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98-TC/04-06

Director, Miamisburg Environmental Management Project
U.S. Department of Energy
Miamisburg Environmental Management Project
P.O. Box 66
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ATTENTION: Alan Spesard

SUBJECT: Contract No. DE-AC24-97OH20044
H-BUILDING DECONTAMINATION ACTION MEMORANDUM

Dear Mr. Brown:

This memo is to document the submittal of the H-Building Hot Laundry Decontamination Action Memorandum for Core Team Review and Approval and subsequent Public Review, a DOE requirement under the Mound Streamlined Building Disposition Process. This document is the result of the incorporation of comments from the March 1998 DOE review.

Sincerely,

Wm. Scott Hood
Project Manager, Main Hill Rad

WSH/mlr

Attachment: Action Memorandum for Removal Action, Building H Hot Laundry

cc: James R. Powers, BWO
DCC

ENVIRONMENTAL RESTORATION PROGRAM

PROPOSED

**ACTION MEMORANDUM
ENGINEERING EVALUATION/COST ANALYSIS**

**REMOVAL ACTION
BUILDING H HOT LAUNDRY**

**MOUND PLANT
MIAMISBURG, OHIO**

April, 1998

PREPARED BY:

**Babcock & Wilcox of Ohio, Inc.
P.O. Box 3030
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for the

U.S. DEPARTMENT OF ENERGY

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ACRONYMS

AEC	Atomic Energy Commission
AM	Action Memorandum
ARARs	Applicable or Relevant and Appropriate Requirements
BGS	Below Ground Surface
BVA	Buried Valley Aquifer
CERCLA	Comprehensive Environmental- Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
D&D	Decontamination and Decommissioning
DOE	Department of Energy
EE/CA	Engineering Evaluation/Cost Analysis
EPA	Environmental Protection Agency
ER	Environmental Restoration
FFA	Federal Facilities Agreement
FSP	Field Sampling Plan
ID	Identification
LSA	Low Specific Activity
mrem	millirem
MSL	Mean Sea Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NTS	Nevada Test Site
OAC	Ohio Administrative Code
OEPA	Ohio Environmental Protection Agency
OU	Operable Unit
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
pCi/g	picocuries per gram
PRS	Potential Release Site

ACRONYMS (cont.)

RCRA	Resource Conservation and Recovery Act
RESRAD	Residual Radioactive Material Program
RI/FS	Remedial Investigation/Feasibility Study
RSE	Removal Site Evaluation
SARA	Superfund Amendments and Reauthorization Act
SW	Semi-Works
TRU	Transuranic
USEPA	United States Environmental Protection Agency

1. PURPOSE

The U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (USEPA) and the Ohio Environmental Protection Agency (OEPA) have agreed on an approach for decommissioning surplus DOE facilities consistent with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). According to this approach, decommissioning activities will be conducted as CERCLA removal actions, unless the circumstances at the facility make it inappropriate (DOE 1995). The DOE is the designated lead agency and removal actions at the Mound Plant are implemented as non-Superfund, federal-lead actions. DOE provides the On-Scene Coordinator (OSC). Non-Superfund, federal-lead removal actions are not subject to United States Environmental Protection Agency (USEPA) limitations on the OSC (\$50,000 authority) and are not subject to National Oil and Hazardous Substances Pollution Contingency Plan (NCP) limitations on removal actions (i.e., \$2,000,000 in cost and 12 months in duration).

This Action Memorandum (AM), Engineering Evaluation/Cost Analysis (EE/CA) has been completed to document the evaluation of site conditions and to propose the removal action described herein.

2. SITE CONDITIONS AND BACKGROUND

2.1. SITE DESCRIPTION

This section describes the physical site location, site characteristics, release of contaminants into the environment and the site's National Priorities List (NPL) status.

2.1.1. Physical Location

The Mound Plant is a 306-acre site on the south border of the city of Miamisburg in Montgomery County, Ohio. The site is approximately 10 miles south-southwest of Dayton and 45 miles north of Cincinnati. The specific location of the proposed removal action is the Hot Laundry area of Building H. This location is identified in Figure 2.1.

2.1.2 Site Characteristics

H Building was constructed in 1948 as one of the original group of buildings at Mound. It housed the laundry facilities for both uncontaminated (cold) and contaminated (hot) clothing. Process water generated from the laundry was collected in a holding tank on the "hot" side of the building, then drained through a pipe to a lift station at SW Building. In 1993, washable clothes used for "hot" work were replaced with disposable clothing which allowed the waste water from the laundry to be diverted to the sanitary disposal plant, Building 57. In addition to the laundry, the building previously held a small maintenance shop. The maintenance shop has been removed and is currently used by the bioassay and gamma spectroscopy laboratories, also housed in the building, as a storage area. The credit union and a set of change rooms are currently located in H Building, as well. H Building is known to be contaminated with radioactive materials.

H Building is a one-story structure with a penthouse. The walls are constructed of reinforced concrete block with a brick face exterior, the roof is made of a metal with a built-up membrane. H Building contains 17,334 square feet. The building is bordered by a sidewalk on the north, east and south sides. It shares a corridor with B Building on its west side. Adjacent buildings are A Building to the north, E Building to the south, M Building to the east and B Building to the west.

H Building is currently scheduled to be decontaminated and transitioned over to Miamisburg Mound Community Improvement Corporation (MMCIC). This is planned to happen in two distinct phases. This Action Memorandum covers the work in Phase I. Phase I covers only the decontamination of the Hot Laundry and repair of any asbestos hazards.

2.1.3 Current Conditions

The laundry, credit union, male and female change rooms, and the bioassay and gamma spectroscopy laboratories are all currently housed in H Building. All material, equipment and systems necessary to maintain these will remain operable until their mission is discontinued or moved to another facility. Surplus materials, excess equipment and abandoned systems will be removed from the building.

Steam for heating is provided to H Building via an underground concrete trench of utility piping running from the powerhouse, P Building. Ventilation is provided to the building by a roof mounted HVAC system. Potable water and sanitary services are provided by means of the Mound Plant underground domestic water lines and an on-site sanitary and storm water sewer treatment plant, Building 57. The wastewater currently generated in the building is laundry or sanitary water.

The building contains two sumps, one in the corridor which is used to collect steam condensate. It will remain in place. The other, a double contained sump, is located in R-133 of the laundry and is no longer used. This sump and its associated piping will be removed as a part of this project.

Asbestos Survey

Asbestos sampling results indicate Asbestos Containing Material (ACM) in the pipe insulation. The walls and ceiling material were re-sampled and the results confirmed that they are free of ACM. Areas with damaged asbestos material will be repaired, as necessary. Industrial Hygiene will be working with the project until all pipe insulation is repaired or removed. Asbestos sampling results and information relative to the asbestos repair quantification and assessment summary of H building are available in the H Building Project File.

Lead Survey

Recent survey and sampling results indicate no lead in the paint, however, the cast iron drain piping contains lead seals. At least two drains inside the building are known to be radiologically contaminated. If the cast iron drain piping associated with these drains is also found to be contaminated, it will be removed and disposed of as radioactive or mixed waste. Sampling results are available in the H Building Project File.

Monitoring Requirements

Asbestos will be monitored with the frequency to be determined by the Mound Industrial Safety and Health Department.

**Table 2.1 Radiological Characterization Summary
Building H**

Type	RSDS	Location	Amount (dpm/100 cm ²)	5400.5 Guidelines for Groups 1,3,4 (fixed + loose) (dpm/100 cm ²)	NUREG 1500 Guidelines (loose) (dpm/100 cm ²)	Attachment 1 Limit (fixed + loose) (See Note 2) (dpm/100 cm ²)	Comments
Highest Alpha Smearable Activity	98-H-003-MR 98-H-023-MR	H-133 floor H-206 wall	27- both locations.	20	211	20	
Highest Alpha Fixed Activity	98-H-003-MR	H-133 floor	140k	100	Note 1	100	Entire floor to be removed.
Highest Beta Smearable Activity	All	All	<1000	1,000	9940	1,000	No Action Necessary
Highest Beta Fixed Activity	98-H-033-MR	Top of light fixture	9.4k	5,000	Note 1	5,000	Light to be removed.
Highest Tritium Smearable Activity	All	All	<1000	1,000	Note 1	1,000	No Action Necessary
Water Sample from sump in H-133	98-H-006-MR	Sump (H-133)	11.53 nCi/L Trit <2.22 dpm/cc α < 15 nCi/L α	DCG's 2000 nCi/L Trit 2 dpm/cc α (Pu)	MCL'S SEE NOTE 3	N/A	No Action Necessary

Note 1 NUREG-1500 gives guidelines for loose beta and alpha only.

Note 2 The limits referenced above is based on MD-80043, Radiological Work Requirements Procedure 400 "Transfer of Radioactive Material and Unrestricted Release of Property/Waste" Attachment 1.

Note 3 MCL's taken from National Primary Drinking Water Regulations 40 CFR part 141 subpart B .16.

For gross alpha, 15 pCi/L

For Tritium, from Table "A" 20,000 pCi/L average annual concentration would result in a whole body dose equivalent of 4 mrem.

2.1.4. Release or Threatened Release into the Environment

The hazardous materials found in H Building laundry area are Asbestos Containing Material (ACM), lead, and PCBs. There is ACM in the pipe insulation, vibration cloth and explosive light gaskets. Damaged ACM will be repaired or removed, as necessary. There are lead seals inside the cast iron drain piping joints. Contaminated drain piping associated with the laundry will be removed during decontamination activities and disposed of as radioactive waste. Equipment remaining inside the building containing refrigerants or hydraulic fluids and the florescent light ballast suspected of containing PCBs will remain in place. There are no hazardous process chemicals being used or stored in the Hot Laundry area of the building.

Radiation surveys of Building H indicate several areas of fixed contamination and some loose. The primary isotope of concern is Pu-238. The cleanup goal for Pu-238 is less than 20 dpm/ 100cm² Removable and less than 100 dpm/ 100 cm² Total (Fixed + Removable), per DOE 5400.5. The soil release level will be less than 25pci/g.

The potential release of radioactive contamination has prompted this removal action.

2.1.5. National Priorities List Status

The EPA placed the Mound Plant in Miamisburg, Ohio on the NPL by publication in the Federal Register on November 21, 1989.

2.2 OTHER ACTIONS TO DATE

The Mound Plant initiated a CERCLA program in 1989, now guided by the agreement between the DOE, Ohio Environmental Protection Agency (OEPA), and US EPA. A Federal Facilities Agreement (FFA) under CERCLA Section 120 was executed between DOE and US EPA Region V on October 12, 1990. It was revised on July 15, 1993 (EPA Administrative Docket No. OH 890-008984) to include OEPA as a signatory. The general purposes of this agreement are to:

- Ensure that the environmental impacts associated with past and present activities at the site are thoroughly investigated and appropriate remedial action taken as necessary to protect the public health, welfare, and the environment.

- Establish a procedural framework and schedule for developing, implementing, maintaining, and monitoring appropriate response actions at the site in accordance with CERCLA, Superfund Amendments and Reauthorization Act (SARA), the NCP, Superfund guidance and policy, and Resource Conservation and Recovery Act (RCRA) guidance and policy.
- Facilitate cooperation, exchange of information, and participation of the parties in such actions.

2.2.1. Previous Removal Actions

No previous removal actions have been performed at Building H.

2.2.2. Current Actions

The Core Team, consisting of the DOE, USEPA and OEPA, was presented a proposal by the B&W of Ohio Main Hill Rad Project Team for the decontamination of the H Building Hot Laundry. The Core Team recommended the action proceed as a CERCLA Removal Action and that an Action Memorandum be written and submitted for approval by DOE/USEPA/OEPA and ODH, as well as a 30-day Public Comment Period before work could commence.

Asbestos piping insulation and florescent light ballasts containing PCBs will not be removed as part of the decontamination process, unless they present an immediate hazard. If these materials have to be removed they will be disposed of according to the appropriate regulations.

All materials and equipment have been removed from the Building H, Hot Laundry, except for the following: several washers and dryers being used by the Cold Laundry, some remaining furniture, windows, doors, plumbing fixtures, ceiling and floor tile, heating units and their associated duct work.

Building H has potable water, compressed air, telephone, computer network connections, fire alarm, steam, storm sewer, and sanitary sewer services. Building H also has electricity and fire sprinkler systems. All these services will be terminated and isolated outside the area to be decontaminated.

2.3. STATE AND LOCAL AUTHORITIES' ROLES

2.3.1. State and Local Action to Date

In 1989, as a result of Mound Plant's placement onto the NPL, DOE and USEPA entered into a FFA which specified the manner in which the Mound CERCLA-based Environmental Restoration (ER) program was to be implemented. In 1993, the FFA was amended to include the OEPA. Under the ER program, DOE remains the lead agency.

2.3.2. Potential for Continued State and Local Response

Eventual release of this area for industrial use is planned. Periodic environmental monitoring of the area may be required until a final Record of Decision is implemented for the entire Mound site. This monitoring would need to be coordinated with local, state, and federal authorities.

Current plant-wide environmental monitoring programs will continue until such time as remediation is complete in this and adjacent areas.

3. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

3.1. THREATS TO PUBLIC HEALTH OR WELFARE

The potential release of radioactive contamination may create a potential threat to the public health or welfare.

3.2. THREATS TO THE ENVIRONMENT

The potential release of radioactive contamination and may create a potential threat to the environment.

3.2.1. Removal Site Evaluation

The Removal Site Evaluation (RSE) requirements, as outlined under EPA's NCP regulations in 40 CFR 300.415, are, presented throughout this AM/EECA.

An evaluation by public health agencies has not been performed for this area, and, therefore, is not included in this AM/EECA. The determination of the need for a removal action is outlined in this section, in Table 3.1.

The NCP identifies eight factors that must be considered in determining the appropriateness of a removal action [40 CFR 300.415(b)(2)]. These criteria are evaluated in Table 3. 1.

Table 3.1 Evaluation of Removal Action Appropriateness Criteria [40 CFR 300.415(b)(2)]

Criteria	Evaluation
(I) "...potential exposure to nearby human populations, animals, or the food chain..."	None.
(ii) "Actual or potential contamination of drinking water supplies..."	There is the potential that contaminated drain lines have leaked into the ground at the floor drains in Building H. There is the potential for radioactive alpha contamination to be present in the soil near the drain lines and beneath the floor.
(iii) "Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;"	None.
(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;"	None.
(v) "Weather conditions that may cause hazardous substances to migrate or be released;"	None.
(vi) "Threat of fire or explosion;"	None.
(vii) "The availability of other appropriate federal or state response mechanisms to respond to the release;" and	There are no state mechanisms, no other federal mechanisms (DOE is the designated lead agency at Mound under CERCLA), and no other DOE programs to provide an appropriate response.
(viii) "Other situations or factors that may pose threats to public health or welfare or the environment."	Building H surveys indicate some areas of fixed radiological contamination and a few areas of loose . There were no indications of stains from hazardous chemicals spills.

4. ENDANGERMENT DETERMINATION

As this location is currently configured and access controlled, there is no known actual or threatened releases of pollutants and contaminants from this site pose an endangerment to public health or welfare or to the environment. However, to eliminate the possibility of endangerment as the site transfers from DOE ownership and control, DOE has determined that removal of the contaminants is appropriate.

5. PROPOSED ACTION AND ESTIMATED COSTS

5.1. PROPOSED ACTION

The proposed action is to perform Phase I of the two phases of the Building H Project in preparation to turn this building over to MMCIC. The objective of Phase I of Building H Decontamination Project is to perform a partial decontamination of Building H in accordance with all DOE, OSHA, OEPA, USEPA, ODH, and other applicable procedures, regulations and requirements.

5.1.1. Proposed Action Description

Site Preparation

This step includes establishing work area boundaries, radiological posting, radiological barriers with the necessary containment and exhausting, access and egress routes, material and supply storage, waste container staging and placement of all necessary permits.

Building Preparation

This includes the establishing of evacuation routes and assembly points, disconnect utility feeds to all abandoned equipment and systems, remove excess equipment and material, remove designated abandoned systems, process and utility piping and conduit and repair or remove Asbestos Containing Material (ACM), as necessary.

Building Decontamination

Phase I will include the following activities:

1. Repair damaged ACM piping insulation throughout the building.
2. Remove abandoned systems, excess equipment and surplus materials.
3. Remove filter bank and associated contaminated duct work in the penthouse.
4. Remove metal stack on the roof above the penthouse.
5. Remove overhead waste water line in the breezeway.
6. Remove contaminated drains and associated piping in the floors of Rooms 9, 130, 131, 132, 133 and 134, as necessary .
7. Remove the sump (PRS 210) and associated piping in H-133.
8. Remove soil under the sump, if contaminated.
9. Decontaminate the walls and floors, as necessary in Rooms 129, 130, 131, 132, 133 and 134.

10. Decontaminate areas of fixed contamination outside radiological area boundaries.

Building Decontamination

During decontamination activities, continuing inspections by the Project Supervisor will be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, walls or loosened material.

Mobilization

This activity will include the set-up of the decontamination airlocks, portable HEPA exhauster, a staging area and relocate equipment to the demolition site, waste load out area and arrange delivery of waste container(s) to site, monitoring equipment and water misters.

Stack Removal

This activity will be to perform the Hot Laundry exhaust stack removal along with its associated duct work and size reduce them for disposal.

Removal of Hot Laundry Filterbank

This activity will consist of removing filters from the filterbank and their disposal as radioactive waste, if contaminated. The survey and wipe down of previously inaccessible surfaces (empty filter area) would be performed. The filterbank duct work would then be removed, if contaminated.

Waste Water Line

This activity covers the removal of the waste water line from H-133 to the Building B Corridor.

Decontaminate Walls

The walls of the laundry area will be decontaminated as necessary via wet wiping or mechanical means.

Decontaminate Floors (Rooms 129, 130, 131 and 132)

This covers the removal of any fixed contamination on the H-129, 130, 131 and 132 floors via mechanical means. Any excess dust material, will be removed using a HEPA filtered vacuum.

Remove H-133 Sump

Remove the sump from the floor of H-133. Note this sump represents PRS 210. If contaminated the sump and its associated piping will be size reduced and disposed of as radioactive waste.

Decontaminate Floors (Room 133 and 134)

This activity covers the removal of any contamination above the re-use release limits and its disposal as radioactive waste.

Remove and Replace Drains

This activity consists of digging out and replacement of the drains and associated piping (if contaminated) in Rooms 129, 130, 131, 132, 133 and 134. Some piping may no longer be required, therefore, it will not be replaced. This also covers the removal of any contaminated subsoil and replacing subsoil and floors as necessary.

The H Building drain lines will only be removed if they are contaminated above the DOE 5400.5 release limits. Any drains to be removed will be removed up to where they penetrate the building foundation. The drains in the foundation and beyond will be either removed as part of the H Building Phase II project or be coordinated with the Soils Project as part of the Underground Lines Removal.

Site Restoration

This activity includes reducing the work zone area and the placement of the area in a safe condition until the start of Phase II. Equipment, materials, waste containers, and boundaries will be removed. Any excavated area outside the building walls will be backfilled and compacted to original contours and elevation. condition until the start of Phase II.

Verification

A Verification Plan will be developed to identify what, if any, contaminants are present. The Verification Plan will also identify the steps to determine the concentration of those contaminants to compare to appropriate risk based guideline criteria and ARARs. The On-Scene Coordinator Report will document the existence of any contamination and completion of the removal action.

Project Closure

All project documentation should be forwarded to the Project Engineer and maintained in the project file. Upon completion of the project, the project notebook or a copy of the project records should be forwarded to the document management system. This is to be accomplished in a radiologically and otherwise safe manner to avoid future maintenance cost and eliminate potential negative impacts to personnel and the environment. Land within the project boundaries is designated for future industrial land use after decommissioning and demolition activities are complete. The boundary of this project includes the entire footprint of Building H in addition to a perimeter surrounding the buildings. The distance from the buildings to the perimeter will be approximately 15 feet

5.1.1.1. Rationale, Technical Feasibility, and Effectiveness

The removal action chosen is necessary for the removal of known contamination and to ensure that migration of the contamination does not occur.

5.1.1.2. Monitoring

Health and safety monitoring will be performed throughout the removal action according to standard Mound procedures. Sampling and analysis of excavated soil will be described in more detail in the Work Plan for Building H.

5.1.1.3. Uncertainties

The major uncertainties are the levels and extent of radiological contamination in and beneath the Hot Laundry floor. The minor uncertainties include location of utilities in the area of the project.

5.1.1.4. Institutional Controls

DOE will remain in control of the subject area over the near term. However, portions of the Mound Plant may be released to non-DOE uses in the foreseeable future.

5.1.1.5. Post-Removal Site Control

Post removal site control will be provided by DOE/Mound. See Institutional Controls above.

5.1.1.6. Cross-Media Relationships and Potential Adverse Impacts

The potential cross-media impact associated with the removal action is the potential for unintended release of contaminated materials into the atmosphere. Careful monitoring and control by misting will be implemented during the removal action.

No potential adverse impacts of the removal action have been identified.

5.1.2. Contribution to Future Remedial Actions

To facilitate further assessments in or near the site of the removal action, the exact dimensions of the excavation and the levels of contamination identified and removed will be documented. The excavation will be documented by utilizing photographs, record drawings, the OSC report, and other information collected during the removal action.

Because the Mound Plant is anticipated to be cleaned up by removal actions, this clean-up is planned to be Phase I of a two phase remediation and transition for Building H. The information obtained, as a result of this removal, will be used in determining the availability for final disposition of the Mound site and will be subject to review in the subsequent risk evaluation.

5.1.3. Description of Alternative Technologies

Alternative technologies frequently evaluated for CERCLA remediation include institutional controls, containment, collection, treatment, and disposal. Based on the prevailing conditions, the following alternatives (in addition to the proposed alternative of excavation) were developed.

1. No Action
2. Institutional Controls

The performance capabilities of each alternative with respect to the specific criteria is discussed below.

5.1.3.1. No Action

The "No Action" approach was eliminated. It is not appropriate to leave radioactive contamination of the level found in the Hot Laundry in place.

5.1.3.2. Institutional Controls

Existing Mound Plant institutional controls effectively minimize the potential for contact of the subject contamination with the general public. However, institutional controls for events such as renovation, removal, or demolition will be difficult to implement, when industrial use of adjacent areas is permitted. Thus, institutional controls were eliminated from further consideration.

5.1.4. Engineering Evaluation/Cost Analysis (EE/CA)

This document serves as the action memo and the EE/CA.

5.1.5. Applicable, or Relevant and Appropriate Requirements (ARARs)

Mound ARARs for the ER Program have been identified (DOE 1993). CERCLA regulations require that removal actions comply with ARARs.

The following areas have been identified as applicable, or relevant and appropriate to this removal action:

- 49 C.F.R. 172, 173: DOT hazardous material transportation and employee training requirements.

5.1.5.1. Air Quality

- 40 C.F.R. Part 61 Subpart H: National Emissions Standards for Emissions of Radionuclides other than Radon from Department of Energy Facilities.
- Ohio Administrative Code (O.A.C.) 3745-15-07(A): Air Pollution Nuisances Prohibited.
- O.A.C. 3745-17-02 (A,B,C): Particulate Ambient Air Quality Standards
- O.A.C. 3745-17-05: Particulate Non-Degradation Policy
- O.A.C. 3745-17-08: (A)(1), (A)(2), (B),(D): Emission Restrictions for Fugitive Dust

5.1.5.2. To Be Considered

- EPA/230/02-89/042: Methods for Evaluating the Attainment of Cleanup Standards.

5.1.5.3. Worker Safety

- 29 C.F.R. Part 1910: Occupational Safety and Health Act (OSHA) - General Industry Standards
- 29 C.F.R. Part 1926: OSHA - Safety and Health Standards
- 29 C.F.R. Part 1904: OSHA - Record keeping, Reporting, and Related Regulations

5.1.6. Other Standards and Requirements

Other standards or requirements related to the actual implementation of the response action may be identified subsequently during the design phase and will be incorporated into the Work Plan for Building H decontamination.

5.1.7. Project Schedule

The schedule established for planning and implementing the removal action is shown in Figure 5.1.

5.2. ESTIMATED COSTS

The cost estimate to perform the removal action is shown in Table 5.1. Costs include the construction activities, all engineering and construction management, waste disposal, and site restoration.

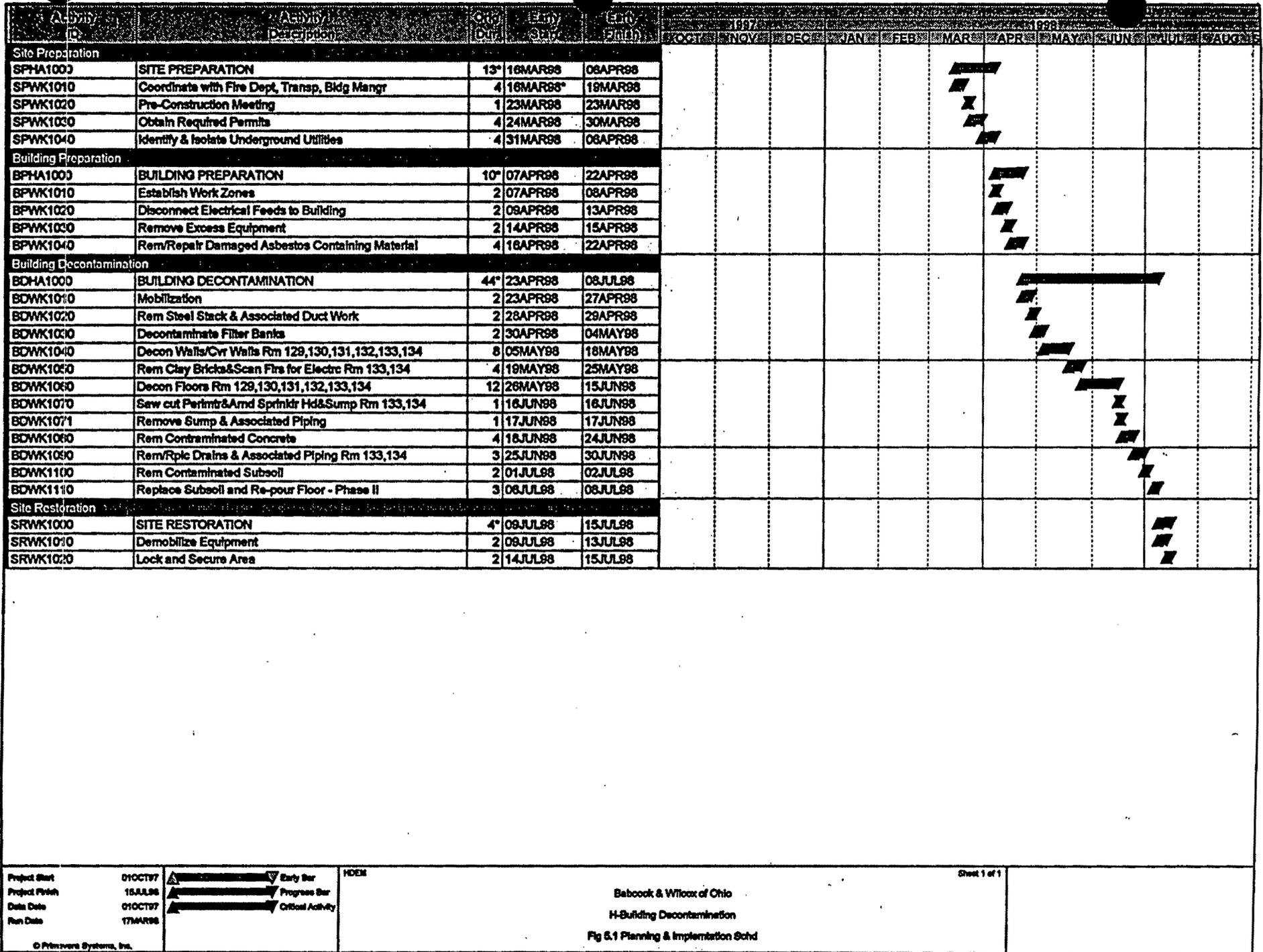
TABLE 5.1 REMOVAL ACTION COST ESTIMATE

ESTIMATE TOTALS

Work Plan and HASP	24,500.
Action Memorandum	1,500.
Core Team / Public Review	1,000.
Characterization	5,000.
Site Prep & Work Zones	10,000.
Equipment & Stack Removal	50,000.
Decontamination of Hot Laundry	120,000.
Characterize soil	5,000.
Remediation: floor/ soil/	15,000.
Verification	4,000.
Waste Disposal and Transportation	4,000.
OSC report	5,000.
	<hr/>
TOTAL (1998 dollars)	\$245,000.

Figure 5.1 Planning and Implementation Schedule

5-9



6. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Radioactive contaminants, if present in the soil, could migrate.

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7. OUTSTANDING POLICY ISSUES

There are currently no outstanding policy issues affecting performance of this removal action.

8. ENFORCEMENT

The Core Team consisting of DOE, USEPA, and OEPA has agreed on the need to perform the removal. The work described in this document does not create a waiver of any rights under the Federal Facility Agreement, nor is it intended to create a waiver of any rights under the Federal Facility Agreement. The DOE is the sole party responsible for implementing this clean-up. Therefore, DOE is undertaking the role of lead agency, per the CERCLA and NCP, for the performance of this removal action. The funding for this removal action will be through DOE budget authorization and no Superfund monies will be required.

9. **RECOMMENDATION**

This decision document represents the selected removal action for Buildings H, developed in accordance with CERCLA as amended by SARA, and consistent with the NCP. This decision is based on the administrative record for the site.

Conditions at the site meet the NCP Section 300.415 (b)(2) criteria for a removal and we recommend initiation of the response action.

Approved:

Sam Cheng, DFR Team Leader

DOE/MEMP

Date

Brian K. Nickel, Project Manager

OEPA

Date

Timothy J. Fischer, Remedial Project Manager

USEPA

Date

10. REFERENCES

DOE 1995 Policy on Decommissioning Department of Energy Facilities Under CERCLA, U.S. Department of Energy, U.S. Environmental Protection Agency, May, 1995

USEPA 1990. Superfund Removal Procedures Action Memorandum Guidance. Office of Emergency and Remedial Response. U.S. Environmental Protection Agency. December 1990.

Environmental Appraisal Report of the Mound Plant, March 1996

DOE 1993 Draft Comprehensive Listing of State of Ohio ARARs, Letter from Hatcher to Kleinrath, May, 1993

APPENDIX

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