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ESC-126/98
May 5, 1998

Mr. Tim Fischer
U.S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Mr. Brian Nickel
Ohio Environmental Protection Agency
Southwest District Office
401 E. Fifth Street
Dayton, Ohio 45402-2911

SUBJECT: Contract No. DE-AC24-97OH20044
BUILDINGS 35 AND 59: DELIVERY OF FINAL ACTION MEMORANDUM

REFERENCE: Statement of Work Requirement C 7.1 -- Regulator Data Requests

Dear Mr. Fischer and Mr. Nickel:

Previously, USEPA, OEPA, and DOE/MEMP approved the Action Memorandum for Buildings 35 and 59. A formal public review period was observed; no comments were received.

The attached Final Action Memorandum for Buildings 35 and 59 has been authorized for release to USEPA, OEPA, and ODH by Ron Church of MEMP.

If you require further information, please contact Dave Rakel at extension 4203.

Sincerely,

Linda R. Bauer, Ph.D.
Department Manager, Environmental Safeguards & Compliance

LRB/nmg

Enclosures as stated

cc: Ray Beaumier, OEPA, (1) w/attachments
Ruth Vandegrift, ODH, (1) w/attachments
Jeff Raines, TechLaw, (1) w/attachments
Administrative Record, (1) w/attachments
Public Reading Room, (5) w/attachments
DCC

3005-9805050014

Environmental Restoration Program

ACTION MEMORANDUM
ENGINEERING EVALUATION/COST ANALYSIS

REMOVAL ACTION
BUILDINGS 35 and 59

MOUND PLANT
MIAMISBURG, OHIO

April 1998

Final

(Revision 0)

Department of Energy

Babcock & Wilcox of Ohio

ENVIRONMENTAL RESTORATION PROGRAM

PROPOSED

ACTION MEMORANDUM
ENGINEERING EVALUATION/COST ANALYSIS

REMOVAL ACTION
BUILDINGS 35 AND 59

MOUND PLANT
MIAMISBURG, OHIO

April, 1998

PREPARED BY:

Babcock & Wilcox of Ohio, Inc.
P.O. Box 3030
Miamisburg, Ohio 45343-3000

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) and the U.S. Environmental Protection Agency (USEPA) 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 Building 35 and Building 59. This location is identified in Figure 2.1.

2.1.2. Site Characteristics

Buildings 35 and 59 are physically connected and since 1977 comprised the Californium Multiplier (CFX) facility. Building 35 is a single story concrete building constructed in 1967 that housed the control room for CFX, offices, x-ray units, dark room, helium leak testing station, and eddy current nondestructive testing laboratory. Building 59 is a two story, concrete block structure constructed in 1977 that housed a neutron radiography and neutron activation facility. These buildings ceased operations in 1990 and at that time the californium source was stored 10 feet below Building 59 in a metal storage tube. In 1995 the californium source was removed from the storage tube and shipped off-site. In 1996 the uranium plates, cadmium blades, and the CFX unit were removed from Building 59. Building 35 was used to support both the 1995 and 1996 activities.

Building 35 is a 50-foot square (2,500 square feet) and has a steel deck and a flat roof covered with small gravel, supported by roof joists spanning the interior masonry wall, and an interior column line.

Building 59 is a two-story, concrete block structure, 18-foot square (648 square feet) and approximately 36 feet high. It has 12 inch-thick first floor walls, 8 inch-thick second floor walls, and a poured concrete roof. The floor separating the two stories is cast-in-place, reinforced concrete 16 inches thick that supported the CFX and biological shielding. Part of this shielding is a concrete "donut" which is 4' -8" high with an 11'-4" outside diameter and a 3'-4" inside diameter and is one piece with the floor.

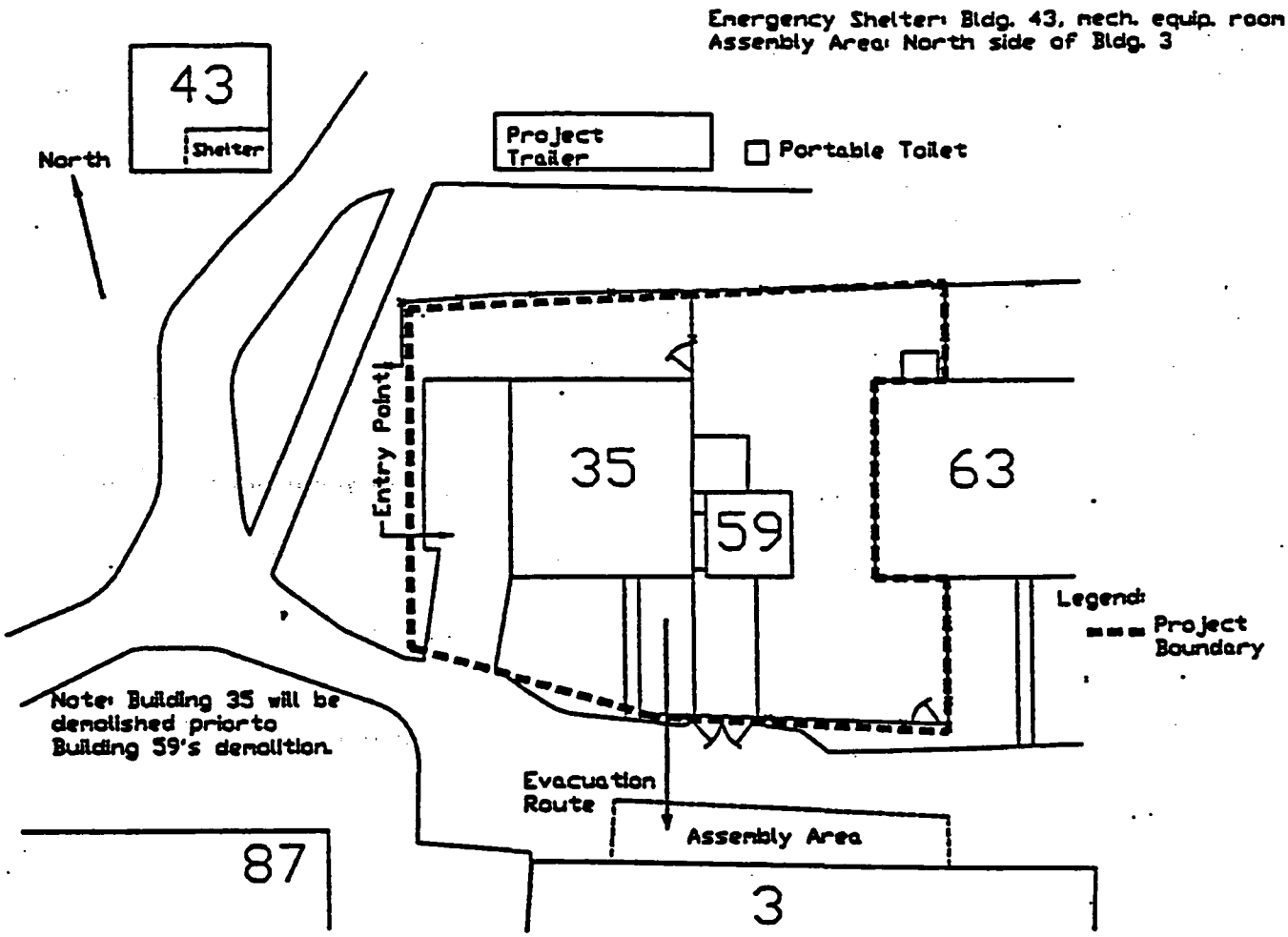


Figure 2.1 Location of Buildings 35 & 59

2.1.3. Release or Threatened Release into the Environment

Radiation surveys of Building 59 indicate some water stains may contain slightly elevated levels of tritium and the existence of radioactive materials (produced by neutron activation) inside the center of the concrete structure that housed the CFX. Other radioactive materials (also produced by neutron activation) are expected where the Californium source was stored in the aforementioned storage tube. Building 35 contains asbestos in the equipment room, roofing system, and floor tile. There is the potential for PCBs in the light ballasts and for chemicals from the photo processing lab to have leaked into the ground at the floor drain.

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

2.1.4. 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.

On November 19, 1997, the Core Team consisting of representatives of DOE/MEMP, US EPA, and OEPA recommended a RESPONSE ACTION for Buildings 35 and 59

(Appendix A) . This recommendation was available for public review and comment from January 15 to February 15, 1998.

2.2.1. Previous Removal Actions

No previous removal actions have been performed at Buildings 35 and 59..

2.2.2. Current Actions

Asbestos piping insulation and florescent light ballasts containing PCBs will be removed before demolition starts. These materials will be disposed according to the appropriate regulations.

All materials and equipment have been removed from Buildings 35 and 59 except for the following items: 2 x-ray units, transformers (no PCBs) and associated equipment, some remaining furniture, windows, doors, plumbing fixtures, ceiling and floor tile, rigid fiberglass insulation panels, air conditioning and heating units and their associated duct work.

Building 35 has potable water, compressed air, telephone, Molan (Mound Local Area Network), steam, storm sewer, and sanitary sewer. Both Buildings 35 and 59 have electricity and fire sprinkler systems. All these services will be terminated and isolated outside the buildings before demolition.

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 and hazardous chemicals may create a potential threat to the public health or welfare.

3.2. THREATS TO THE ENVIRONMENT

The potential release of radioactive contamination and hazardous chemicals 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. The source and nature of the potential release are described in the Building Data Package for Buildings 35, 59. On the basis of this information, the Core Team recommended a RESPONSE ACTION for this building. 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 for photo chemicals to have leaked into the ground at the floor drain in Building 35. There is the potential for radioactive neutron activation products to be present in the soil near the storage location for the californium source.
(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;"	There is the potential for photo chemicals to have leaked into the ground at the floor drain in Building 35. There is the potential for radioactive neutron activation products to be present in the soil near the storage location for the californium source.
(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 59 surveys indicate some water stains may contain slight levels of tritium and the existence of radioactive materials from neutron activation of the concrete structure that housed the CFX.

4. ENDANGERMENT DETERMINATION

As this location is currently configured and access controlled, it is unknown whether 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 dismantle, demolish, and remove Buildings 35 and 59 and associated contaminated soil plus adjacent asphalt and concrete within the soil removal boundaries. 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 35&59 in addition to a perimeter surrounding the buildings. The distance from the buildings to the perimeter will vary from 20 to 40 feet as shown in Figure 2.1.

5.1.1. Proposed Action Description

- Site Preparation

This step includes among other activities; placement of project trailer; removal of any trees or shrubs that interfere with work activities; review demolition activities with commercial tenant in Building 63, Star City, review demolition activities and safety issues with work force and Mound Fire Department; obtain appropriate site permits; establish control of access and egress to construction site; locate and clearly mark underground utilities; establish temporary water supply for dust control.

- Building Preparation

This step includes among other activities; disconnecting telephone and computer network service to the buildings, terminating potable and fire protection water, disconnecting and cutting electrical feeds to the buildings and isolating them outside the buildings.

- Building Demolition

This step includes among other activities; establishing a staging area and relocating heavy duty equipment at the project site; establishing a staging area for waste; making provisions for monitoring equipment; making provisions for water misters. Progression of building demolition will be determined in the field. The general approach is to begin wth Building 35 then address Builidng 59. Heavy-duty equipment using shear, grapple, and ram fixtues will be used. Asphalt within the project boundaries will be removed. The storage tube will be removed and surrounding soil will be removed later contingent on sampling results. The soil near

the sewer piping from the former film developing room will be sampled for contamination by film developing chemicals and remediated as necessary.

- Verification

A Verification Plan will be developed to identify what, if any, contaminants are present. Because of the possibility of activation products, the elements of concern can not all be identified beforehand. 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.

- Site Restoration

Equipment, materials, waste containers, and boundaries will be removed. The site willl be backfilled and compacted to original contours and elevation. The area will be seeded as needed.

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 35 & 59 Demolition.

5.1.1.3. Uncertainties

The major uncertainties are the levels and extent of activation products near the u-tube and the presence of contamination from chemicals used in film developing. 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. If necessary, enforceable deed restrictions will be in place at the time of transfer in order to ensure future protection of human health and the environment.

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 the final remedy for the Building 35 and 59 site. 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. The Core Team determined that a

Response Action is warranted for Building 35 and 59.

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 buildings 35&59 demolition.

5.1.7. Project Schedule

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

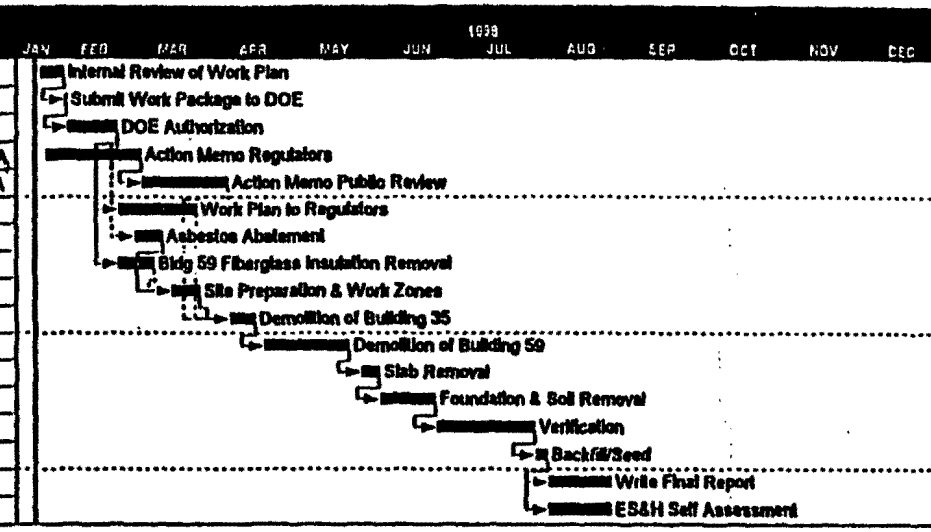
5.2. ESTIMATED COSTS

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	35,000.
Site Prep & Work Zones	10,000.
Demolition of buildings	300,000.
Characterize foundation & soil	30,000.
Remediation foundation/soil/verify	60,000.
OSC report	5,000.
TOTAL (1998 dollars)	$440,000.

Act ID	Description	Orig Dur	Early Start	Early Finish
1000	Internal Review of Work Plan	6d	26JAN98	03FEB98
1010	Submit Work Package to DOE	1d	04FEB98	04FEB98
1020	DOE Authorization	10d	05FEB98	23FEB98
1021	Action Memo Regulators	18d	26JAN98 A	04MAR98 A
1022	Action Memo Public Review	18d	05MAR98 A	06APR98 A
1023	Work Plan to Regulators	18d	24FEB98	25MAR98
1030	Asbestos Abatement	8d	02MAR98 *	12MAR98
1040	Bldg 59 Fiberglass Insulation Removal	8d	24FEB98	09MAR98
1050	Site Preparation & Work Zones	8d	16MAR98	26MAR98
1060	Demolition of Building 35	12d	07APR98 A	16APR98
1070	Demolition of Building 59	20d	20APR98	21MAY98
1080	Slab Removal	4d	26MAY98	01JUN98
1085	Foundation & Soil Removal	12d	02JUN98	22JUN98
1090	Verification	22d	23JUN98	29JUL98
1100	Backfill/Seed	2d	30JUL98	03AUG98
1110	Write Final Report	15d	04AUG98	27AUG98
1120	ES&H Self Assessment	15d	04AUG98	27AUG98



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Babcock & Wilcox of Ohio
Demolition of Buildings 35 & 59

Early bar
Progress bar
Critical bar
Summary bar
Start milestone point
Finish milestone point

Figure 5.1 Planning and Implementation Schedule

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

Contaminants from film processing, if present in the soil, could migrate. Activation products in the soil near the storage tube could migrate.

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 35 and 59, 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	3/5/98 Date
Brian K. Nickel, Project Manager	OEPA	3/6/98 Date
Timothy J. Fischer, Remedial Project Manager	USEPA	3/4/98 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.

Building Data Package, Buildings 35,59, dated January 13, 1998.

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

APPENDIX

MOUND PLANT RECOMMENDATION

BUILDINGS 35, 59

Background:

Buildings 35 and Building 59 are physically connected, and since 1977 comprised the Californium Multiplier (CFX) facility. Building 35 is a single story concrete building constructed in 1967. It is 2,500 square feet in size. Building 35 has a steel deck and a flat roof covered with small gravel, supported by roof joints spanning the interior masonry walls and an interior column line. It housed the control room for CFX, offices, and the neutron radiography and eddy current nondestructive testing laboratory that supported the CFX mission.

Building 35 ceased operations in 1990 except it has been used for prejobs and a break area to support Building 59 shutdown activities. Building 35 has two remaining X-ray units that most likely contain lead shielding. These units will be disposed of per applicable state and federal regulations.

Building 59 was built as a neutron radiography and neutron activation facility in 1977. It is a two story, concrete block structure, 18-foot square and approximately 36 feet high (648 square feet). It has 12 inch-thick first floor walls, 8 inch-thick second floor walls, and a poured concrete roof. The floor separating the two stories is cast-in-place, reinforced concrete 16 inches thick that supported the Californium Multiplier (CFX) and biological shielding. Part of this shielding is a concrete "donut" which is 4'-8" high with an 11'-4" outside diameter and an inside diameter of 3'-4" and is one piece with the floor. The first floor of Building 59 housed the positioning mechanisms for radiographing components containing energetic materials. Neutron backscatter from the floor was minimized by placing a hole in the center of the floor directly beneath the film plane. This hole was covered by a grating and a thin aluminum sheet.

Building 59 is empty and has been unused since 1990. At that time, the Californium source was stored 10 feet below Building 59 in a U-tube. In 1995 the Californium source was removed from the U-tube and shipped off-site. In 1996, uranium plates, cadmium blades, and the CFX unit were removed from Building 59 as part of Safe Shutdown.

Recommendation:

Radiological characterization has shown a beta fixed activity at 130,000 disintegrations per minute per 100 sq. Centimeters (dpm/100 cm^2). This value exceeds the radiological guideline of 5,000 dpm/100 cm^2.

It has been determined that these conditions are not protective of human health and the environment. Therefore, a RESPONSE ACTION is recommended.

Concurrence:

DOE/MEMP: Sam Cheng 11/19/97
Sam Cheng, D&D Team Leader (date)

USEPA: Timothy J. Fischer 11/19/97
Timothy J. Fischer, Remediation Project Manager (date)

OEPA: Brian K. Nickel 11/19/97
Brian K. Nickel, Project Manager (date)