30 01 040524 0006

CH2M HILL
Mound, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, OH
45343-3030

CH2MHILL

SM-094/03
December 10, 2003

Mr. Dewain Eckman, Acting Director
Miamisburg Closure Project
U. S. Department of Energy
500 Capstone Circle
Miamisburg, OH 45342

ATTENTION: Paul Lucas

SUBJECT: Contract No. DE-AC24-03OH20152
BUILDING 38, STRUCTURE OSC REPORT, FINAL, REV. 1
Bldg 38 GFS/I: Completion Document Approved – Activity ID EBDEE038AY
38 Stack GFS/I: Completion Document Approved – Activity ID EBDEE038DY

REFERENCE: Statement of Work Requirement 055 - Regulator Reports

Dear Mr. Eckman:

Paul Lucas from your office has approved the following revised document to be released:

- Building 38, Structure OSC Report, Final, Rev. 1

Changes since Final include the reinsertion of the word "properly" to describe the disposal of the building debris, and to elaborate on the text describing the radiological assessment and surveys performed prior to demolition to identify areas of the building that met surface release criteria.

If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact Bob Ransbottom at 865-4220.

Sincerely,

K. L. Kehler
SMPP/TFV Project Manager

KLK/VKD

Enclosures

cc: David Seely, USEPA, (1) w/attachments
Brian Nickel, OEPA, (1) w/attachments
Ruth Vandegrift, ODH, (1) w/attachments
Mary Wojciechowski, Tetra Tech, (1) w/attchs
Frank Schmaltz, DOE/MCP, (1) w/attachments
Lisa Rawls, DOE/MCP, w/o attachments
Randy Tormey, DOE/OH, (1) w/attachments
Terry Tracy, DOE/HQ, (1) w/attachments
Dann Bird, MMCIC, (2) w/attachments
Jim Bonfiglio, MESH, (1) w/attachments
Public Reading Room, (4) w/attachments
Kurt Kehler, CH2M Hill, (1) w/attachments
Val Darnell, CH2M Hill, (1) w/attachments
DCC (1) w/attachments
Admin Record (2) w/attachments
John Fulton, CH2M Hill, w/o attachments
Bob Ransbottom, CH2M Hill, w/o attachments
Dave Rakel, CH2M Hill, w/o attachments

BUILDING 38 STRUCTURE REMOVAL ACTION

Includes closure of PRSs 294, 295, 297, 298, 301, 305, and 326

OSC REPORT

December 2003

Final, Rev. 1

Department of Energy
Miamisburg Closure Project

CH2MHILL

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Acronyms

BOSS	Balance of Site Structures
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
D&D	decontamination and decomissioning
DAC	derived air concentration
DOE	Department of Energy
ER	Environmental Restoration
MCP	Miamisburg Closure Project
NTS	Nevada Test Site
OEPA	Ohio Environmental Protection Agency
OSC	On-Scene Coordinator
PP	Plutonium Processing
PRP	Potentially Responsible Party
PRS	Potential Release Site
RA	Removal Action
RTG	Radioisotopic Thermoelectric Generator
SM	Special Metallurgical
USEPA	United States Environmental Protection Agency

RECOMMENDATION

The superstructure portion of the Building 38 Removal Action was performed based on radiological contamination from plutonium-238 processing activities that occurred within the building. The removal action resulted in the demolition of Building 38 and its stack (PRS 305), and disposal of approximately 6,671 cubic yards of material. The radioactive waste was sent to Envirocare and the Nevada Test Site (NTS); the demolition debris meeting surface release criteria was sent to Stoney Hollow Landfill, and the concrete meeting surface release criteria was reused onsite. Other building components designated as PRSs 294, 295, 297, 298, 301, and 326 were removed by the previous site contractor. This OSC Report closes out PRSs 294, 295, 297, 298, 301, 305, and 326. Removal of the contaminated soil covered by the Building 38 Removal Action is underway and will be closed out separately in the Building 38 Soil OSC Report.

10/28/03

for Paul Lucas, OSC
U.S. Department of Energy
Miamisburg, Ohio

11/19/03

David Seely, Remedial Project Manager
USEPA
Chicago, Illinois

10/29/03

Brian Nickel, Project Manager
OEPA
Dayton, Ohio

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1.0 SUMMARY OF EVENTS

This section describes the site background and events leading up to the removal action, parties involved in supporting the removal action, chronological narrative of the removal action, and resources committed to complete the project.

1.1 Site Conditions and Background The Action Memorandum, Building 38 Removal Action, January 2002, Final (Revision 2), and the Building 38 Removal Action, Action Memorandum, Addendum 1, Final, August 2003 authorize removal of Building 38, the Building 38 Stack, and the contaminated soil in the vicinity. This Structure On-Scene Coordinator (OSC) Report documents only the removal of the Building 38 superstructure and stack, and associated building component PRSs. The removal of contaminated soil, and soil-related PRSs in the vicinity of Building 38 will be documented via the Building 38 Soil OSC Report.

The levels of radiological contamination present warranted a Removal Action (RA) under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) and subsequent demolition of Building 38 and its stack.

1.1.1 Building 38 Structure

Building 38, also called PP (Plutonium Processing) Building, was constructed in 1968 to replace the facilities in SM Building (Special Metallurgical). Building 38 was originally used as a plutonium-238 production processing facility and more recently supported the assembly and testing of Radioisotopic Thermoelectric Generators (RTGs), the repackaging and storage of excess nuclear material, and the storage and identification of orphan radioactive sources at Mound. Even though Building 38 has undergone extensive Decontamination and Decommissioning (D&D) cleanup in the past, sealed-in-place plutonium-238 contamination was present. There were seven structural Potential Release Sites (PRSs) (Table 1): six located within the building, and the seventh being the stack.

Building 38 was a two-story structure with the lower level constructed of reinforced concrete and prestressed concrete, and the upper-level constructed of concrete block. The roof was prestressed concrete with built-up membrane of asphalt. The total floor space was 44,327 square feet. Appendix D provides photographs of the building and stack before, during, and after demolition. The basement walls, slab, and footers were left in place and will be removed with the Building 38 soil removal action activities.

1.1.2 Building 38 Stack

The Building 38 Stack was a masonry process exhaust stack that served Building 38 and SM Building (prior to its demolition in March 1995). The stack's interior had been exposed to radioactive isotopes of thorium, americium, uranium, and plutonium. The 200-foot tall stack was made of bricks and mortar, reinforced with wire mesh and rebar, and coated on the inside surface. The stack was supported by a square reinforced concrete base pad, which was left in place and will be removed with the Building 38 soil

removal action activities. The stack also included a 48-inch diameter exhaust duct from Building 38 to the plenum, the exhaust plenum with support platform, and stack exhaust fan, which were removed with the structure removal activities. The Building 38 stack was designated as PRS 305.

Associated Potential Release Sites and Previous Investigations.

The seven PRSs listed in Table 1 (approximate locations are shown on Figure 2) were dispositioned with the Building 38 Structure and are closed out in this OSC Report. The 15 PRSs listed in Table 2 are to be dispositioned with the Building 38 Soil, and will be closed out in the corresponding Soil OSC Report.

Removal Action. The authorization of a Removal Action for Building 38, the Building 38 Stack, and contaminated soil in the vicinity was made by the Core Team on July 12, 1999 via the Building 38 Action Memorandum. Three additional soil-related PRSs were added via the Building 38 Action Memo Addendum 1, Final August 2003. These documents were made available for public review and comment on July 19, 1999 and June 4, 2003, respectively. Since DOE is the sole responsible party for cleanup of contamination in Building 38, no Potentially Responsible Parties (PRPs) were sought to clean up the site. Monsanto Research Corporation, EG&G Mound Applied Technologies, and BWXT of Ohio, Inc. were the operating contractors at the site from 1948 to 30 September 1988, from 1 October 1988 until 30 September 1997, and from 1 October 1997 until 31 December 2002 respectively. CH2M Hill Mound, Inc. became the site contractor for the Miamisburg Closure Project (MCP) effective January 1, 2003.

1.2 Organization of the Removal Action

Table 3 (Appendix B) lists the parties supporting the removal action and their responsibilities.

1.3 Objectives

Removal Action Objectives: The objectives of the Building 38 Removal Action were to demolish the Building 38 superstructure and stack, remove the Buildings 33 and 38 slabs and foundations, remove the contaminated soil in the vicinity of SM Building and Buildings 33 and 38, and remove additional soil PRSs in the vicinity. Completion of the Building 38 superstructure and stack demolition and closure of the PRSs listed in Table 1 is documented in this Structure OSC Report. Completion of the foundation and soil removals, and removal of the soil-related PRS listed in Table 2 will be documented in the Soil OSC Report.

Documentation Objective. The objective of this Building 38 Structure OSC Report is to describe the structure removal action fieldwork, report the air monitoring results, and document successful completion of the structure removal portion of the project. Material quantities and disposition locations are presented in Table 4. The cost breakdown of the structure portion of the RA is presented in Table 5. A separate Building 38 Soil OSC

Report will be provided to document completion of the soil removal portion of the project.

Verification of Structure Demolition. The verification of the building and stack superstructure removal is provided in the photographs included in Appendix D. The Building 38 basement walls and slab, and the stack slab were left in place and will be removed during the soil removal action activities.

1.4 Chronological Narrative of the Removal Action

The following is a chronological narrative of events surrounding the Building 38 Structure removal action.

Timeframe	Activity
1968	Building 38 construction completed.
1974	A waste solidification facility (2,184 square feet) was added to the west side of Building 38.
1976	A low-level liquid waste facility and tanker loading pad was added to the west side of Building 38.
1977	Men's change room (1,764 square feet) and two dock towers (with an overhead rail crane in each) were added to Building 38.
1979	Plutonium processes in Building 38 ceased. After this time, only encapsulated heat sources were handled in the building.
1982 – early 1990s	D&D activities conducted.
1996	RTG assembly and disassembly operations started in Building 38.
1998	Orphan source work ended in Building 38.
July 1999	Core Team binned Building 38 as a Removal Action.
June to October 2002	Safe Shutdown activities conducted.
October 2002 to June 2003	Building 38 decontamination conducted.
January to February 2003	Asbestos abatement conducted.
June 2003	Exhaust ductwork demolition performed.
June to July 2003	Building 38 structure and stack demolished.
September 2003	Structure OSC Report generated.
November 2003	Structure OSC Report released.

2.0 EFFECTIVENESS OF THE REMOVAL ACTION

The Building 38 superstructure and stack have been demolished and the debris removed and disposed of properly per the EPA-approved work plans. Photographs taken before, during, and after demolition are included in Appendix D.

2.1 Actions Taken by Site Contractor

The Balance of Site Structures (BOSS) project and onsite personnel planned and performed removal action oversight, building and stack dismantlement and demolition, air monitoring for worker safety, and onsite transportation and staging of debris. The project met the removal action objectives as outlined in the Action Memorandum (Final Revision 2, dated January 2002). CH2M Hill Mound, Inc. personnel prepared the OSC Report, which shows that the structure Removal Action objectives were achieved.

Building and Stack Dismantlement and Demolition

Photographs of Building 38 and its stack before, during, and after demolition are provided in Appendix D. To prevent the generation of airborne radioactive contamination during demolition activities, a suite of engineering controls were employed. These controls included (but were not limited to) fixing contamination using liquid fixatives and/or foam, scabbling fixed contamination locations to remove the contamination, and using water misting to prevent fugitive dust emissions. All wastewater generated during decontamination activities was containerized and transported to the onsite Alpha Treatment System (ATS) Building (also known as Building 125) for processing. Water and sludge remaining in the building sumps and wastewater holding tank was solidified into concrete, and disposed of as LSA waste at the Nevada Test Site (NTS).

Prior to demolition, Radiological Controls performed an evaluation of the radiological history of the building. Radiological characterization surveys were conducted to identify clean and contaminated areas of the building. The survey results were used to guide the demolition sequence and to ensure proper debris segregation. Additionally, in-process surveys were also conducted throughout the phase I activities to ensure that the implemented controls were effective. The sections of the building that were anticipated to meet surface release criteria were demolished first.

Following demolition, debris was segregated and radiologically surveyed. Only structural material that met surface release criteria was released to Stoney Hollow Landfill (Appendix B, Table 4). Concrete debris meeting surface release criteria was size reduced to facilitate transportation to and processing at the onsite concrete crusher, prior to being reused as hard fill material onsite. Radioactively contaminated debris was size reduced and packaged to meet the Envirocare or NTS waste acceptance criteria.

Prior to stack demolition, an air lock work area (with ventilation providing negative pressure to draft airflow downward in the stack) was installed at the opening at the base

of the stack. Bracket scaffolds were installed on the stack to enable brick-by-brick demolition of the stack from the top down. The stack debris was routed down the interior of the stack to the air lock work area at the base. All debris from the stack demolition was disposed of as radiological waste. Radiological surveys were performed to ensure proper management of the waste stream, per the EPA-approved Work Plan.

Appendix C provides a copy of the CH2M Hill Mound, Inc. news announcement was released in June 2003 and five articles published about the Building 38 and stack demolition that appeared in the Dayton Daily News and the Miamisburg/West Carrollton News.

Air Monitoring for Worker Safety

During demolition activities, the Mound Radiological Control organization performed air monitoring to confirm a safe work environment, in accordance with 10 CFR 835. Air monitoring results (including the monitor locations relative to the demolition activities and wind direction) from the stack and building demolition are provided in Appendix E. On each day that demolition activities were performed, at least two air monitors were used at any given time (one upwind of the work area and the other downwind of the work area). The monitors were repositioned in response to changes in wind direction.

The derived air concentration (DAC) is a calculated value for occupationally exposed radiological workers based on continuous, non-shielded exposure. For the purpose of the Building 38 demolition, the DAC was calculated based on the isotopic mix of 60% plutonium-238, 30% plutonium-239, and 10% americium-241. The highest recorded results were 0.030 DAC and 0.106 DAC, for the stack and building respectively. All results were well below the 0.3 DAC, which is a Mound Administrative Control level based on 10 CFR 835.

The air monitoring results indicate that there was no airborne worker radiological exposure, and therefore it can be extrapolated that the demolition activities did not pose any risk to human health and the environment.

Additional Building 38 Removal Action Activities

The Environmental Restoration (ER) project will perform the soil removal actions and prepare the Building 38 Soil OSC Report.

2.2 Actions Taken by Local, State, and Federal Agencies

The Department of Energy (DOE)/MCP, the United States Environmental Protection Agency (USEPA), and Ohio EPA (OEPA) had oversight responsibility for the removal action. The DOE/MCP was the lead agency for the RA and provided the funding and oversight for the RA. The USEPA and OEPA had oversight responsibility for the RA and review of the Action Memorandum and OSC Reports to ensure that the objectives are/were met.

OEPA performed building and demolition site inspections; there were no corrective actions noted. They also performed air monitoring; all results were within appropriate limits.

2.3 Actions Taken by Subcontractors

Subcontractors involved in the project included the following:

- American Services Group, Inc. Cleves, Ohio for asbestos abatement
- Cleveland Wrecking Co., Ontario, California for building demolition.
- Concrete Coring Company, Dayton, Ohio for concrete wall and floor cutting.
- International Chimney, Buffalo, New York for SM/PP Stack demolition.
- Rieck Mechanical Electrical Services, Dayton, Ohio for isolation of mechanical utilities.
- RWE Nukem, Oak Ridge, Tennessee for building decontamination.
- Safeway Steel Products, Fairfield, Ohio for installation and disassembly of scaffolding for containments.
- URS Group, Inc. Oak Ridge, Tennessee as the primary contractor.

3.0 DIFFICULTIES ENCOUNTERED

3.1 Items that Affect the Removal Action

No difficulties were encountered that affected the removal action.

3.2 Issues of Intergovernmental Coordination

All DOE/USEPA/OEPA interactions were good. The agencies were updated informally on a regular basis, and formally at monthly Core Team meetings. The Mound 2000 Process worked well. Coordination with CH2M Hill, Inc. and the subcontractors went well.

4.0 RECOMMENDATIONS

4.1 Means to Prevent a Recurrence

The building debris was removed and disposed of properly per the EPA-approved work plan; therefore, the spread of contamination is prevented. This soil Removal Action is underway, and will be closed out in the Building 38 Soil OSC Report. Once both removal actions are complete, the area will be transferred from federal to private ownership. All State and Federal disposal rules will apply.

APPENDIX A

FIGURES

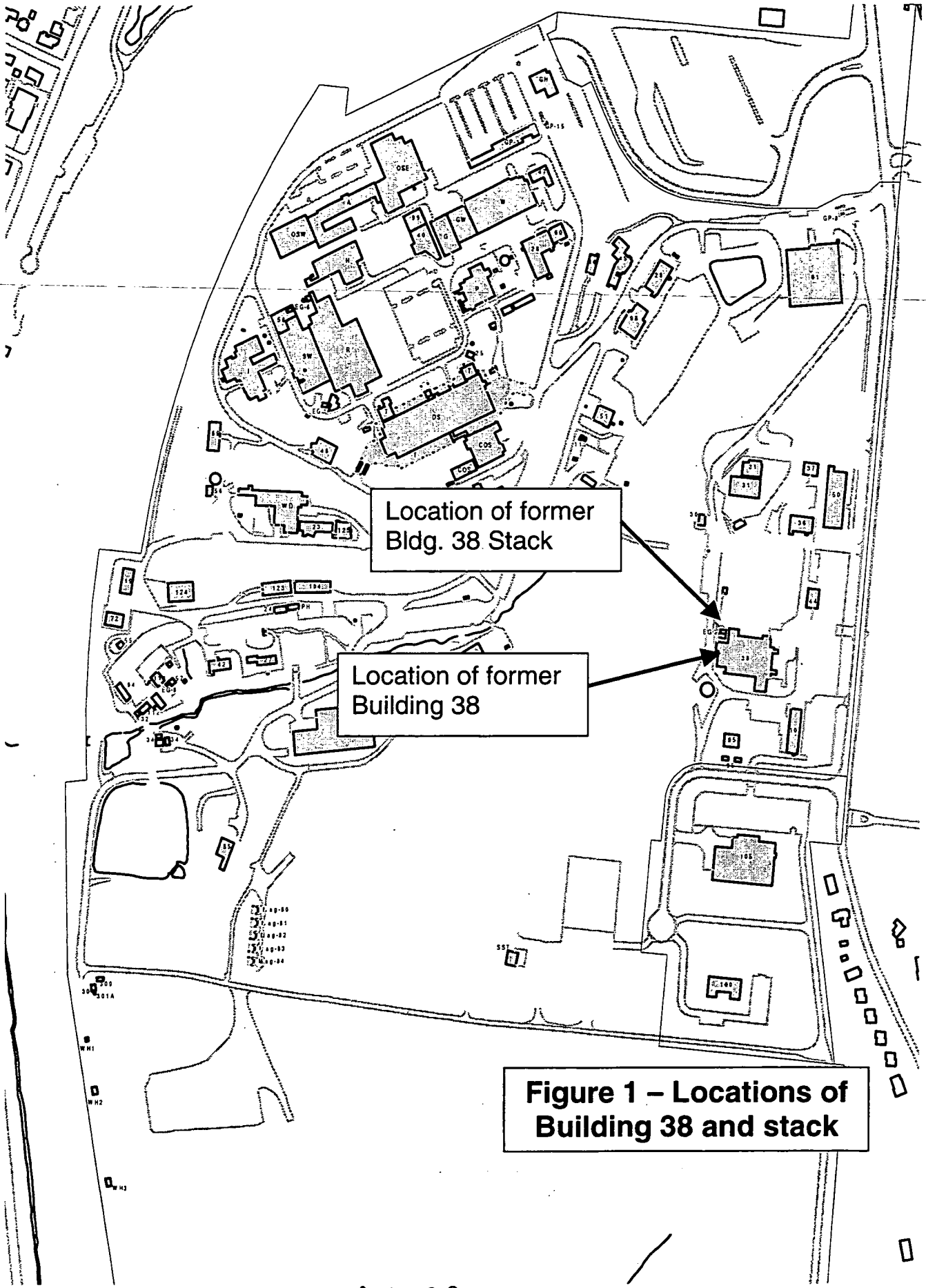
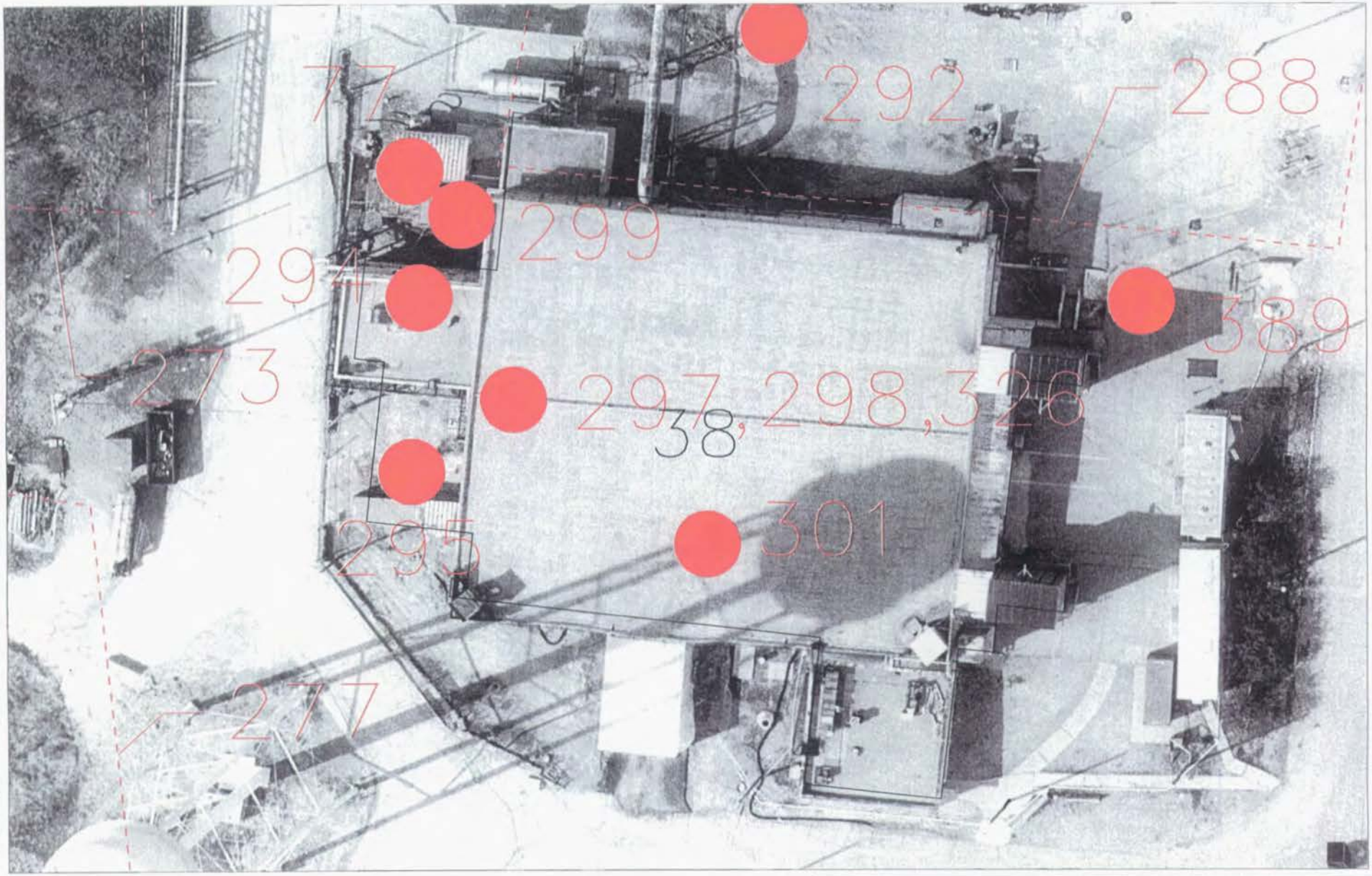


Figure 1 – Locations of Building 38 and stack

A 1 of 2

A2 of 2



PRS Point

PRS Area

PRS Line

20 10 0 20 40FT

GRAPHIC SCALE

MOUND

Environmental Restoration Geographic Information System

ISS	DATE	REVISION	BY	CHKR	ENG	UPMEC	APVD	#
	08/29/03		SSP					

SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ISSUE																					

SHEET	1	2	3	4	5	6
ISSUE	*					

PART CLASSIFICATION

Figure 2 Building 38 and Vicinity

DRAWING CLASSIFICATION: UNCLASSIFIED

SIZE | DRAWING NUMBER: vicinity.dgn | JOB NUMBER

DWG TYPE: STE | PRMG: ER-GIS | CAGEC | SCALE | SHEET 1 OF 1

STATUS: MD-REL-08/29/03 | ORIGIN: MSTATION / J

APPENDIX B

TABLES

Table 1: PRSs Dispositioned with Building 38 Structure Removal

(Closed out in this Building 38 Structure OSC Report)

PRS	Description
294	WS Bldg. Solidification Unit
295	Bldg. 38 Solid Radioactive Waste Compactors
297 & 298	Bldg. 38 Alpha Wastewater Sumps (tanks 26 & 27) – above ground tanks
301	In-Line Incinerator
305	Building 38 Stack
326	Sanitary Sump (tank 254)

Table 2: PRSs to be Dispositioned with Building 38 Soil Removals

(Will be closed out in the Building 38 Soil OSC Report)

PRS	Description
77	Former Warehouse 10 Footprint
78	Former Warehouse 11 Footprint
267	Area 9, Former Thorium Storage/Redrumming Area
273	Area 12, Thorium-contaminated Soil form Area 1
285	Area 11, Contamination from SM Bldg. Operations
287	SM Bldg. Historic Septic Tank (tank 241) -removed
288	Area 17, SM Bldg. Soils
289-292	SM Bldg. Alpha Wastewater Sumps (tanks 210-213) - all four removed
293	Footprint of Former SM Bldg. Solidification Unit
296	Bldg. 38 West Dock Sump (tank 25)*
299	EG-2 Diesel underground storage tank (tank 121). Tank removal and soil sampling is regulated under AOC 1301:7-9-13. The required BUSTR (Bureau of Underground Storage Tank Regulations) Remedial Action Plan contains COCs and action levels related to this tank. The plan has been approved by the state fire marshal.
303	Warehouse 14 Foundation

Table 3: Organization of the Removal Action

US EPA SR-6J 77 W. Jackson Street Chicago, IL 60604 312-886-7058	David Seely	Federal agency responsible for MCP oversight.
Ohio EPA 401 E. Fifth Street Dayton, OH 45402-2911 937-285-6357	Brian Nickel	State agency responsible for MCP oversight.
DOE-MCP P.O. Box 66 500 Capstone Circle Miamisburg, OH 45342 937-847-8350	Paul Lucas	OSC responsible for MCP oversight and success.
CH2M Hill Mound, Inc. BOSS Project 1 Mound Road Miamisburg, OH 45343-3030 937-865-4069	Kurt Kehler	Provide OSC with technical assistance, administrative support, field oversight, site safety, photo, site documentation, and preparation of the OSC Report.

Table 4: Materials and Disposition

Type of Material	Quantity	Disposal Method	Disposal Location
Radioactive Waste	5,637 cubic yds	Landfill	Envirocare and NTS
Demolition Debris	699 cubic yds	Landfill	Stoney Hollow
Clean Hard Fill Debris (concrete)	335 cubic yds	Reused	Spoils Area/ Concrete Crusher

Table 5: Removal Cost

Extramural Costs	Cost
Work Planning	$ 1,400,300
Safe Shutdown	1,234,200
Characterization	279,900
Decontamination and Demolition	6,863,000
Estimated Total Project Cost	**$ 9,777,400**

APPENDIX C

GENERAL MEDIA INFORMATION

CH2MHILL
Mound, Inc.

MIAMISBURG Mound COMMUNITY IMPROVEMENT CORP

2006 Closure of DOE Mound Site Brings Change to the Neighborhood Skyline

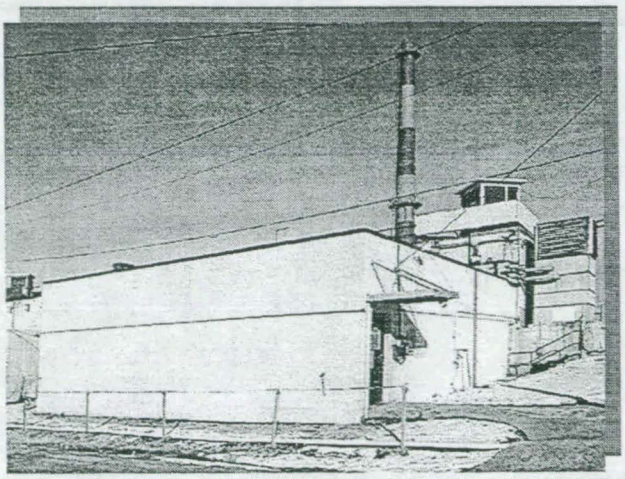
The U.S. Department of Energy contracted with CH2M HILL Mound, Inc., to clean up the Miamisburg Mound site in preparation for property transfer to the Miamisburg Mound Community Improvement Corporation (MMCIC) for future reuse. The demolition of 66 structures and related infrastructure began under the new contract in January 2003. As the work continues, you will soon notice major changes to the neighborhood skyline as the existing smokestacks are removed. This demolition is part of the overall normal work plan at the site. Cleanup completion is anticipated by 2006.

What can you expect to see?
In the next few days, construction workers will begin to erect scaffolding up and around Building Stack 38. Preparation for demolition of the stack and auxiliary buildings has begun and is expected to be complete at the end of July. The site crews will begin work at 6:00 a.m., Monday through Saturday, working 10-hour shifts.

Who can you call with questions?
Jane Greenwalt, DOE Public Affairs Officer, Ohio Field Office at 937-847-8350, ext. 312 or Lynette Bennett, Manager of Public Relations for CH2M HILL Mound, Inc. at 937-865-5519.

How can you learn more about the project?
Additional information is available for public review in the CERCLA Public Reading Room, 305 E. Central Avenue, Miamisburg. Mound Action Committee (MAC) meetings are held the second Friday of each month from 9:00 – 10:00 a.m. Meetings are informal and interactive, open to the public, and there are no membership dues or obligations.

The DOE Ohio Field Office publishes a monthly newsletter, 'New Directions'. Please call if you want to be added to the mailing list.



Stack 38 and adjacent building are visible from Mound Road across from the Mound Golf Course.

Smokestack razing safety questions raised

Ex-Mound worker challenges DOE on process

By Dale Dempsey
ddempsey@DaytonDailyNews.com

MIAMISBURG — A former employee of the Mound Plant has questioned the Department of Energy about the safety of removing two smokestacks on the site of the former nuclear weapons plant.

The DOE this year announced plans to raze the towers, as part of the conversion to a business and technology park. The tower demolition is set to begin today, and officials said the department is taking steps to contain possible contaminants.

"I want to know what you are doing to prevent contamination for neighbors," Mark Becker wrote to the DOE last week. Becker was formerly a public information official for Mound and later BWX Ohio, which operated the plant for the Energy Department. Becker is currently with Ciba Specialty Chemicals in Memphis, but said he still has relatives in Miamisburg, prompting his concern.

The towers were used for work with plutonium and other radionuclides, Becker said.

"Will the towers be taken apart brick by brick to eliminate any material getting into the atmosphere?" Becker wrote. "I would think that better information should be put out and not with a mention that the skyline is changing."

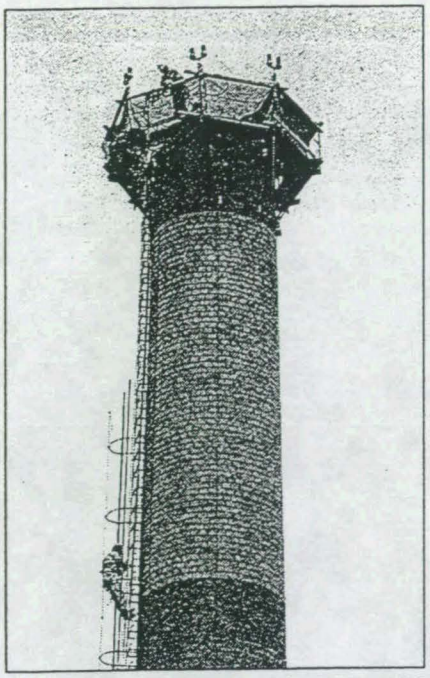
Jane Greenwalt, a spokeswoman for the DOE, said reverse-flow ventilation and a containment structure at the base of the towers will be used to prevent escape into the atmosphere.

She also said the structures will be dismantled brick by brick.

Becker's reaction was still one of skepticism. "They indicate they have potentially no harmful health effects but they have not ruled it out," he said. "I would not take my son to Mound Park while the work is being done."

For more information, visit the Reading Room at the Miamisburg Senior Adult Center, 305 Central Ave.

Contact Dale Dempsey at ddempsey@DaytonDailyNews.com or 225-2270.



JIM WITMER/DAYTON DAILY NEWS

Chimney work

A demolition worker Tuesday climbs the chimney of Building 38, a former plutonium processing plant, on the grounds of the former Department of Energy's Mound Plant in Miamisburg. More than 60 buildings are to be demolished in the Mound closure project, set to be completed by 2006. The site is being converted to a business and technology park.

Mound towers coming down

by Steve Sandlin
The News
Steve.Sandlin@miller-publishing.com

The demolition of two smokestack towers at the Mound site, once used for work with plutonium and other radio-nuclides, is being done safely, according to officials at the site.

The 200 foot towers are coming down as part of the site's conversion to a business and technology park. Some people in the community have expressed concerns that radioactive contaminated materials could escape the site and endanger the public, but officials say

(Continued on Page 6A)

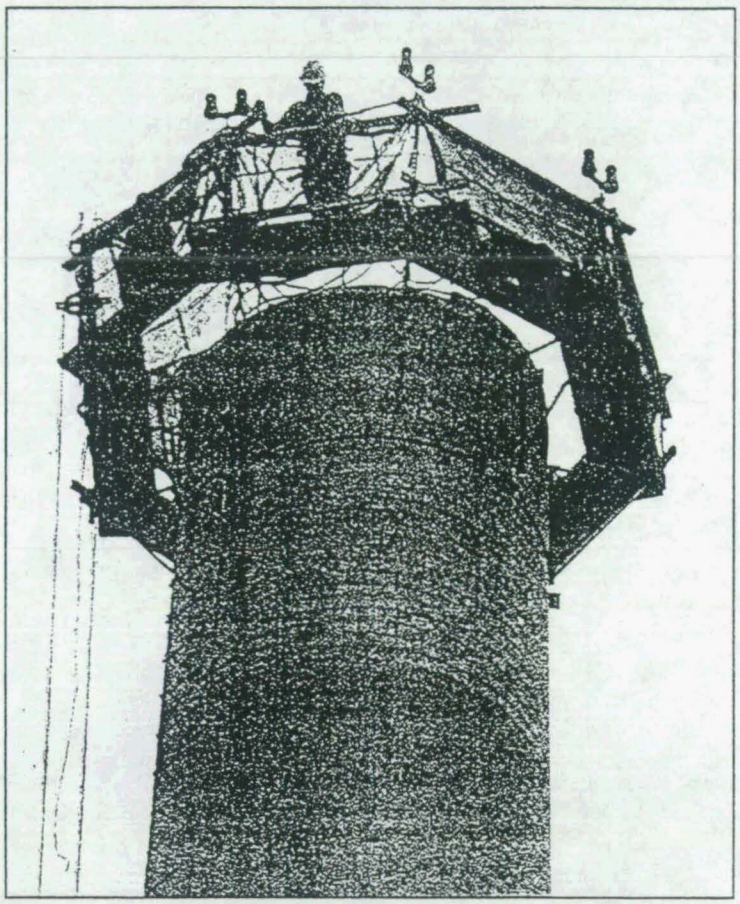


Photo by Steve Sandlin
Workers demolish one of the smokestacks at the Mound site.

Mound towers

(Continued from Page 1A)

that's unlikely.

"We are taking down the towers using a method that's been approved by the Ohio EPA (Environmental Protection Agency)," said Chris Watson, project manager. "In fact, we and the EPA are working side-by-side during the process.

"We have air monitors located all around the demolition site and the EPA does, too," he said.

Watson said the towers are being taken down by a team of family members from Missouri who are known for such work.

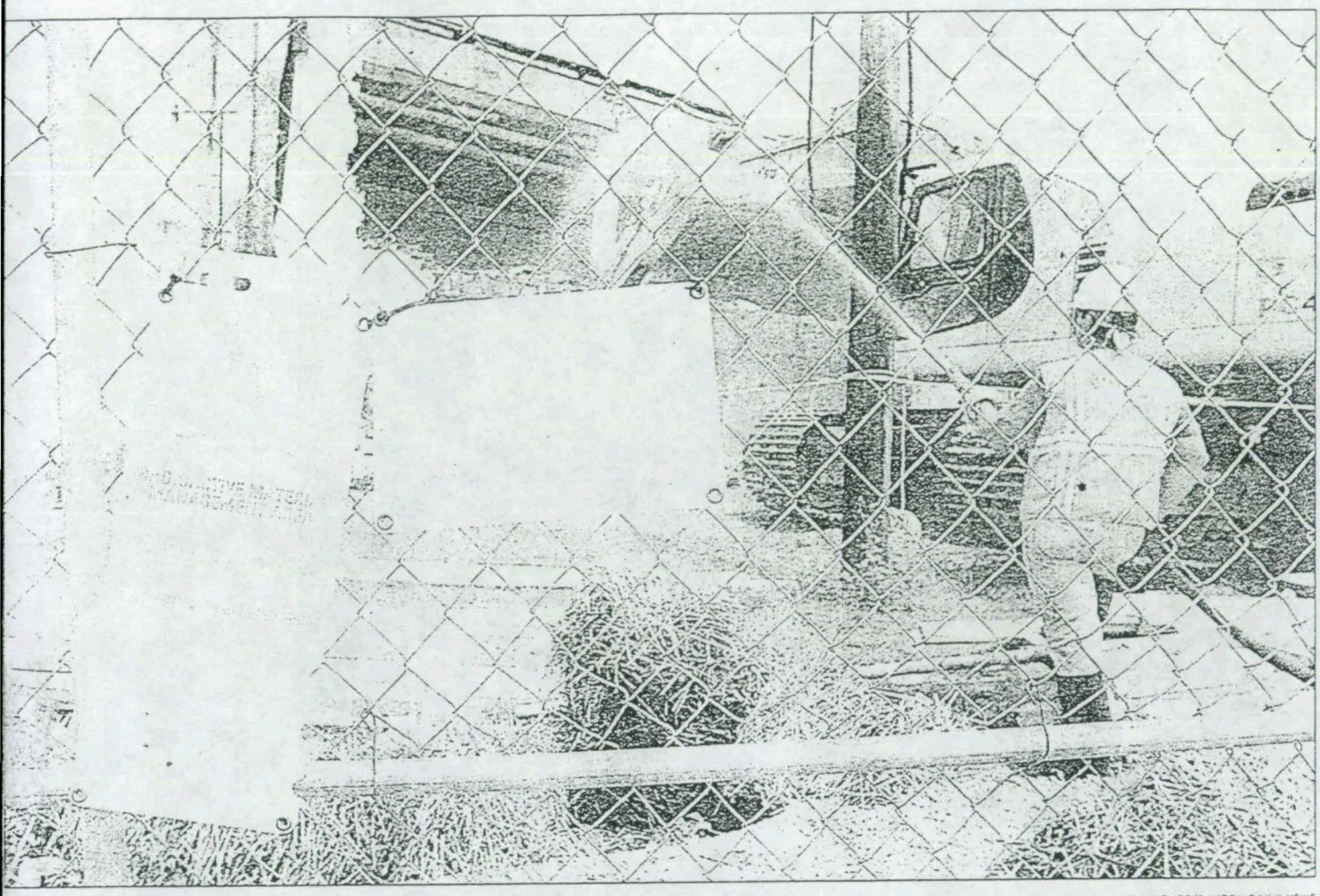
The team, the Bower family consisting of a father, son and cousin, are using a method called "bracket scaffolding" to demolish the towers.

Watson said the men push the bricks of the tower off and down inside the towers, then move the brackets down and do more.

He said at the bottom of the tower, the discarded material is taken through three bays to take it from "dirty to clean" and special HEPA air filters capture any contaminated materials in the air.

He said there is also a reverse air flow ventilation system that keeps contaminated air from exiting up through the towers.

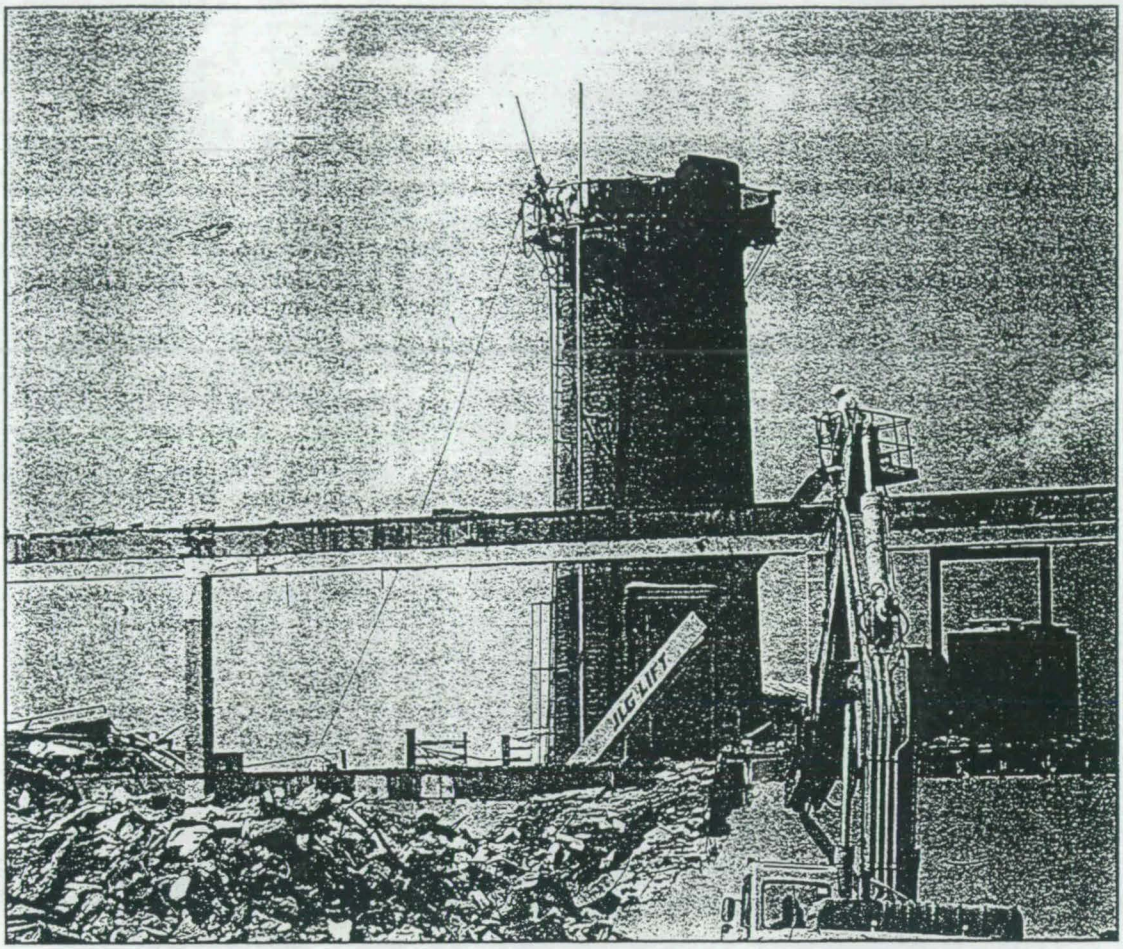
"The process is approved by the Ohio EPA and they are here to make sure everything is done safely," said Watson. "And that's our mission, too."



JIM WITMER/DAYTON DAILY NEWS

Building 38 comes down at the Mound

A demolition worker sprays water as heavy machinery knocks down a wall of Building 38, a former plutonium processing plant on the grounds of the Department of Energy's former Mound Plant in Miamisburg. Building 38 is one of 66 buildings being taken down in the Mound Lab Miamisburg Closure Project, which is scheduled for completion in 2006. The former nuclear weapons plant is being converted to community use.



Demolition work on the stack at Mound has been completed.

Demolition on Building 38 & stack complete at Mound

NEWS FROM THE HILL

The demolition of Building 38 and Stack at the Mound site in Miamisburg is nearly complete, and much of the debris associated with this project has been removed. The next phase of this project is to remove soil and asphalt located within close proximity to the former Building 38 Stack and approximately 500 feet from the roadway running adjacent to Mound Road. The area for excavation is about 50 feet by 100 feet.

Unlike the demolition work, this work will be conducted during the evenings (Monday through Thursday) and on weekend days. Lights, and earth moving equipment such as an excavator, front-end loader and hauler may be seen from the roadway beginning early August through mid-September.

Multiple measures are being taken to protect workers and neighbors during excavation. Soils will be misted during the excavation process, containerized directly from excavation, and covered with tarps during off-shift hours when work is not actively being performed. Wind speeds will be monitored and work ceased if levels are exceeded, and air monitoring will be conducted to assure safety measures are functioning properly. Controls will be put in place to prevent excess run-on/run-off of surface water into and out of the excavation. Any surface water in the excavation will be sampled and disposed of using accepted waste management practices.

If you have questions about the Miamisburg Closure Project contact Jane Greenwalt, Public Affairs Officer, DOE at 673-4568 or Lynette Bennett, Manager of External Communications for CH2M HILL Mound, Inc. at 865-5519.

If you have stories to share, please submit them to lbennett@ch2m.com or write Lynette Bennett, Manager of External Communications for CH2M HILL Mound, Inc., at P.O. Box 3030, Miamisburg, Ohio 45343-3030.

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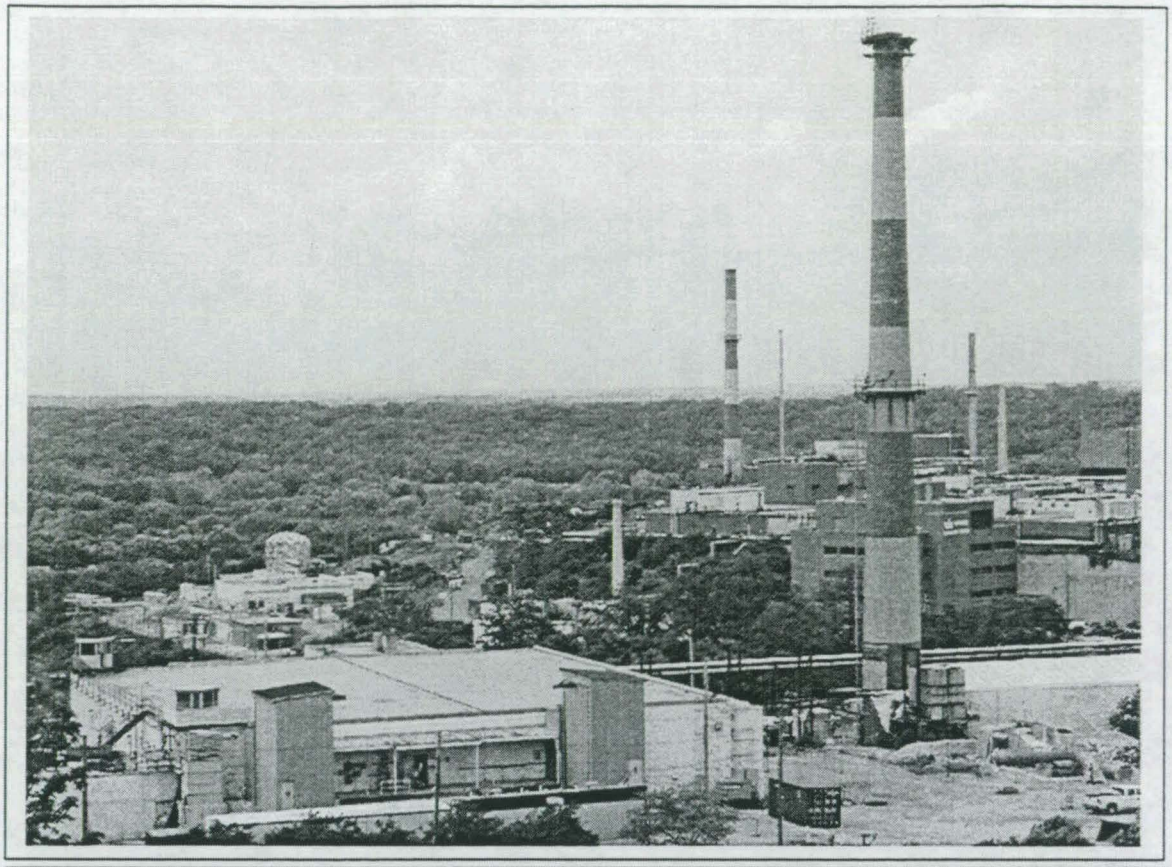
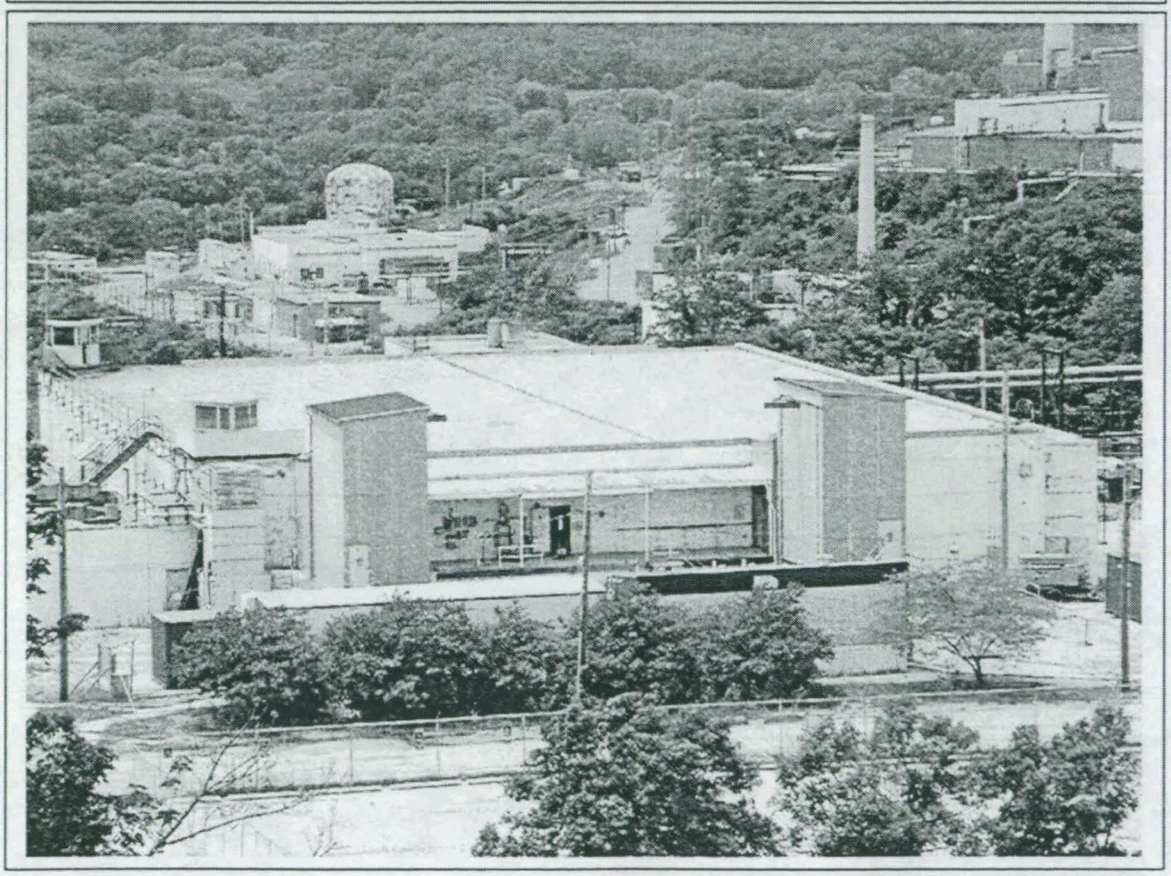
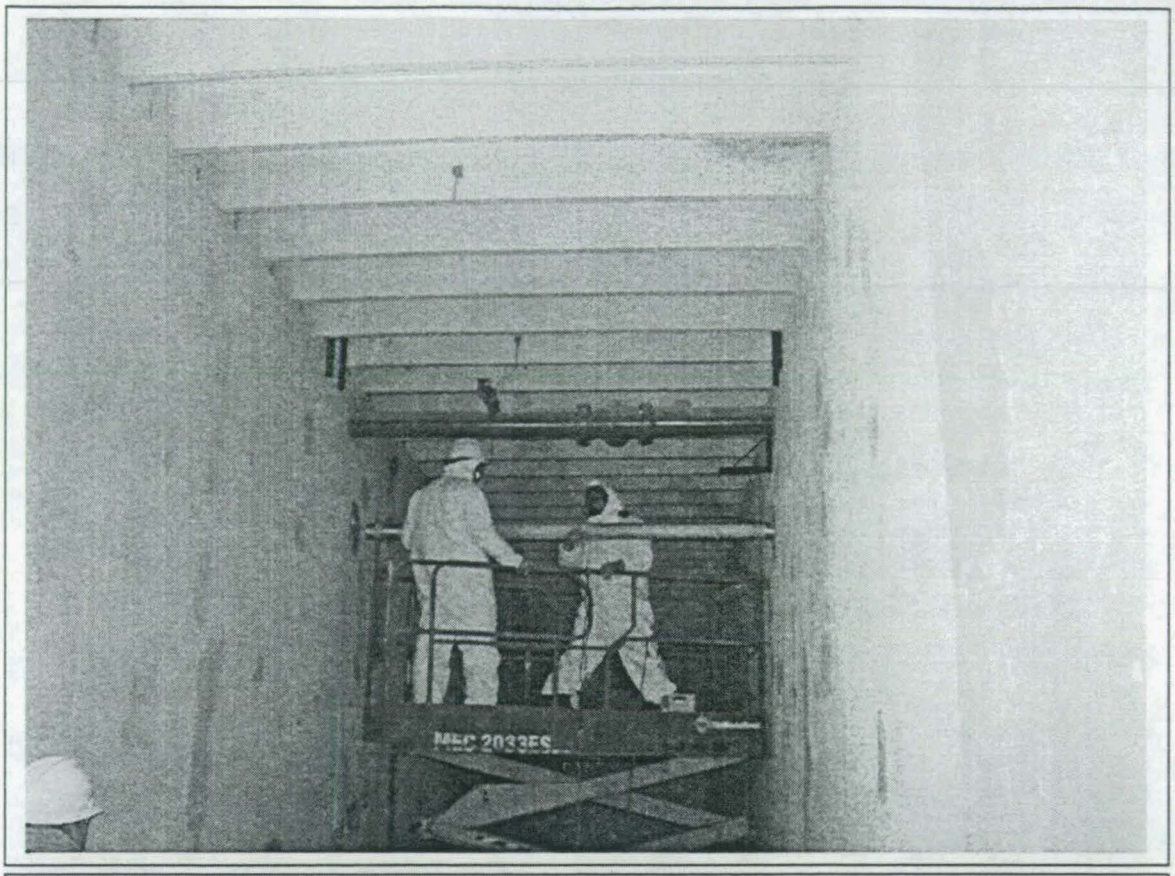
APPENDIX D

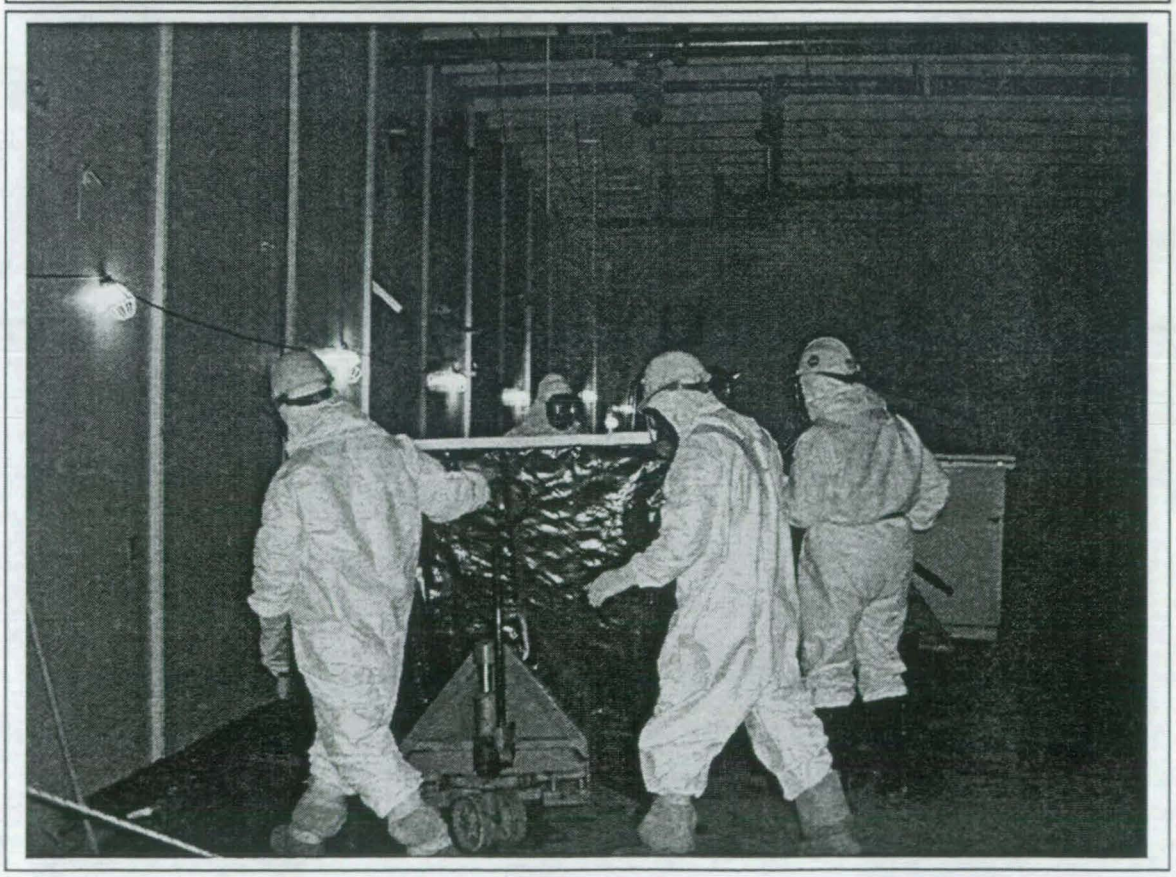
PHOTOGRAPH DOCUMENTATION

Building 38 and Stack Prior to Demolition

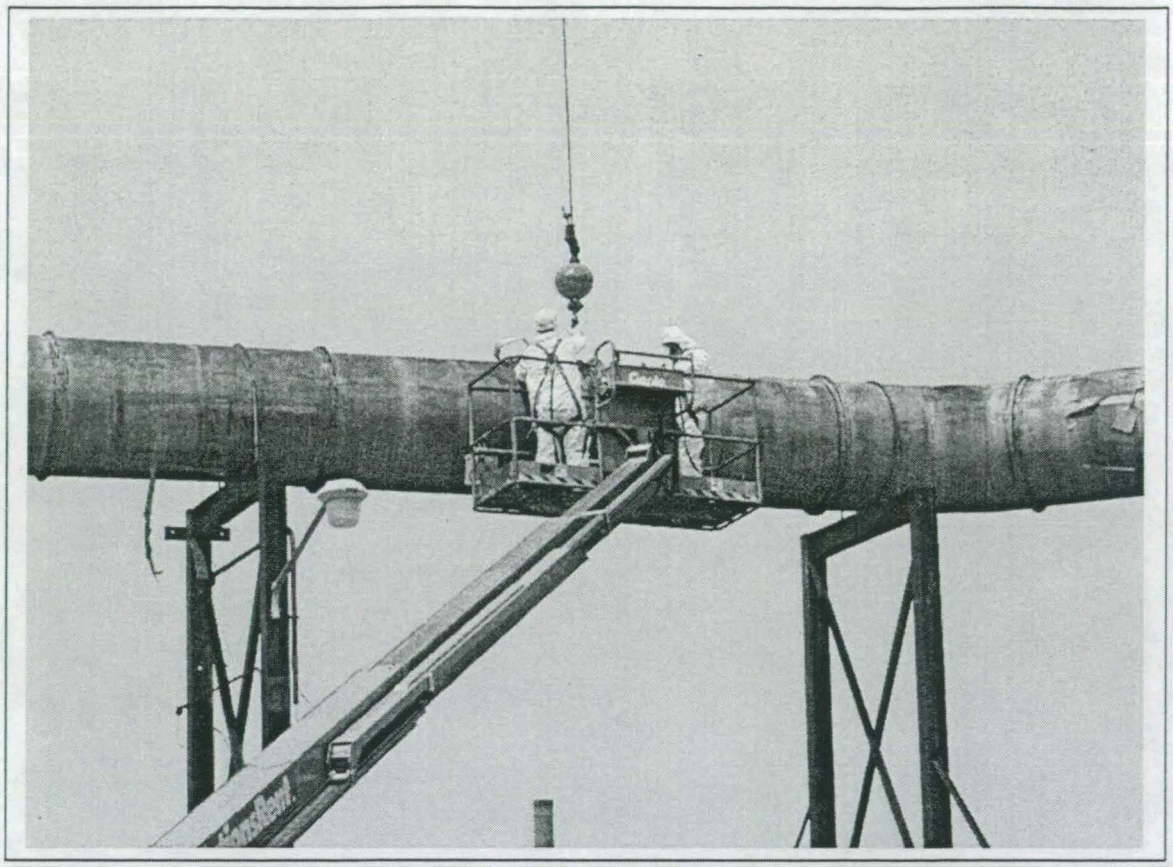


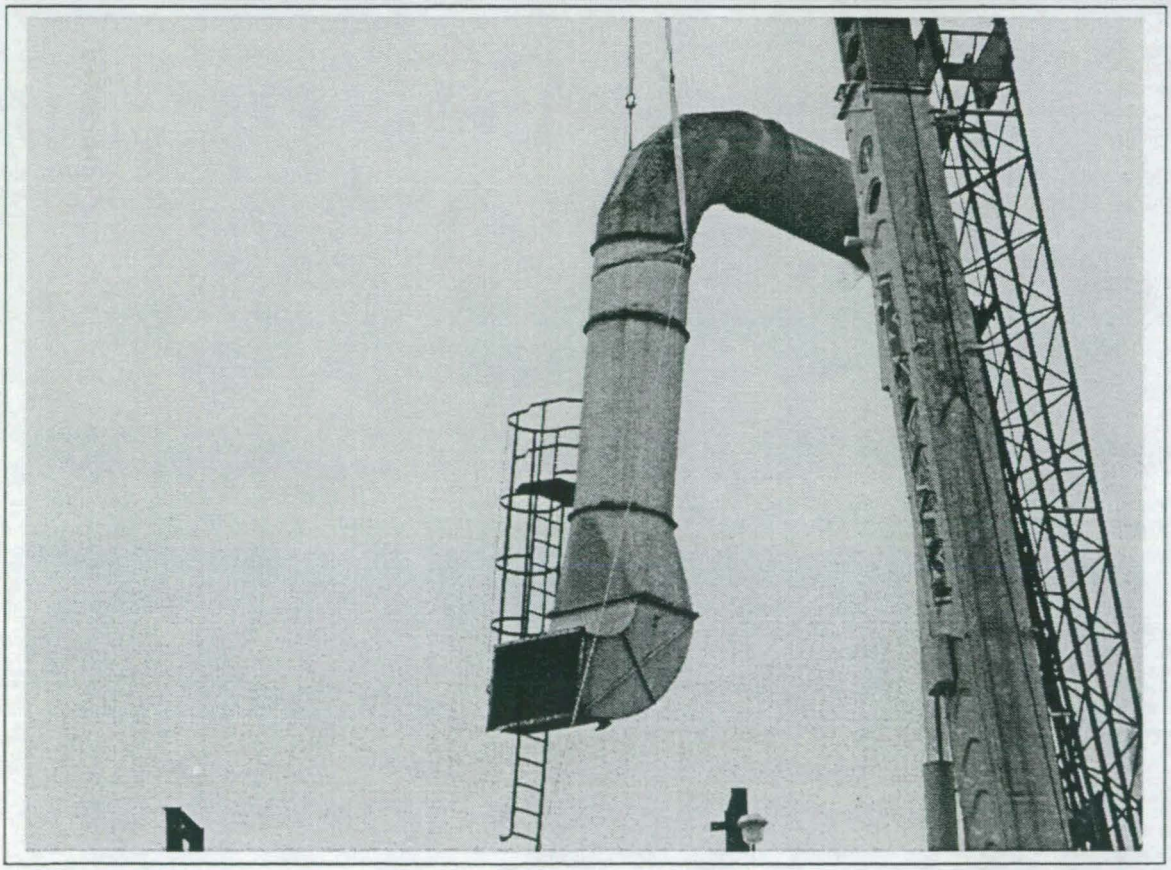



MEC 2033ES

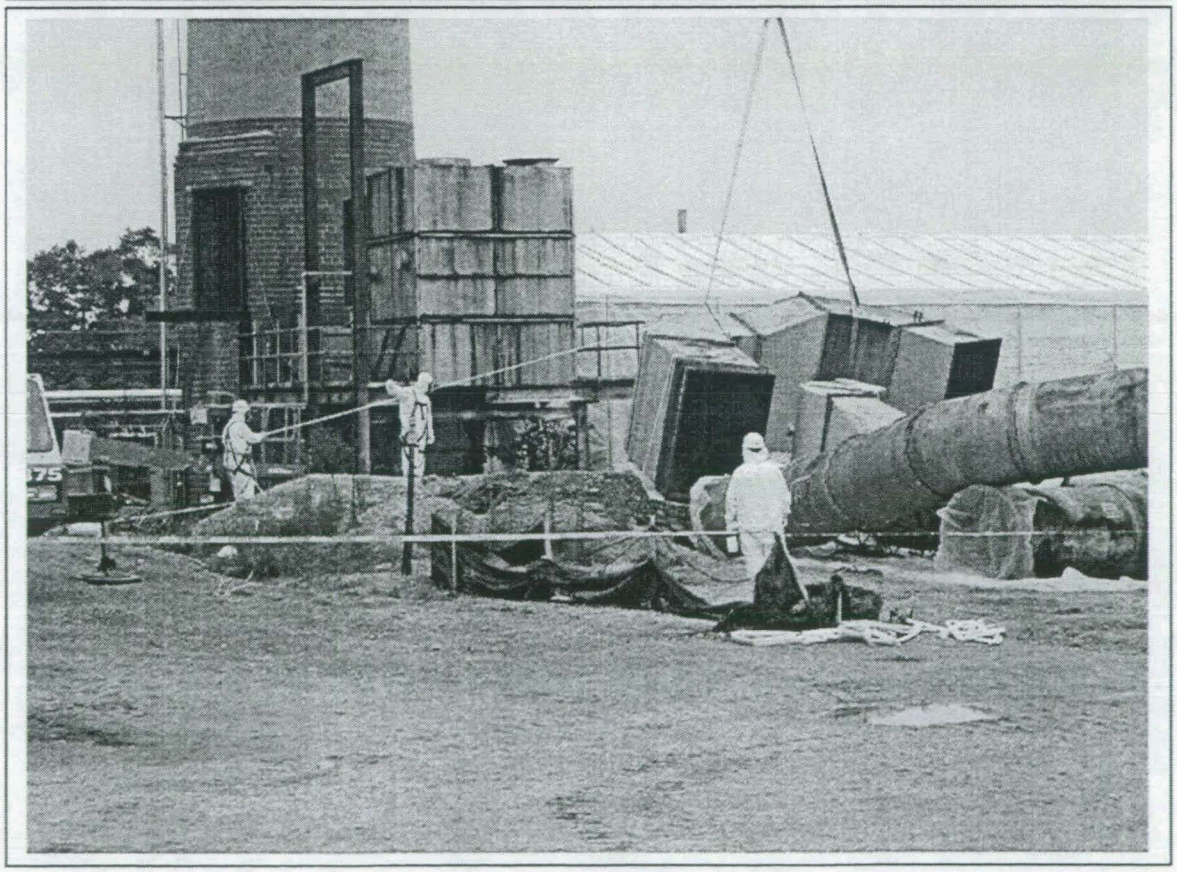


Building 38 Exhaust Ductwork Demolition

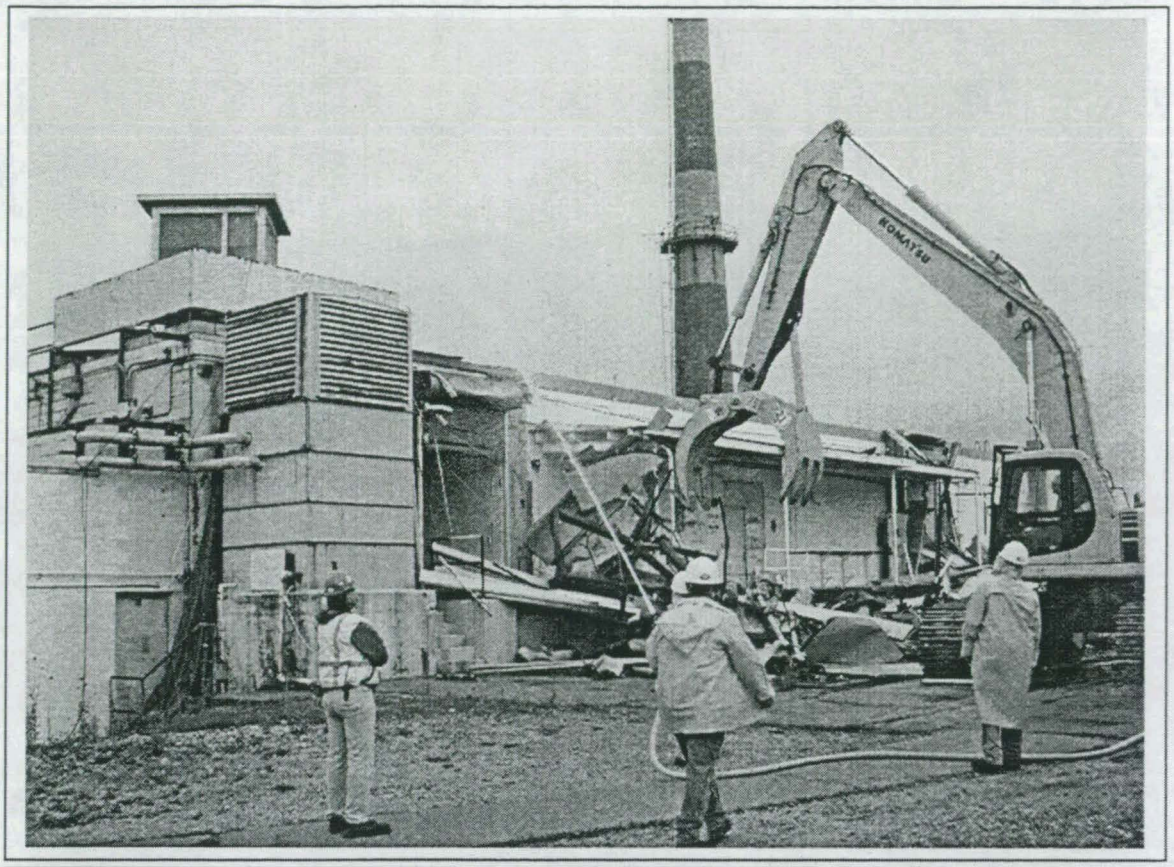


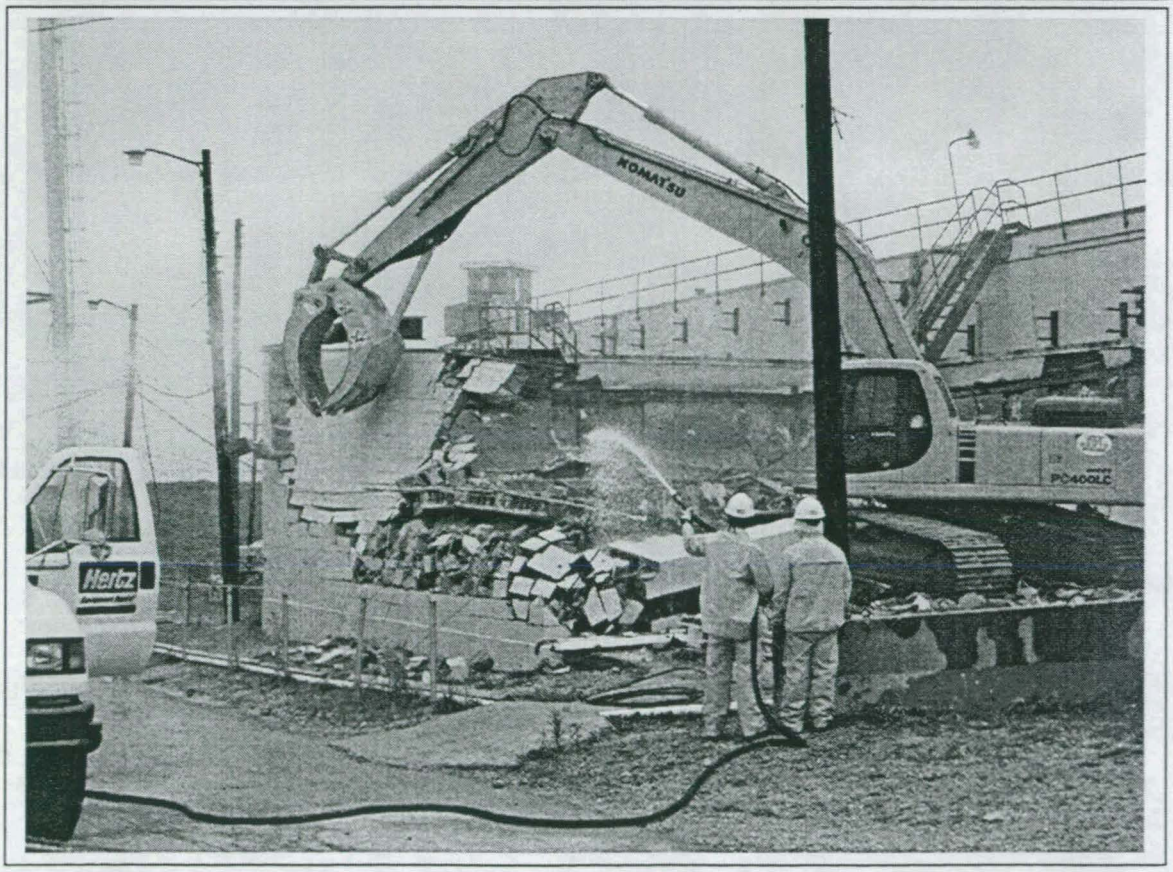


Building 38 Exhaust Ductwork Demolition

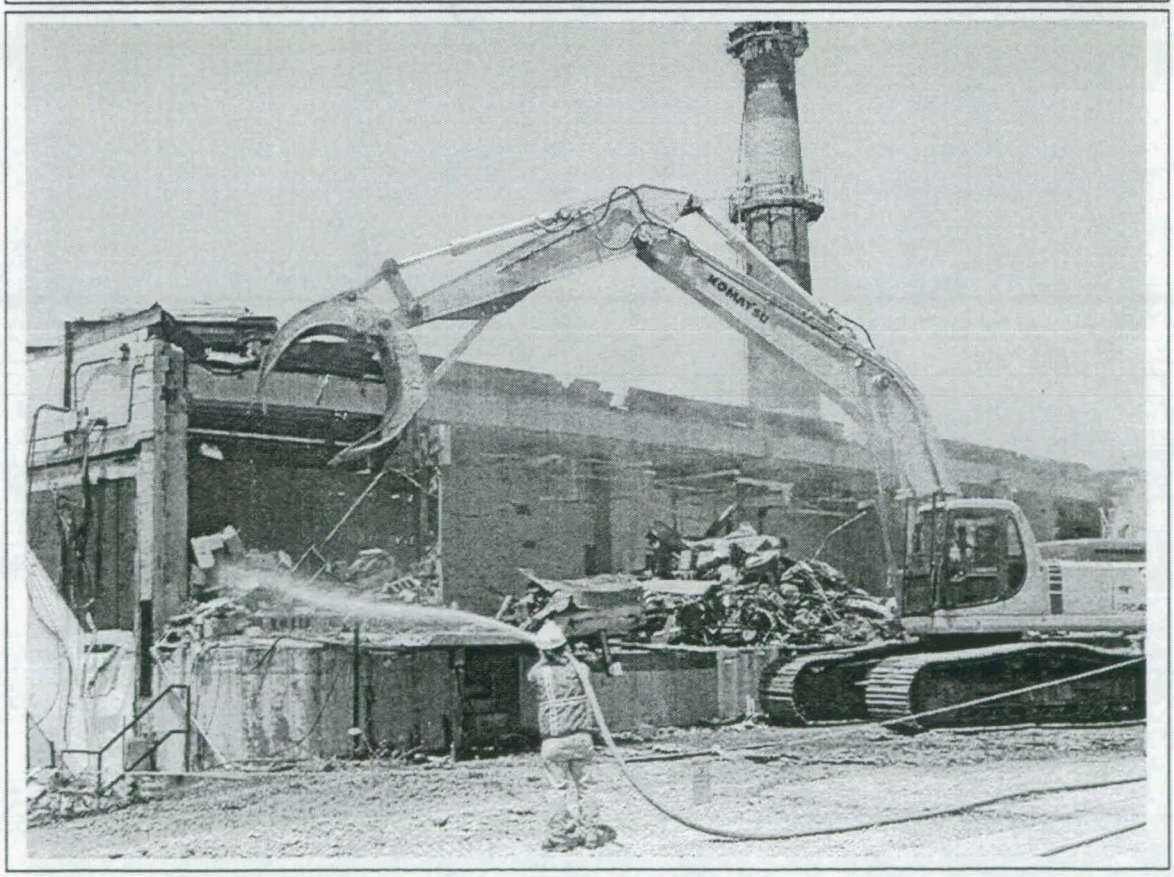


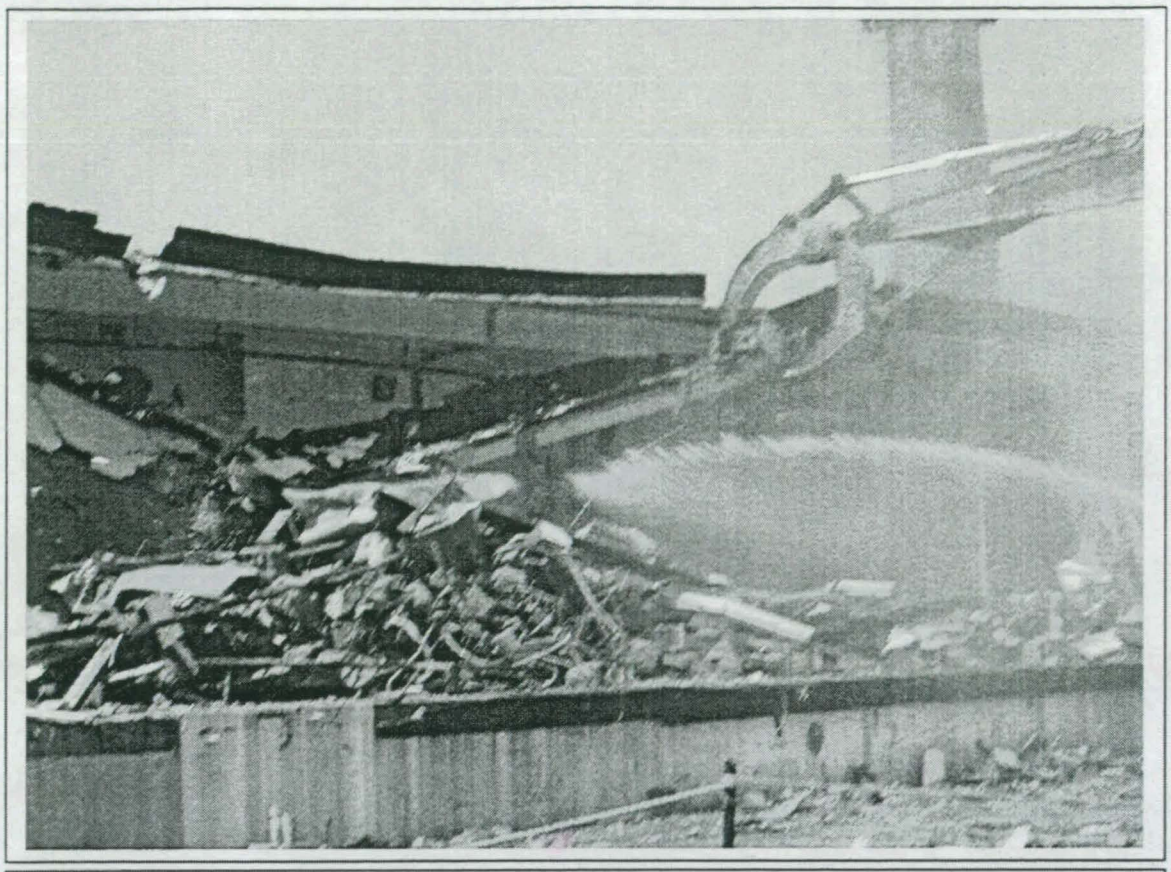
Building 38 Superstructure Demolition

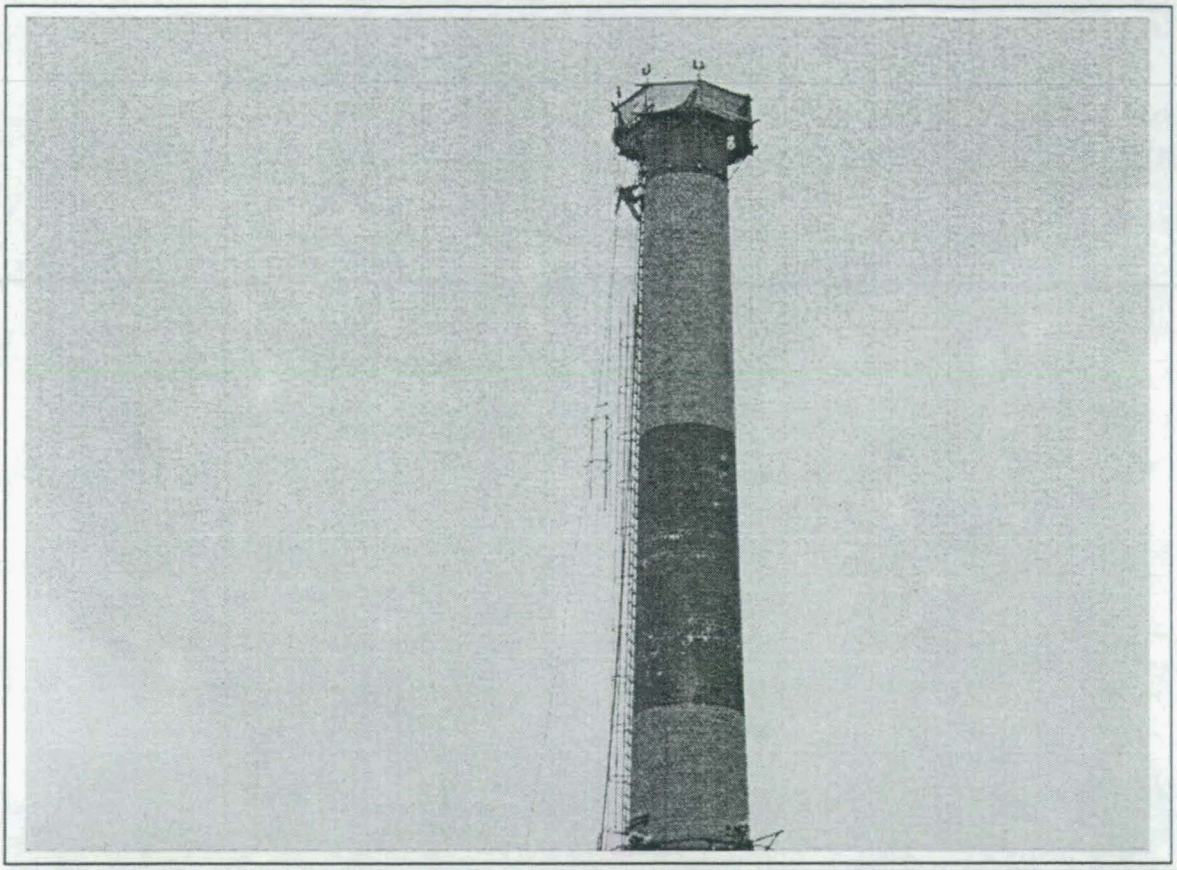


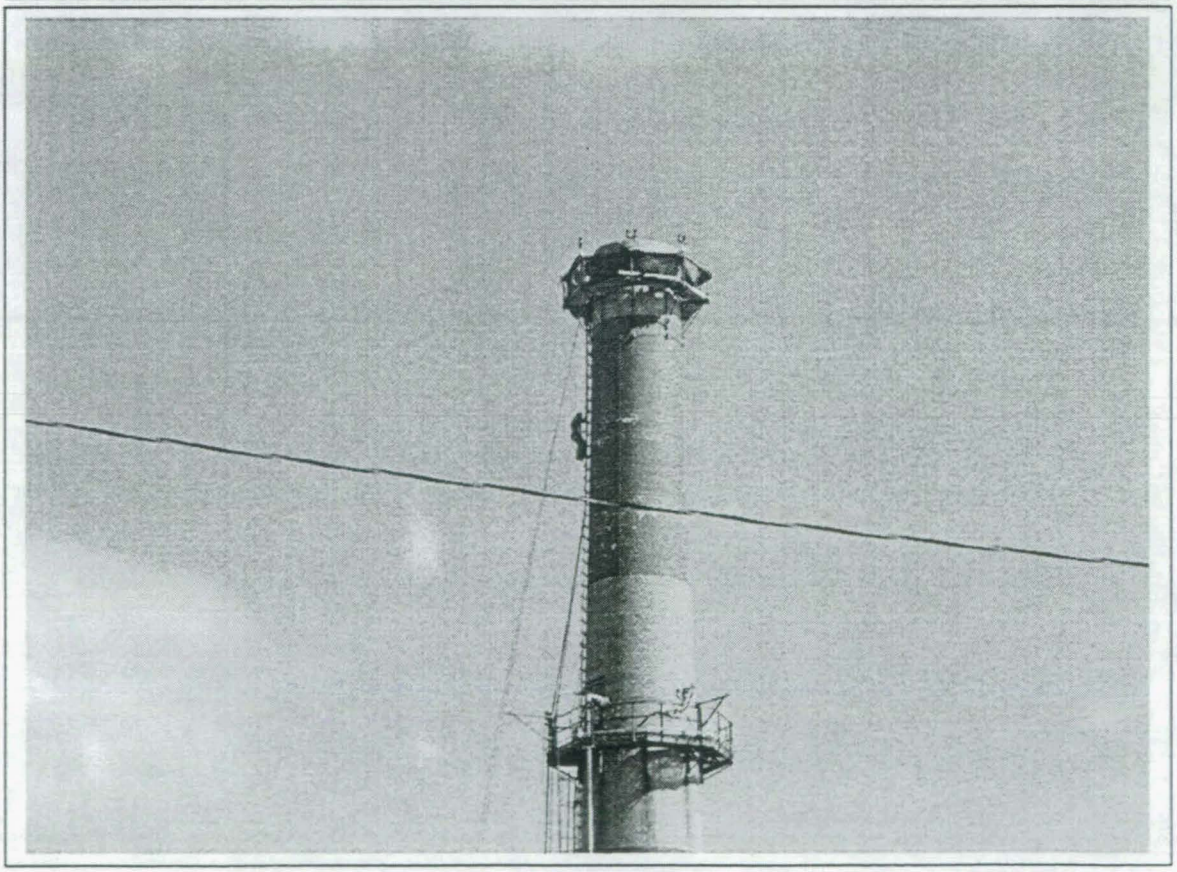


Building 38 Superstructure Demolition

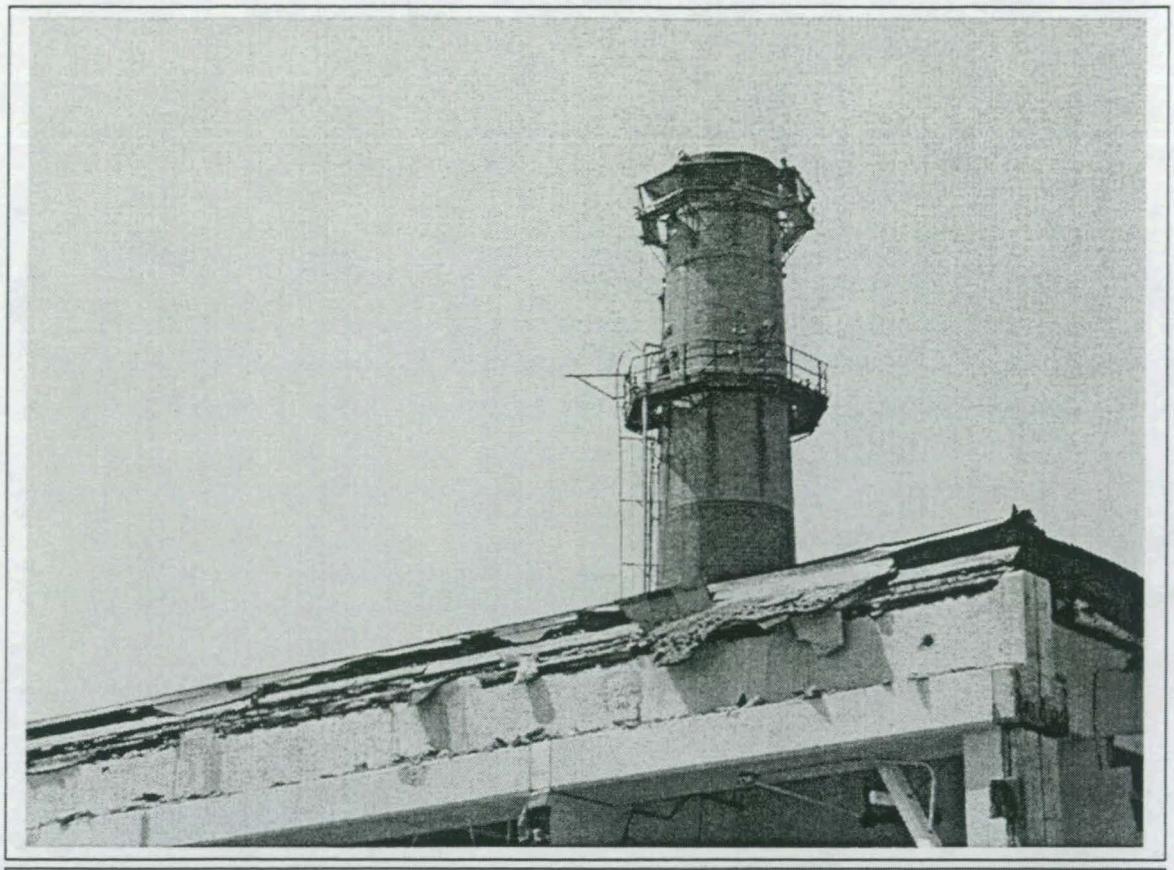








Building 38 Stack (PRS 305) Demolition



APPENDIX E

RADIOLOGICAL AIR MONITORING RESULTS

Rwp	Rwp Rev	Sample ID	Sample Revision	RCT Collected Date	RSDS Year	RSDS Room/Area	RSDS ID	Building	Room	Area	Purpose	Dac Fraction
1417	1	19929	3	6/10/03	03	38	0985	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	1	19923	3	6/11/03	03	38	0989	38	Stack	HEPA Exhaust	Posting Verification	0.000
1417	1	19843	5	6/12/03	03	38	0991	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	1	19862	3	6/13/03	03	38	0992	38	Stack	HEPA Exhaust	Posting Verification	0.000
1417	1	19903	3	6/16/03	03	38	0979	38	Stack	HEPA Exhaust	Posting Verification	0.000
1417	1	19888	3	6/17/03	03	38	0980	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	1	20176	3	6/19/03	03	38	0996	38	Stack	HEPA Exhaust	Posting Verification	0.000
1417	1	20131	3	6/20/03	03	38	1010	38	Stack	HEPA Exhaust	Material Conf. C & V	0.030
1417	1	20141	3	6/21/03	03	38	1028	38	Stack	HEPA Exhaust	Routine (Daily)	0.000
1417	2	20194	3	6/23/03	03	38	1043	38	Stack	HEPA Exhaust	Material Conf. C & V	0.002
1417	2	20183	4	6/24/03	03	38	1025	38	Stack	HEPA Exhaust	See Comments	0.003
1417	2	20208	3	6/25/03	03	38	1040	38	Stack	HEPA Exhaust	Posting Verification	0.002
1417	2	20213	3	6/26/03	03	38	1037	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20228	3	6/27/03	03	38	1050	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	0	20236	3	6/28/03	03	38	1051	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20333	3	7/1/03	03	38	1055	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20338	3	7/2/03	03	38	1058	38	Stack	HEPA Exhaust	See Comments	0.000
1417	2	20427	6	7/7/03	03	38	1060	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20484	3	7/8/03	03	38	1068	38	Stack	HEPA Exhaust	Material Conf. C & V	0.014
1417	2	20456	3	7/9/03	03	38	1070	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20466	3	7/10/03	03	38	1079	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20459	3	7/11/03	03	38	1083	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20560	3	7/12/03	03	38	1093	38	Stack	HEPA Exhaust	See Comments	0.000
1417	2	20568	3	7/14/03	03	38	1098	38	Stack	HEPA Exhaust	See Comments	0.000
1417	2	20625	4	7/15/03	03	38	1104	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20616	3	7/16/03	03	38	1110	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20641	4	7/17/03	03	38	1116	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000
1417	2	20622	4	7/18/03	03	38	1124	38	Stack	HEPA Exhaust	Material Conf. C & V	0.000

Maximum	0.030
Average	0.002
Standard Deviation	0.006
Confidence Interval	0.002
n	28

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Rwp	Rwp Rev	Sample ID	Sample Revision	RCT Collected Date	RSDS Year	RSDS Room/Area	RSDS ID	Building	Room	Area	Purpose	Dac Fraction
1418	0	20191	3	6/18/03	03	38	1047	38	Demo	Upwind	Boundary Verification	0.004
1418	0	20143	3	6/23/03	03	38	1029	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20144	3	6/23/03	03	38	1029	38	Demo	Downwind	Boundary Verification	0.000
1418	0	20198	3	6/24/03	03	38	1042	38	Demo	Downwind	Boundary Verification	0.008
1418	0	20204	3	6/25/03	03	38	1041	38	Demo	Upwind	Boundary Verification	0.002
1418	0	20211	3	6/26/03	03	38	1038	38	Demo	Downwind	Boundary Verification	0.003
1418	0	20231	3	6/27/03	03	38	1049	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20234	6	6/28/03	03	38	1052	38	Demo	downwind	Boundary Verification	0.000
1418	0	20324	4	6/30/03	03	38	1056	38	Demo	O/S	Boundary Verification	0.000
1418	0	20325	3	6/30/03	03	38	1056	38	Demo	O/S	Boundary Verification	0.000
1418	0	20340	3	7/2/03	03	38	1054	38	Demo	upwind	Boundary Verification	0.002
1418	0	20342	3	7/2/03	03	38	1054	38	Demo	downwind	Boundary Verification	0.004
1418	0	20341	3	7/2/03	03	38	1054	38	Demo	downwind	Boundary Verification	0.017
1418	0	20431	3	7/7/03	03	38	1061	38	Demo	Downwind	Boundary Verification	0.021
1418	0	20430	3	7/7/03	03	38	1061	38	Demo	Upwind	Boundary Verification	0.024
1418	0	20477	3	7/8/03	03	38	1067	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20479	3	7/8/03	03	38	1067	38	Demo	Downwind	Boundary Verification	0.002
1418	0	20478	3	7/8/03	03	38	1067	38	Demo	Downwind	Boundary Verification	0.097
1418	0	20453	3	7/9/03	03	38	1077	38	Demo	Downwind	Boundary Verification	0.000
1418	0	20452	3	7/9/03	03	38	1077	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20470	3	7/10/03	03	38	1082	38	Demo	Downwind	Boundary Verification	0.000
1418	0	20469	3	7/10/03	03	38	1082	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20556	3	7/12/03	03	38	1092	38	Demo	Upwind	Boundary Verification	0.001
1418	0	20557	4	7/12/03	03	38	1092	38	Demo	Downwind	Boundary Verification	0.003
1418	0	20564	3	7/14/03	03	38	1101	38	Demo	Upwind	Boundary Verification	0.002
1418	0	20565	3	7/14/03	03	38	1101	38	Demo	Downwind	Boundary Verification	0.003
1418	0	20648	4	7/15/03	03	38	1107	38	Demo	Upwind	Boundary Verification	0.007
1418	0	20649	3	7/15/03	03	38	1107	38	Demo	Downwind	Boundary Verification	0.010
1418	0	20608	3	7/16/03	03	38	1113	38	Demo	Downwind	Boundary Verification	0.000
1418	0	20606	3	7/16/03	03	38	1113	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20607	3	7/16/03	03	38	1113	38	Demo	Downwind	Boundary Verification	0.000
1418	0	20605	3	7/16/03	03	38	1113	38	Demo	Upwind	Boundary Verification	0.002
1418	0	20634	4	7/17/03	03	38	1136	38	Demo	LoadOut	Boundary Verification	0.000
1418	0	20632	4	7/17/03	03	38	1136	38	Demo	Downwind	Boundary Verification	0.000
1418	0	20631	4	7/17/03	03	38	1136	38	Demo	Upwind	Boundary Verification	0.006
1418	0	20633	4	7/17/03	03	38	1136	38	Demo	Downwind	Boundary Verification	0.013

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Results Building 38 Demo

Rwp	Rwp Rev	Sample ID	Sample Revision	RCT Collected Date	RSDS Year	RSDS Room/Area	RSDS ID	Building	Room	Area	Purpose	Dac Fraction
1418	0	20597	3	7/18/03	03	38	1126	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20598	3	7/18/03	03	38	1126	38	Demo	Downwind	Boundary Verification	0.003
1418	0	20599	3	7/18/03	03	38	1126	38	Demo	Downwind	Boundary Verification	0.005
1418	0	20611	3	7/19/03	03	38	1132	38	Demo	Upwind	Boundary Verification	0.003
1418	0	20612	3	7/19/03	03	38	1132	38	Demo	Downwind	Boundary Verification	0.003
1418	0	20803	3	7/21/03	03	38	1135	38	Demo	down wind	Boundary Verification	0.000
1418	0	20802	3	7/21/03	03	38	1135	38	Demo	upwind	Boundary Verification	0.008
1418	0	20808	3	7/22/03	03	38	1143	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20811	3	7/22/03	03	38	1143	38	Demo	down wind	Boundary Verification	0.000
1418	0	20809	3	7/22/03	03	38	1143	38	Demo	down wind	Boundary Verification	0.007
1418	0	20799	3	7/23/03	03	38	1148	38	Demo	Down wind	Boundary Verification	0.000
1418	0	20800	3	7/23/03	03	38	1148	38	Demo	Down wind	Boundary Verification	0.000
1418	0	20798	4	7/23/03	03	38	1148	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20875	3	7/24/03	03	38	1149	38	Demo	Down Wind	Boundary Verification	0.000
1418	0	20895	3	7/25/03	03	38	1155	38	Demo	Down Wind	Boundary Verification	0.005
1418	0	20894	3	7/25/03	03	38	1155	38	Demo	Upwind	Boundary Verification	0.013
1418	0	20928	4	7/26/03	03	38	1160	38	Demo	Upwind	Boundary Verification	0.000
1418	0	20930	3	7/26/03	03	38	1160	38	Demo	Downwind	Boundary Verification	0.000
1418	0	21116	3	7/29/03	03	38	1177	38	Demo	DownWind	Boundary Verification	0.000
1418	0	21117	3	7/29/03	03	38	1177	38	Demo	UpWind	Boundary Verification	0.006
1418	0	21101	4	7/30/03	03	38	1179	38	Demo	Upwind	Boundary Verification	0.000
1418	0	21102	3	7/31/03	03	38	1179	38	Demo	Downwind	Boundary Verification	0.000
1418	0	21089	4	7/31/03	03	38	1181	38	Demo	Upwind	Boundary Verification	0.000
1418	0	21090	3	7/31/03	03	38	1181	38	Demo	Downwind	Boundary Verification	0.000
1418	0	21121	3	8/1/03	03	38	1189	38	Demo	Boundary	Boundary Verification	0.000
1418	0	21146	3	8/4/03	03	38	1208	38	Demo	Airlock	Boundary Verification	0.004
1418	0	21152	3	8/5/03	03	38	1191	38	Demo	Upwind	Boundary Verification	0.000
1418	0	21158	3	8/6/03	03	38	1198	38	Demo	Downwind	Boundary Verification	0.000
1418	0	21157	3	8/6/03	03	38	1198	38	Demo	Upwind	Boundary Verification	0.003
1418	0	21170	3	8/7/03	03	38	1209	38	Demo	Upwind	Boundary Verification	0.002
1418	0	21171	3	8/7/03	03	38	1209	38	Demo	Downwind	Boundary Verification	0.002
1418	0	21172	3	8/7/03	03	38	1209	38	Demo	Downwind	Boundary Verification	0.003
1418	0	21163	4	8/8/03	03	38	1210	38	Demo	Upwind	Boundary Verification	0.002

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Rwp	Rwp Rev	Sample ID	Sample Revision	RCT Collected Date	RSDS Year	RSDS Room/Area	RSDS ID	Building	Room	Area	Purpose	Dac Fraction
1418	0	21164	4	8/8/03	03	38	1210	38	Demo	Downwind	Boundary Verification	0.003
1418	0	21165	3	8/8/03	03	38	1210	38	Demo	Downwind	Boundary Verification	0.004
1418	0	21282	3	8/11/03	03	38	1213	38	Demo	Downwind	Boundary Verification	0.000
1418	0	21281	4	8/11/03	03	38	1213	38	Demo	Upwind	Boundary Verification	0.000
1418	0	21283	3	8/11/03	03	38	1213	38	Demo	Downwind	Boundary Verification	0.000
1418	0	21286	3	8/12/03	03	38	1220	38	Demo	Upwind	Boundary Verification	0.000
1418	0	21287	3	8/12/03	03	38	1220	38	Demo	Downwind	Boundary Verification	0.000
1418	0	21295	4	8/13/03	03	38	1223	38	Demo	Downwind	Boundary Verification	0.001
1418	0	21294	3	8/13/03	03	38	1223	38	Demo	Upwind	Boundary Verification	0.106

Max	0.106
Average	0.005
Standard Deviation	0.016
Confidence Interval	0.004
n	78

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