

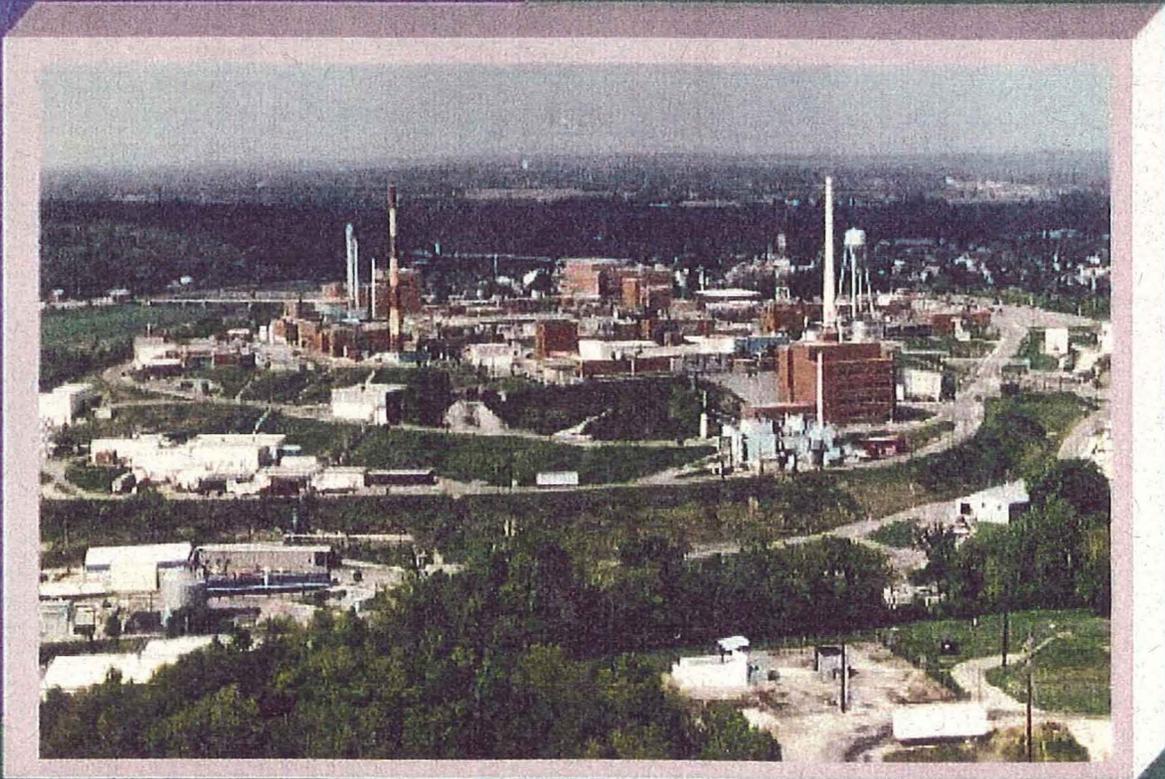


*Mound Site
CERCLA
Reading Room Copy*



**MOUND PLANT
Closeout Report
Building 44**

Final
August 2002



*Mound Site
CERCLA
Reading Room Copy*

Closeout Report

Building 44

**DOE Mound Plant
Miamisburg, Ohio 45343**

Prepared for:

**United States Department of Energy
Miamisburg Environmental Management Project
P.O. Box 3020
Miamisburg, Ohio 45343-3020**

Prepared by:

BWXT of Ohio, Inc.

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1.0 PURPOSE

This is the final report documenting completion of the demolition of Building 44 which was located at the DOE Mound Site, as shown in Figures 1 and 2 (Appendix A). The building was demolished per the Work Package for Building 44 Demolition (May 13, 2002), which is included in Appendix B. The scope of work relating to this building demolition is considered complete.

2.0 BACKGROUND

Building 44 was constructed in 1970 as a cafeteria in the Special Metallurgical (SM) Area (Figure 3). It was a one-story, 2,480 square-foot, concrete block structure with a built-up membrane coal tar roof. The eight-room building consisted of an entry, ante room, women's and men's restrooms, kitchen, storage room, and cafeteria. Floor plans are included as Appendix D.

The building was serviced with a fire sprinkler system and central steam for heat. Electric service was 240 volts. The building had potable water and sanitary services provided by the Mound Plant facility, which were terminated prior to demolition.

3.0 ACTIONS TAKEN

The Building 44 Building Data Package and Work Plan were submitted for simultaneous Core Team and Public Review on April 24, 2002. The 30-day Public Review period concluded on May 23, 2002. This Closeout Report documents the completion of the removal of the building, pad, foundation, and footers.

All preparation and demolition activities were performed in accordance with a detailed Work Plan (Appendix B) to perform safe shutdown of utilities, maintain site access control, and perform demolition and debris removal. There were no Potential Release Sites (PRSs) associated with Building 44.

Building 44 was radiologically surveyed before and after demolition. All radiological sampling results were below applicable surface release criteria (Appendix C).

Building demolition commenced on June 19, 2002 and was completed to the slab on June 20, 2002. The slab and foundation removal started on June 26, 2002 and was completed on July 2, 2002. Site restoration was completed on July 8, 2002. The demolition was accomplished as a non-CERCLA project, per the Building Data Package. Photographs taken before, during, and after demolition are provided in Figure 3.

Demolition material was dispositioned as noted in Table 1.

Table 1 - Materials Disposition

Material	Quantity	Method	Location
Construction Debris (concrete/metal)	750 cubic yards	Landfill	Stoney Hill
Clean Hard Fill Debris (concrete)	175 cubic yards	Reused	Spoils Area/ Concrete Crusher

4.0 PROBLEMS ENCOUNTERED

Building 44 was successfully demolished per the Work Package, with no variances reported.

5.0 RESOURCES COMMITTED

Table 2 lists the personnel organization for the demolition. Table 3 provides a summary of the total cost.

Table 2 - Personnel Organization for the Demolition

Agencies or Parties Involved	Contact	Description of Participation
US EPA HSRM-6J 77 W. Jackson Chicago, IL 60604 312-886-5787	Tim Fischer	Federal agency responsible for Mound Plant oversight.
Ohio EPA 410 E. Fifth Street Dayton, OH 45402-2911 937-285-6468	Brian Nickel	State agency responsible for Mound Plant oversight.
DOE/MEMP P.O. Box 66 1 Mound Road Miamisburg, OH 45343-0066 937-865-3620	Frank Schmaltz	DOE/MEMP Project Manager responsible for project oversight and success.
BWXT of Ohio, Inc. Main Hill Project P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 937-865-4071	Budd Thompson	Provided the DOE/MEMP Project Manager with technical assistance, administrative support, sampling, decontamination, photo and site documentation, site safety, and report preparation.

Table 2 - Personnel Organization for the Demolition

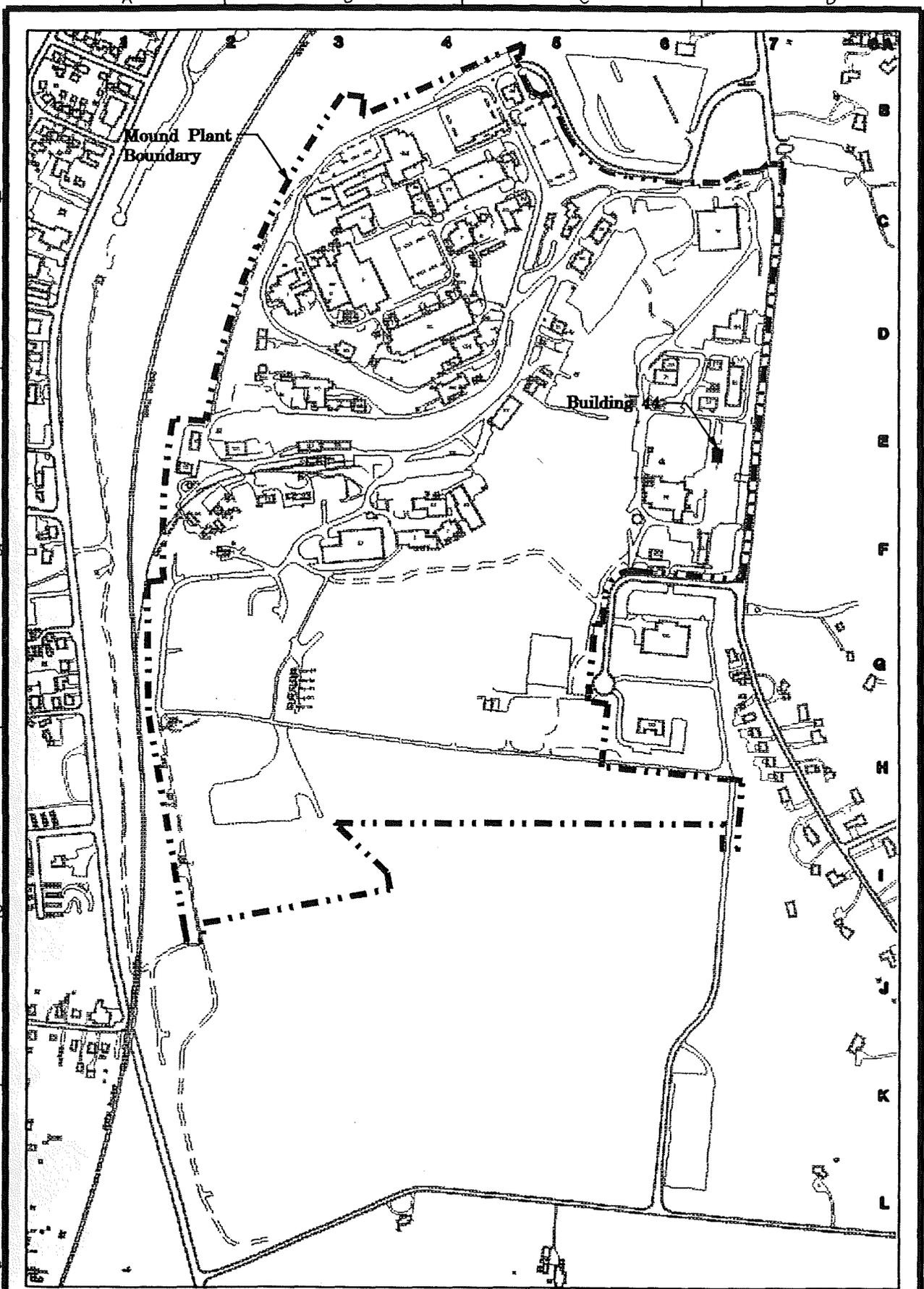
Agencies or Parties Involved	Contact	Description of Participation
BWXT of Ohio, Inc. General Superintendent and Equipment Manager P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 937-865-4071	Budd Thompson	Provided the personnel and equipment necessary for the demolition.

Table 3 - Total Cost

Summary Activity	Cost
Work Planning	\$ 10,000
Safe Shutdown	47,000
Characterization	6,000
Decontamination and Demolition	30,000
Hauling and Disposal	10,800
Total Cost	\$103,800

Appendix A

Figures



Legend

	Structures		Water course
	Paved roadway		Fence
	Unpaved roadway		Mound Plant boundary
	Railroad		Contour line

0 100 200 400 600 800 1000
Scale in Feet

63/25/02 ISSUE FOR GENERAL USE SSP



SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ISSUE	1	2	3	4	5	6	TITLE CLASSIFICATION														
SHEET																Figure 1					
ISSUE																Location of Building 44					
FILE CLASSIFICATION																UNCLASSIFIED					
DATE																63/25/02					
BY																gen_site_plan.dgn					
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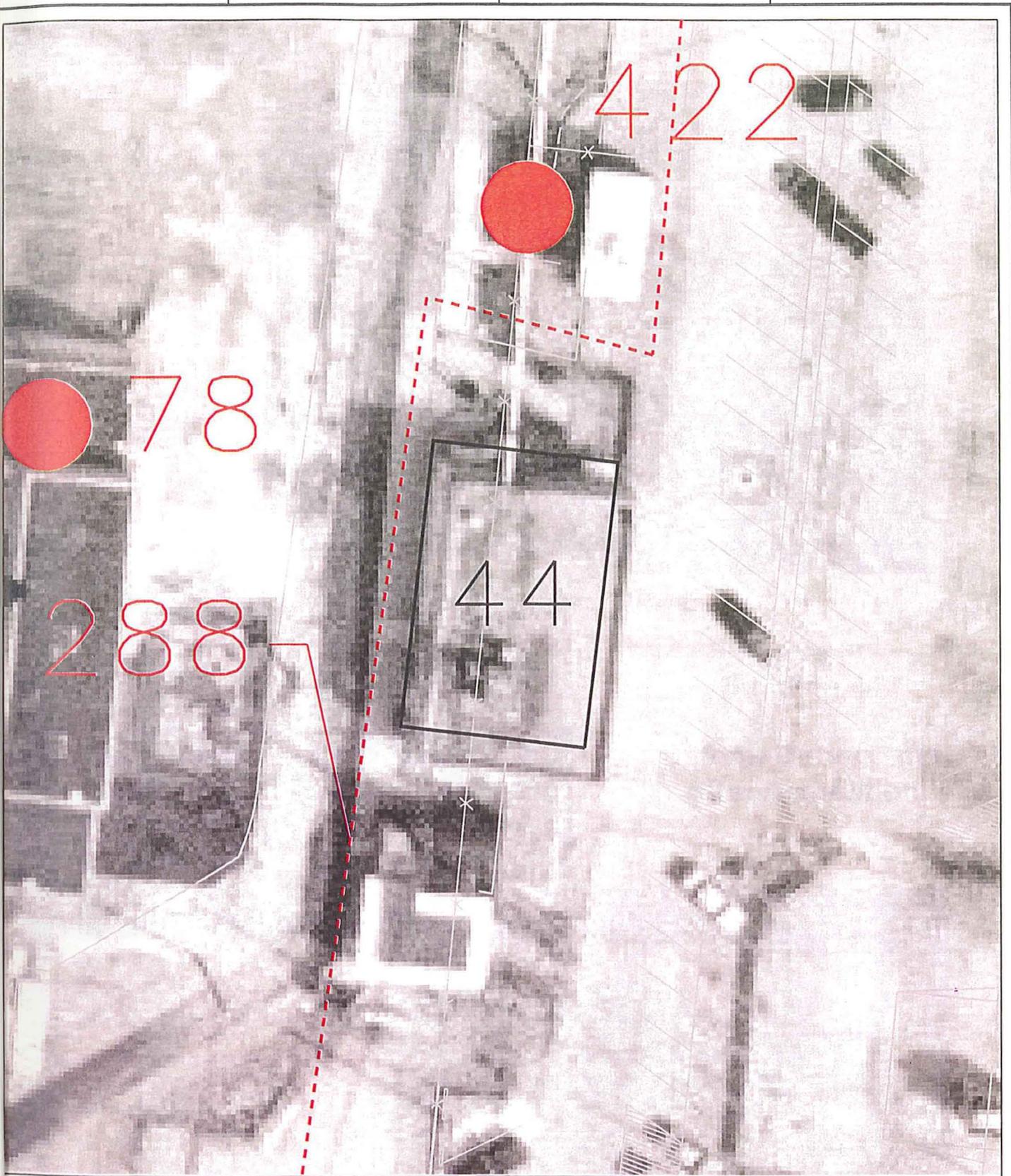
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D

C

B

A



PRS Point



PRS Area

MOUND



Environmental
Restoration
Geographic
Information
System



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																							
DRAWING CLASSIFICATION							SIZE	DWG#	NUMBER														
UNCLASSIFIED									vicinity.dgn														
JOB NUMBER																							
DRAWING TYPE							SCALE																
STE							ER-GIS	SCALE															
STATUS MD-REL							ORIGIN																
							MSTATION																
							J																

03/26/02

DATE

REVISION

SSP

BY

CHKR

ENG

UPREC

APVD

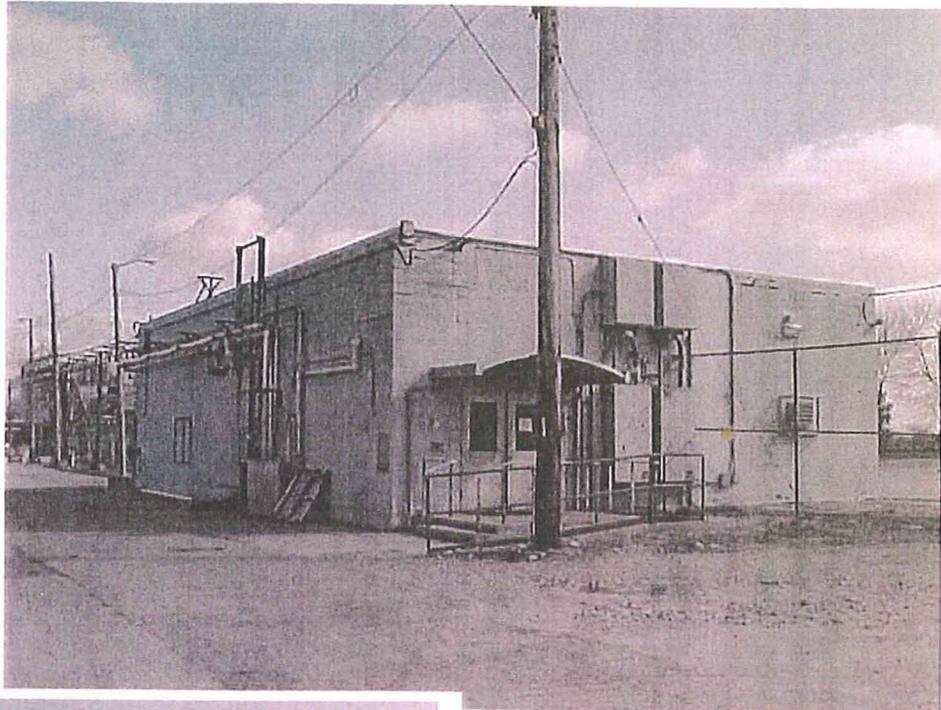
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D

C

B

A



**Figure 3:
Building 44**

**Before, During, and
After Demolition**

Work Package



Appendix B

Work Package

WORK PACKAGE / PRELIMINARY HAZARD ANALYSIS

Office Master Copy

Field Working Copy

Review Copy

Other Copy

(Original Approval Signatures)
[color]

(Original Field Sign -Offs)

[Note: Mark this section in

The Project Engineer is responsible for completing Sections 1 through 10. On subcontractor projects, the subcontractor shall complete sections 6, 9, and 10.

1. WORK PACKAGE TITLE: **Building 44 Demolition**

2. WORK PACKAGE NUMBER. *SMPP/TFV - - RR 30043*

Charge Number: G00378

3. WORK PACKAGE SCOPE: This work package covers the physical demolition of Building 44's structure, slab and the foundation.

4. WORK PACKAGE PHASES:

1. Building 44 Demolition Project Controls and Set-Up
2. Building 44 Demolition
3. Slab and Foundation Removal
4. Perform Site Restoration

5. WORK LOCATION:

Building #: Building 44 Structure

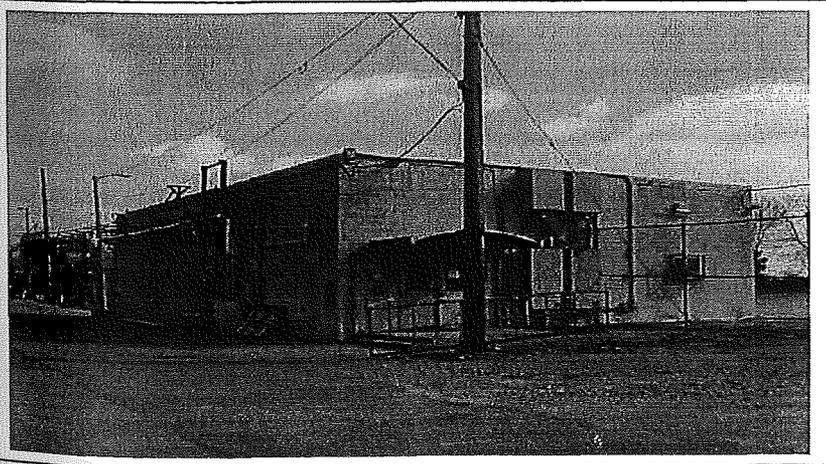
Room #: N/A

Other:

6. SPECIAL MATERIALS AND EQUIPMENT:

1. John Deere 644 Loader
2. John Deere 992E LC Track Hoe w/ Grapple
3. John Deere 790E LC Track Hoe w/ Shear
4. John Deere 690 Track Hoe
5. Cat 932 Track Loader
6. Volvo Dump Truck
7. Heavy Equipment as needed

Insert the proper sequence of Work Package phases for the job. A phase is a separately definable portion of the project.



8. Note: Comments, to identify activities/hazards that are common to multiple phases of the project. Identification of these items will facilitate the option of addressing the items once in the pre-job briefing, as opposed to redundantly listing them in the JSAs for different phases. COMMENTS:

Enter any review comment or issues in this section and/or information generated as a result of completing detailed work steps.

9. REVIEW SIGNATURES:

Project Superintendent: Mike Stromberg *Mike Stromberg* Date: 04/26/02 Phone: 865-3866
Project Foreman: Bill Wahler *Bill Wahler* Date: 5/10/02 Phone: 865-3663
Industrial Safety & Hygiene: Jared Wills *Jared Wills* Date: 4/24/02 Phone: 865-4096
Rad. Controls: Steve Collas *Steve Collas* Date: 5/13/02 Phone: 865-3178
ES&C: Ron Paulick *Ron Paulick* Date: 5/13/02 Phone: 865-4080
Waste Mgmt: Willis Daniel *Willis Daniel* Date: 4/24/02 Phone: 865-3822
Bldg. Mgmt: Gary Weidenbach *Gary Weidenbach* Date: 4/26/02 Phone: 865-3241
Other: SEE NEXT PAGE FOR CRAFT SIGN-OFF Date: 1/1 Phone:

10. USQ SCREEN / DETERMINATION REQUIRED? YES NO

Brief Explanation: THE ONLY CRITICAL SYSTEM IS THE JUNCTION BOX ON THE WEST EXTERIOR WALL WHICH HOUSES EMER. GEN. CONTROL WIRING. A USQ WAS WRITTEN AS PART OF BLDG. 44 SAFE SHUTDOWN. THIS WORK MUST BE COMPLETED PRIOR TO DEMOLITION.

USQ Trained Person: Jeff Maul Date: 5/13/02 Phone: 865-4295

10. AUTHORIZATION SIGNATURE:

Project Manager: [Signature] Date: 5/13/02 Phone:

11. WORK PACKAGE CLOSURE:

Project Superintendent: _____ Date: 1/1 Phone:

Project Manager: _____ Date: 1/1 Phone:

RETURN PHA TO IS&H AT JOB COMPLETION.

4. DETAILED WORK SEQUENCE:

4.1 Building 44 Demolition Project Controls:

The following project controls are implemented to ensure the safety and protection of the workers, site employees and the environment.

1. Mobilization:

a) Set-up:

1. Excavate and install water hydrant on domestic water supply in the Northwest Courtyard.
2. Plug sanitary sewer lines at manhole inlet (due north of building). *CS E - Jm*
3. Disconnect telephone cable in manhole. *CS E - Jm*
4. Remove electrical power and power distribution equipment
5. Remove fire alarms, panels, pull switches and smoke detectors.
6. Remove tritium exit signs.
7. Remove any exterior light bulbs that might contain mercury.

b) Establish Work Zone: barriers and fencing. Relocate fencing to provide a secure barrier to the site while providing enough work area to demolish Building 44 from the East Parking Lot.

c) Building 44 west roadway closure. (Notify Fire Department, Transportation, Security, EOC and DOE)

d) Establish staging area and relocate equipment to the demolition site.

e) Establish waste loading area (WLA) and arrange delivery of waste container(s) to site.

f) Monitoring equipment.

g) Establish water-misting stations.

h) Establish storm water controls.

1. Install silt fabric over storm water grates.
2. Install silt fencing along contour as necessary.

2. Safety:

a) Site Control - **ROAD CLOSURE** -The West Roadway around Building 44 will be restricted starting April 29, 2002. This is to facilitate the prep and demolition of Building 44. The roadway is scheduled to be closed until May 20, 2002. The roadway can be open for emergencies by contacting the SM/PP-TFV Project Foreman, Bill Wahler or the Project Superintendent, Mike Stromberg. (See attached map.)

b) Building 50 and Building 38 entrances and exits within the 75-foot exclusion zone will be blocked off and/or protected by temporary chain link fencing.

(CAUTION)

The manufacturer of the mechanical shear recommends a 75-foot exclusion zone to protect against personnel injury that may be caused by flying debris. No one will be permitted within a 75-foot distance of the Shear while cutting. (Except-Heavy Duty Operators who will remain in the equipment cabs.)

(CAUTION)

Be aware of threatening weather and take shelter when life-threatening storms are imminent.

3. Fugitive Dust Controls:

Fugitive dust emission shall not exceed 20% opacity as a three-minute average.

- a) Water misting or other suitable dust suppression will be used to control fugitive dust during demolition, size reduction, loading and activities.
- b) Debris and soil will be covered if necessary to prevent dust when hauled to the Spoils Area.
- c) Periodic application of water or other suitable dust suppression to roadways and parking lots will be used to prevent dust from becoming airborne.

(CAUTION)

Water misting shall be minimized during inclement weather to reduce the potential for slipping hazards.

Shut off the water supply immediately when not in use, drain hoses used to facilitate the water-misting process, as necessary, and store them where they will not freeze.

4. Storm Water Controls:

Control measures are used to ensure the quality of storm water leaving the site. These control measures and practices are outlined in the sites' Storm Water Pollution Prevention Plan OPA980099.

- a) All sanitary and storm floor drains will be plugged to prevent accidental discharges to the wastewater treatment plant or the environment.
- b) Redirect flow patterns around the project site to prevent storm water run-on.
- c) Provide inlet protection to the storm sewer system by covering catch basins immediately adjacent to the project site and plugging roof drains at ground level until which time the underground pipes can be appropriately abandoned.
- d) Water that has collected in an open excavation or in sumps, must be monitored prior discharging to the sanitary or storm sewer systems. Contact Environmental Monitoring at extension 4188 for monitoring and review of these non-routine discharges.
- e) Exercise good housekeeping techniques by segregating materials in a timely manner, including the prompt disposal of wastes, and sweeping debris from the streets to prevent storm water pollution.

5. Waste Management Issues:

- a) Size-reduce concrete and masonry brick, as necessary, to fit into a container. Load debris into waste container using the front-end loader or grapple or stage debris to be used as backfill.
- b) Segregate structural steel and lead, if present, from the construction debris as determined practical.

b) Segregate structural steel and lead, if present, from the construction debris as determined practical.

4.2. Building 44 Demolition:

During the demolition, the Project Crew will perform a continuous inspection. These inspections will be performed from a safe distance, as the work progresses. This is to detect potential hazards resulting from weakened or deteriorated floors, walls or loosened material.

(NOTE)

The progression, direction, and equipment usage of the building demolition will ultimately be determined in the field.

STEP 1. Starting at the southeast corner of Building 44, begin demolition of the first floor. Make sure overhead lines are locked out. Avoid the overhead lines with the demolition equipment.

STEP 2. Remove the roof and all outer and interior walls down to the slab level.

STEP 3. RCTs to perform radiological surveys of the containers if a MARISSM survey has not been completed.

STEP 4. Load debris for transport to landfill.

4.3. Slab and Foundation Removal:

STEP 1. Remove the slab and associated drains connected to the slab. Plug and cap all drains coming from Building 44 where they discharge into the sanitary and storm sewer lines.

STEP 2. Remove all foundations down to two feet below ground level. Concrete to be sent to the Concrete Crusher

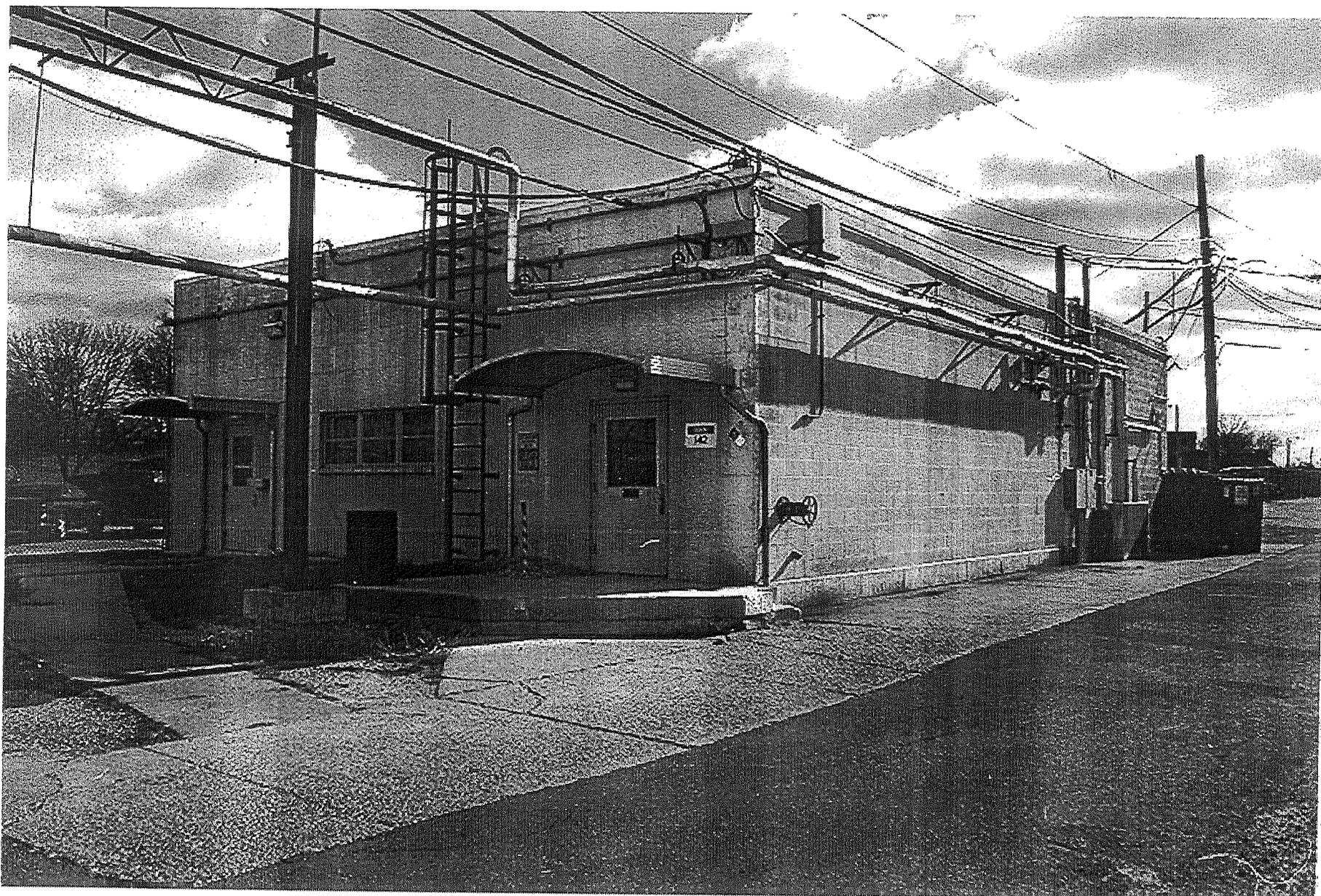
STEP 3. Have a Rad Control Technician a survey any concrete in contact with the soil before sending it to the Concrete Crusher. Attach Survey to the **Request To Stage Clean Hard Fill Debris At Construction Spoils Area, Form ML-9817 (8/00)** for approval.

(NOTE)

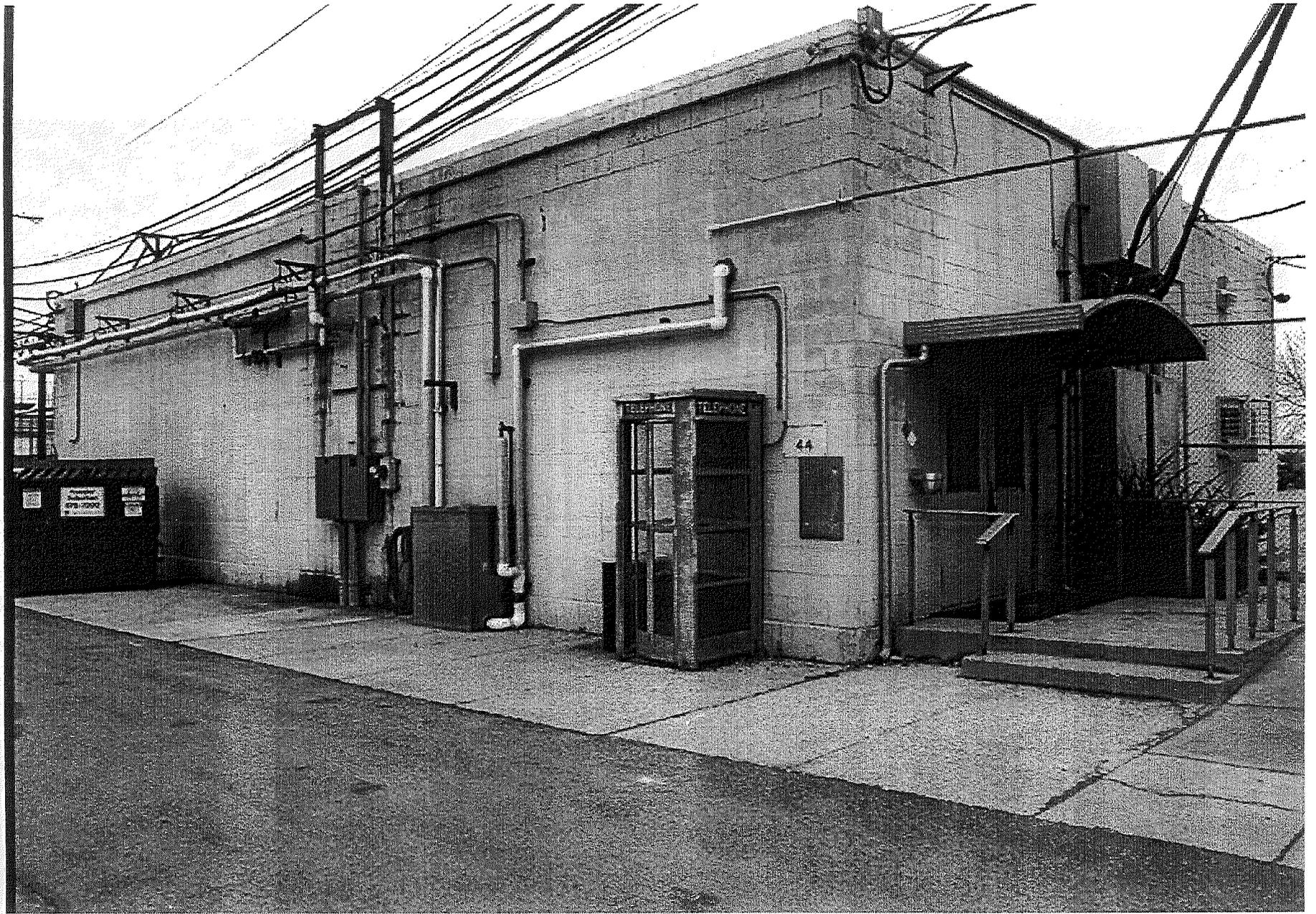
Confirmation sampling activities will need to be coordinated with demolition and backfill activities.

4.4. Perform Site Restoration:

STEP 1. Following the Site Restoration Plan, contour the site to allow proper drainage and prevent erosion. It may be necessary to install silt fencing and seed and mulch the excavated area to encourage the growth of ground cover.



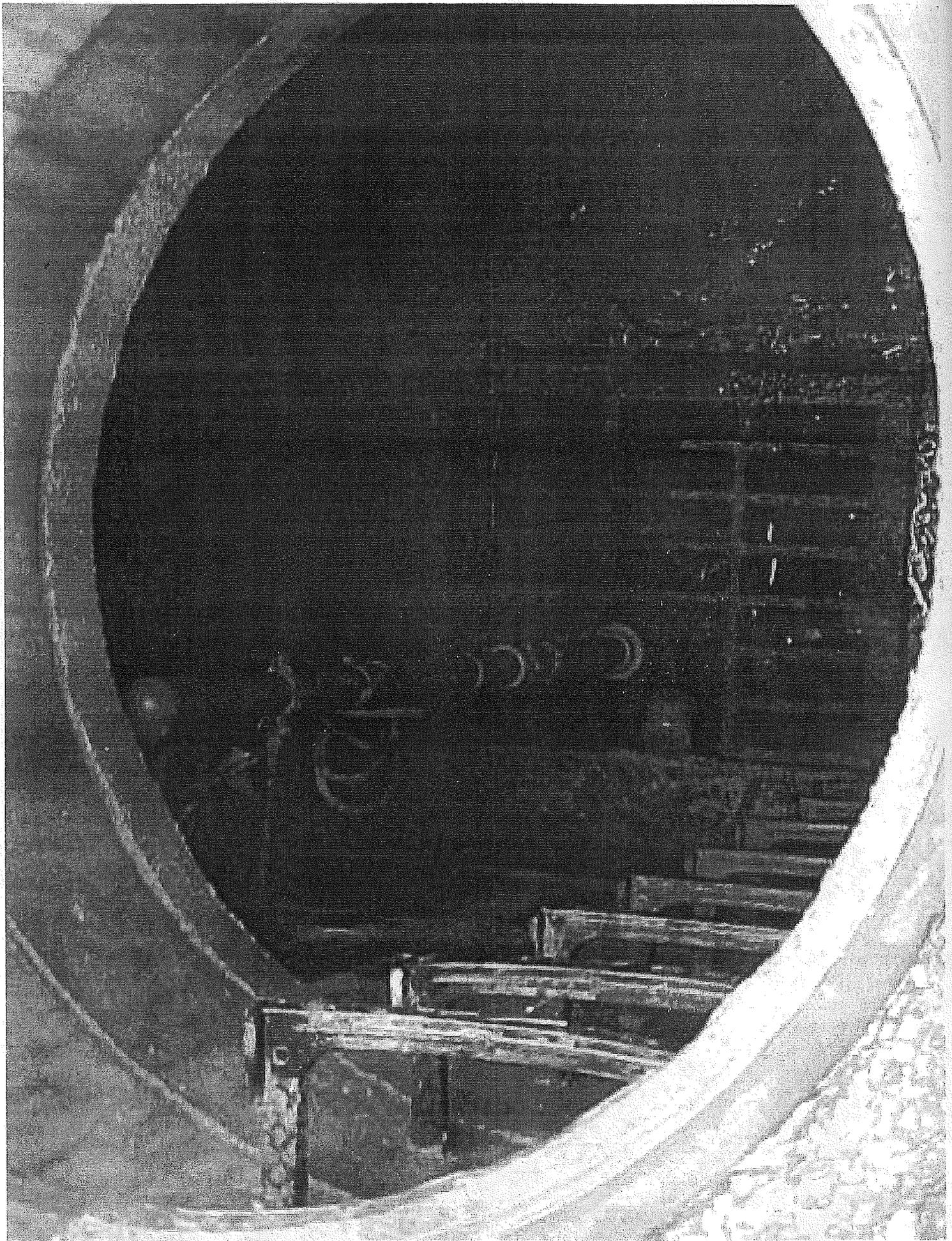
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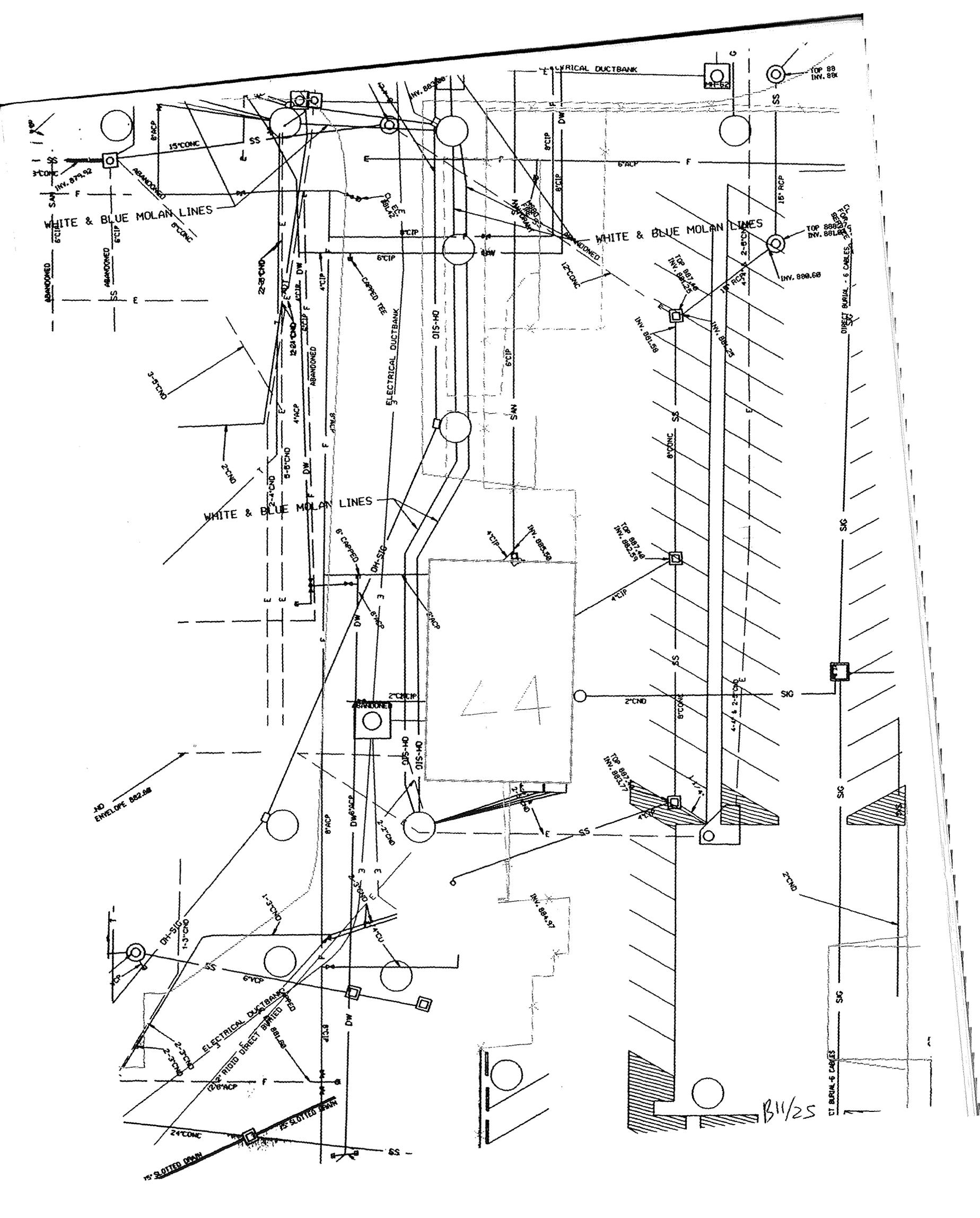
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WHITE & BLUE MOLAN LINES

WHITE & BLUE MOLAN LINES

WHITE & BLUE MOLAN LINES

ELECTRICAL DUCTBANK

CYRICAL DUCTBANK

ABANDONED
6" CIP
SS
F

15" CONC
8" RCP
SS
F

22" CHD
12" CHD
4" RCP
DW
F

6" CIP
CAPPED TE
F

DIS-HO
SAN
6" CIP
F

ABANDONED
12" CONC
F

TOP 882.59
INV. 882.59
F

TOP 882.59
INV. 882.59
F

TOP 882.59
INV. 882.59
F

DIRECT BURIAL - 6 CABLES

NO ENVELOPE 882.58

OH-SIG
1-3" CHD
F

DIS-HO
DIS-HO
2-2" CHD
F

DIAPYCE
8" RCP
DW
F

2" CIP
F

INV. 882.59
F

TOP 882.59
INV. 882.59
F

TOP 882.59
INV. 882.59
F

TOP 882.59
INV. 882.59
F

ELECTRICAL DUCTBANK
2-3" CHD
2-3" CHD
F

24" CONC
15" SLOTTED DOWN
F

DW
F

DIS-HO
DIS-HO
F

INV. 882.59
F

TOP 882.59
INV. 882.59
F

TOP 882.59
INV. 882.59
F

TOP 882.59
INV. 882.59
F

1" BURIAL - 6 CABLES

B11/25

**PRELIMINARY HAZARD ANALYSIS (PHA)
FOR WORK PACKAGE ACTIVITIES**

SECTION A, INDUSTRIAL SAFETY - TO BE COMPLETED BY THE INDUSTRIAL SAFETY AND HEALTH REPRESENTATIVE
Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. lead compliance plans, confined space plans, hearing conservation programs, etc.), including any notations for future Hazard Analyses. Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards, that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Blockage of exits or means of egress	Yes	Demolition Prep	Building off limits prior to and during demolition. Work area will be fenced in. [EGRESS]
Blockages/obstructions (Identify)	No		
Burning, welding, hot-work (Fire Watch)	Yes		[BURN]Use an approved Burn Permit, ML-7733 (11-00)
Chemical compatibility of corrosives/flammables	No		
Chemical process safety	No		
Compressed gas cylinders	No		
Confined space entry	Yes		An approved Confined Space Permit along with IH monitoring of the manholes will be used during the telephone disconnect and the plugging of the sewer inlets.
Crane operations, overhead or mobile	No		
Critical lifts (heavy or high value loads)	No		[CLIFT]
Electrical hazards	No		[LIVEL]
Elevated work/fall protection	No		[ELEV]
Emergency eyewash/shower available	No		[EWASH]
Emergency alarms or evacuation plans required	No		The demolition crew Assembly Area will be the SW Building Assembly Area, located just north of the B Building slab and at the west end of OSW Building.
Explosive/flammable atmosphere	No		
Explosives	No		
Fire protection system/equipment outage	Yes		[FIRE/EFIRE]
Fire Hazards Analysis Required of Demolition	Yes		FHA has been performed and is in the project file. [FHA/ADJA]
Flammable liquids/gases	No		[FLAM]
Forklifts, aerial lifts or material handling equipment	Yes		
Grounding of electrical equipment	No		
Hazards due to condition of facility or terrain (Identify)	Yes		Debris Piles
Hoisting and rigging	No		[HOIST]
Lighting/illumination/adequacy	No		[MLITE]

SECTION A, INDUSTRIAL SAFETY - TO BE COMPLETED BY THE SAFETY AND HEALTH REPRESENTATIVE

Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. lead compliance plans, confined space plans, hearing conservation programs, etc.). Including any notations for future Job Safety and Health Analysis (JSHA). Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item	Exst	Work Package Phase	Comments, Controls, Methods of Compliance
Lockout/tagout of hazardous sources:	No		[LOTO/ISO] Building 44 will be isolated prior to demolition as part of the safe shutdown phase.
<input type="checkbox"/> Electrical	No		
<input type="checkbox"/> Mechanical (steam, hydraulic, pneumatic)	No		
<input type="checkbox"/> Interlocks	No		[ILOCK]
<input type="checkbox"/> Chemical	No		
<input type="checkbox"/> Radiological	No		
Machine guards	No		All machinery will either be removed or electrically disconnected prior to demolition.
Modification to Fire Wall/Door	No		[FIREWAL] Building 44 will be isolated prior to demolition
Obstruction of fire protection equipment (pull boxes, hydrants, fire department connections, control panels, fire extinguishers, etc.)	No		Building 44 will be isolated prior to demolition
Off-shift work	No		
Outages of the plant public announcement (PA) system or the emergency notification system	No		[OUTAGE]
Overhead or underground utilities (Identify)	Yes		[UTIL] All utilities will be isolated prior to demolition. This will be performed as part of the safe shutdown activity. For any overhead lines still in place, a 15' distance will be maintained.
Penetrations into walls, floors, etc.	No		[PENETR]
Plastic sheeting or wood framing/enclosures	No		
Powder-actuated tools	No		
Public utilities (Identify)	No		[WATER]
Repetitive work	No		[ERGO]
Structural Modification	No		[STRUCT]
Special Fire Protection Equipment Required	No		[FIREQU]
Trenching/Shoring	Yes		[An approved Excavation/ Soil Disturbance Permit will be followed along with inspections by the Project Safety Officer will be used for installing the new domestic water hydrant and the removal of the Building 44 Foundation and Soil.]
Temporary heating facilities	No		
Temporary/portable buildings or structures	No		[FACIL]
Temporary service hook-ups (Identify)	Yes	Prep Phase	Water will be hooked up for misting.
Traffic control/flagman	Yes	Prep Phase	[TRAFFIC] Roadway will be blocked except for emergencies.
Work in attics, ceilings, chases, or crawlspaces	No		
Work impacting adjacent normally occupied areas	Yes		[ADJAC/BMAPP/SIGNS/NOTIF] Building 38 and Building 50.
Work Requiring Scaffolding, construction and inspection	No		[SCAFF]
Other (Specify)	No		

SECTION B, INDUSTRIAL HYGIENE - TO BE COMPLETED BY INDUSTRIAL HYGIENE REPRESENTATIVE

Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. lead compliance plans, confined space plans, hearing conservation programs, etc.), including any notations for future Job Safety and Health Analysis (JSHA). Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item	Exst	Work Package Phase	Comments, Controls, Methods of Compliance
Abrasive blast (<input type="checkbox"/> MSDS available)*	No		
Asbestos	No		[ASBEST]The asbestos abatement will be performed prior to the demolition.
Beryllium	No		
Blood-borne pathogens*	No		
Cadmium	No		
Carcinogens (<input type="checkbox"/> MSDS available)*	No		[CARC]
Chemicals/solvents (<input type="checkbox"/> MSDS available)*	No		[CHEM/MSDS]
Chlorofluor carbon (CFC)	No		[CFC]
Coal, tar or asphalt products	No		
Coating/painting (<input type="checkbox"/> MSDS available)*	No		
Corrosives/acids/caustics (<input type="checkbox"/> MSDS available)*	No		
Dusty operations		Yes	The only dust expected will be the dust from the demolition of the structure. To alleviate this concern water misting will be established in close proximity of the demolition activity.
Hazardous Waste Operations (HAZWOPER)*	No		
High Pressure systems	No		[HIPRES]
Insulation/man-made mineral fibers (<input type="checkbox"/> MSDS available)*	No		
Lasers	No		
Lead	No		
Foam in Place Operations	No		
Mercury	No		
Noise in excess of 85 dBA	Yes	Demolition	[NOISE]Hearing protection will be required during Heavy Equipment and Hoe Ramming operations.
Polychlorinated biphenyl's (PCBs)	No		
Removal of ceiling tiles*	No		
Spraying/generation of mists*	No		
Temperature extremes (heat or cold stress)	No		[CRYRO/COLD/HEAT]
Ventilation or Air Monitoring requirements	No		[VENTIL/TH]
Welding, brazing, or thermal cutting operations	Yes	Debris removal	[BURN] Cutting of re-bar and miscellaneous steel. Use approved Burn Permit, ML-7733 (11-00)
Other (specify)			

*NOTE: Requires a description of the materials involved which present a hazard. Identify the physical location of the MSDS.

SECTION C, RADIOLOGICAL PROTECTION - TO BE COMPLETED BY RADIOLOGICAL CONTROLS REPRESENTATIVE

Identify engineering/administrative controls or PPE as required, keyed to the following checklist items. Insert any required and/or other special actions to be taken because of the particular hazard (i.e. RWP, ALARA Plan, etc.). Additionally, identify any activities which DOE prescribed Occupational Safety and Health standards that require protective measures be designed, inspected, or approved by a professional engineer or other competent person. (Use Section D if additional space is needed.)

Item	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
<i>Location:</i> Controlled Area	No		
Contamination Area	No		[STP]
High Contamination Area	No		[STP]
Radioactive Materials Storage Area	No		
Airborne Radioactivity Area (STP or OBT)	No		
Radiation Area	No		
High Radiation Area	No		
Very High Radiation Area	No		
Other (Specify)	No		
<i>Activities:</i> Criticality Safety Concerns	No		
Digging/Soil Removal	No		[DIG]
Surface destruction of radioactively contaminated materials or equipment?	No		[SURFAC]
Welding, burning, or grinding?	No		[SURFAC]
Hammering, chipping or scraping?	No		[SURFAC]
Abrasive blasting?	No		[SURFAC]
Dust-collecting equipment or systems?	No		
Decontamination and clean-up?	No		
Rad Waste Storage and Disposal Required	No		[RWSTOR/WASTE/CHAR]
Other (Specify)			
<i>Sources:</i> X-Ray machine/generator	No		[XRAY]
Sealed radioactive sources	No		
Unsealed radioactive sources	No		
<i>Controls:</i> Radiological Work Permit	No		[RWP/RWP=JS/RWP=N/R/RPGEN]
ALARA Plan	No		[ALARA]
Air Flow Studies	No		[AIRFLOW/CAM]
Urinalysis program	No		
Preliminary or in-process characterization	No		[SURVPS/SURVIP]
Anti-contamination clothing	No		
Respiratory protection	No		[RESP]
Needs Analysis Evaluation	No		
Hazards Analysis	No		

Engineering Controls	No		
Administrative Controls	No		
Supplemental dosimetry	No		
Shielding	No		
Personnel monitoring (frisking)	No		

SECTION D - OTHER CONDITIONS, CONCERNS, OR SUPPLEMENTAL INFORMATION FROM SECTIONS A THROUGH C

Identify Assembly Points: ***Be aware of threatening weather and take shelter when life-threatening storms are imminent. The Assembly Point will be the same as the Building 50 Assembly Point. South Area of Bldg. 50.***

Project/Activity: **SM/PP-TFV / Building 44 Demolition**

Name: John W. Nichols

JSHA CRITERIA CHECKLIST	YES	NO	N/A
1. Work performed with a 6-ft. or greater fall hazard, excluding portable ladders. See Item 14 for further requirements.		X	
2. Roof work requiring the use of fall protection (within 6 ft of an unprotected edge) or special fall protection procedures.		X	
3. Potential hazardous chemical exposure above action levels or permissible exposure limits (PELs), or ACGIH Threshold Limit Values (TLVs).		X	
4. Work activity in an immediately dangerous to life or health (IDLH) breathing hazard environment.		X	
5. Fire or explosion hazards. Are fire hazards beyond a Hot Work Permit? (Reference O2, MD-10286)		X	
6. Work within close proximity of live electrical than 50 volts, conductors, and/or work that requires multiple locks, multiple hazard sources, or complicated lockout/tagout circumstances. (Reference MD-10444, <i>Lockout/Tagout Procedure Manual</i> , for multiple energy lockout/tagout.)	X		
7. Any maintenance or repair of equipment under pressure where the pressure cannot be shut off and de-energized.		X	
8. Work with high or extreme exposure to ionizing or non-ionizing radiation (reference MD-80036, Op 10002), noise, or heat or cold stress (reference D9, D13 & D16, MD-10286).		X	
9. Determined by an appropriate core team, building manager, member of general or executive management, or the IS&H manager to require a JSHA.	X		
10. Any onsite construction or service project directed to have JSAs based on this procedure and/or instruction from project personnel or IS&H staff.		X	
11. Near-miss event with the potential for loss of life or limb or disabling injury/illness if repeated.		X	
12. Excessive trauma/motion/vibration work situations or manual lifting involving heavy, large, and/or awkward-to-handle objects (reference MD-10407, <i>Ergonomics Program</i>).		X	
13. Unguarded, unmarked close clearance, pinch point, exposed moving machinery parts.		X	
14. Known potential falling object hazards (e.g., employees working above other employees, potential for dropping tools, falling equipment or material) or working in areas with the potential for flying objects (flying chips, sandblasting, etc.), exposure to sharp or protruding objects (e.g., working inside plenums, air mover ducts, etc.).		X	

MANDATORY JSHA REQUIRED TO ADDRESS ANY/ALL (YES) RESPONSES

B 20/25

JOB SAFETY & HEALTH ANALYSIS

JSHA MASTER DOCUMENT CONTROL NO:
SM/PP-TFV-44-04-10-02

SIGNATURES

DATE: 04/10/02	<input checked="" type="checkbox"/> NEW <input type="checkbox"/> REV	BUILDING: 44	JOB: Building 44 Demolition
DEPARTMENT/COMPANY: SM/PP-TFV Project / BWXT		SECTION: N/A	
OCCUPATIONS: Heavy Duty, Demo Tech, Pipe fitter/ Welder, Electrical and Construction Craft			

ORIGINATOR: John W. Nichols	<i>John W. Nichols</i>
REVIEW/REV: Jared Wills / Chris Ahlquist	<i>Jared Wills</i>
REVIEW/REV: Mike Stromberg / Bill Wahler	<i>Mike Stromberg</i> <i>Bill Wahler</i>
APPROVED: Gary Weidenbach	<i>Gary Weidenbach</i>
APPROVED: C. D. Thompson	<i>C. D. Thompson</i>

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Safety Shoes, Orange Vests, Hard Hats, Safety Glasses and gloves		MSDS(s)/CHEMICALS ASSOCIATED WITH THE JOB: N/A										
BASIC JOB STEPS	POTENTIAL ACCIDENT/ILLNESSES OR KNOWN HAZARDS	SAFE JOB PROCEDURES										
<p>Break the job down into basic steps that tell what is done first, what is done next, and so on.</p> <p>Record the job steps in their normal order of occurrence. Describe what is done, not the details of how it is done. Usually, three or four words are sufficient to describe each job step. For example, the job of "replacing a light bulb" may break down into basic steps as follows:</p> <ol style="list-style-type: none"> Bring and set up ladder Ascend ladder Remove light globe & bulb Replace light bulb Replace light globe Descend ladder Remove and store ladder 	<p>Ask yourself for each job what accidents/illnesses could occur to the employee doing the job.</p> <p>Record potential accidents/illnesses by combining one of the abbreviations below with the agent of contact. For example, "struck by a crane hook" is recorded "SB-crane hook." Number each potential accident.</p> <table> <tr> <td>SB - Struck by</td> <td>CO - Caught on</td> </tr> <tr> <td>CB - Contacted by</td> <td>IB - Caught between</td> </tr> <tr> <td>SA - Struck against</td> <td>F - Fall</td> </tr> <tr> <td>CW - Contact with</td> <td>SO - Strain-overexertion*</td> </tr> <tr> <td>CI - Caught in</td> <td>E - Exposure (occ. illness)</td> </tr> </table> <p>*Show ergonomic stresses as SO (repetitive trauma, single event strain, or awkward position)</p>	SB - Struck by	CO - Caught on	CB - Contacted by	IB - Caught between	SA - Struck against	F - Fall	CW - Contact with	SO - Strain-overexertion*	CI - Caught in	E - Exposure (occ. illness)	<p>For each potential accident/illness, ask yourself exactly what the employee should do or not do to avoid the accident/illness.</p> <p>Describe specific precautions in detail. Give each precaution the same number given in the potential accident (center column) to which it applies. Avoid generalities such as "Be alert," "Be careful," and "Take caution." Use simple do or don't statements, e.g., "Lock out main power switch," "Stand clear of lift before signaling," or "Check wrench grip before exerting full force." If necessary, explain how, as well as what, to do. Amount of detail is a matter of judgment.</p> <p>Describe ergonomic solutions (job redesign, new tools, worker lift assistance, etc.)</p>
SB - Struck by	CO - Caught on											
CB - Contacted by	IB - Caught between											
SA - Struck against	F - Fall											
CW - Contact with	SO - Strain-overexertion*											
CI - Caught in	E - Exposure (occ. illness)											
General Safety Note	A wide variety of incidents occur on a regular basis that potentially could result in injury or illness	<ol style="list-style-type: none"> 1) Be cognizant of your own safe work practices as well as those of your co-workers 2) Review any related safety procedures of which you are unsure 3) Utilize STOP WORK Authority as necessary 										
Pre-job meeting with involved personnel to discuss the work plan and safety requirements.	NA	This project engages in Enhanced Work Planning (EWP), a ISM process that evaluates and improves the approach by which work is identified, planned, approved, controlled, and executed.										
Plug sanitary sewer lines	Exposure to toxic or asphyxiating atmospheres	Obtain and follow a Confined Space Entry permit per MD-10286 M11.										
Building demolition causing hazardous work area.	Tripping hazards, potential falling debris, sharp objects, uneven walking surface.	Isolate demolition area by chain link fencing and barricade any unprotected areas.										
Building demolition causing falling debris.	Injury or equipment damage from falling building debris.	Wear proper PPE for a demolition site and stay away from building structure that has been structurally weakened.										
Disconnect telephone cable in manhole	Exposure to toxic or asphyxiating atmospheres	Obtain and follow a Confined Space Entry permit per MD-10286 M11.										

B
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**JOB SAFETY AND HEALTH ANALYSIS FORM
(CONTINUATION SHEET)**

BASIC JOB STEPS	POTENTIAL ACCIDENT/ILLNESSES OR KNOWN HAZARDS	SAFE JOB PROCEDURES
Remove temporary power equipment	Electrical shock	LOTO supply circuit per MD-10286 M3
Excavate to disconnect and cap water line. Then install hydrant.	Excavation entrapment Damage or contact with underground utilities	Obtain and follow an Excavation Permit per MD-10286 O5.
Demolition using shear or other heavy duty mechanized equipment	Injury from being struck by flying material from shear or other heavy duty mechanized equipment	The manufacturer of the mechanical shear recommends a 75-foot exclusion zone to protect against personnel injury that may be caused by flying debris. No one will be permitted within a 75-foot distance of the shear head while it is in operation. (Except-Heavy Duty Operators who will remain in the equipment cabs.) The exclusion zone for the hoe ram is 50 feet and all other Heavy Duty mechanized equipment is 30 feet.
Outside work on days with elevated temperatures and humidity	Heat Stress	During periods of elevated temperature, follow the requirements of MD-10286 D13 Heat Stress
Work inside construction area	Injury in construction area	Wear hard hat, safety glasses, and steel toe shoes at all times inside construction area. Ear protection must be worn in areas of excessive noise. Wear safety vest while mechanical machinery, such as shear, grapple, and haulers, are in operation. (Exemption: equipment operators do not need to wear hard hats, safety glasses, or vests while inside the enclosed cab. However, the operator must wear hearing protection while operating the equipment) Wear gloves while handling demolition debris
Water Misting during demolition.	Injury from Heavy Equipment	Orange Safety Vests, warning beepers on equipment and radios.
Cutting Re-bar and piping.	Cutting of metal; open flame and sparks of hot metal	Wear protective PPE coverings and follow the Hot Work Permit guidelines.
Be aware of threatening weather	Possible injury from lighting strike or high wind from tornado.	Take shelter when life-threatening storms are imminent.

B
22/25

WORK PACKAGE REVISION FORM

Work Package Revision Form			
Work Package No. SMPP/TFV—RR 30043		Revision No.:	
Revision Description: (attach page revisions to form)			
	Name	Signature	Date
PREPARED BY:			
Revision Preparer:	John W. Nichols		
REVIEWED BY:			
Job Supervisor:	Bill Wahler		
Project Superintendent/ Foreman:	Mike Stromberg		
Industrial Safety & Hygiene P o C:	Jared Wills		
Radiological Point of Contact:	Steve Collas		
Environmental Safeguards & Compliance P o C:	Ron Paulick		
Waste Management PoC:	Willis Daniel		
Building Manager:	Gary Weidenbach		
Other:			
Other:			
USQ Trained Person			
USQ SCREEN / DETERMINATION REQUIRED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Brief Explanation: A Screening is not necessary based on the fact no Nuclear Facilities will be impacted by the I Building Demolition. _____ _____ _____			
APPROVED BY:			
Project Manager:	Budd Thompson		

Rad Summary

Appendix C

Radiological Summary

RSDSs Prior to Demolition

RADIOLOGICAL SURVEY DATA SHEET

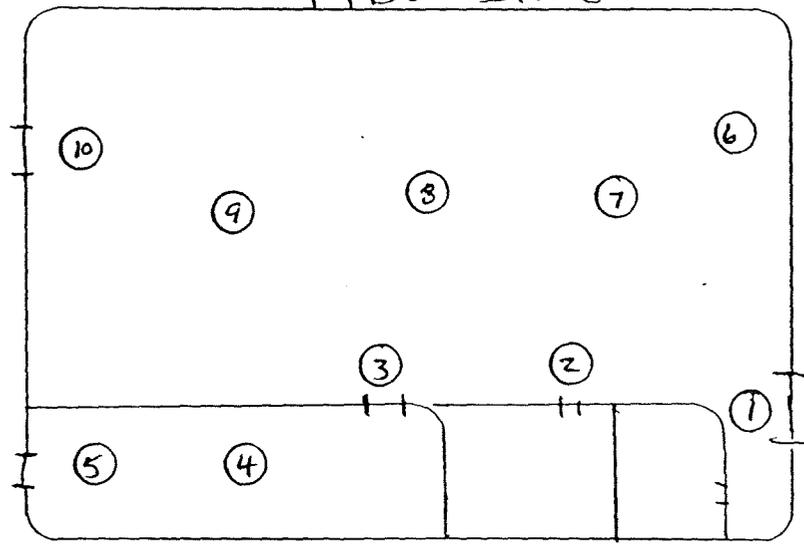
1 of 4

LOCATION: (BLDG./AREA/ROOM)	44 BUILDING	SURVEY NO.	01-OSA-078
PURPOSE:	ANNUAL 44 BUILDING	RWP NO.	N/A
		DATE:	12-12-01
		TIME:	1430

MAP/DRAWING

COPY

44 BUILDING



LEGEND: # = mrem/hr (γ) whole body
 #E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact
 \triangle # = mrem/hr neutron
 \square # = air sample number
 \odot # = swipe number
 \odot #/a or β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5603/5604	1-31-02
	N/A	

Completed by: (Signature)	HP #	Date:
<i>[Signature]</i>		12-17-01
Completed by: (Print Name)		
DANIEL HARVEY		MICHAEL S RUBADUE
Counted by: (Signature)	HP #	Date:
SEE ATTACHED		
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP #	Date:
<i>[Signature]</i>		12-17-01
Reviewed/Approved by: (Print Name)		
RM Coblenz		

Alpha/Beta Analysis

Batch ID:	01-OSA-078 RUBADUE (10) CYR		
Batch File:	Smear Unit 3 - 200112131110	Acquisition Date:	12/13/01
Group:	H	Count Time (min):	1.5
Device:	Unit 3	Recalibration Date:	5/22/2003
Geometry:	Swipe/Smear		
Serial Number:	15764-1		

<u>Sample ID</u>	<u>Carrier</u>	<u>Alpha (dpm)</u>	<u>2σ</u>	<u>Beta (dpm)</u>	<u>2σ</u>
1	144	0.00	0.00	1.44	2.89
2	121	2.56	5.13	1.43	2.89
3	143	0.00	0.00	1.44	2.89
4	65	0.00	0.00	0.00	0.00
5	101	0.00	0.00	2.89	4.08
6	122	2.56	5.13	0.00	0.09
7	57	0.00	0.00	4.33	5.00
8	52	0.00	0.00	1.44	2.89
9	39	2.56	5.13	2.88	4.09
10	100	0.00	0.00	2.89	4.08

NSH

NSH

Bunda Stringer 12-14-01

01-OSA-078 RUBADUE (10) CYR

3 of 4
+ 0 +

CH 08 23

Protocol #: 3 Name: Pw H3 #401393 13-Dec-2001 16:09
 Region A: LL-UL= 0.5-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region C: LL-UL=40.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Time = 2.00 QIP = tSIE/AEC ES Terminator = Count
 RUBADUE 01-OSA-07B (F1-F10) CYR
 Conventional DPM
 Nuclide 1 = 800
 Luminescence Correction On
 Data/Application Drive & Path = c:\data

SAMP	TIME	LUM	FLAG	CPMA	CPMB	CPMC	tSIE	DPM1	A:2S%
-1	10.00	1	B	12.03	10.51	5.43	644.	18.24	
0	2.00	1		194.07	184.17	1.57	518.	472.72	10.60
1	2.00	11		0.00	0.00	0.07	605.	0.00	0.00
2	2.00	43		0.00	0.00	0.00	628.	0.00	0.00
3	2.00	0		0.00	0.00	0.00	637.	0.00	0.00
4	2.00	16		0.00	0.00	0.00	542.	0.00	0.00
5	2.00	0		0.00	0.00	0.00	588.	0.00	0.00
6	2.00	0		0.00	0.00	0.00	572.	0.00	0.00
7	2.00	0		0.00	0.00	0.00	618.	0.00	0.00
8	2.00	18		0.00	0.00	0.00	632.	0.00	0.00
9	2.00	0		0.00	0.00	0.00	637.	0.00	0.00
10	2.00	0		0.00	0.00	0.00	677.	0.00	0.00

Handwritten initials

4 of 4

Brenda Stringer 12-14-01

CS of 23

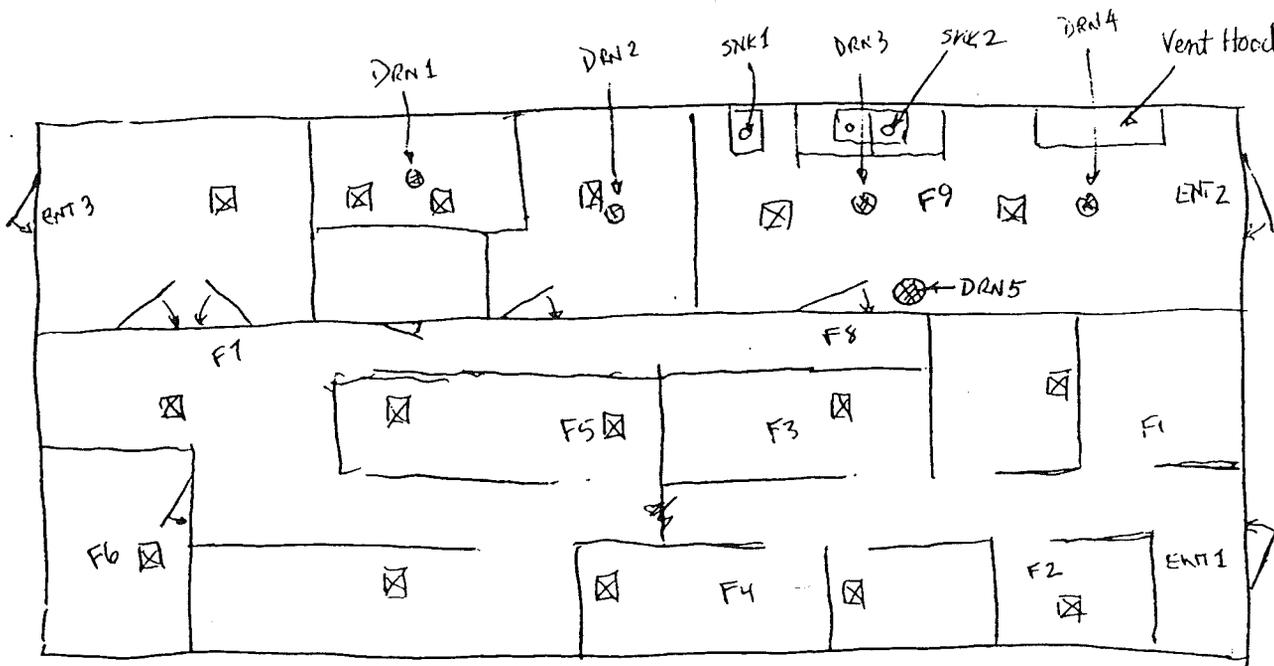
RADIOLOGICAL SURVEY DATA SHEET

Page 1 of 3

LOCATION: (BLDG./AREA/ROOM) BLDG 44	SURVEY NO. 01-05A-066
PURPOSE: Generic Disposition Survey for Building Transition (Confirmatory Survey)	RWP NO. N/A
	DATE: 11/8/01
	TIME: 1640

MAP/DRAWING

COPY



☒ Ceiling Air Vent

Air Vents surveyed with NE ELECTRA : All $< 100 \text{ dpm}/100 \text{ cm}^2$; $< 5000 \text{ dpm}/100 \text{ cm}^2 \beta$

Air Vents, Floors, Walls, Tables, Sinks, Work Tables, etc.: Large area area wipes $< 100 \text{ dpm}/100 \text{ cm}^2$ ^{wipe α} _{11/12/01}
 $< 5000 \text{ dpm}/\text{wipe } \beta$

LEGEND: # = mrem/hr (y) whole body
 #E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact

△ # = mrem/hr neutron

○ # = swipe number

□ # = air sample number

○ #/α or β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Ludlum M2350	5671/5148/5675	9/21/02
NE ELECTRA	5603/5604	01/31/02
N/A		

Completed by: (Signature) <i>Robert Coblenz / Dan Harvey</i>	HP #	Date: 11/12/01
Completed by: (Print Name) ROBERT COBLENZ / DANIEL J. HARVEY		
Counted by: (Signature) <i>N/A</i>	HP # N/A	Date: N/A
Counted by: (Print Name) <i>N/A</i>		
Reviewed/Approved by: (Signature) <i>Kevin Kosko</i>	HP #	Date: 11/13/01
Reviewed/Approved by: (Print Name) KEVIN KOSKO		

RSDS# 01-05A-066 RCT: PMC RCT: DGH

43-20 (DET#3) BKG:	0	EFF: 0.193	PROBE AREA:	181 cm	Surface Eff:	0.5		
43-37 (DET#4) BKG:	0	EFF: 0.183	PROBE AREA:	584 cm				

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
SRCBKG	5671		5675	4	0	11/8/01	11:56	45	300	17
SRCCHECK	5671		5675	4	1	11/8/01	13:02	2234	60	4181
SRCCHECK	5671		5675	4	2	11/8/01	13:04	2199	60	4115
SRCCHECK	5671		5675	4	3	11/8/01	13:05	2190	60	4098
SRCCHECK	5671		5675	4	4	11/8/01	13:08	2322	60	4345
SRCCHECK	5671		5675	4	5	11/8/01	13:09	2182	60	4083
SRCCHECK	5671		5675	4	6	11/8/01	13:11	2280	60	4267
SRCBKG	5671		5148	3	7	11/8/01	13:19	4	300	5
SRCCHECK	5671		5148	3	8	11/8/01	13:20	2059	60	11788
SRCCHECK	5671		5148	3	9	11/8/01	13:22	2075	60	11880
SRCCHECK	5671		5148	3	10	11/8/01	13:24	1728	60	9893
SRCCHECK	5671		5148	3	11	11/8/01	13:25	1997	60	11433
SRCCHECK	5671		5148	3	12	11/8/01	13:58	2137	60	12235
SRCCHECK	5671		5148	3	13	11/8/01	13:59	2079	60	11903
SRCCHECK	5671		5148	3	14	11/8/01	14:01	2045	60	11708
SRCCHECK	5671		5148	3	15	11/8/01	14:02	2076	60	11886
BLD44DRN01	5671		5675	4	19	11/8/01	15:33	13	30	49
BLD44DRN02	5671		5675	4	20	11/8/01	15:35	5	30	19
BLD44DRN03	5671		5675	4	21	11/8/01	15:36	5	30	19
BLD44DRN04	5671		5675	4	22	11/8/01	15:37	4	30	15
BLD44DRN05	5671		5148	3	31	11/8/01	16:01	0	60	0
BLD44ENT01	5671		5675	4	16	11/8/01	15:21	3	30	11
BLD44ENT02	5671		5675	4	17	11/8/01	15:25	5	30	19
BLD44ENT03	5671		5675	4	18	11/8/01	15:27	10	30	37
BLD44FLR01	5671		5675	4	23	11/8/01	15:47	4	30	15
BLD44FLR02	5671		5675	4	24	11/8/01	15:48	4	30	15
BLD44FLR03	5671		5675	4	25	11/8/01	15:49	4	30	15
BLD44FLR04	5671		5675	4	26	11/8/01	15:50	5	30	19
BLD44FLR05	5671		5675	4	27	11/8/01	15:52	7	30	26
BLD44FLR06	5671		5675	4	28	11/8/01	15:54	5	30	19
BLD44FLR07	5671		5675	4	29	11/8/01	15:55	6	30	22
BLD44FLR08	5671		5675	4	30	11/8/01	15:56	3	30	11
BLD44FLR09	5671		5675	4	35	11/8/01	16:34	5	30	19
BLD44SNK01	5671		5148	3	32	11/8/01	16:03	3	60	17
BLD44SNK02	5671		5148	3	33	11/8/01	16:06	1	60	6

RSDSs After Demolition

RADIOLOGICAL SURVEY DATA SHEET

Pg 1 of 3

LOCATION: (BLDG./AREA/ROOM)	44 / 0/S	SURVEY NO.	02-TF-1087
PURPOSE:	DEBRIS PILE (ASPHALT)	RWP NO.	N/A
	CONFIRMATION	DATE:	6-18-02
		TIME:	1330

MAP/DRAWING

DIRECT FRISK RESULTS INDICATE:

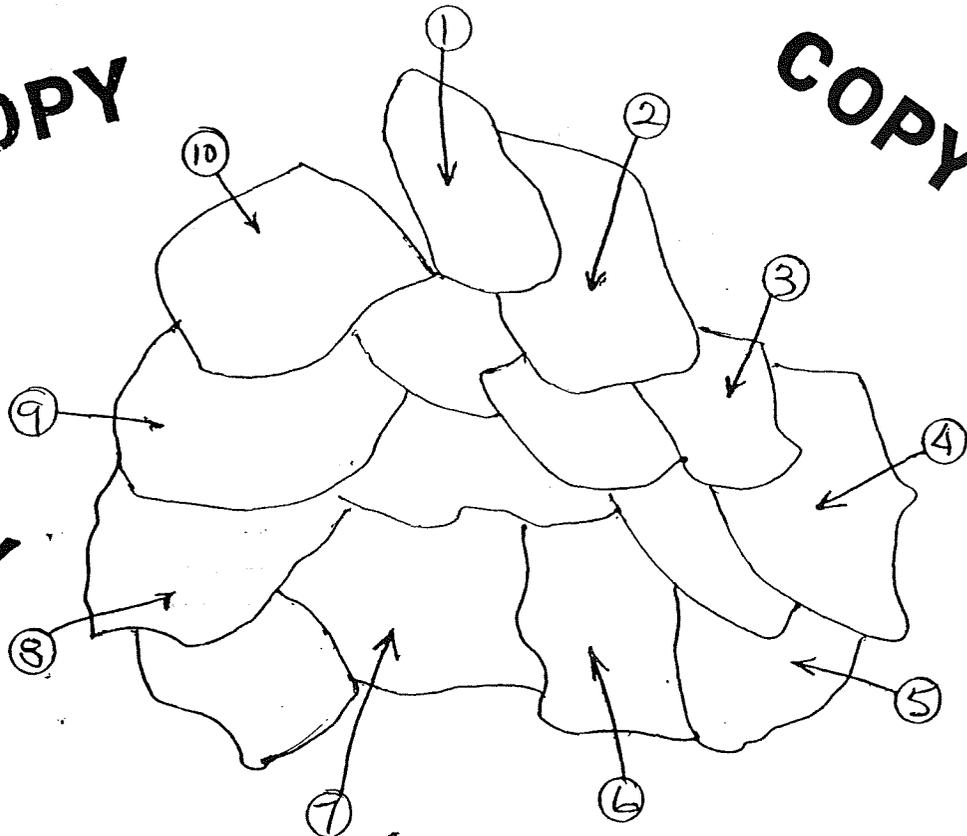
$\frac{<100}{\alpha}$

$\frac{25K}{\beta}$

COPY

COPY

COPY



LEGEND: # = mrem/hr (γ) whole body
 Δ # = mrem/hr neutron
 \square # = air sample number
 # = swipe number
 #/ α or β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5607/5608	5-9-03
BICRON		

Completed by: (Signature)	HP	Date:
<i>[Signature]</i>		6-18-02
Completed by: (Print Name)		
PG KANEY / DJ HARVEY		
Counted by: (Signature)	HP #	Date:
SEE		
Counted by: (Print Name)		
ATTACHED		
Reviewed/Approved by: (Signature)	HP #	Date:
<i>[Signature]</i>		6-18-02
Reviewed/Approved by: (Print Name)		
RM Coblenz		

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR034
Batch Ended: 6/18/02 13:20
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1087 RADLEY(10) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.06		0.21	1.81	
A2	2	1.58	1.95		0.26	1.70	
A3	3	0.00	2.13		0.00	1.24	
A4	4	0.00	2.00		0.00	1.18	
B1	5	0.00	2.02		0.00	1.25	
B2	6	0.00	2.01		0.29	1.69	
B3	7	0.00	2.12		1.37	2.22	
B4	8	0.00	2.00		0.00	1.16	
C1	9	1.56	2.13		4.10	2.80	
C2	10	0.00	1.84		0.00	1.16	

✓ PGR

✓ PGR

Y. Smith-Brown

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RADIOLOGICAL SURVEY DATA SHEET

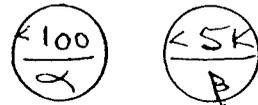
pg. 1 of 4

LOCATION: (BLDG./AREA/ROOM) 4A / 0/S	SURVEY NO. 02-TF-1089
PURPOSE: DEBRIS PILE CONFIRMATION	RWP NO. N/A
	DATE: 6-20-02
	TIME: 0930

MAP/DRAWING

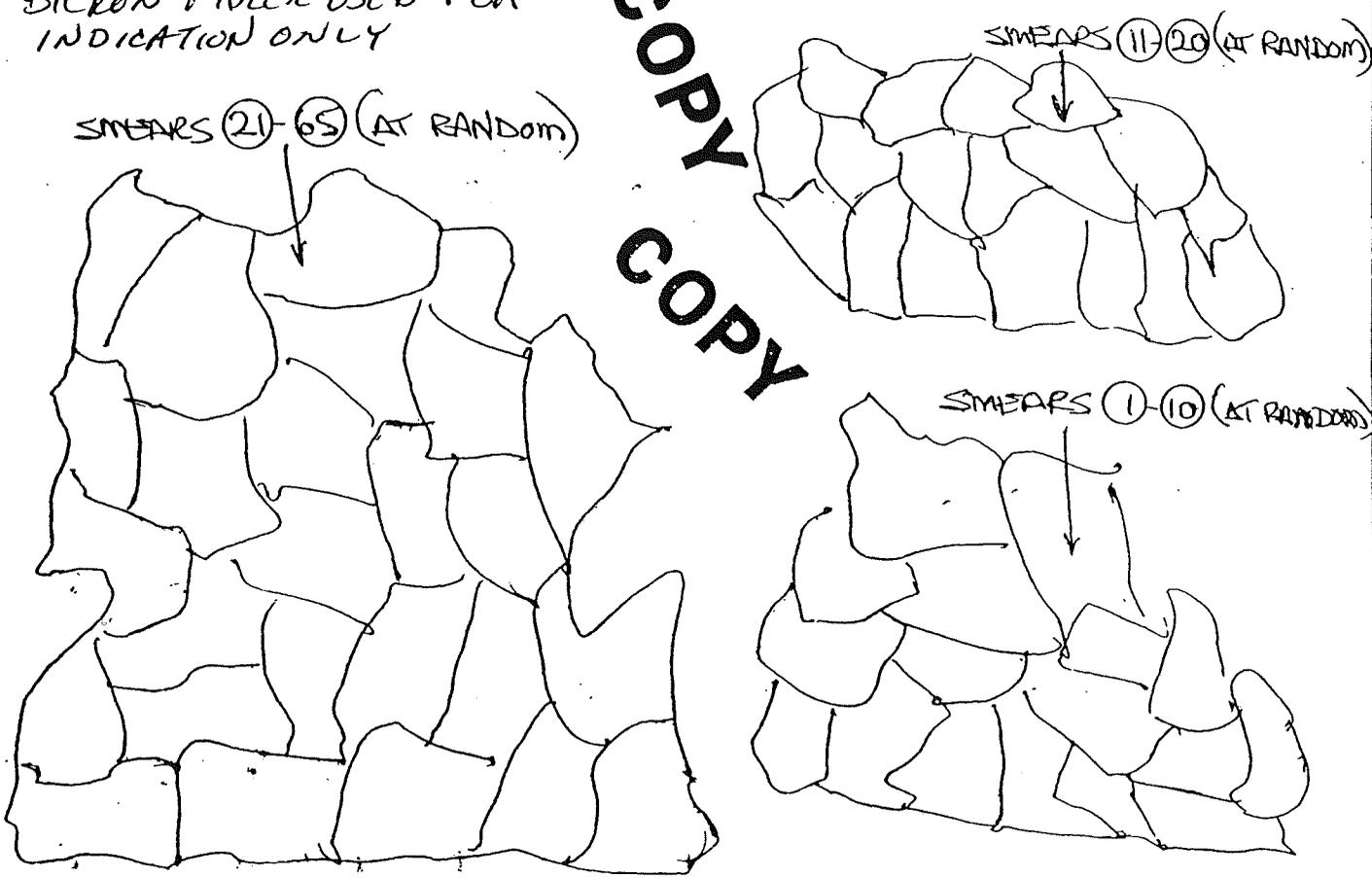
INTEGRATED COUNTS TAKEN IF α AUDIBLE DETECTED

DIRECT FRISK RESULTS INDICATE :



BICRON FIDLER USED FOR INDICATION ONLY

COPY COPY



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact

= mrem/hr neutron

= air sample number

= swipe number
or β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5607/5608	5-9-03
BICRON	3815/3846	1-7-03
	N	
	A	

Completed by: (Signature) <i>PG Radley</i>	HP # [redacted]	Date: 6-20-02
Completed by: (Print Name) PG RADLEY / DJ HARVEY		
Counted by: (Signature) <i>See attached</i>	HP # [redacted]	Date: 7
Counted by: (Print Name) [redacted]		
Reviewed/Approved by: (Signature) <i>R. M. Cable</i>	HP # [redacted]	Date: 6-20-02
Reviewed/Approved by: (Print Name) R. M. Cable		

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm ²)				
Sample #	βγ	Alpha	Tritium	Comments
1	SEE	ATTACHED	DEBRIS PILE	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

Removable Contamination				
Swipes (dpm/100cm ²)				
Sample #	βγ	Alpha	Tritium	Comments
36	SEE	ATTACHED	DEBRIS PILE	
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
<div style="display: flex; justify-content: space-around; align-items: center;"> N A </div>				

COMMENTS: *N/A*

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for βγ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-88)

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Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Aqua
 Data file name: SMEAR005
 Batch Ended: 6/20/02 9:34

Crosstalk correction performed.

Recalibration Date: 4/3/03
 Serial Number: 26966-1

Batch ID: RADLEY SUR #02-TF-1089 (65)/BH

Detector ID	Sample ID	Alpha Activity		
		DPM	σ	flags
A1	1	0.00	2.09	
A2	2	0.00	2.12	
A3	3	0.00	1.95	
A4	4	0.00	1.98	
B1	5	1.05	2.12	
B2	6	0.00	2.14	
B3	7	3.47	2.58	
B4	8	0.00	1.93	
C1	9	0.00	2.14	
C2	10	0.00	2.04	
C3	11	0.00	2.03	
C4	12	0.00	2.29	
D1	13	0.00	2.18	
D2	14	0.00	2.11	
D3	15	1.66	1.96	
D4	16	0.00	2.01	
A1	17	0.00	2.09	
A2	18	0.00	2.12	
A3	19	0.00	1.98	
A4	20	0.00	1.94	
B1	21	1.06	2.06	
B2	22	0.00	2.18	
B3	23	3.46	2.60	
B4	24	0.00	1.91	
C1	25	0.00	2.15	
C2	26	0.00	2.05	
C3	27	0.00	2.03	
C4	28	0.00	2.29	
D1	29	0.00	2.16	
D2	30	3.93	2.91	
D3	31	0.00	1.96	
D4	32	1.73	2.01	

Beta Activity		
DPM	σ	flags
0.19	1.86	
0.00	1.42	
0.00	1.42	
2.83	3.13	
4.91	3.01	
0.00	1.44	
0.00	1.84	
1.72	2.02	
1.36	2.03	
0.00	1.57	
0.00	1.37	
0.00	1.55	
0.60	1.98	
3.65	2.66	
0.00	1.98	
0.00	1.45	
0.19	1.86	
0.00	1.42	
2.66	2.54	
0.00	1.59	
0.00	1.34	
1.51	2.27	
3.15	2.78	
0.00	1.23	
2.68	2.42	
2.08	2.52	
0.00	1.37	
0.00	1.98	
0.00	1.49	
0.00	1.45	
0.00	1.98	
0.00	1.45	

✓ PGR

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✓ PGR

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Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Aqua
 Data file name: SMEAR005
 Batch Ended: 6/20/02 9:34

Crosstalk correction performed.

Recalibration Date: 4/3/03
 Serial Number: 26966-1

Batch ID: RADLEY SUR #02-TF-1089 (65)/BH

Detector ID	Sample ID	Alpha Activity		
		DPM	σ	flags
A1	33	0.00	2.08	
A2	34	0.00	2.13	
A3	35	0.00	1.95	
A4	36	0.00	1.97	
B1	37	1.06	2.08	
B2	38	1.52	2.20	
B3	39	0.00	1.85	
B4	40	0.00	1.92	
C1	41	1.65	2.14	
C2	42	0.00	2.04	
C3	43	0.00	2.03	
C4	44	1.68	2.29	
D1	45	0.00	2.16	
D2	46	0.00	2.07	
D3	47	0.00	1.97	
D4	48	0.00	2.01	
A1	49	0.00	2.08	
A2	50	1.90	2.12	
A3	51	1.56	1.95	
A4	52	0.00	1.99	
B1	53	1.06	2.06	
B2	54	0.00	2.15	
B3	55	0.00	1.83	
B4	56	0.00	1.93	
C1	57	0.00	2.13	
C2	58	0.00	2.06	
C3	59	1.78	2.03	
C4	60	0.00	2.29	
D1	61	0.00	2.18	
D2	62	0.00	2.10	
D3	63	0.00	1.97	
D4	64	0.00	2.01	
A1	65	0.00	2.09	

Beta Activity		
DPM	σ	flags
0.00	1.36	
1.01	1.92	
0.00	1.42	
1.63	2.88	
0.09	1.80	
2.55	2.59	
1.06	2.20	
0.59	1.67	
0.00	1.54	
0.69	2.10	
0.00	1.37	
0.00	1.55	
0.00	1.49	
0.00	1.45	
0.79	2.35	
0.00	1.45	
0.00	1.36	
0.00	1.42	
0.00	1.42	
4.04	3.35	
0.00	1.34	
0.00	1.44	
0.00	1.40	
1.72	2.02	
0.00	1.54	
4.87	3.21	
0.00	1.37	
0.00	1.98	
0.60	1.98	
2.37	2.33	
0.79	2.35	
1.11	1.93	
0.19	1.86	

✓ PR

✓ PR

Verda Nilope 6-20-02

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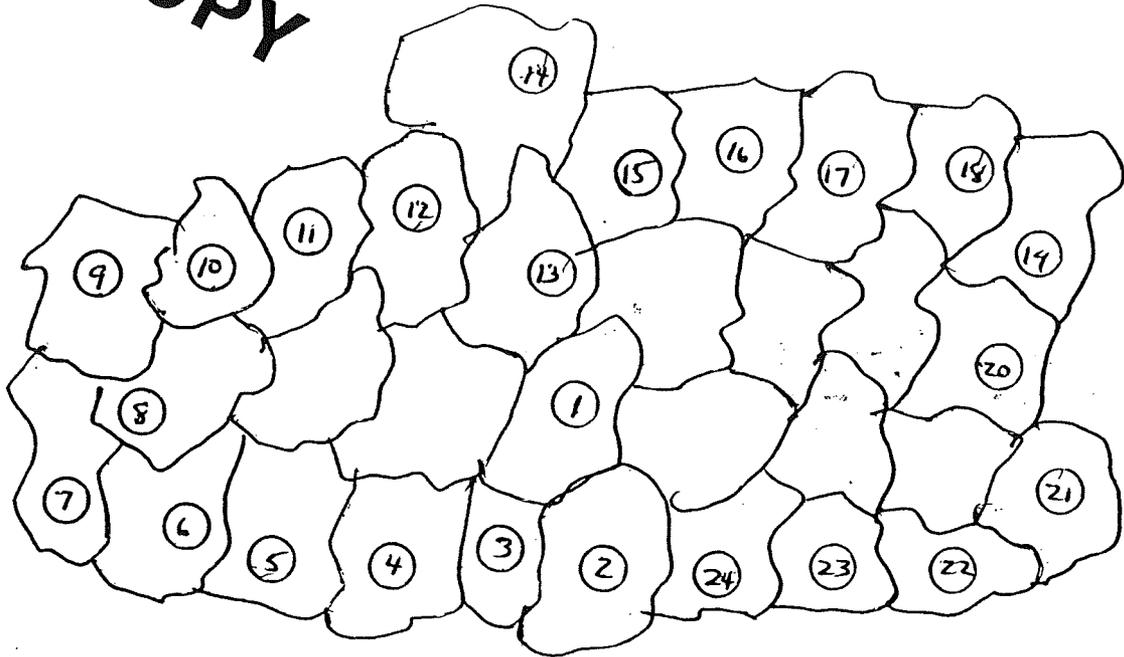
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RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 44 BUILDING	SURVEY NO 02-TF-1136
PURPOSE: CONCRETE PILE SURVEY FOR RELEASE TO WASTEMANAGEMENT	RWP NO. N/A
	DATE: 6-28-2002
	TIME 0845

MAP / DRAWING

COPY



#25-#26

ON SHEAR BLADE AND TRACK LOADER

- NOTE: BICRON FIDLER USED FOR INDICATION ONLY. RESULTS WERE NON-DETECTABLE.
- INTEGRATED READING TAKEN IF AUDIBLE ALPHA DETECTED ALL RESULTS:
<100 dpm/100cm² ALPHA AND <5K dpm/100cm² BETA

LEGEND: # = mrem/hr (γ) whole body
 #E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact
 K = factor of 1000
 - - - - = radiological boundary

△ # = mrem/hr neutron ○ # = swipe number
 □ # = air sample number ○ #/α or β = direct contamination

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5347/5319	5-22-2003
BICRON	3815/3846	1-7-2003
N/A		

Completed by: (Signature) <i>[Signature]</i>	HP# [Redacted]	Date: 6-28-2002
Completed by: (Print Name) DANIEL J. HARVEY		
Counted by: (Signature) RECORD ON FILE	HP# NA	Date: NA
Counted by: (Print Name) NA		
Reviewed/Approved by: (Signature) <i>[Signature]</i>	HP# [Redacted]	Date: 6-28-02
Reviewed/Approved by: (Print Name) RM Oblowitz		

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm ²)				
Sample #	Beta	Alpha	Tritium	Comments
1-24	SEE		N/A	CONCRETE
25	ATTACHED			SHEAR BLADE
26				TRACK LOADER
N/A				

Removable Contamination				
Swipes (dpm/100cm ²)				
Sample #	Beta	Alpha	Tritium	Comments
N/A				

COMMENTS: N/A

- NOTES:**
- See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
 - To request RO Count Room analysis for beta, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
 - Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.
- ML-8620A (4-98)

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Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Aqua
 Data file name: SMEAR002
 Batch Ended: 6/28/02 9:11

Crosstalk correction performed.

Recalibration Date: 4/3/03
 Serial Number: 26966-1

Batch ID: HARVEY SUR #02-TF-1136 (26)BH

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.08		0.00	1.36	
A2	2	0.00	2.15		3.59	2.65	
A3	3	0.00	1.95		0.00	1.42	
A4	4	0.00	1.96		0.00	2.33	
B1	5	0.00	2.08		0.24	1.80	
B2	6	0.00	2.14		0.00	1.44	
B3	7	0.00	1.86		2.26	2.50	
B4	8	0.00	1.93		1.72	2.02	
C1	9	1.65	2.14		0.00	1.54	
C2	10	0.00	2.04		0.00	1.57	
C3	11	1.77	2.05		2.35	2.24	
C4	12	0.00	2.29		0.00	1.98	
D1	13	1.74	2.21		3.04	2.71	
D2	14	0.00	2.07		0.00	1.45	
D3	15	0.00	1.96		0.00	1.98	
D4	16	0.00	2.01		0.00	1.45	
A1	17	0.00	2.09		0.19	1.86	
A2	18	0.00	2.13		1.01	1.92	
A3	19	0.00	1.97		1.44	2.23	
A4	20	0.00	1.96		0.42	2.62	
B1	21	0.00	2.10		2.64	2.48	
B2	22	0.00	2.16		0.27	1.90	
B3	23	0.00	1.84		0.00	1.84	
B4	24	0.00	1.93		1.72	2.02	
C1	25	0.00	2.13		0.04	1.54	
C2	26	0.00	2.04		0.69	2.10	

AGH

Rgt

Denda Hwlope 6-28-02

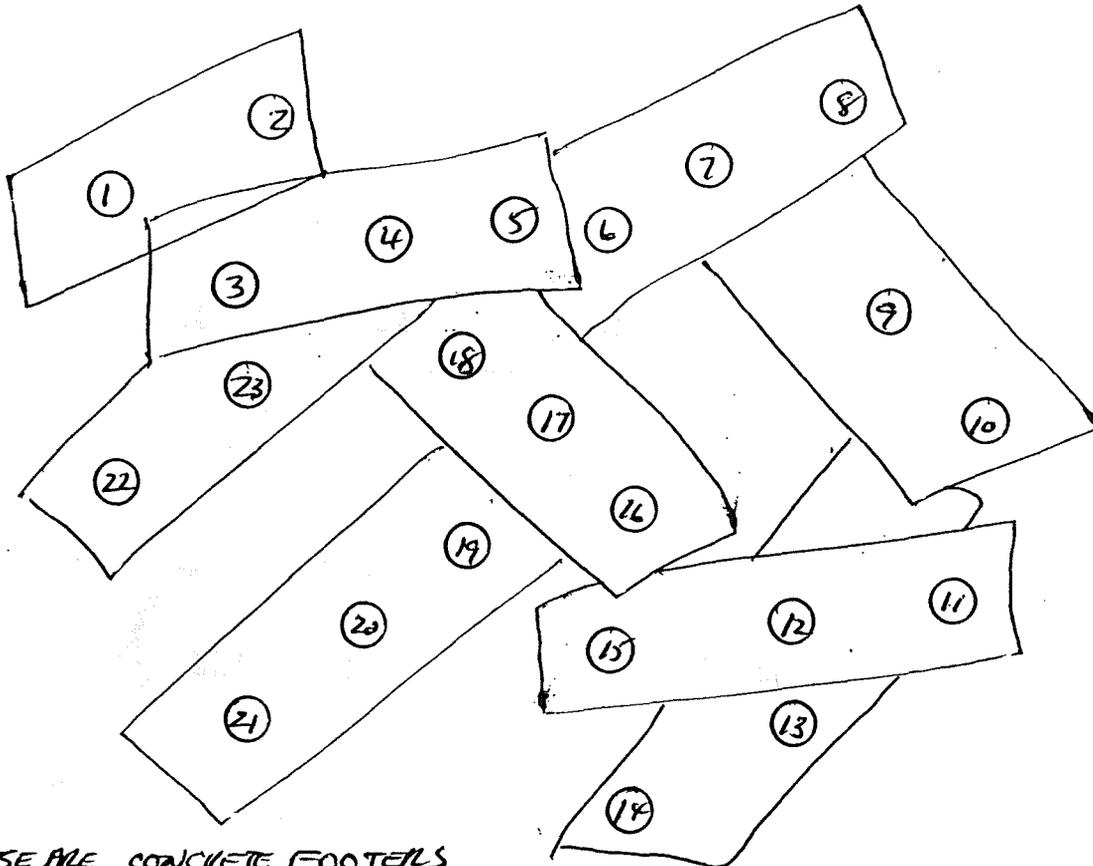
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RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 44 BUILDING	SURVEY NO 02-TF-1137
PURPOSE: CONCRETE PILE SURVEY FOR RELEASE TO WASTEMANAGEMENT	RWP NO. N/A
	DATE: 6-28-2002
	TIME 1600

#24 TAKEN ON RAM HOE MAP / DRAWING



COPY

* THESE ARE CONCRETE FOOTINGS

- NOTE: BICRON FIDLER USED FOR INDICATION ONLY. RESULTS WERE NON-DETECTABLE.
- INTEGRATED READING TAKEN IF AUDIBLE ALPHA DETECTED ALL RESULTS:
<100 dpm/100cm² ALPHA AND <5K dpm/100cm² BETA

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+γ) extremity on contact
K = factor of 1000
----- = radiological boundary

△ # = mrem/hr neutron ○ # = swipe number
□ # = air sample number ○ #/α or β = direct contamination

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5347/5319	5-22-2003
BICRON	3815/3846	1-7-2003
	N/A	

Completed by: (Signature) <i>Daniel J. Harvey</i>	HP# [REDACTED]	Date: 6-28-2002
Completed by: (Print Name) DANIEL J. HARVEY		
Counted by: (Signature) RECORD ON FILE	HP# NA	Date: NA
Counted by: (Print Name) NA		
Reviewed/Approved by: (Signature) <i>DRM Coblenz</i>	HP# [REDACTED]	Date: 7-2-02
Reviewed/Approved by: (Print Name) DRM Coblenz		

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm ²)				Comments
Sample #	Beta	Alpha	Tritium	
1-23	SEE		N/A	CONCRETE FOOTER
24	ATTACHED		N/A	RAM HOE
N/A				

Removable Contamination				
Swipes (dpm/100cm ²)				Comments
Sample #	Beta	Alpha	Tritium	
N/A				

COMMENTS: N/A

- NOTES:**
- See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
 - To request RO Count Room analysis for beta, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
 - Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-8620A (4-88)

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Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Green
 Data file name: SMEAR073
 Batch Ended: 7/1/02 8:12
 Cal. Due Date: 4/25/03
 Serial Number: 26966-3

Batch ID: 02-TF-1137 HARVEY(24) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.05		0.00	1.28	
A2	2	1.58	1.95		0.26	1.70	
A4	3	1.47	2.00		0.00	1.18	
B1	4	0.00	2.03		0.29	1.77	
B2	5	0.00	2.03		1.49	2.06	
B3	6	1.59	2.10		0.00	1.29	
C2	7	1.32	1.84		0.00	1.16	
C3	8	3.73	2.98		4.10	2.79	
C4	9	1.48	1.95		0.00	1.14	
D1	10	0.00	1.96		1.60	2.14	
D3	11	0.00	2.17		2.92	2.56	
D4	12	0.00	2.09		0.00	1.20	
A1	14	0.00	2.05		0.00	1.28	
A2	15	0.00	1.94		0.00	1.20	
A4	16	1.47	2.00		0.00	1.18	
B1	17	0.00	2.07		4.04	2.80	
B2	18	0.00	2.00		0.00	1.19	
B3	19	0.00	2.11		0.08	1.81	
C2	20	0.00	1.84		0.00	1.16	
C3	21	1.66	2.11		1.76	2.16	
C4	22	1.48	1.97		0.00	1.96	
D1	23	0.00	1.96		1.60	2.14	
D3	24	0.00	2.14		0.36	1.81	

27 H

27 H

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B. Smith-Brown

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR075
Batch Ended: 7/1/02 8:30
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1137 HARVEY (#13) BSB

Detector ID	Sample ID
A1	13

Alpha Activity		
DPM	σ	flags
1.45	2.05	

D7H

Beta Activity		
DPM	σ	flags
0.00	1.28	

D7H

Blair

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