAL TELEPHONES AND TELEPHONE SERVICE

These include the following:

- Emergency telephone number 911 (also 6511)
- Emergency message system through which the Communications Center furnishes information to onsite personnel relative to emergencies and general information.
- Mobile and cellular radio telephones utilized by the Security vehicles.

G-5e First Aid and Medical Supplies

G-5e(1) Emergency Treatment

Personnel are provided first aid treatment in the emergency treatment room in T195. A doctor is normally on duty and nurses are always on duty during the day shift, Monday through Friday. First aid and/or arrangements for transporting ill or injured personnel for treatment is provided at other times by Subcontracted Community Emergency Response Organization (who are state certified Emergency Medical Technicians). A minimum of one state certified Emergency Medical Technician is scheduled for each shift on site. Emergency personnel may be summoned by calling the Communications Center in an emergency.

G-5e(2) Ambulance Service - General

Injured or ill employees will be transported by FCP Subcontracted Community Emergency Response Organization's ambulance or through their mutual aid equipment to pre-designated area hospitals.

G-5e(3) Ambulance Service, 2nd and 3rd Shifts, Weekends, Holidays, Vacation Shutdown

Ambulance service is provided during second and third shifts, weekends, and holidays in the same manner as during regular day shift hours.

G-6 COORDINATION AGREEMENTS

A contract has been awarded to a local off-site emergency response agency. This agency is

responsible for the emergency response at the site when facility response can not mitigate the event. Any mutual aid agreements are the responsibility of the Subcontracted Emergency Response Organization. The Subcontracted Community Emergency Response Organization has signed mutual aid agreements with other agencies and/or have agreed to provide needed assistance to the FCP at local, county, state and federal levels. Attachment G-3 contains information regarding the contract with the Crosby Township Fire Department and Life Squad and the current letters of agreement with Mercy Franciscan Hospital–Mount Airy (formerly Providence Hospital) and University Hospital.

Off-site organizations have been provided information of facility layouts, associated hazardous areas, entrances to the facility and primary evacuation routes to facilitate emergency response. Hospitals have been familiarized with the types of injuries and illnesses which may potentially occur at the facility. In addition, off-site responders are provided with annually updated facility layouts, evacuation routes, floor plans, etc., and are invited to participate in joint emergency exercises conducted every three years (more often if changing conditions warrant).

The Incident Commander will request the call-in of additional mutual aid assistance as needed. Equipment dispatched for such requests operate under the immediate supervision of the responder's senior on-scene official, but under the general direction of the requester's senior on-site official. The Communications Center Operator, in the event of Contingency Plan Implementation and at the request of the Emergency Coordinator/AEDO, shall request additional assistance by calling one or more of the off-site organizations' telephone numbers listed in Table G-1; see Figure G-4 for interrelationships between these organizations.

G-7 EVACUATION PLAN

EVACUATION OF RCRA FACILITIES

Personnel will respond to voice warnings from a supervisor, audible alarms, or (when alone without supervision) to their own cognition of the events without the benefit of signals. As determined by the Emergency Coordinator/AEDO, personnel may have to evacuate to their rally point. Personnel will be instructed as to what action to take, if further movement is necessary. A discussion and maps of the evacuation routes and rally points are provided for each area used to manage hazardous waste in Attachment G-1.

GENERAL EVACUATION

All major emergencies require prompt and deliberate action. Following an established set of procedures is required, in the event of any major emergency, for the safe evacuation of personnel. In specific emergency situations, however, the Emergency Coordinator/AEDO may deviate from the procedures to provide a more effective plan for bringing the situation under control. The Emergency Coordinator/AEDO is responsible for advising Management of the necessity for any evacuation.

The following actions, in the event that a facility evacuation is required, will be taken by those present:

- (A) The Sitewide Alarm System will be activated at the Communications Center followed by an announcement over the emergency message system.
- (B) Employees shall carry out assigned responsibilities during an emergency shutdown. For example, individuals may have assignments to shut off fuel gas, water, steam, electricity and/or perform other special duties.
- (C) All employees will report to their predetermined rally point for accountability and further instruction. Should the emergency involve a nuclear criticality, all employees will report instead to the specific locations indicated in the Site Criticality Procedure.

G-8 REPORTS

Certain notifications and reports may be required by the regulatory authorities, in the event of an emergency that requires implementation of the Contingency Plan. Section G-4a describes the oral notifications and written reports required upon the implementation of the Contingency Plan. Any one or more of these reports may be required depending on the nature and extent of the emergency. Current record keeping/reporting procedures are maintained in the Operating Record.

G-8a Required Written Reports

GENERAL INCIDENT REPORTING

The FCP will note in its operating and event reporting records, the time, date, and details of any incident that requires implementation of this Contingency Plan. Within 15 days after an occurrence of an incident, a written report describing the implementation of the Contingency

Plan (Form B Notification to Ohio EPA of Implementation of Contingency Plan) is required to be submitted to the Ohio EPA by the FCP as outlined in Section G-4a. An example of Form B is shown in Figure G-10.

RESUMPTION OF OPERATIONS REPORTING

The State regulatory authority shall be notified of the readiness to resume hazardous waste operations by using Form C (Written Notice to Ohio EPA and Appropriate Local Authorities of Resumption of Hazardous Waste Operations). Prior to notification, the equipment must be returned to a clean and serviceable condition (as described in Section G-4h). An example of Form C is shown in Figure G-11.

G-9 AMENDING THE CONTINGENCY PLAN

The FCP will amend the plan and distribute amended copies, when any of the following occur:

- a) The plan fails in an emergency; or,
- b) The list of emergency coordinators changes; or,
- c) The list of emergency equipment changes; or,
- d) Changes in the facility increase the potential for fires, explosions, or releases of hazardous waste, or change the response necessary in an emergency.

Table G-1
Emergency Operation Personnel & Organizations

EMERGENCY COORDINATORS/ASSISTANT EMERGENCY DUTY OFFICERS

<u>NAME</u>	<u>HOME PAGER*</u>	<u>OFFICE</u>	<u>HOME ADDRESS</u>	<u>TELEPHONE</u>
David L. Jackson**	[REDACTED]	4036	[REDACTED]	[REDACTED]
Duckworth, R.	[REDACTED]	4749	[REDACTED]	[REDACTED]
Bierman, J	[REDACTED]	4749	[REDACTED]	[REDACTED]
McCool, D.	[REDACTED]	4749	[REDACTED]	[REDACTED]
Stacey, E.	[REDACTED]	4749	[REDACTED]	[REDACTED]

- * The most effective means for reaching the on-site Emergency Coordinator/AEDO is via pager, or Radio #202. The on duty Emergency Coordinator/AEDO may also be reached by:
- o radio through the 24-hour-staffed FEMP Communications Center
 - o office, (513) 648-4749,
 - o portable cellular telephone, (513) 484-2294, or
 - o mobile vehicle cellular telephone, (513) 484-2295, or (513) 484-2296

There is an Emergency Coordinator/AEDO on-site at all times, 24 hours per day, 365 days per year. The home addresses and telephone numbers of all Emergency Coordinator/AEDOs (and other Emergency Operations personnel as well) are available on-site from the Communications Center or the Emergency Operations Center, if, for some reason, an off-duty Emergency Coordinator/AEDO would need to be reached.

** D. Jackson is the Safety and Health Program Manager. The on-site/on-duty Emergency Coordinator/AEDO at the time of an incident will be the primary incident commander for that incident.

FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: TABLE G-1

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
PAGE 2 OF 4

Table G-1

OTHER

All Emergencies	(513) 648-6511
FEMP Communications Center.....	(513) 648-4444
DOE Site Office.....	(513) 648-3155
Security Office.....	(513) 648-5614
Medical Office	(513) 648-4433
Release Evaluator (Pager).....	(513) 303-3880
US EPA Region 5	(312) 353-2318
US EPA RCRA Hotline	(800) 424-9346

Table G-1

Off-Site Emergency Operation Organizations

OFF-SITE NOTIFICATION

DEPARTMENT OF ENERGY

- DOE Headquarters, Washington, D.C.....(202) 586-5000
- DOE Headquarters Emergency Operations Center (202) 586-8100
- DOE Ohio Field Office (513) 246-0021

STATE OF OHIO

- Ohio Emergency Management Agency (614) 889-7150
- Ohio EPA Emergency Response Center (Spill Reporting Hotline) (800) 282-9378
- Ohio EPA Columbus (Division Emergency Remedial Response) (614) 644-2924
- Ohio EPA Southwest District Office (937) 285-6357
or (800) 686-8930
- Ohio Department of Health (614) 466-3543
- Ohio State Highway Patrol (513) 863-4606
- Ohio State Fire Marshall (800) 686-0736

HAMILTON COUNTY

- Communications Center Emergency - 911
(513) 825-2280
- Emergency Management Agency (Emergency Operations Center)..... (513) 851-7080
- Hamilton Cty. Dept. of Environ. Svces., Air Quality Pgms. (513) 946-7777
- Southwest Local School District (513) 367-4139
- Sheriff's Department (513) 825-2280

BUTLER COUNTY

- Sheriff Dispatch..... (513) 887-3010
- Emergency Management Agency (Emergency Operations Center).....(513) 785-5810

Table G-1

Off-Site Emergency Operation Organizations

LOCAL FIRE DEPARTMENTS

Crosby Township	911 or (513) 385-8338
Ross Township	911 or (513) 728-2023
Colerain Township	911 or (513) 825-6143

EMERGENCY MEDICAL SERVICE

Colerain Township Fire Department.....	(513) 825-6143
Crosby Township Fire Department.....	(513) 385-8338
Franciscan MediCenter.....	(513) 367-2222
Mercy Franciscan Hospital – Mount Airy.....	(513) 853-5000
Mercy Hospital – Fairfield.....	(513) 870-7001
University Hospital.....	(513) 584-4571
University Air Care.....	(800) 826-8100 or (513) 584-7522

OTHER AGENCIES

Chemical Referral Center, CMA	(800) 262-8200
Coast Guard/DOT National Response Center	(800) 424-8802
N.O.A.A.....	(513) 283-3195
RCRA/EPCRA Superfund Call Center.....	(800) 424-9346
American Red Cross	(513) 579-3000
Chemtrec	(800) 424-9300

Table G-2

The FCP Emergency Organization Roster

EMERGENCY RESPONSE TEAM

Assistant Emergency Duty Officer/Emergency Coordinator
Subcontracted Community Emergency Response Personnel
Emergency Medical Technicians

ADDITIONAL SUPPORT PERSONNEL to the EMERGENCY RESPONSE TEAM

Radiological Safety Technicians (As Needed)
Industrial Hygiene Technicians (As Needed)

ADDITIONAL FIELD PERSONNEL

Operations Response

Plant Supervisors
Facility Owner
Operations Personnel

Security Response

Shift Lieutenant
Security Officers
Security Support Group

COMMUNICATIONS CENTER

Communication Technician

EMERGENCY OPERATIONS CENTER

Emergency Duty Officer
DOE Site Manager
Emergency Director
Emergency Management Advisor
Deputy Emergency Director
Safety and Health Advisor
Operations Advisor
Environmental Advisor
Public Information Advisor
Security Advisor
DOE Liaison
Off-site Notification Officer (2)
Field Communicator
Information Plotters
Runners
Historian
Administrative Support

FERNALD CLOSURE PROJECT
 FERNALD, OHIO
 EPA ID NO. OH6890008976
 SECTION G: TABLE G-3

RCRA PART B PERMIT APPLICATION
 FCP REVISION 9.1 10/04
 PAGE 1 OF 1

Table G-3
Emergency Respiratory Equipment

<u>DESCRIPTION</u>	<u>TYPICAL APPLICATION</u>	<u>LIMITATIONS</u>
<p>Air-purifying full-face MSA Ultratwin respirator equipped with cartridges approved for HF, organic vapors, acid gases, ammonia, amines, formaldehydes, radionuclide aerosols not exceeding 100 times DOE limits in 10 CFR 835 or other highly toxic particulates.</p>	<p>Environments containing relatively low HF concentrations, radionuclides or other highly toxic particulate contaminants including UF₆.</p>	<p>Only approved for relatively low concentrations of gases, vapors, and particulate contaminants. Wearers must be satisfactorily fit-tested prior to use.</p>
<p>Airline full-face mask respirator or hooded airline respirator.</p>	<p>Environments containing relatively high but not immediately dangerous to life and health (IDLH) concentrations of contaminants.</p>	<p>Requires CGA-Grade D breathing air supply. Length of airline hose station and wearer must not exceed 300 feet. May only be used in confined spaces when equipped with 5-minute compressed air escape bottle.</p>
<p>Full-faced self-contained breathing apparatus (SCBA) or positive pressure supplied air respirator equipped with 5-minute compressed air escape bottle.</p>	<p>Environments with IDLH or unknown concentrations of air contaminants.</p>	<p>Air supply in (SCBA) air bottle is limited to 30 or 60 minutes. This equipment must be used in 2-man teams, with at least one additional worker outside IDLH area (two workers outside area for fire-fighting). Wearer must be judged physically fit enough to wear 40 pound SCBA and protective clothing. Wearers must also be trained and drilled in use of this equipment.</p>

NOTE: All personnel must be fit-tested for the proper size of respirator before use. A training session must also be attended prior to fit-testing on the types and uses of equipment available.

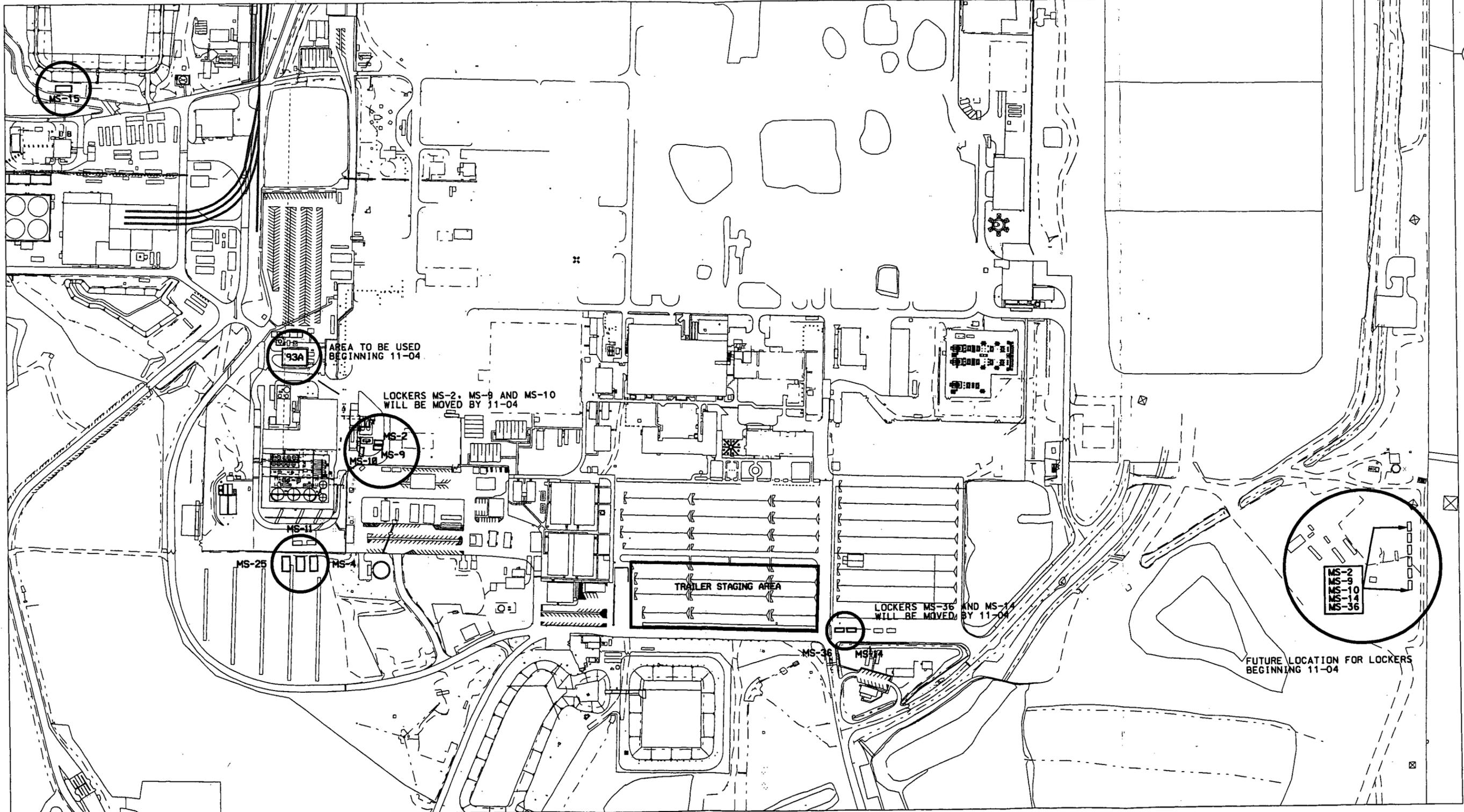
FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: TABLE G-4

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
PAGE 1 OF 1

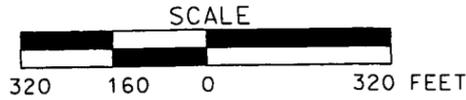
Table G-4

Types of Pressurized Fire Extinguishers

<u>DESCRIPTION</u>	<u>TYPICAL APPLICATION</u>	<u>LIMITATIONS</u>
Pressurized water	Class A fires including wood, paper, trash, etc.	Not suitable for flammable liquid (Class B), electrical (Class C), or metal (Class D) fires.
Pressurized CO ₂	Flammable liquid (Class B) and electrical (Class C) fires.	Not suitable for Class A or Class D fires.
Pressurized dry chemical	Paper, wood, some plastics (Class A) Flammable liquid (Class B) and electrical (Class C) fires.	Not suitable for Class D fires.
Pressurized MetL-X	Metal (Class D) fires.	For metal fires only.



DRAFT



LOCATION MAP

FIGURE G-2

FCP EMERGENCY RESPONSE ORGANIZATION

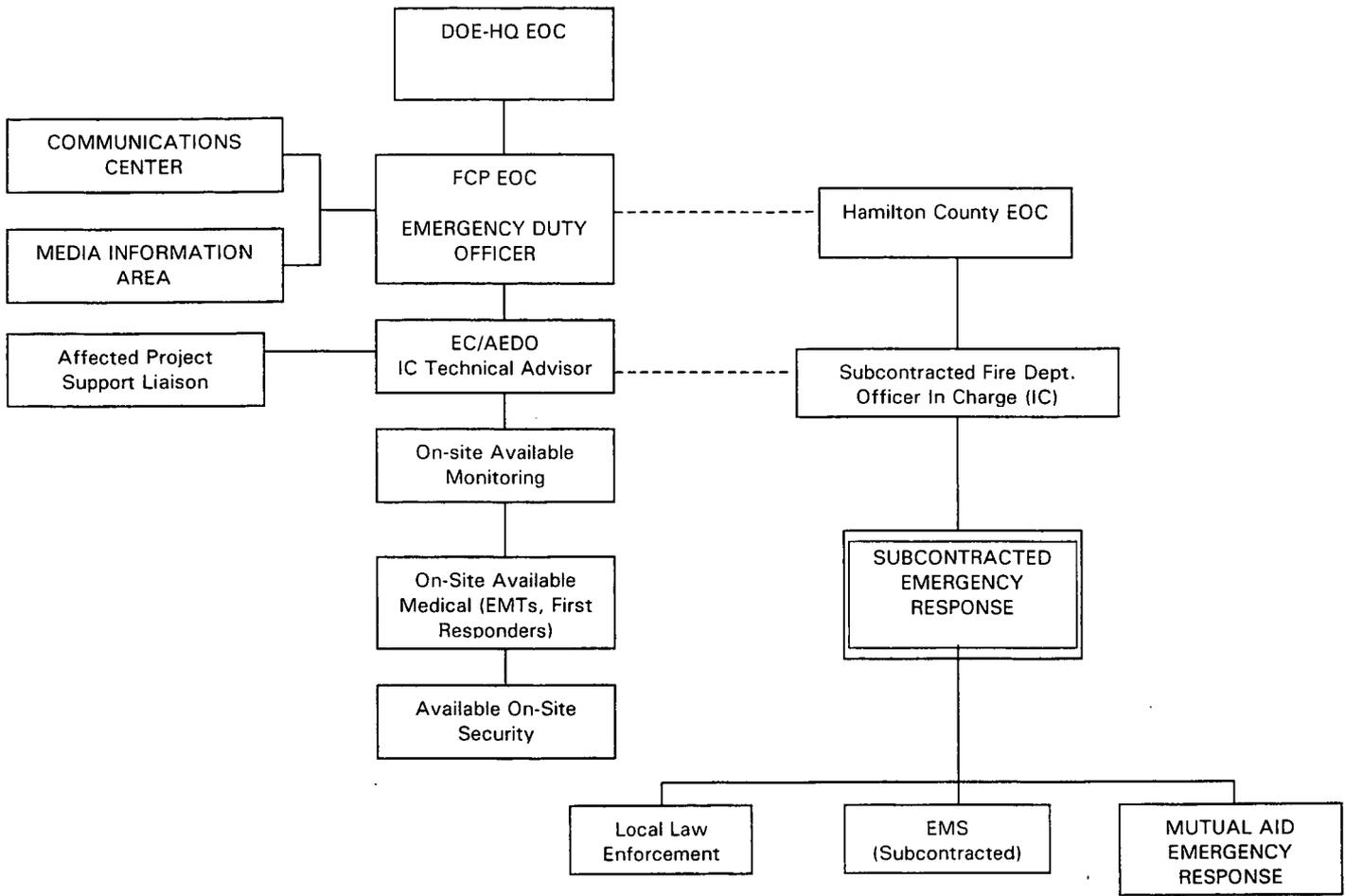


FIGURE G-3

EMERGENCY COORDINATION FLOW

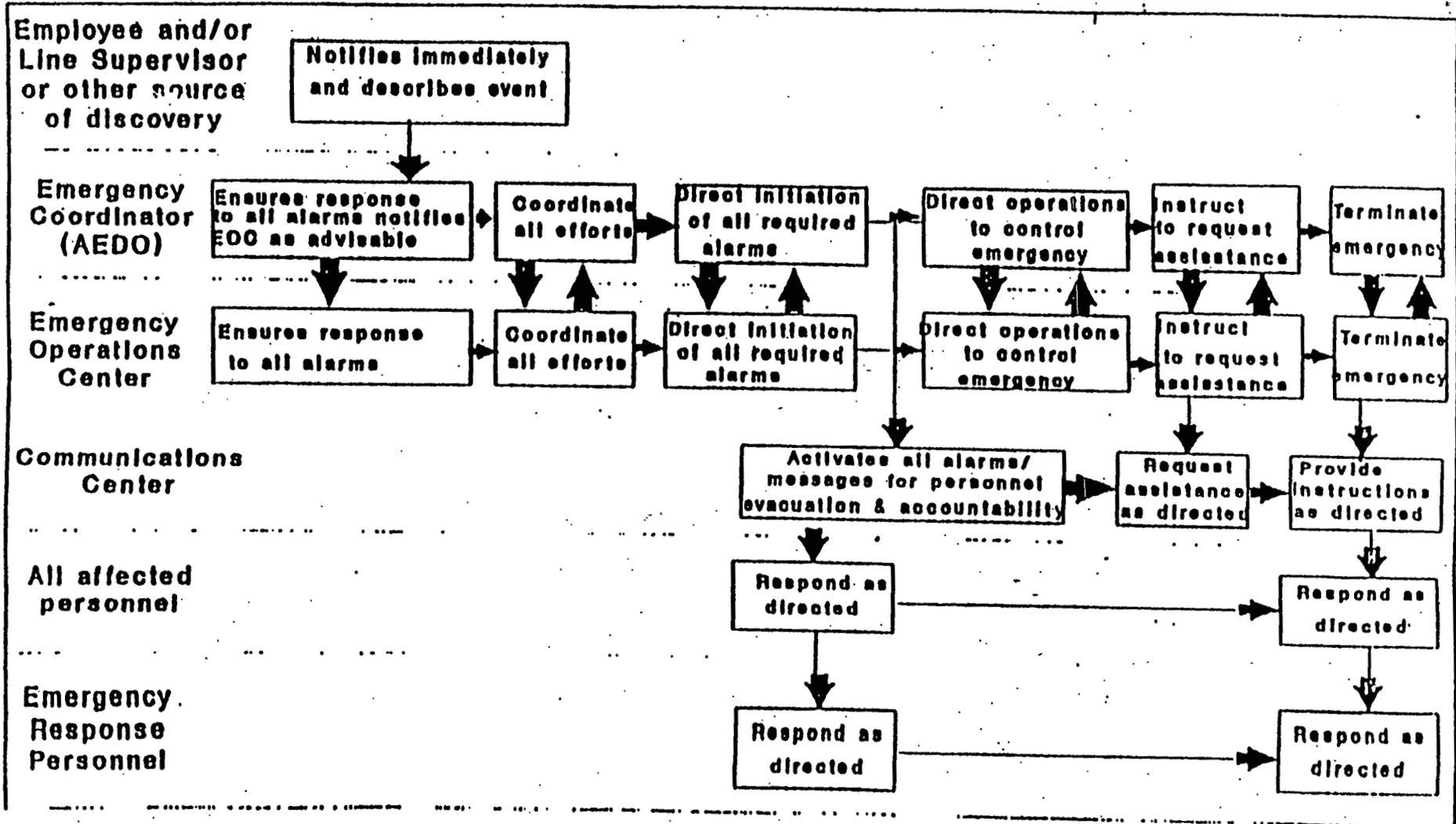


FIGURE G-3.1

Training and Participation Requirements

	Drills & Exercises	EMT – State of Ohio	Firefighter -NFPA	HazMat -NFPA	Incident Command	GET/HAZ WOPER	EOC Staff
Administrative Support							
AEDO							
Comm Center Staff							
Emergency Director							
Employees							
Deputy Emergency							
DOE-FCP Manager							
DOE Liaison							
Environmental Advisor							
EOC (County & State)	Invited					Invited	
Field Communicator							
Historian							
Information Officer							
Medical Staff							
Monitoring Teams							
Responders	Invited	Invited	Invited	Invited	Invited		
Off-Site Notification							
Operations							
Plotter							
Public Information							
Safety & Health							
Security							
Visitors							
Key	Full participation req'd			Some participation			Invited

Figure IS NOT intended to be inclusive of all training that may be required for each position.

FIGURE G-4

5715

Requirements for Notification and Reporting

Notifications and Reporting	Non Emergency			Emergency		
	Loggable Event	Off Normal	Unusual	Alert	Site Area	General
Notification Requirements						
AEDO	Consults with EDO			Activates EOC		
Butler County	Notification by Agreement			15 Minutes		
DOE-Fernald			2 Hours			
DOE-HQ						
DOE-OH						
EDO	Consults with AEDO			Activates EOC		
Hamilton County	Notification by Agreement			15 Minutes		
Occurrence Reporting Team		6 Working hours				
Public Affairs	24 Hours or next working day			EOC		
Release Evaluator	Notified Immediately for Spills only					
State of Ohio				15 Minutes		
Reporting Requirements						
AEDO Log	All events entered in daily log					
Notification Report		Required for all events				
Daily Operations Report						
Final Report						

Effective Date:

12-1-1995

FIGURE G-5.2

GENERAL DESCRIPTION

Operational Emergency levels and four types of actions are described in the FEMP EAL Guides:

Radiological Events - Criteria

Radiological Events	Alert	Site Area	General
<p>Criteria</p>	<p>Loss of accountable special nuclear material</p> <p>Unplanned release of radioactive material projected to result in an exposure at the facility boundary ≥ 100 mrem TEDE but < 1 rem TEDE</p> <p>Unplanned breach of Silos 1, 2, or 3 resulting in a projected exposure at the facility boundary ≥ 100 mrem TEDE but < 1 rem TEDE</p>	<p>Unplanned release of radioactive material projected to result in an exposure at the facility boundary ≥ 1 rem TEDE</p> <p>Unplanned breach of Silos 1, 2, or 3 resulting in a projected exposure at the facility boundary ≥ 1 rem TEDE</p>	<p>Unplanned release of radioactive material projected to result in an exposure at the site boundary ≥ 1 rem TEDE or ≥ 5 rem thyroid.</p>
<p>Onsite - Protective Actions</p>	<p>Shelter in place if possible, evacuate immediate danger area</p> <p>Rally point accountability</p> <p>Employee announcement</p> <p>Bioassay at termination</p>		
<p>Offsite - Protective Actions</p>	<p>Update counties and state regularly</p> <p>Monitoring onsite and/or offsite</p>		<p>Activate offsite warning system</p> <p>Issue Protective Active Recommendations</p> <p>Implement RCRA plan applicable</p>
<p>Event Mitigation Actions</p>	<p>Contain event</p> <p>Isolate area</p> <p>Terminate release</p> <p>Monitor onsite/offsite</p> <p>Clean up</p>		
<p>Response Groups</p>	<p>Emergency Duty Officers</p> <p>Emergency Operations Center</p> <p>Monitoring teams</p> <p>Security (Recall)</p> <p>Medical (Recall)</p> <p>Emergency Response Team (Recall)</p> <p>Mutual Aid (as needed)</p>		

FIGURE G-5.2

9715

Hazardous Material Events - Criteria

Hazardous Material Events	Alert	Site Area	General
<p>Criteria</p>	<p>Unplanned release of a hazardous substance resulting in a projected airborne concentration at the facility boundary \geq ERPG-1 and $<$ ERPG-2. If ERPG values are not available, projected airborne concentration at the facility boundary \geq TEEL-1 and $<$ TEEL-2 values.</p>	<p>Unplanned release of a hazardous substance resulting in a projected airborne concentration between the facility boundary and the site boundary is \geq ERPG-2. If ERPG values are not available, \geq TEEL-2.</p>	<p>Unplanned release of a hazardous substance resulting in a projected airborne concentration at the site boundary is \geq ERPG-2. If ERPG values are not available, \geq TEEL-2.</p>

FIGURE G-5.2

5715

Hazardous Material Events - Actions

Hazardous Material Events	Alert	Site Area	General
Onsite - Protective Actions	Shelter in place if possible, evacuate immediate danger area. Rally point accountability. Employee announcement. Bioassay at termination.		
Offsite - Protective Actions	Update counties and state regularly. Monitoring onsite and/or offsite.		Activate offsite warning system. Issue Protective Active Recommendations.
Event Mitigation Actions	Contain event. Isolate area. Terminate release. Monitor onsite/offsite. Implement RCRA plan applicable. Clean up.		
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)		

FIGURE G-5.2

5715

Health & Safety - Criteria

Health & Safety	Operational Emergency
Criteria	<p>The following events or conditions represent, cause, or have the potential to cause serious health and safety impacts to workers or members of the public.</p> <p>Radioactive or other hazardous material contamination that is causing or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria.</p> <p>An offsite hazardous material event not associated with DOE operations that is observed to have or is predicted to have an impact on a DOE site such that protective actions are required for onsite DOE workers.</p> <p>An occurrence that causes or can reasonably be expected to cause significant structural damage to DOE facilities, with confirmed or suspected personnel injury or death or substantial degradation of health and safety.</p> <p>Any facility evacuation in response to an actual occurrence that requires time-urgent response by specialist personnel, such as hazardous material responders or mutual aid groups not normally assigned to the affected facility.</p> <p>Any non-transportation-related mass casualty event.</p>

Effective Date:

05-1-1995

Health & Safety - Actions

Health & Safety	Operational Emergency	
Onsite - Protective Actions	Shelter in place if possible, evacuate immediate danger area Rally point accountability Employee announcement Bioassay at termination	
Offsite - Protective Actions	Update counties and state regularly Monitoring onsite and/or offsite	Activate offsite warning system Issue Protective Active Recommendations Implement RCRA plan applicable
Event Mitigation Actions	Contain event Isolate area Terminate release Monitor onsite/offsite Clean up	
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)	

Environmental - Criteria

Environmental	Operational Emergency
<p>Criteria</p>	<p>The following events or conditions represent, cause, or have the potential to cause <i>serious detrimental effects on the environment.</i></p> <p>Any actual or potential release of dispersible hazardous material or regulated pollutant to the environment, in a quantity greater than five times the Reportable Quantity (RQ) specified for such material in 40 CFR 302, that could result in significant offsite consequences such as major wildlife kills, wetland degradation, aquifer contamination, or the need to secure downstream water supply intakes.</p> <p>Any release of greater than 1,000 gallons (24 barrels) of oil to inland waters; greater than 10,000 gallons (238 barrels) of oil to coastal waters; or a quantity of oil that could result in significant off-site consequences (e.g., need to relocate people, major wildlife kills, wet-land degradation, aquifer contamination, need to secure downstream water supply intakes, etc.) [Oil as defined by the Clean Water Act (33 U.S.C. 1321) means any kind of oil and includes petroleum.]</p>

Environmental - Actions

Environmental	Operational Emergency	
<p>Onsite - Protective Actions</p>	<p>Shelter in place if possible, evacuate immediate danger area Rally point accountability Employee announcement Bioassay at termination</p>	
<p>Offsite - Protective Actions</p>	<p>Update counties and state regularly Monitoring onsite and/or offsite</p>	<p>Activate offsite warning system Issue Protective Active Recommendations Implement RCRA plan applicable</p>
<p>Event Mitigation Actions</p>	<p>Contain event Isolate area Terminate release Monitor onsite/offsite Clean up</p>	
<p>Response Groups</p>	<p>Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)</p>	

Offsite Transportation Events - Criteria

Offsite Transportation Events	Operational Emergency
Criteria	Transportation accident involving a shipment of hazardous or radiological material originating from the FEMP in which the integrity of the shipment is in doubt or cannot readily be determined.

Offsite Transportation Events - Actions

Offsite Transportation Events	Operational Emergency
Protective Actions	Offer Protective Action Recommendations to IC Update counties and state regularly in appropriate jurisdiction. Monitoring at event scene (if requested)
Event Mitigation Actions	Support local jurisdictions Public Information Officer Monitoring at event scene (if requested) Contain event (local event) Isolate area (local event) Terminate release (local event) Clean up (local event)
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Medical (local event) Emergency Response Team (local event)

8-128

FIGURE G-5.2

5715

Safeguards & Security Events - Criteria

Safeguards & Security Events	Operational Emergency
Criteria	<p>The following events or conditions represent, cause, or have the potential to cause degradation of security or safeguards conditions with actual or potential direct harm to people or the environment.</p> <p>Actual unplanned detonation of an explosive device or a credible threatened detonation resulting from the location of a confirmed or suspicious explosive device.</p> <p>Any actual confirmed dissemination/contamination or a credible threat to the site by the use of biological or chemical agents resulting from a malevolent act.</p> <p>An actual terrorist attack or sabotage event involving a DOE site/facility or operation.</p> <p>Kidnapping or the taking of hostage(s) involving a DOE site/facility or operation.</p> <p>Actual theft or loss of a Category I or II quantity of Special Nuclear Materials or other hazardous material that, if released, could endanger workers, the public, or the environment.</p> <p>Damage or destruction of a site or facility by natural or malevolent means sufficient to expose classified information to unauthorized disclosure.</p>

Safeguards & Security Events - Actions

Safeguards & Security Events	Operational Emergency
Onsite - Protective Actions	<p>Shelter in place if possible, evacuate immediate danger area. Rally point accountability. Employee announcement. Implement search procedures. Restrict radio communications.</p>
Offsite - Protective Actions	None
Event Mitigation Actions	<p>Implement PL-3055 Female Physical Protection Security Plan Isolate area.</p>
Response Groups	<p>Emergency Duty Officers Emergency Operations Center Security (Recall) Assistance from local law enforcement or FBI</p>

Other Events - Criteria

Other Events	Operational Emergency
Criteria	Anytime the AEDO/EDO or DED/ED determine that conditions warrant the declaration of an Operational Emergency

Other Events - Actions

Other Events	Operational Emergency	
Onsite - Protective Actions	Shelter in place if possible, evacuate immediate danger area Rally point accountability Employee announcement Bioassay at termination	
Offsite - Protective Actions	Update counties and state regularly Monitoring onsite and/or offsite	Activate offsite warning system Issue Protective Active Recommendations Implement RCRA plan applicable
Event Mitigation Actions	Contain event Isolate area Terminate release Monitor onsite/offsite Clean up	
Response Groups	Emergency Duty Officers Emergency Operations Center Monitoring teams Security (Recall) Medical (Recall) Emergency Response Team (Recall) Mutual Aid (as needed)	

Figure G-7

5715

Activation methods for all elements of the Emergency Response Organization

Emergency Response Organization Elements	Pager Group(s)	Activation Method		Approximate Response Time	
		Primary	Backup	Onsite	Offsite
AEDO	All	ERT Pager or radio	Pager, EMS or telephone	Immediate upon notification	Variable, < 45 minutes
EDO	1 & 2	Pager	Telephone		
EOC Staff	1 and/or 2				
Security and Accountability	4	ERT Pager or radio	Pager, EMS or telephone		
Monitoring Team	5	Pager	Telephone		
Release Evaluator	None	Pager	Telephone		
Public Affairs	1 & 2	Pager	Telephone		
Offsite Responder	N/A	Crosby Twp. Radio otherwise telephone request	Radio request	Onsite in 10 to 30 minutes	

5/15

FORM A

Figure G-9

OHIO HAZARDOUS WASTE RELEASE
FIRE, EXPLOSION REPORT TO OHIO EPA
OAC 3745-54-56(D)(2)

Ohio EPA

800-282-9378

1. Name of Reporter _____
2. Telephone Number of Reporter _____
3. Date of Incident _____
4. Time of Incident _____
5. Type of Incident _____
6. Name of Materials to Extent Known _____
7. Quantity of Materials to Extent Known _____
8. Extent of Injuries, If Any _____
9. Possible Hazards to Human Health or the Environment Outside Facility _____

EXAMPLE

DATE AND TIME OF CALL AND PERSON RECEIVING CALL

Ohio EPA

Date _____ Time _____ Person _____

5715

FORM B

Figure G-10

NOTIFICATION OF OHIO EPA OF IMPLEMENTATION OF CONTINGENCY PLAN
OAC 3745-54-56(J)

(Date)

, Director
Ohio EPA
1800 WaterMark Drive
P. O. Box 1049
Columbus, Ohio 43266-0149

SUBJECT: NOTIFICATION OF IMPLEMENTATION OF FEMP OHIO HAZARDOUS
WASTE CONTINGENCY PLAN - OAC 3745-54-56(J)

Dear :

The following information is being submitted by the U.S. Department of Energy (DOE) pursuant to OAC 3745-54-56(J). On _____, an incident occurred at the Fernald Environmental Management Project (FEMP) which required the implementation of the site's Ohio Hazardous Waste Contingency Plan. The contents of this notice are based on the best available information known at this time.

1. Name, Address, Telephone Number of Owner

U. S. Department of Energy
Office of Environmental Restoration and Waste Management
1000 Independence Avenue Southwest
Washington, D. C. 20585
(202) 586-5000

2. Name, Address, Telephone Number of Facility

Fernald Environmental Management Project - Site Address
7400 Willey Road
Fernald, Ohio 45030
(513) 738-6200

Fernald Office - Mailing Address
U. S. Department of Energy
P.O. BOX 398705
Cincinnati, Ohio 45239-8705
(513) 738-6200

3. Date of Incident _____

4. Time of Incident _____

5. Type of Incident _____

6. Name of Materials Involved _____

7. Quantity of Materials Involved _____

8. Extent of Injuries, If Any _____

9. Assessment of Actual or Potential Hazards to Human Health or the Environment, If Applicable

10. Estimated Quantity and Disposition of Recovered Material that Resulted from the Incident

EXAMPLE

Signature

Title

WRITTEN NOTICE TO OHIO EPA AND APPROPRIATE LOCAL AUTHORITIES
OF RESUMPTION OF HAZARDOUS WASTE OPERATIONS
OAC 3745-54-56(F)

(Date)

(Ohio EPA, Hamilton & Butler County Planning Committees)

SUBJECT: NOTIFICATION OF RESUMPTION OF HAZARDOUS WASTE
OPERATIONS - OAC 3745-5456(F)

This notice is being made to comply with the requirements of OAC 3745-54-56. On _____, there was an OAC 3745-54-56 Emergency Incident at the Federal Environmental Management Project (FEMP) site. The U.S. Department of Energy (DOE) expects to resume operation in the affected areas of the facility _____.

No waste which was incompatible with the released materials was treated, stored or disposed of until clean-up procedures were completed. All emergency equipment used in the affected area listed in the contingency plan has been cleaned and fit for its intended use.

Signature

Title

5715

ATTACHMENT G-1

Emergency Procedures, Site Layout and Equipment Information

Attachment G-1 contains the description of evacuation procedures and general procedures to be followed in the event of an explosion, fire or spill, and a description of the evacuation routes and a listing of safety and emergency equipment for each area currently being used to manage hazardous waste.

These areas include the following:

- Hazardous Waste Storage Lockers (9 lockers; 4 locations) (Note: Beginning in November 2004, 5 of these lockers will be moved to one location – so this will become 9 lockers, 3 locations)
- Trailer Staging Area
- Boiler Plant (Building 93A)

General Information

Emergency procedures for areas used to manage hazardous waste are described specifically in this section. Responses to an event are identical for each unit and the details are given for the response to the three types of events:

- 1) an explosion;
- 2) a fire; or
- 3) a spill of hazardous waste

A response involves the action that endangered personnel must take when encountering an actual or potential explosion, fire, or spill. Personnel may have the knowledge and judgement to discern the severity of the situation. Personnel lacking knowledge sufficient to discern the severity of the situation should immediately move to a safe location and contact the Emergency Coordinator/AEDO. The categorization level of an EVENT may not reach an OPERATIONAL EMERGENCY level, and thus will not cause the implementation of this Contingency Plan. The situation may nevertheless warrant a protective and remediation response. For example, an incident that does not involve the Subcontracted Community Emergency Response Organization may be handled by personnel properly trained under the RCRA training curriculum; small spills or fires may be handled by immediate action of the individuals discovering the event. Even events that involve response by the Subcontracted Community Emergency

Response Organization, if the Emergency Coordinator/AEDO so determines, may not require implementation of this Contingency Plan. See Section G-3 and G-4c for guidelines the Emergency Coordinator/AEDO uses in determining implementation of this Contingency Plan. See Section G-4 of this Contingency Plan for general emergency response procedures.

EVACUATION & SAFETY PLAN

1. Purpose and Scope of the Contingency Plan

To protect the lives and property of all personnel inside and in the vicinity of an event at the FCP, and the prevention of environmental damage.

2. Reason for Activating the Contingency Plan

2.1 Explosion

- 2.1.1** Any employee who detects an actual or potential explosive situation in the vicinity should immediately alert all nearby workers unless the situation is self evident.
- 2.1.2** Pull the nearest fire alarm. Report the exact location of the explosion to the Communication Center by two-way radio or telephone (Direct line - call 911 or cell phone – call 648-6511), if an alarm box is not near.
- 2.1.3** Leave the area promptly by the least dangerous and most direct or designated route. Continue the escape by evacuating to the designated rally point (Figure G-1) before trying to make a radio report to summon emergency response personnel.
- 2.1.4** Using nearby emergency equipment may not be possible if it is in what appears to be the danger zone.
- 2.1.5** Report the nature of the problem and exact location to the Communication Center by two-way radio or telephone and wait for assistance from the emergency response personnel.

2.1.6 Supervisor or senior person in charge should take account of all personnel and summon immediate medical attention to seriously injured personnel.

2.1.7 Continue evacuation to the next safe rally point before taking account of all personnel, if it is evident that the explosion poses a threat to the designated Rally Point or if this rally point is downwind in the path of smoke or vapors.

2.1.8 Use any available and appropriate emergency equipment such as eyewash and shower, if exposed to fumes, smoke, or other hazardous physical irritations. Notify your supervisor and report to medical personnel in T195 immediately. Anyone who is aware of any exposure to a fellow worker should request immediate medical help for that person.

2.2 **FIRE**

2.2.1 Any employee who detects an actual or potential fire situation in the vicinity should immediately alert all nearby workers.

2.2.2 Pull the nearest fire alarm. Report the exact location of the fire to the Communication Center by two-way radio or telephone (Direct line - call 911 or cell phone - call 648-6511), if an alarm box is not near.

2.2.3 Use available fire fighting equipment to fight the fire until the Fire Department arrives if there is no immediate danger involved and you have proper training.

2.2.4 Immediately use available emergency equipment to provide first aid for burns and other minor injuries.

2.2.5 Supervisor or senior person in charge should take account of all personnel and summon immediate medical attention to seriously injured personnel.

2.2.6 Leave the building quickly and calmly by the least dangerous and most direct or designated route.

2.2.7 Evacuate to the designated rally point. Supervisor or senior person in charge

should take account of all personnel.

2.2.8 Continue evacuation to the next safe rally point, if this rally point is downwind in the path of smoke or fumes, before taking account of all of the personnel.

2.2.9 Use any available and appropriate emergency equipment such as eyewash and shower, if exposed to vapors, smoke, or other hazardous physical irritations. Notify your supervisor and report to medical personnel in T195 as soon as possible. Anyone who is aware of any exposure to a fellow worker should see that medical help is provided to that person.

2.3 HAZARDOUS WASTE SPILL INCIDENT

Initial Response

2.3.1 Any employee who detects an actual or potential hazardous waste spill situation in the vicinity should immediately alert all nearby workers.

NOTE: If exposed to waste materials, use appropriate emergency equipment such as eyewash and shower. Notify supervisor and report to Medical.

2.3.2 If time and conditions permit, conduct an initial evaluation, to determine the extent and seriousness of the event. Take immediate steps, if possible (without risk of injury), to control the source of the discharge, spill, or leak, or to prevent it from migrating. (This may involve such actions as shutting off equipment, closing valves, or using absorbent pads or pigs for blocking/diking).

NOTE: Employees without specific training or knowledge of the released material or equipment, should not take action to control the spill, which may put their safety, or that of others, at risk.

2.3.3 In the event of an emergency incident, contact the Emergency Coordinator/AEDO immediately and evacuate the area.

Hazardous Waste Spill Incident Notification

2.3.4 Promptly notify immediate supervision or Emergency Coordinator/AEDO in supervisor's absence, of the magnitude, location, status, and type of material spilled, as well as any other pertinent information.

2.3.5 For routine spill events/incidents, contact Radiological Safety and/or Industrial Hygiene technicians to perform monitoring and analyses of the spill incident, as necessary, in order to determine material hazards, monitor the extent of contamination, or to specify PPE requirements.

2.3.6 Initiate spill incident reporting/recording.

Hazardous Waste Spill Incident Cleanup

2.3.7 Ensure spill incident cleanup is conducted in accordance with Emergency Coordinator/AEDO's direction and guidance contained in procedures.

SAFETY EQUIPMENT

Areas used to manage hazardous waste are supplied with varying levels and amounts of safety equipment depending upon the use, occupancy, and contents of the unit. The remainder of Attachment G-1 lists the locations of safety and emergency equipment designated for each area. Only personnel with the appropriate training and experience shall utilize the specified safety equipment: fire extinguishers, respirators and protective clothing, and spill clean-up equipment.

HAZARDOUS WASTE STORAGE LOCKERS BY ADVANCED WASTE WATER TREATMENT FACILITY

Three hazardous waste storage lockers (MS-2, MS-6 and MS-10) are located east of the Advanced Waste Water Treatment Facility. These lockers may be used for the storage of containers of hazardous waste with and without free liquids and ignitable wastes.

Personnel should evacuate to Rally Point No. 12, located south of the Advanced Waste Water Treatment Facility (Building 51).

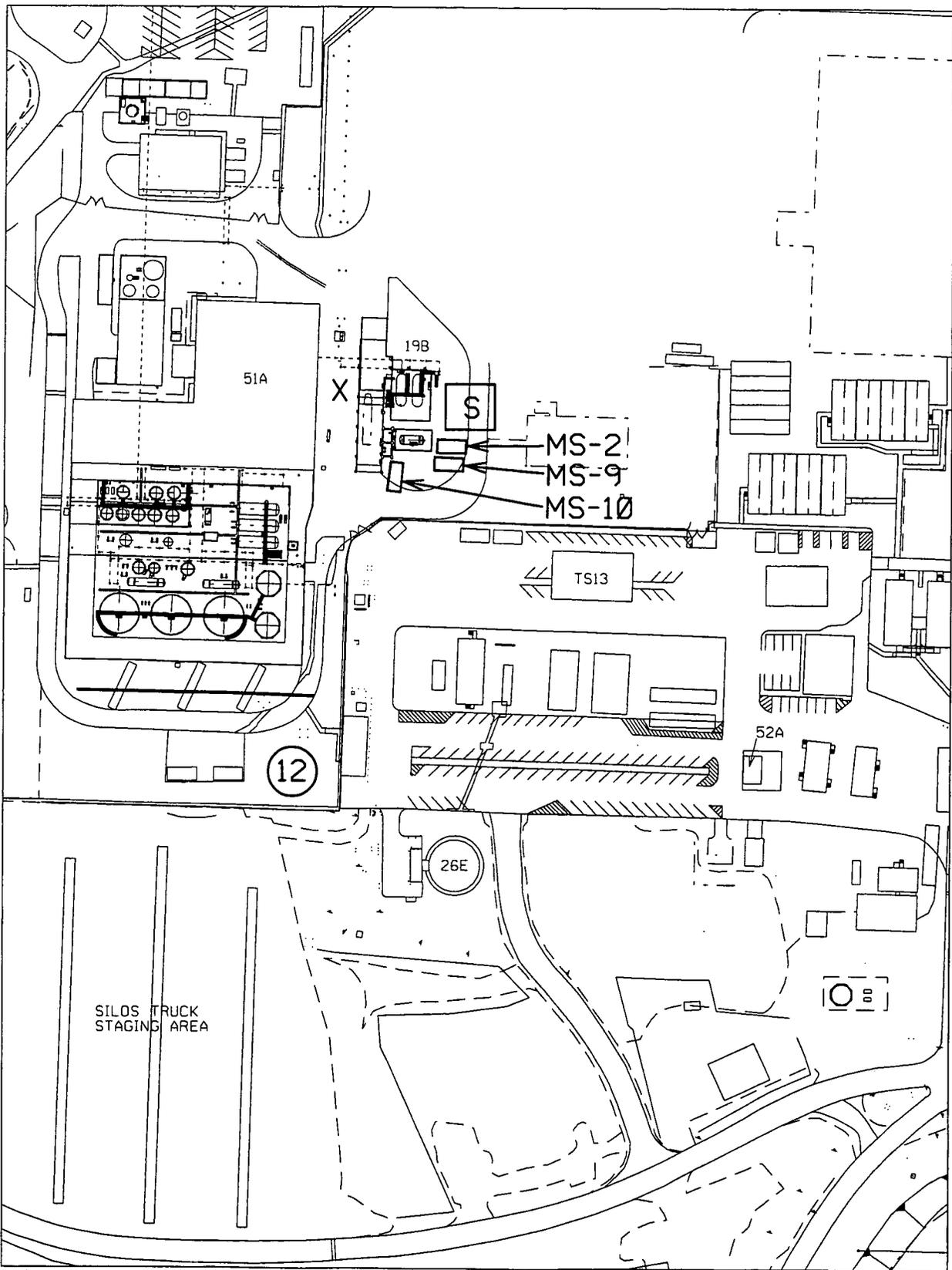
The following is a list of safety equipment assigned to this unit:

- Fire Extinguisher
 - 1) 10# ABC posted outside, west of the storage lockers

- Portable Eye Wash Station
 - 1) Available to personnel during operations

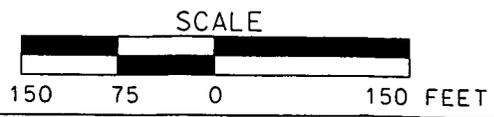
- Spill Cleanup Equipment
 - 1) One Portable spill kit located outside, north of MS-2

NOTE: These lockers are planned to be moved from this area in November 2004. The new location for these lockers will be on the east side of the site, south of Cell 8.



LEGEND:

- X FIRE EXTINGUISHER
- [S] SPILL CLEANUP EQUIPMENT
- (12) RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS BY AWWT

FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: CONTINGENCY PLAN - ATTACHMENT G-1

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
Page 7 Of 12

CLEAN-SIDE HAZARDOUS WASTE STORAGE LOCKERS

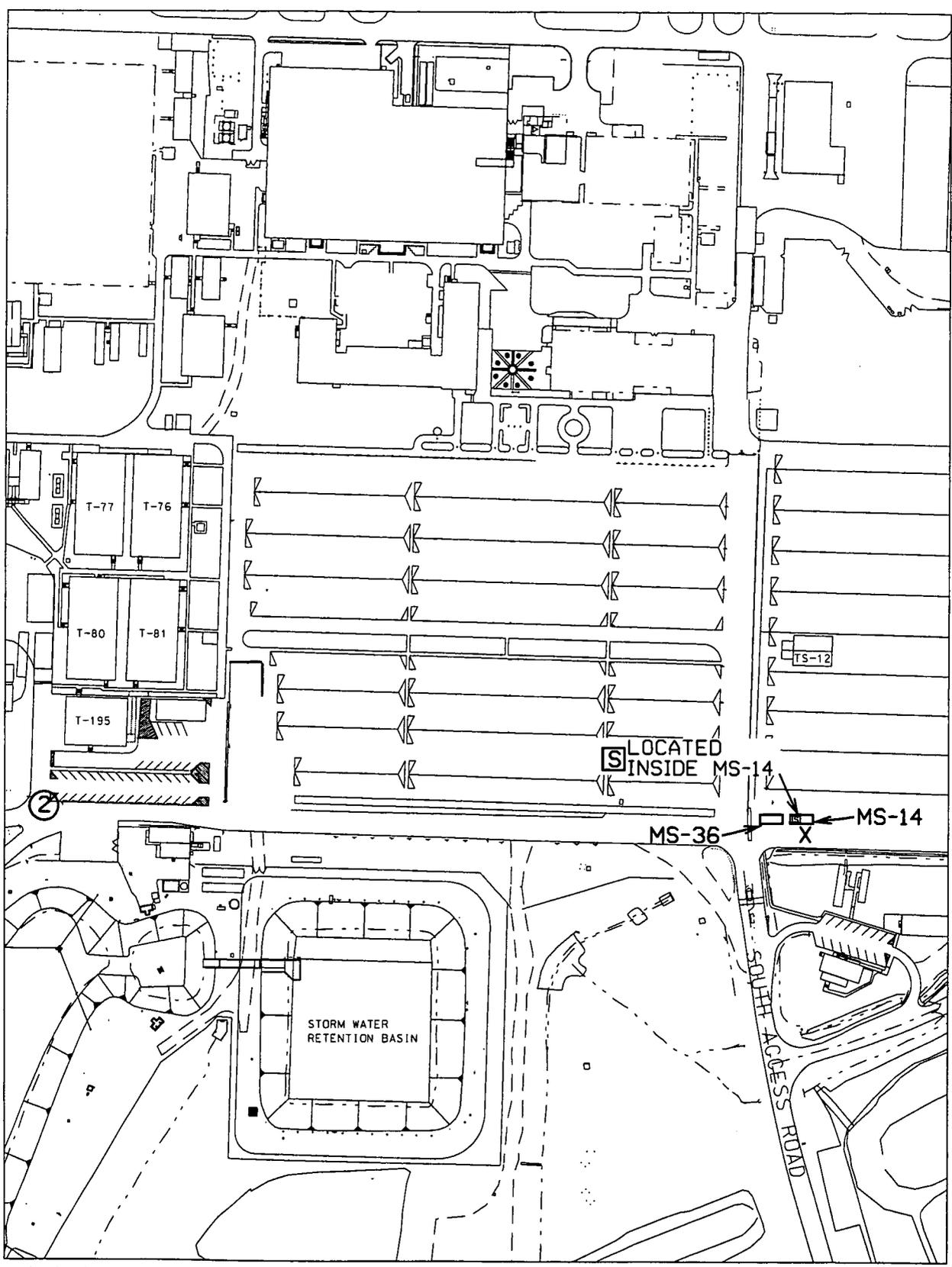
Two hazardous waste storage lockers (MS-14 and MS-36) are located at the southwest corner of the East Parking Lot. These lockers may be used for the storage of containers of hazardous waste with and without free liquids, PCBs and ignitable wastes.

Personnel should evacuate to Rally Point No. 2, located south of the Medical trailer (T-195).

The following is a list of safety equipment assigned to this unit:

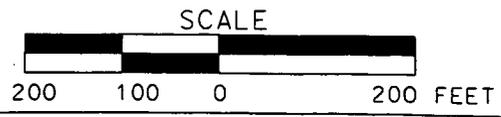
- Fire Extinguisher
 - 1) 10# ABC posted outside, on the south wall of MS-14
- Portable Eye Wash Station
 - 1) Available to personnel during operations
- Spill Cleanup Equipment
 - 1) One Portable spill kit located inside MS-14

NOTE: These lockers are planned to be moved from this area in November 2004. The new location for these lockers will be on the east side of the site, south of Cell 8.



LEGEND:

- X FIRE EXTINGUISHER
- [S] SPILL CLEANUP EQUIPMENT
- (2) RALLY POINT



CLEAN-SIDE HAZARDOUS WASTE STORAGE LOCKERS

FERNALD CLOSURE PROJECT
FERNALD, OHIO
EPA ID NO. OH6890008976
SECTION G: CONTINGENCY PLAN - ATTACHMENT G-1

RCRA PART B PERMIT APPLICATION
FCP REVISION 9.1 10/04
Page 8 Of 12

MIXED WASTE TRAILER STAGING AREA

Mixed waste containers may be temporarily staged in truck trailers in the southern half of the West Parking Lot prior to shipment. These trailers may contain mixed waste with and without free liquids, PCBs and ignitable wastes.

Personnel should evacuate to Rally Point No. 2, located south of the Medical trailer (T-195).

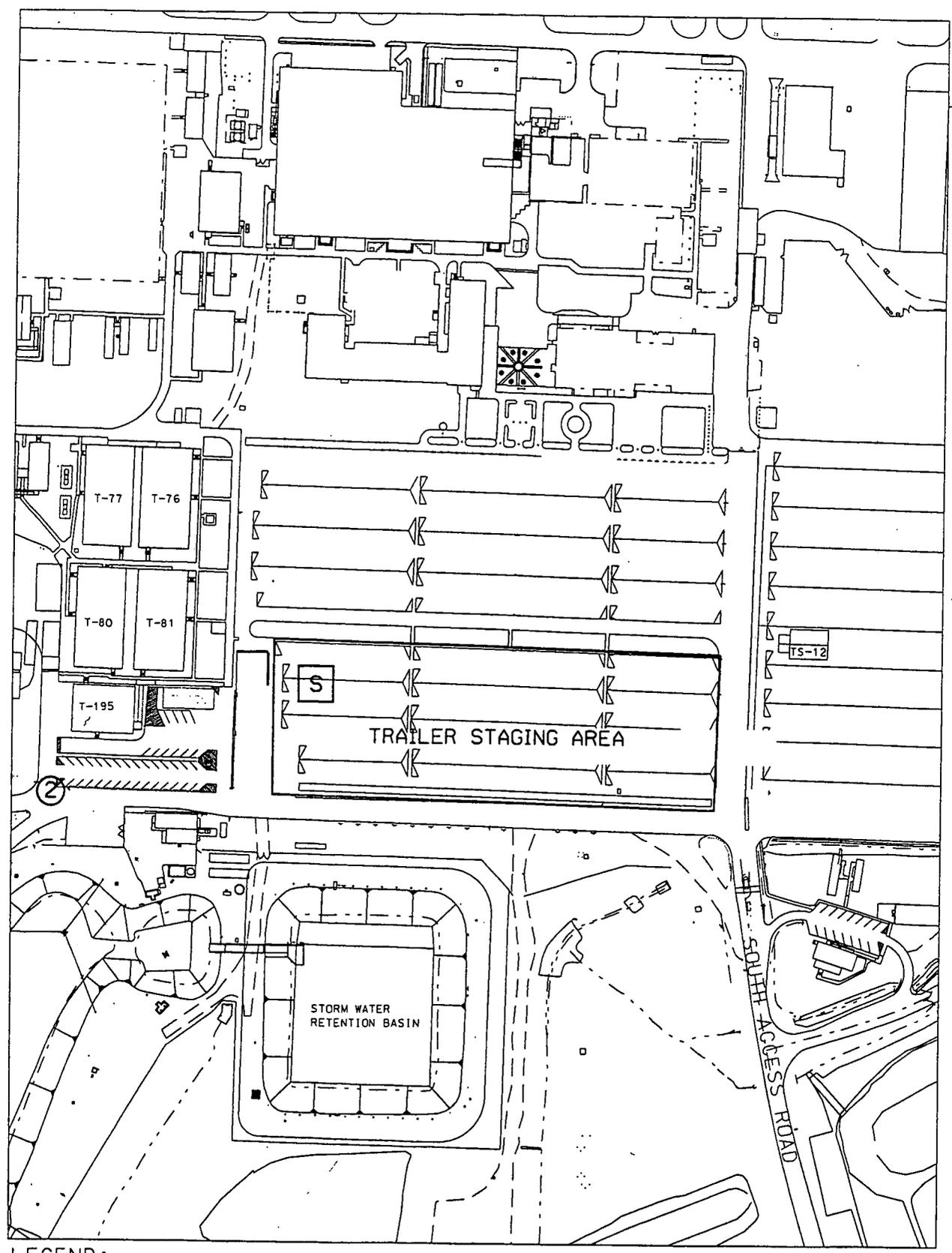
The following is a list of safety equipment assigned to this unit:

- Spill Cleanup Equipment
 - 1) One Portable spill kit located in the Trailer Staging Area

V:\5715\p1\49n\CONT\INCENCY.PLAN\cpl an-03.dgn

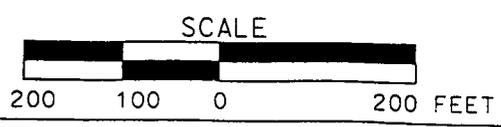
STATE PLANAR COORDINATE SYSTEM 1983

05-OCT-2004



LEGEND:

- [S] SPILL CLEANUP EQUIPMENT
- (2) RALLY POINT



MIXED WASTE TRAILER STAGING AREA

HAZARDOUS WASTE STORAGE LOCKERS IN SILOS TRUCK STAGING AREA

Three hazardous waste storage lockers (MS-4, MS-11 and MS-25) are located in the northeast corner of the Silos Truck Staging Area. These lockers may be used for the storage of containers of hazardous waste with and without free liquids, PCBs and ignitable wastes.

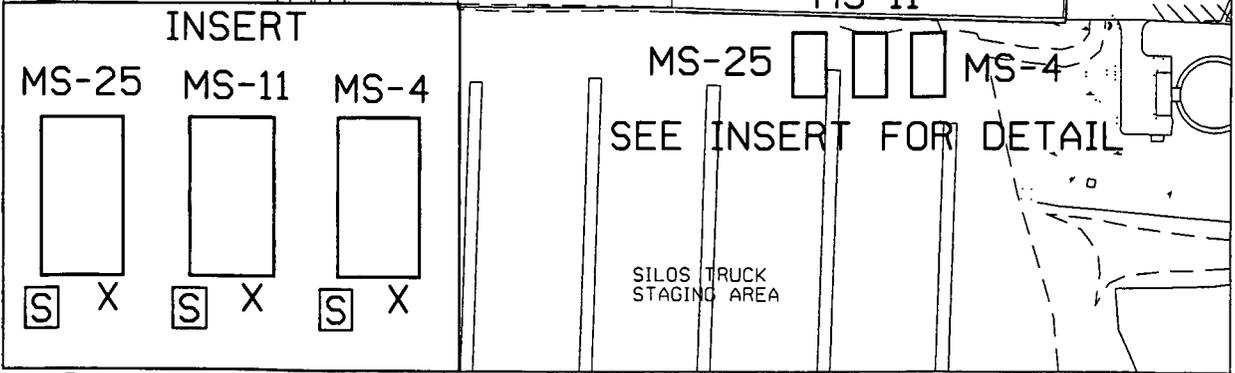
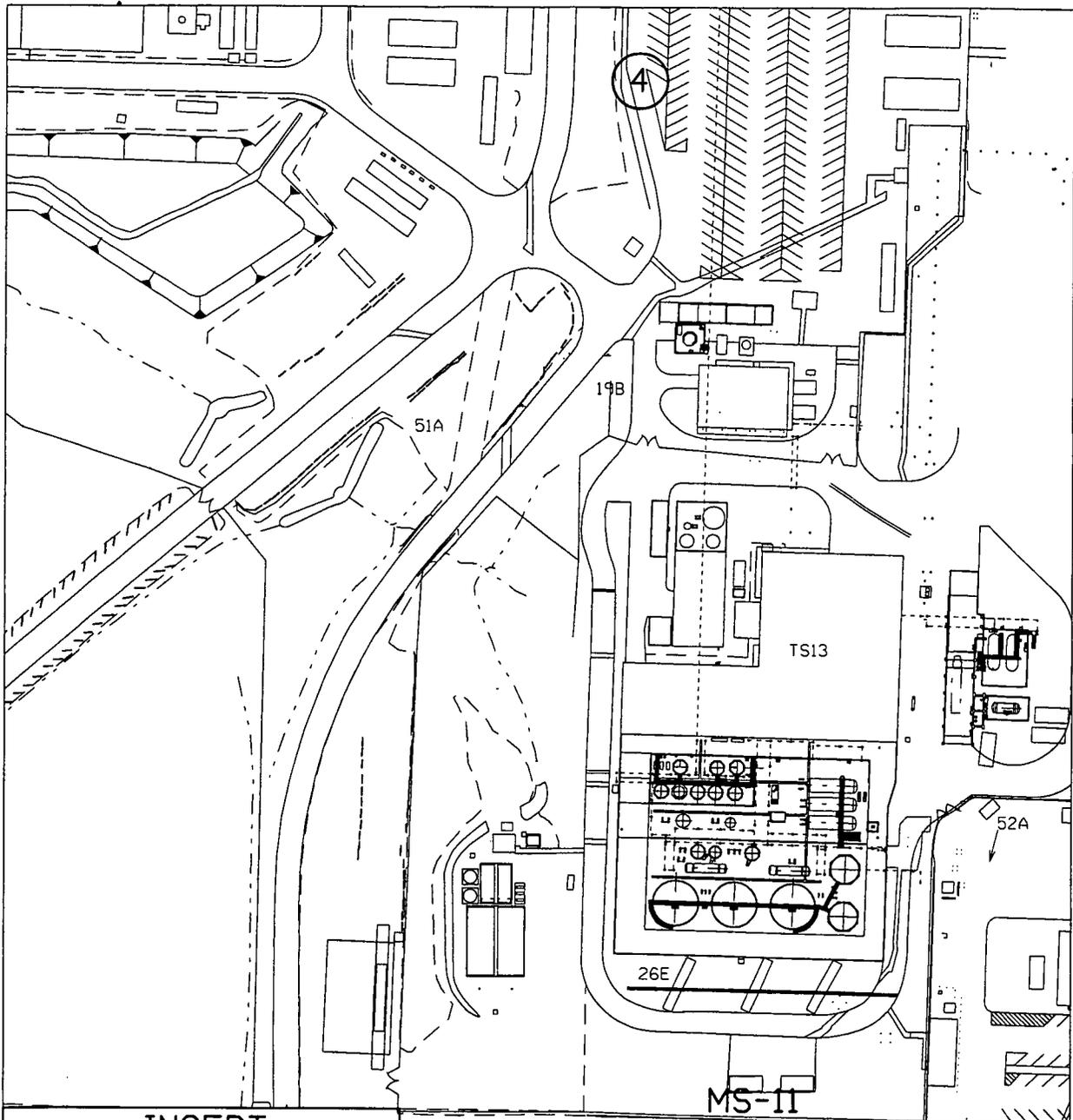
Personnel should evacuate to Rally Point No. 4, located at the west end of the former Building 30/45 parking lot.

The following is a list of safety equipment assigned to this unit:

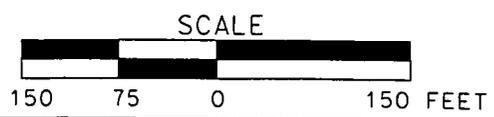
- Fire Extinguishers
 - 1) 10# ABC posted outside, on the south wall of MS-4,
 - 2) 10# ABC posted outside, on the south wall of MS-11
 - 3) 10# ABC posted outside, on the south wall of MS-25

- Portable Eye Wash Station
 - 1) Available to personnel during operations

- Spill Cleanup Equipment
 - 1-3) A portable spill kit is located outside, on the south end of each Hazardous Waste Storage Locker (3 total)



- LEGEND:**
- X FIRE EXTINGUISHER
 - [S] SPILL CLEANUP EQUIPMENT
 - (4) RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS IN SILOS TRUCK STAGING AREA

HAZARDOUS WASTE STORAGE LOCKER BY SILOS

One hazardous waste storage locker (MS-15) is located near the Silos, north of the Radon Control System Building (Building 94A). This locker may be used for the storage of containers of hazardous waste with and without free liquids and ignitable wastes.

Personnel should evacuate to Rally Point No. 4, located at the west end of the former Building 30/45 parking lot.

The following is a list of safety equipment assigned to this unit:

- Fire Extinguisher
 - 1) 10# ABC posted inside, on the north wall of Building 94A

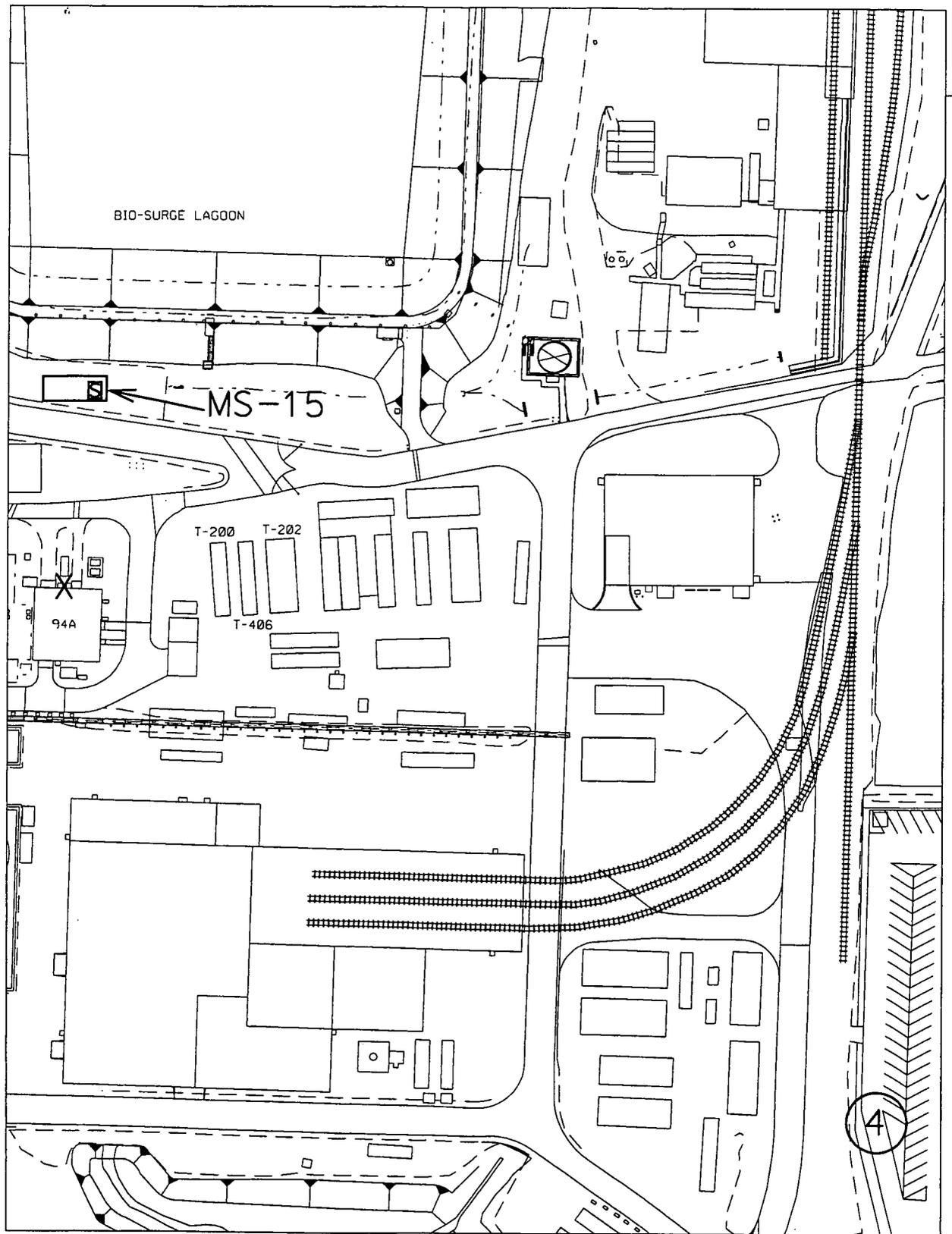
- Portable Eye Wash Station
 - 1) Available to personnel during operations

- Spill Cleanup Equipment
 - 1) One Portable spill kit located inside MS-15

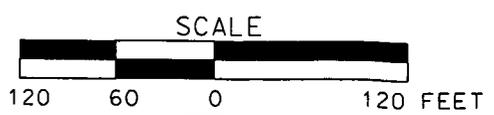
V:\519p1*dgn*CONTINGENCY_PLAN.dgn 05.dgn

STATE PLANNING COORDINATE SYSTEM 1927

05-OCT-2004



- LEGEND:**
- X FIRE EXTINGUISHER
 - S SPILL CLEANUP EQUIPMENT
 - ④ RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS BY SILOS

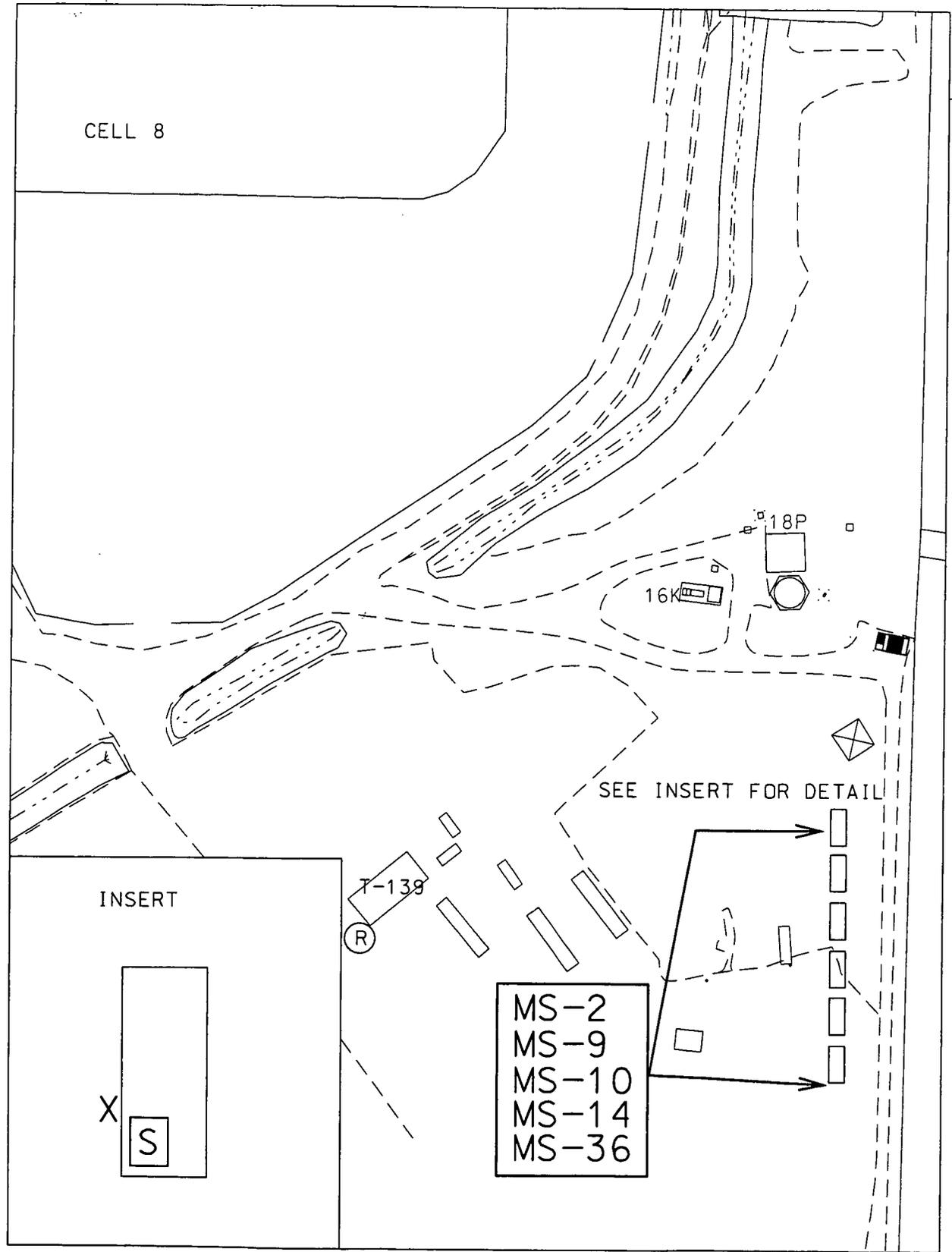
HAZARDOUS WASTE STORAGE LOCKERS SOUTH OF CELL 8 (FUTURE LOCATION – BEGINNING IN NOVEMBER 2004)

Beginning in November 2004, five hazardous waste storage lockers (MS-14, MS-36, MS-2, MS-9 and MS-10) will be located south of Cell 8. These lockers may be used for the storage of containers of hazardous waste with and without free liquids and ignitable wastes. Note that a sixth locker is also located in this area (MS-5) but it is not being used for the storage of containers of hazardous waste.

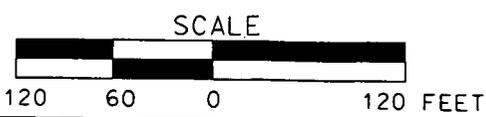
Personnel should evacuate to the Rally Point located at the entrance to T-139.

The following is a list of safety equipment assigned to this unit:

- Fire Extinguishers
1-5) 10# ABC posted on the outside wall of each locker
- Portable Eye Wash Station
1) Available to personnel during operations
- Spill Cleanup Equipment
1-2) Two portable spill kits are assigned to this area



- LEGEND:**
- X FIRE EXTINGUISHER
 - S SPILL CLEANUP EQUIPMENT
 - R RALLY POINT



HAZARDOUS WASTE STORAGE LOCKERS SOUTH OF CELL 8

HAZARDOUS WASTE REPACKAGING AREA IN BOILER PLANT (BUILDING 93A)

Beginning in November 2004 to the end of December 2004 (under current plans), the FCP will utilize the east bay of the Boiler Plant (Building 93A) to repackage hazardous waste containers for off-site shipment. These operations will occur in an enclosure which will be constructed in the north east corner of the building.

Personnel should evacuate to Rally Point No. 12, located south of the Advanced Waste Water Treatment Facility (Building 51).

The following is a list of safety equipment assigned to this building:

- Automatic sprinkler system with automatic fire alarms to an attended location

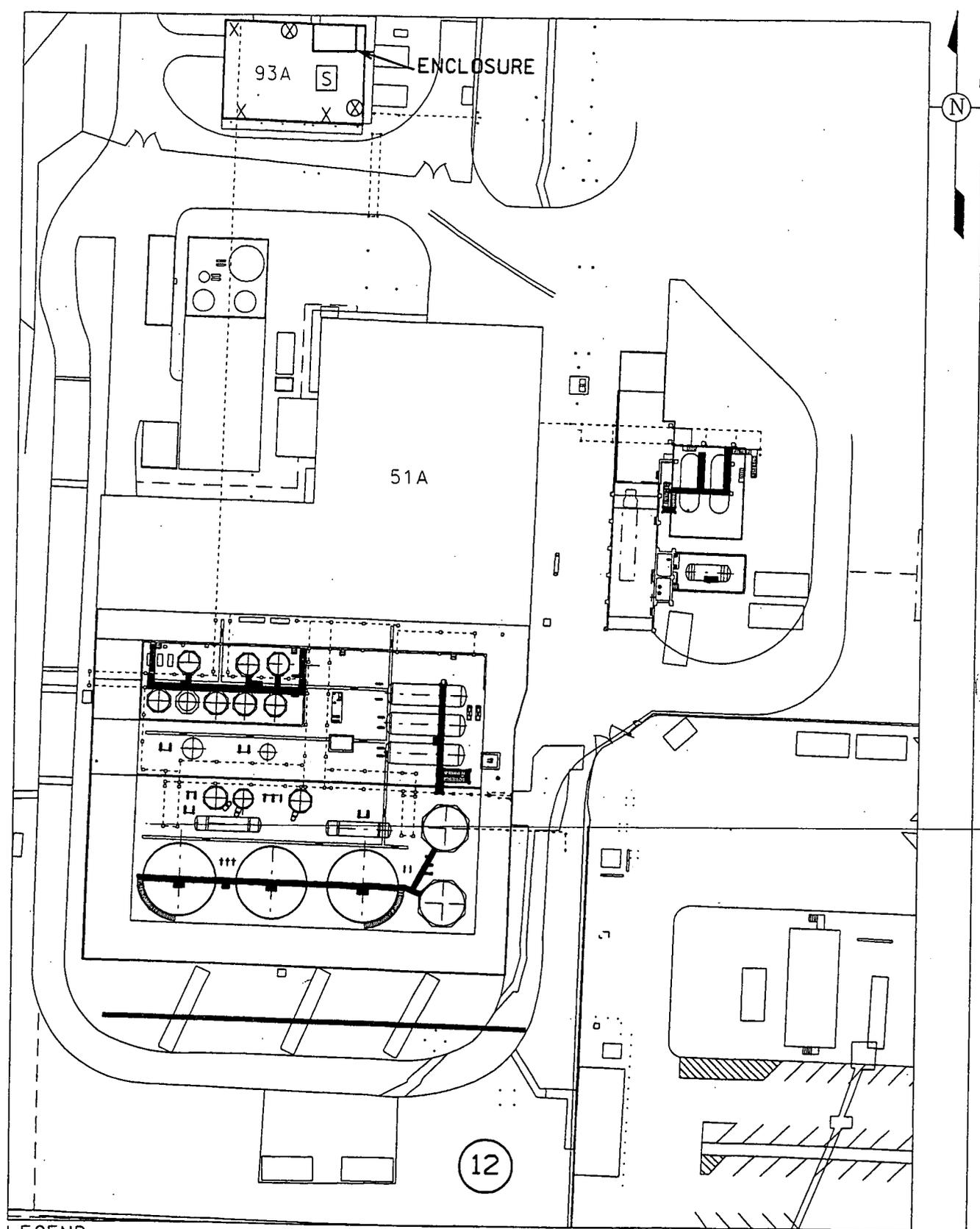
- Manual Fire Alarms
 - 1) By South east door
 - 2) Middle bay, along North wall

- Fire Extinguishers
 - 1) 20# ABC posted on column in East bay, near the South wall
 - 2) 20# ABC posted on the North wall near the West corner
 - 3) 20# ABC posted on South wall near the West end

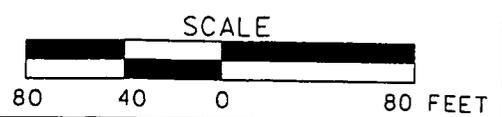
- Portable Eye Wash Station
 - 1) Available to personnel during operations

- Spill Cleanup Equipment
 - 1) At least one portable spill kit is assigned to this building

5715



- LEGEND:**
- X FIRE EXTINGUISHER
 - S SPILL CLEANUP EQUIPMENT
 - Ⓡ RALLY POINT
 - ⊗ MANUAL FIRE ALARM



HAZARDOUS WASTE REPACKAGING AREA IN BOILER PLANT (BUILDING 93A)

The following chart depicts the number of on-site runs that have been experienced since 1999:

YEAR	EMS	FIRE / HAZ MAT / OTHER
1999	38	36
2000	26	28
2001	25	27
2002	40	30

Fluor Fernald will provide information during the transition period and as required thereafter, designed to give fire department members a general familiarization of site activities, hazards, Emergency Plan contents, Emergency Coordinator responsibilities, communication mechanisms, and Radiation Worker Training. Fluor Fernald will also provide current and updated information for the Seller to use in keeping their pre response plans current and accurate.

The site maintains it's own water distribution system for water supplied by the Cincinnati Water Works. This system has a 400,000-gallon ground storage tank, and 2 automatic fire pumps [one electric and one diesel, both rated at 1250 gallons per minute. The underground firemain system has post indicator valves (PIV) and functional fire hydrants, which are located throughout the site. The hydrant and PIV locations are depicted on existing pre fire plans. The various system components are maintained and tested by Fluor Fernald in accordance with National Fire Protection Association (NFPA) criteria.

C.2 Scope of Work:

C.2.1 The Seller must be technically capable of providing the services as stated in this document 24 hours a day, 7 days a week. This capability must include: trained / certified personnel, all required personnel protective equipment, extinguishing agents and application equipment, vehicles for the delivery of extinguishing agents and application equipment, transportation vehicles for personnel, transportation vehicles for patients (injured / sick), necessary medical supplies, specialty rescue equipment, and auxiliary breathing air supplies. If the Seller is not available for whatever reason, contingency plans must be in place to furnish the listed services through alternate means. Such contingency plans must be automatically implemented by the Seller's primary dispatch center.

C.2.2 The primary function of this contract is to ensure the safety of personnel and preservation of property at the FCP. This is achieved through effective manual fire fighting / suppression, basic and advanced emergency medical care, hazardous materials mitigation/clean-up and technical rescue. Seller response protocols must be such that they sufficiently limit undue hazards to employees, threat to the public welfare, adverse effects to the environment and loss of DOE property. Performance of the services required herein shall be in compliance with applicable state and local requirements governing emergency services response. NFPA standards are only applicable to the extent required by the state.

C.2.3 Fluor Fernald and the Seller will respond to FCP site emergencies in accordance with the response concepts described in the FCP Emergency Plan. The Emergency Plan is not designed or intended to direct fire department or Emergency Response operations. However, it does serve as the basic framework for incident management in all emergencies. The use of an incident command system by the Seller shall be required; the size and complexity of the event will determine the structure and size of the command. The Seller will utilize the pre fire plans for their initial response.

C.3 Requirements**C.3.1** The five (5) categories of work/services included in this contract:

- 1) Basic & Advanced Life Support - Emergency Medical Services (field treatment and transport)
- 2) Fire Suppression and Search & Rescue
- 3) Mass Casualty Response & Coordination
- 4) Technical Rescue (high angle, low angle, trench rescue, surface water, vehicle and heavy rescue / extrication) and Confined Space Stand-by.
- 5) Hazardous Materials Mitigation.

C.3.1.1 Basic & Advanced Life Support – Emergency Medical Services

The Seller shall provide Basic Life Support (BLS), Intermediate Life Support (ILS) and Advanced Life Support (ALS) services [as defined in the Ohio Revised Code 4765.37 (BLS), 4765.38 (ILS), and 4765.39 (ALS)] for the FCP including transportation to licensed medical treatment facilities. Therefore, the cost to transport an individual to an off site licensed medical treatment facility shall be at no additional cost to the individual being transported.

Although remote, there is the possibility that ambulances, equipment and personnel could become contaminated with radiological or chemical contaminants while providing EMS care at the FCP. Emergency decontamination facilities for non-life threatening injuries / illness are currently available at the site medical treatment facility. Site radiological safety technicians with the appropriate monitoring equipment will address specific radiological concerns and assist emergency responders as needed. Technicians may accompany the contaminated injured / ill person to the hospital or follow in a separate vehicle to limit the spread of contamination and perform radiological monitoring of the ambulance and hospital facility.

C.3.1.2 Fire Suppression and Search & Rescue

The Seller shall provide all equipment and personnel necessary to safely conduct the activities involved in controlling or extinguishing fires that may occur at the FCP. Fire suppression includes all activities performed at the scene of a fire incident or adjacent locations that expose Seller personnel to the dangers of heat, flame, smoke, or other products of combustion, explosion, or structural collapse.

If personnel are reported missing as the result of an emergency or evacuation, the FCP Emergency Coordinator will notify the responding officer in charge. It will be the responding Seller's responsibility to conduct a complete search of affected area(s) to determine if missing personnel are within that area and if possible remove them to a safe location.

C.3.1.3 Mass Casualty Response & Coordination

The Seller shall maintain the equipment and training necessary to mitigate mass casualty response and the coordination of qualified personnel and equipment necessary to mitigate such an event.

C.3.1.4 Technical Rescue and Confined Space Stand-by

The Seller shall maintain equipment and training to conduct technical rescue (high angle, low angle, trench rescue, surface water, vehicle & heavy rescue extrication) or have the capability to access qualified personnel and equipment.

Confined Space - A "confined space," is defined as an area that is large enough and so configured that a worker can bodily enter the space and perform assigned work, has limited or restricted means for entry and exit, and is not designed for continuous occupancy and is subject to the accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere. Confined Spaces are identified at the FCP and a listing of these locations will be available for inclusion in the Seller's pre fire plans.

The officer in charge shall ensure that fire fighters entering and/or conducting rescue inside a permit required confined space are properly protected to assure that individual's safety. Entries into Immediately Dangerous to Life & Health (IDLH) atmospheres can only be made at the direction of the Seller's officer in charge and with the appropriate personal protective equipment.

C.3.1.5 Hazardous Materials Mitigation

The Seller's hazardous materials team (Haz-Mat Team) shall be responsible for the stabilization of chemical releases and/or spills that may or may not contain radioactive constituents that may occur at the site. Fluor Fernald will supply technical guidance relating to the released chemical and its compatibility with other materials. If radioactive constituents are present, FCP Radiological Technicians will be available to support the Haz Mat team's activities.

FCP personnel will supply the Seller's Haz Mat Team with technical expertise, monitoring equipment and personnel, and available neutralizers and absorbents. Fluor Fernald will be fully responsible for the final clean up, transfer, and remediation of all spills / releases and disposal of used materials and equipment.

C.3.2 Project Specific Activities

C.3.2.1 Required Drills

Fluor Fernald will initiate and the Seller shall participate in approximately 4 drills/exercises each calendar year conducted at the FCP with the involvement of the FCP Emergency Coordinator and FCP Emergency Operations Center. These drills /exercises will be coordinated in advance with the Seller. The time estimated for preparation and participation in each drill is 6 hours.

C.3.2.2 Confined Space Standbys

Scheduled work activities at the FCP require that site personnel enter permit required confined spaces for maintenance or other work activities. Such access may require the standby of emergency equipment and emergency personnel. Normally such a standby can be scheduled. The Supplier shall plan for this to occur four (4) times during a year. No time estimate is available for this activity.

C.3.2.3 Refilling Breathing Air Bottles

Fluor Fernald will retain approximately 25 self-contained breathing apparatus units and spare air bottles for non emergency use; the Seller will be requested to fill these air bottles as necessary.

C.3.2.4 Fire Hydrants

It will be the responsibility of Fluor Fernald to maintain and service the fire hydrants on site. As the project moves to closure the hydrant system will be greatly reduced or eliminated. Fluor Fernald will notify the Seller whenever changes are made to the water supply system.

C.3.2.5 Equipment Monitoring & Decontamination

Fluor Fernald will be responsible for the monitoring, decontamination and or replacement of any contaminated equipment utilized during emergency response activities at site.

C.3.2.6 Bioassay Program

Individuals who respond to an emergency may be required to participate in Fluor Fernald's Bioassay Program. This could result from a suspected exposure to a radionuclide contaminate or as a precautionary measure based on the event that occurred. When necessary, personnel will be required to leave a urine sample prior to their departure from the site. Analysis of the sample will be conducted by Fluor Fernald and the results furnished directly to the individual that furnished the sample.

If TLDs (thermo-lucent dosimeter) are required they will be supplied to the individuals responding to the emergency by Fluor Fernald's on-duty Emergency Coordinator.

As standard practice, individuals are restricted from entering a radiologically controlled area if total (external plus internal) exposures, in any one calendar year, exceed 1,000 mrem Total Effective Dose Equivalent (TEDE).

The University Hospital

Health Alliance™

234 Goodman Street
Cincinnati, OH
45219-2316
513-584-1000

Feb. 29, 2000

Jack Craig, Director
Department of Energy
Fernald Environmental Management Project
P.O. Box 538705
Cincinnati, OH 45253-8705

FILE: 5488
LIBRARY:

Mar 6 8 36 AM '00
LOG... ACC 212

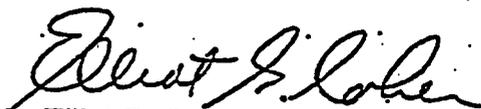
Dear Mr. Craig:

This letter will serve to acknowledge our continued commitment to provide emergency medical care to your employees in the event of a medical emergency arising at the Fernald Environmental Management Project (FEMP), located near Fernald, Ohio.

This commitment is a further extension of the letter of agreement, last revised in December 1992 (Terry White to Milan Marshall, Dec. 29, 1992). While our management has changed from the University of Cincinnati to the University Hospital, Inc. (a part of the Health Alliance of Greater Cincinnati), we will continue to honor this commitment. In the case of an emergency that requires our support, University Hospital will provide treatment in our Center for Emergency Care. If deemed necessary and appropriate, care and/or transport can be made by our University Air Care emergency air medical helicopters.

University Hospital is a verified Level I Trauma Center and Level I Burn Center. As such we are committed to serving the needs of the ill and injured throughout the tri-state, including the employees and visitors at the FEMP site. We are pleased to have this opportunity to provide our services to you and your staff should the need arise.

Sincerely,



Elliot G. Cohen
Senior Vice President

LETTER OF AGREEMENT

THIS LETTER OF AGREEMENT, is effective on the 1st day of December, 1992, by and between Flour Daniel Environmental Restoration Management Company, hereinafter called "FERMCO" and Providence Hospital and Franciscan MediCenter at Harrison, 2446 Kipling Avenue, Cincinnati, Ohio 45239, hereinafter called "Providence".

1. This letter of agreement delineates the areas of responsibility of FERMCO and Providence concerning emergency medical services to be provided by Providence Hospital to FERMCO employees in the event of a medical emergency at employee's place of employment, the Fernald Environmental Restoration Project, Fernald, Ohio hereinafter called "FEMP".
2. Providence agrees to provide emergency medical treatment to FERMCO employees in the Franciscan MediCenter at Harrison or the Emergency Room of Providence Hospital in case of sickness or accident.
3. FERMCO agrees to monitor all employees prior to admission to the Providence Emergency Room to determine the level of radioactivity present, if any, on the employee's skin or clothing. Efforts will be made by FERMCO to reduce contamination, if present, to a level as low as practical. If serious injuries or sickness is/are present and the need for immediate emergency treatment precludes decontamination, FERMCO will give Providence medical personnel appropriate precautionary instructions. All FERMCO employees who have not been decontaminated shall be sent directly to Providence Hospital as the Franciscan MediCenter at Harrison does not have decontamination equipment.
4. If Providence equipment or supplies become contaminated with radioactive or toxic materials as a direct result of radioactive or toxic materials which may be carried into the Emergency Room by the FERMCO employee being treated, FERMCO will provide for the decontamination or replacement thereof at no charge to Providence.
5. This Agreement may be terminated by either party upon 30 days written notice to the other party. Providence and FERMCO can modify this Letter of Agreement by mutual written consent.
6. Providence shall act as an independent contractor in the delivery of emergency services. FERMCO shall neither have nor exercise any control over the methods by which Providence delivers such services. The sole interest of FERMCO is to assure that Providence services shall be performed in a competent, efficient, and satisfactory manner.

Providence Hospital of Cincinnati

By: [Signature]
Title: Vice President
Date: 11-7-92

Flour Daniel Environmental Restoration Management Company

By: [Signature]
Title: V.P. Acquisition & Finance
Date: 11/17/92