3006 0406170021

BWX Technologies, Inc.
a McDermott company

BWXT of Ohio, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

SM-112/02
September 24, 2002

Mr. Richard B. Provencher, Director
Miamisburg Closure Project
U. S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Robert S. Rothman

SUBJECT: Contract No. DE-AC24-97OH20044
CLOSEOUT REPORT – BRICKMAKER TENTS, FINAL

REFERENCE: Statement of Work Requirement C.7.1e - Regulator Reports

Dear Mr. Provencher:

Rob Rothman from your office has approved the release of the following final document to the regulators and the public:

- Closeout Report – Brickmaker Tents, Final

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

Sincerely,

C. D. Thompson
SMPP/TFV Project Manager

CDT/VKD:jdg

Enclosures

cc: Tim Fischer, USEPA, (1) w/attachments
Brian Nickel, OEPA, (1) w/attachments
Ruth Vandegrift, ODH, (1) w/attachments
Frank Schmaltz, DOE/MCP, (1) w/attachments
Randy Tormey, DOE/OH, (1) w/attachments
Terry Tracy, DOE/HQ, (1) w/attachments
J. D. Bonfiglio, MESH, (1) w/attachments
Bob Ransbottom, BWXT of Ohio, (1) w/attachments
Val Darnell, BWXT of Ohio, (1) w/attachments
Budd Thompson, BWXT of Ohio, (2) w/attachments
Public Reading Room, (4) w/attachments
DCC

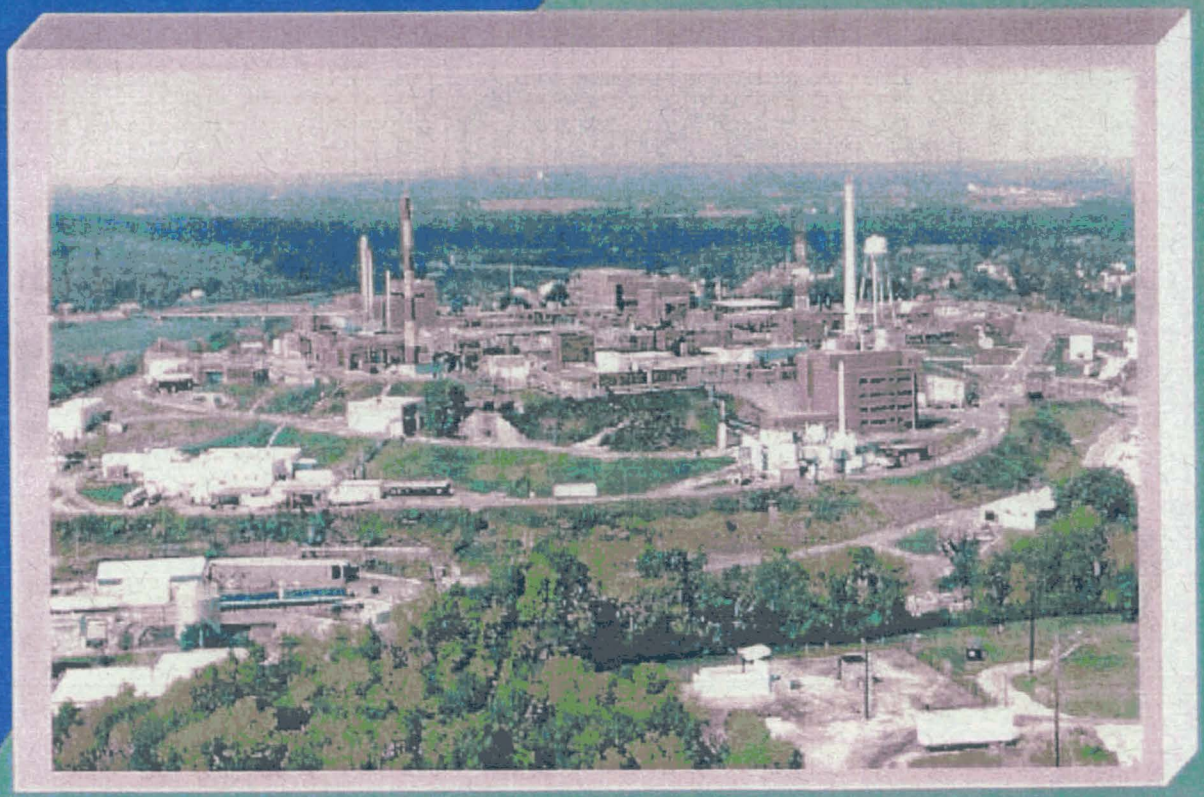
MOUND

Environmental Restoration Program

OhioEPA

MIAMISBURG CLOSURE PROJECT
Closeout Report
Brickmaker Tents

Final
September 2002



Closeout Report

Brickmaker Tents

Prepared for:

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

Prepared by:

BWXT of Ohio, Inc.

TABLE OF CONTENTS

Section | Page

1.0 Purpose 1
2.0 Background 1
3.0 Actions Taken 2
4.0 Problems Encountered 3
5.0 Resources Committed 3

Tables

Table 1: PRSs in Proximity to the Brickmaker Tents 2
Table 2: Materials Disposition 2
Table 3: Personnel Organization for the Demolition 3
Table 4: Total Cost 4

Appendices

Appendix A Figures
Figure 1: Location of Brickmaker
Figure 2: Brickmaker and Vicinity
Figure 3: Brickmaker – Before, During, and After Demolition

Appendix B Work Package

Appendix C Radiological Summary

1.0 PURPOSE

This is the final report documenting completion of the demolition of the Brickmaker Tents that were located at the DOE Miamisburg Closure Project Site, as shown in Figures 1 and 2 (Appendix A). The tents were demolished per the Work Package for Demolition of Brickmaker Building (July 18, 2002), a copy of which is included in Appendix B. The scope of work relating to this building is considered complete.

2.0 BACKGROUND

The Brickmaker Tents were constructed in 1992 as temporary structures to house the brickmaker equipment. The three tents were steel-framed Rubb®-Brand buildings measuring approximately 39 x 60 feet, 15 x 40 feet, and 25 x 60 feet. The tents were located in the upper portion of the Test Fire Valley between the Main Hill and the Special Metallurgical/Plutonium Processing (SM/PP) Hill as shown on Figure 1.

The brickmaker equipment, which had been housed in the tents, was designed to compress low-level radioactively contaminated soils into extruded bricks for soil offsite disposal. Trial runs of the equipment occurred in 1994 and 1995. However, elevated disposal costs for compacted soil, as well as equipment operational challenges caused the brickmaker equipment to be uneconomical. Later, a pilot program to test a process to combine coal and paper sludge into briquettes was initiated and then abandoned. In 1999, the brickmaker equipment was radiologically surveyed and cleared for free release. The equipment was sold at auction and removed from the site.

Adjacent to the Brickmaker Tents, there had also been a single-wide trailer with wooden decking. That trailer was removed in 1997, transferred to the Spoils Area, and later demolished.

Subsequent to the removal of the brickmaker equipment, the tents were used to provide temporary shelter to heavy equipment.

No waste was stored in the Brickmaker Tents. There were no utilities or sanitary services provided at the Brickmaker Tents.

There was a sump (located just south of where the largest tent had been located) that had been used to contain runoff from the brickmaker equipment. After completing the Brickmaker Tent demolition, the sump fluid was removed and analyzed. The analytical results (Appendix C) were all below appropriate screening levels. The sump was then removed, radiologically surveyed, and disposed of, and the resulting excavation backfilled.

There were no Potential Release Sites (PRSs) associated with the Brickmaker Tents. Table 1 lists the three PRSs in the vicinity of the Brickmaker Tents (Figure 2), and their binning status.

Table 1: PRSs in Proximity to the Brickmaker Tents

PRS	CERCLA or Bldg. Related	Binning Status	Comments
32	Building	Unbinned	Underground Sanitary Sewer Line G12; will be included in the PRS 31-36 Package.
286	Building	Removal Action (RA)	Area 16, SM Building Sanitary Sewage Septic Tank Leach Field.
397	CERCLA	Further Assessment (FA)	Elevated Soil Gas Location.

3.0 ACTIONS TAKEN

The Brickmaker Tents were considered personal property and therefore did not require a Building Data Package for removal. The demolition of the Brickmaker Tents was accomplished as a non-CERCLA project per the detailed Work Package (Appendix B). The concrete jersey guards that had supported the frame of the largest tent will be reused onsite.

Tent demolition was completed on July 25, 2002, and sump removal was completed on September 9, 2002. Photographs taken before, during, and after demolition are provided in Figure 3 (Appendix A). This Closeout Report documents the completion of the Brickmaker Tent demolition and removal.

Radiological surveys of accessible areas were performed and results are provided in Appendix C. However, since the Brickmaker Tents previously housed a radiological process, they would require a 100% radiological survey to be disposed of as free release materials. Since a 100% survey was not economically feasible, the tents were disposed of as low-level alpha-contaminated radiological waste.

Demolition material was dispositioned as noted in Table 2.

Table 2 - Materials Disposition

Material	Quantity	Method	Location
Low-Level Radiological Waste (tent material and poles)	3,840 cubic yards	Truck	Nevada Test Site
Construction Debris (concrete/fiberglass sump)	30 cubic yards	Landfill	Stoney Hill

4.0 PROBLEMS ENCOUNTERED

The Brickmaker Tents were successfully demolished per the Work Package, with no variances reported.

5.0 RESOURCES COMMITTED

Table 3 lists the personnel organization for the demolition. Table 4 provides a summary of the total cost.

Table 3 – Personnel Organization for the Demolition

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

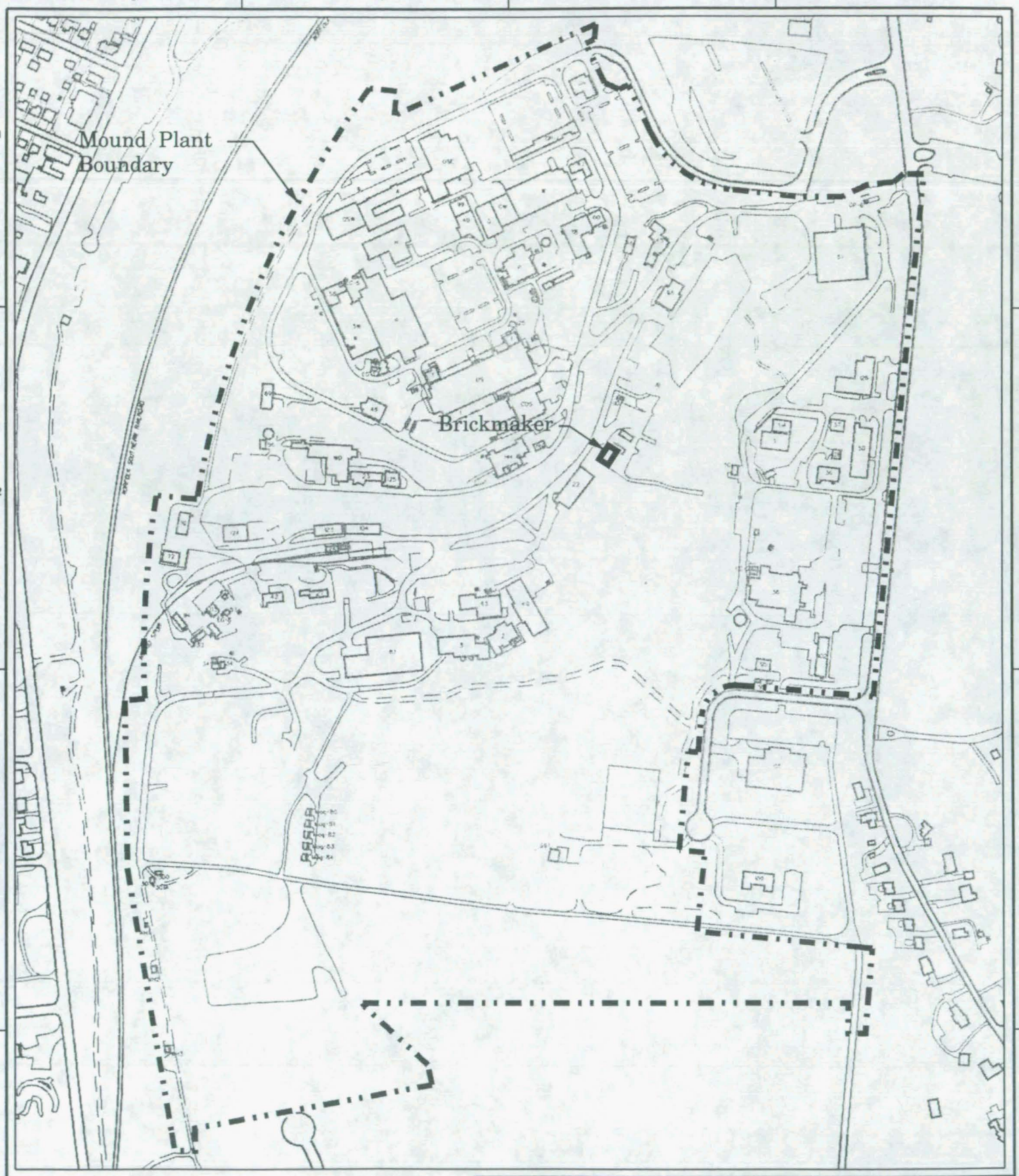
Table 4 - Total Cost

Summary Activity	Cost
Work Planning	$ 3,000
Safe Shutdown	1,000
Characterization	2,500
Decontamination and Demolition	3,000
Hauling and Disposal	43,617
Total Cost	**$ 53,117**

Figures

Appendix A

Figures



Legend

Structures
Paved roadway
Unpaved roadway
Mound Plant boundary
Railroad

0 100 200 400 600 800 1000
Scale in Feet

ISS	DATE	REVISION	BY	CHKR	ENG	LPMCC	APVD	B
	07/22/02	*	SSF					

MOUND
Environmental Restoration Geographic Information System

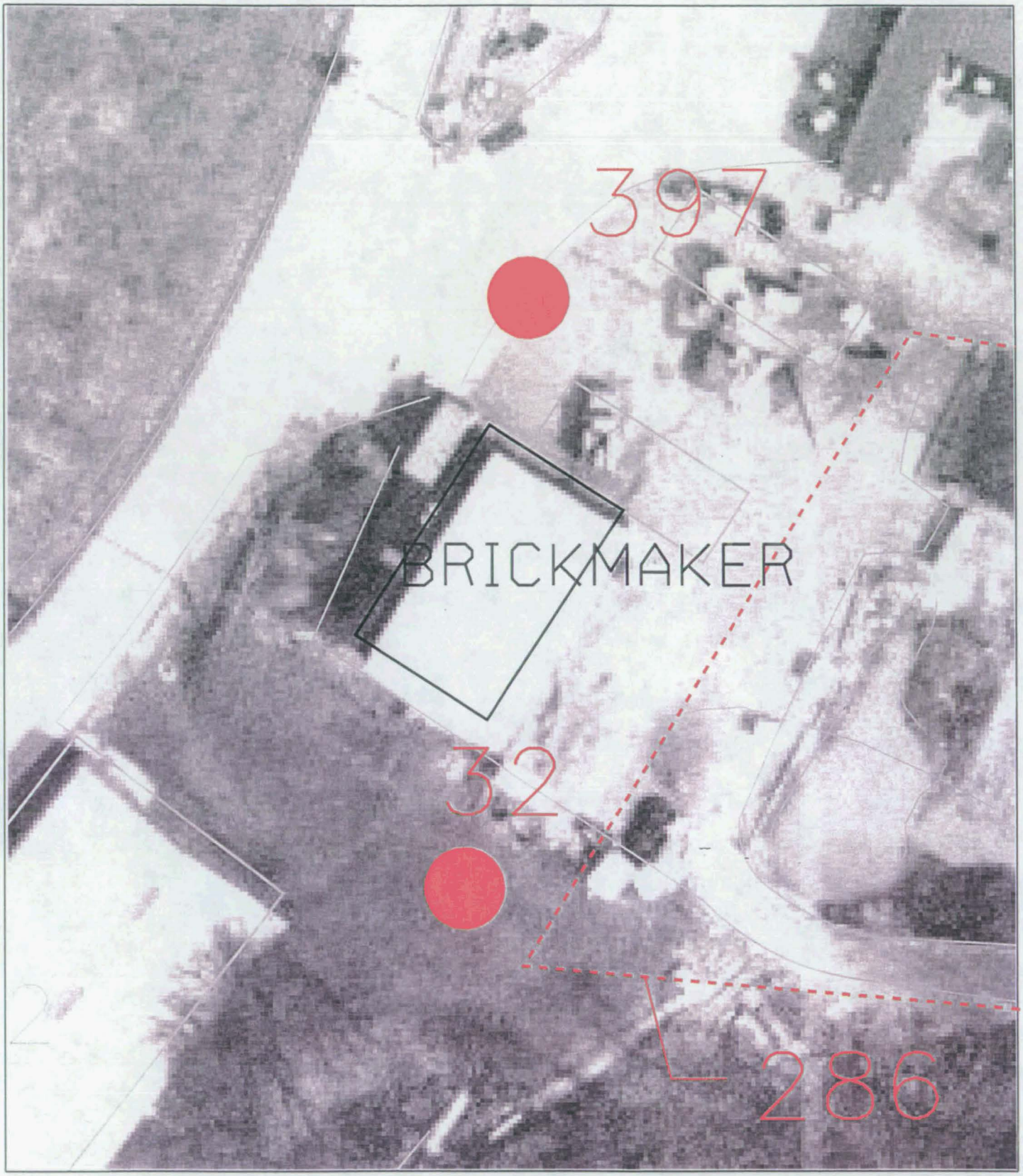
SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ISSUE																					

SHEET	1	2	3	4	5	6
ISSUE						

PART CLASSIFICATION

Figure 1
Location of Brickmaker

DRAWING CLASSIFICATION: UNCLASSIFIED
SIZE
DRAWING NUMBER: gen_site_plan.dgn
JOB NUMBER
DWG TYPE: STE
PRNG: ER-GIS
CAGEC
SCALE
SHEET 1 OF
STATUS: MD-REL-**/**/**
ORIGIN: MSTATION / J



PRS Point

PRS Area

PRS Line

ISS	DATE	REVISION	BY	CHKR	ENG	LPNEC	APVD	W
	07/15/02		SSF					

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

Figure 2
Brickmaker
and Vicinity

DRAWING CLASSIFICATION: UNCLASSIFIED

SIZE | DRAWING NUMBER: vicinity.dgn | JOB NUMBER

DWG TYPE: STE | PRNC: ER-GIS | CADEC | SCALE | SHEET 1 OF

STATUS: MD-REL-**/**/** | ORIGIN: MSTATION / J

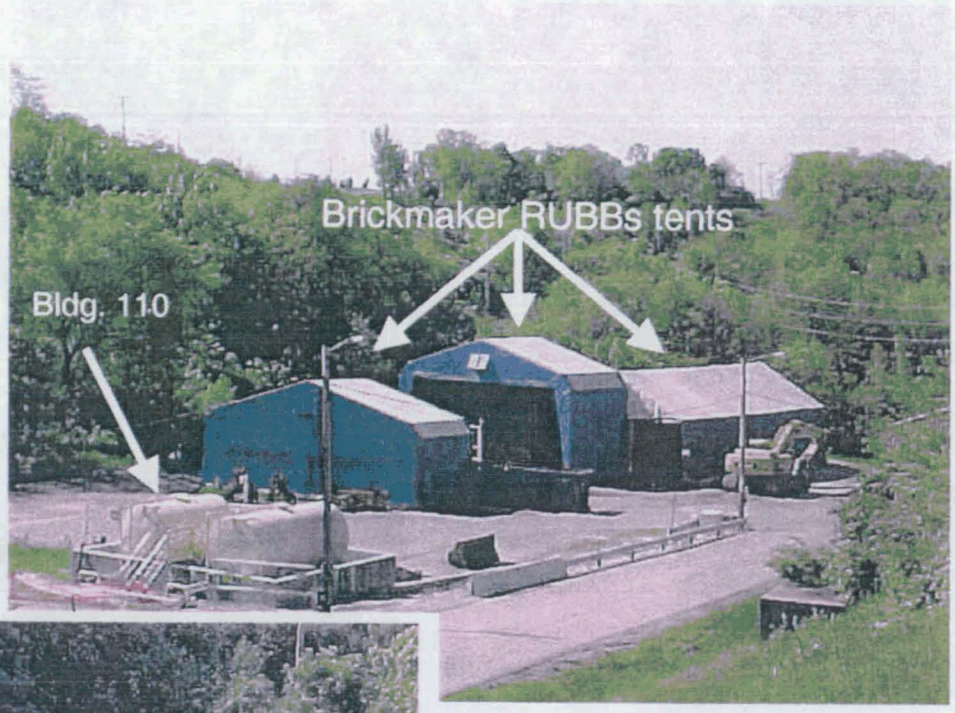
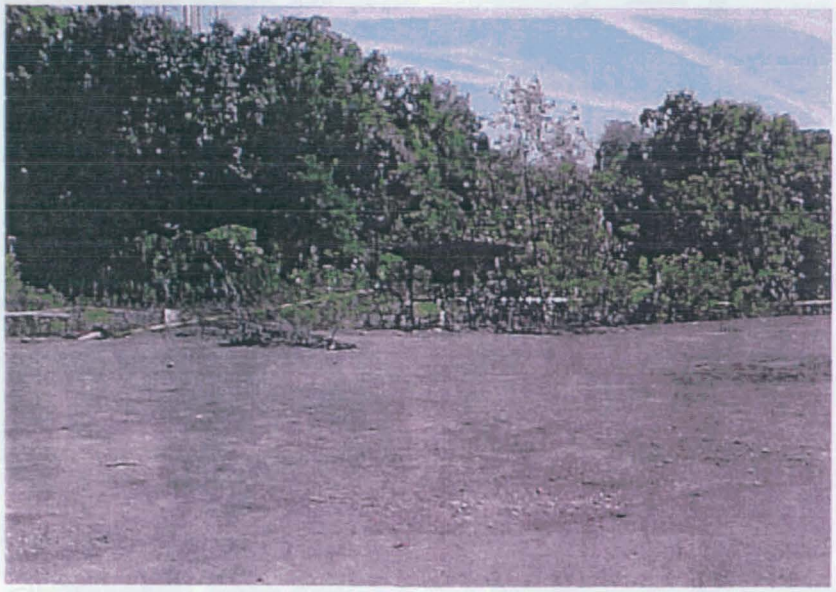


Figure 3:
Brickmaker Tents

Before, During, and After Demolition



Work Package

Appendix B

Work Package

WORK PACKAGE / PRELIMINARY HAZARD ANALYSIS

~ Office Master Copy (Original Approval Signatures) ~ Field Working Copy (Original Field Sign -Offs) ~ Review Copy [Note: Mark this section in color] ~ Other Copy

Note: The Project Engineer is responsible for completing Sections 1 through 10.

1. WORK PACKAGE TITLE: Demolition of Brickmaker Building

2. WORK PACKAGE NUMBER. SMPP/TFV-30051-0

3. WORK PACKAGE SCOPE: Perform Low Hazard Demolition of Brickmaker Building

4. WORK LOCATION:

Building #: **Brickmaker Building**

5. WORK PACKAGE PHASES:

1. Work Site Preparation
2. Remove & Dispose of Building Covering
3. Disassemble, Remove, and Dispose of Building Structural Members
4. Site Grading & Construction Area Disassembly

Note: Insert the Work Package phases for the job. A phase is a separately definable portion or evolution of the project.

6. SPECIAL MATERIALS AND EQUIPMENT:

1. Crane, Man-lifts, Bucket Truck, Truck Excavator, & Rubber Tire Loaders

Note: Insert any materials that require long lead procurement or special order. Don't list common items such as PPE.

7. DETAILED WORK STEPS:

NOTE: Be aware of Heat Stress Conditions & Encourage Use of Water

1.0 Work Site Preparation
1.1 Barricade work area & post construction notices as needed.

CAUTION: Do not operate gasoline/diesel combustion powered equipment inside tents for prolonged periods

NOTE: Both Step 2 & Step 3 may be accomplished at the same time utilizing Heavy Duty Equipment

2.0 Remove Building Covering
2.1 Utilizing man-lifts, as needed, detach and remove building covering. Ensure proper fall protection is utilized.
2.2 Dispose of covering in provided RAD waste roll-off for disposal per attached Waste Management Plan.

3.0 Disassemble, Remove, and Dispose of Building Structural Members

NOTE: Hoisting & Rigging Guideline Card is Required

3.1 Utilizing crane and man-lifts, as needed, disassemble and remove structural members. Ensure proper fall protection is utilized. During heavy equipment operation, utilize hearing protection.
3.2 Dispose of structural members in provided RAD waste roll-off for disposal per attached Waste Management Plan.

NOTE: RCTs must direct survey each Jersey Bouncer including underside before removal

4.0 Site Grading & Construction Area Disassembly
4.1 Remove Jersey Bouncers to plant site storage location for future use.
4.2 Rough grade low areas & holes in order to eliminate hazards.
4.3Remove Construction Area barricades & postings

OK RC Resolution

Note: Insert the activities to be performed during the job. Describe the specific methods of accomplishing these activities and appropriate level of detail based on the complexity, hazard, and skill of the craft. Activities listed must be grouped under the Work Package phases listed in item 5.

Work Package /Preliminary Hazard Analysis (Continued)

8.COMMENTS:

Note: Comments, to identify activities/hazards that are common to multiple phases of the project (example: Wear leather gloves when handling cut pipe). Identification of these items will facilitate the addressing the items once in the pre-job briefing.

9. REVIEW SIGNATURES:

Written by:	J Boston	Date: 7/12/02	Phone: 3262
Construction Manager:	W. M. Stanley	Date: 7/12/02	Phone: 3866
Field Supervisor/Foreman:	B Orr	Date: 7/17/02	Phone: 5663
Project Eng. Mgr:	R.C. Sandbottom	Date: 7/15/02	Phone: 4220
Industrial Safety & Hygiene:	Paul Wills	Date: 7/12/02	Phone: 4096
Rad. Controls:	[illegible]	Date: 7/12/02	Phone: 3178
ES&C:	K Pettit	Date: 7/17/02	Phone:
Waste Mgmt:	[illegible]	Date: 7/12/02	Phone: 3822
Bldg. Mgmt:	Gary L Weidenbach	Date: 7/18/02	Phone: 3241
Classification: :	N/A	Date: / /	Phone:
Other:		Date: / /	Phone:

Note: Project Manager has the authority to N/A signatures if review is not applicable.

10. USQ SCREEN / DETERMINATION REQUIRED? ☐YES ☒NO now

Brief Explaination Not a Nuclear or Radiol.ogical Facility

USQ Trained Person: J Boston Date: 7/12/02 Phone: 3262

11. AUTHORIZATION SIGNATURE:

Project Manager: R.C. Thompson Date: 7/18/02 Phone: 4071

12. WORK PACKAGE CLOSURE:

Job Supervisor: _____ Date: / / Phone:

Project Manager: _____ Date: / / Phone:

RETURN PHA TO IS&H AT JOB COMPLETION.

Waste Disposition Plan
Demolition of Brickmaker Building

The purpose of this waste management plan is to identify waste streams that will be generated during the demolition of Brickmaker Building. Characterization of waste streams will be summarized and disposal options specified.

The plan will outline types of waste/waste quantities expected. Information will be provided on the schedule for waste generation, RCRA characterization, radiological characterization, packaging requirements/mode of disposal, and any specific waste acceptance criteria that must be met for disposal.

Waste types and estimates are based on a physical examination of the Brickmaker Building conducted on June 14, 2002 and review of the processes that were performed in there. The Brickmaker Building is considered to be contaminated. The majority of the waste that will be generated in the demolition process will be disposed of as low-level radioactive waste. The waste will include all associated piping located inside the Building. The waste generated is alpha contaminated waste. This waste should be disposed of as alpha contaminated waste.

Gamma spec will be run to verify which alpha radionuclides are present. Wastes are listed in expected order of generation.

Waste Type	LLW: Alpha contaminated steel and tent material, hardware, tools, PPE.
Quantity expected	60 cu yd
Schedule for waste generation	July, 2002 - Aug., 2002
RCRA characterization	Non-hazardous
Radiological characterization	Alpha contamination, if gross alpha counts are greater than 20 dpm/100 cm^2 then individual radionuclides present will need to be identified.
Packaging requirements	Will send to the rail for disposal via roll-off
Mode of disposal	Offsite burial via Waste Management Operations

Any unusual or unexpected items not addressed in this plan should be set aside for examination and evaluation by the project engineer and waste coordinator.

Prepared by Willis Daniel
Date: 7/10/02

APPROVAL CONTINUATION SHEET

Reviews:

Name	Signature	Date	Department
Norman Rausch	Norman Rausch	7-17-02	HTD
W.E. Nichols	W.E. Nichols	7-17-02	CC-2641
Rex Bompsey	[illegible]	7-17-02	FM
Steven Cook	Steven Cook	7-17-02	DT
Sean Boyer	Sean Boyer	7/17/02	DT

Reference Drawings	Rev.	Reference Procedures	Rev.

APPENDIX A

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	No		[EGRESS]
Blockages/obstructions (Identify)	No		
Burning, welding, hot-work (Fire Watch)	No		[BURN]
Chemical compatibility of corrosives/flammables	No		
Chemical process safety	No		
Compressed gas cylinders	No		
Confined space entry	No		[CONFINE]
Crane operations, overhead or mobile	Yes	2 & 3	Utilize Hoisting & Rigging Guideline Card
Critical lifts (heavy or high value loads)	No		[CLIFT]
Electrical hazards	No		[LIVEL]
Elevated work/fall protection	Yes		[ELEV] Aerial Lift Possible
Emergency eyewash/shower available	No		[EWASH]
Emergency alarms or evacuation plans required	No		[EMERG]
Explosive/flammable atmosphere	No		
Explosives	No		
Fire protection system/equipment outage	No		[FIRE/EFIRE]
Fire Hazards Analysis Required of Demolition	No		[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)	No		
Hoisting and rigging	Yes	2 & 3	[HOIST] Utilize Hoisting & Rigging Guideline Card
Lighting/illumination/adequacy	No		[MLITE]

APPENDIX A

Preliminary Hazard Analysis (PHA)For Work Package Activities (Continued)

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	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Lockout/tagout of hazardous sources:	No		[LOTO/ISO]
9 Electrical	No		
9 Mechanical (steam, hydraulic, pneumatic)	No		
9 Interlocks	No		[ILOCK]
9 Chemical	No		
9 Radiological	Yes	2 & 3	Building not for free release, to be disposed of as Rad waste.
Machine guards	No		
Modification to Fire Wall/Door	No		[FIREWAL]
Obstruction of fire protection equipment (pull boxes, hydrants, fire department connections, control panels, fire extinguishers, etc.)	No		
Off-shift work	No		
Outages of the plant public announcement (PA) system or the emergency notification system	No		[OUTAGE]
Overhead or underground utilities (Identify)	No		[UTTL]
Penetrations into walls, floors, etc.	No		[PENETR]
Plastic sheeting or wood framing/enclosures	Yes		
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	No		[DIG]
Temporary heating facilities	No		
Temporary/portable buildings or structures	No		[FACIL]

APPENDIX A

Preliminary Hazard Analysis (PHA)For Work Package Activities (Continued)

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.)

Temporary service hook-ups (Identify)	No		
Traffic control/flagman	No		[TRAFIC]
Work in attics, ceilings, chases, or crawlspaces	No		
Work impacting adjacent normally occupied areas	No		[ADJAC/BMAPP/SIGNS/NOTIF]
Work Requiring Scaffolding, construction and inspection	No		[SCAFF]
Other (Specify)	Yes	2	Do not disassemble fabric during periods of high winds

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	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Abrasive blast (☐ MSDS available)*	No		
Asbestos	No		[ASBEST]
Beryllium	No		
Blood-borne pathogens*	No		
Cadmium	No		
Carcinogens (☐ MSDS available)*	No		[CARC]
Chemicals/solvents (☐ MSDS available)*	No		[CHEM/MSDS]
Chlorofluorcarbon (CFC)	No		[CFC]
Coal, tar or asphalt products	No		
Coating/painting (☐ MSDS available)*	No		
Corrosives/acids/caustics (☐ MSDS available)*	No		

APPENDIX A

Preliminary Hazard Analysis (PHA)For Work Package Activities (Continued)

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.)

Dusty operations	No		[POWDER]
Hazardous Waste Operations (HAZWOPER)*	No		
High Pressure systems	No		[HIPRES]
Insulation/man-made mineral fibers (☐ MSDS available)*	No		
Lasers	No		
Lead	No		
Foam in Place Operations	No		
Mercury	No		
Noise in excess of 85 dBA	Yes	3	[NOISE] During heavy equipment operation utilize hearing protection
Polychlorinated biphenyls (PCBs)	No		
Removal of ceiling tiles*	No		
Spraying/generation of mists*	No		
Temperature extremes (heat or cold stress)	Yes	All	[CRYRO/COLD/HEAT] Discuss in prejob briefings, make water & sports drinks available and encourage use.
Ventilation or Air Monitoring requirements	Yes	2	[VENTIL/IH] Do not operate gasoline/diesel combustion powered equipment inside tents for prolonged periods.
Welding, brazing, or thermal cutting operations	No		[BURN]
Other (specify)	No		

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

APPENDIX A

Preliminary Hazard Analysis (PHA)For Work Package Activities (Continued)

FOR Work Packages

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
Location:	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		
Activities:	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	Yes	2 & 3	[RWSTOR/WASTE/CHAR] Building not for free release, dipose of as Rad waste.
	Other (Specify)	No		
Sources:	X-Ray machine/generator	No		[XRAY]
	Sealed radioactive sources	No		
	Unsealed radioactive sources	No		

APPENDIX A

Preliminary Hazard Analysis (PHA)For Work Package Activities (Continued)

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.)

Controls:	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	Yes		[SURVPS] Preliminary Survey has been completed
	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)	Yes	1, 2, & 3	Check hands & feet each break
	Other	No		

SECTION D - OTHER CONDITIONS, CONCERNS, OR SUPPLEMENTAL INFORMATION FROM SECTIONS A THROUGH C INCLUDING APPLICABLE LESSONS LEARNED:

Although RAD surveys of accessible areas indicate no contamination, the building housed a RAD process (brickmaker). Therefore, a 100% survey would be required for free release. A 100% survey is not economically feasible, therefore the building will be peakaged as RAD waste.

Project/Activity: Demolition of Brickmaker

Name: Jeffrey L. Boston

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, *Lockout/Tagout Procedure Manual*, 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 nonionizing 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 JSHAs 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 trama/motion/vibration work situations or manual lifting involving heavy, large, and/or awkward-to-handle objects (reference MD-10407, *Ergonomics Program.*		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

JOB SAFETY & HEALTH ANALYSIS

JSHA MASTER DOCUMENT CONTROL NO:
SMPP/TFV – BRKMKR – 062802-00

DATE:	_X NEW ___ REV	BUILDING:	JOB:
6/28/02		Brickmaker	Demolition of Brickmaker Building

DEPARTMENT/COMPANY:	SECTION:
BWXT of Ohio	N/A

OCCUPATIONS:
Fabrication Mechanic, Heavy Duty, & Demolition Technician

SIGNATURES

ORIGINATOR: J.D. Boston 07.12.02
REVIEW/REV: M.M. Stanley 07.12.02
REVIEW/REV: Paul Wells 7.12.02
APPROVED: Gary J. Weidenbach 7/18/02
APPROVED: D. Thompson 7/18/02

REQUIRED PERSONAL PROTECTIVE EQUIPMENT:
Safety Glasses with side shields, safety shoes, hard hats & hear protection as needed

MSDS(s)/CHEMICALS ASSOCIATED WITH THE JOB:
none

BASIC JOB STEPS	POTENTIAL ACCIDENT/ILLNESSES OR KNOWN HAZARDS	SAFE JOB PROCEDURES
Break the job down into basic steps that tell what is done first, what is done next, and so on. 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: 1. Bring and set up ladder 2. Ascend ladder 3. Remove light globe & bulb 4. Replace light bulb 5. Replace light globe 6. Descend ladder 7. Remove and store ladder	Ask yourself for each job what accidents/illnesses could occur to the employee doing the job. 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. SB - Struck by CB - Contacted by SA - Struck against CW - Contact with CI - Caught in CO - Caught on IB - Caught between F - Fall SO - Strain-overexertion* E - Exposure (occ. illness) *Show ergonomic stresses as SO (repetitive trauma, single event strain, or awkward position)	For each potential accident/illness, ask yourself exactly what the employee should do or not do to avoid the accident/illness. 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. Describe ergonomic solutions (job redesign, new tools, worker lift assistance, etc.)
General Safety Note	A wide variety of incidents occur on a regular basis that potentially could result in injury or illness	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.
1. Work Site Preparation	1. Heat Stress	Discuss in prejob briefings, make water & sports drinks available and encourage use
2. Remove Building Covering	2a. Elevated work 2b. Potential cuts from knife/cutters	2a. Utilize manlift with fall protection & hard hats. Avoid driving or maneuvering lift over holes, drop-offs and uneven work surfaces. Use slow speed during maneuvering. 2b. Utilize work gloves
3.Disassemble, & Remove Building Structural Members	3a. Elevated work with crane/ heavy equipment 3b. Potential cuts from powered hand saws	3a. Utilize manlift with fall protection and Hoisting and Rigging Guideline Card. 3b. Utilize work gloves & safe operating practices

JOB SAFETY AND HEALTH ANALYSIS FORM
(CONTINUATION SHEET)

BASIC JOB STEPS	POTENTIAL ACCIDENT/ILLNESSES OR KNOWN HAZARDS	SAFE JOB PROCEDURES

SIGN-OFF SHEET

I have read and understand the attached Job Specific Work Plan and JSHA:

Signature	Date	Department

POST JOB CONFERENCE

What went well?

What could be improved?

Other Comments:

Items Requiring Further Action:

POST-JOB CONFERENCE ATTENDEES

NAME	HP	NAME	HP

Rad Summary

Appendix C

Radiological Summary

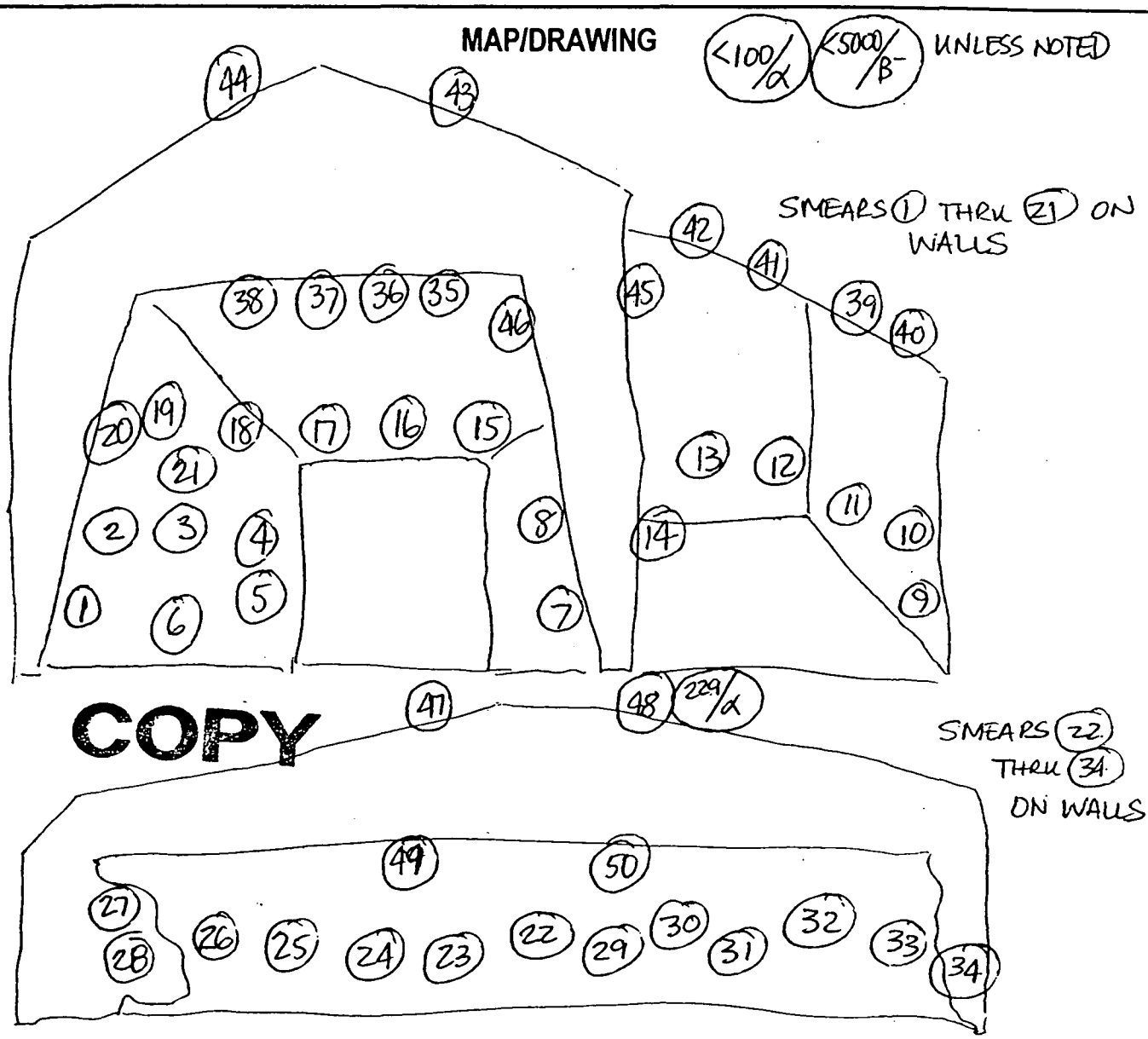
RSDSs Prior to Demolition

RADIOLOGICAL SURVEY DATA SHEET

1 of 4

LOCATION: (BLDG./AREA/ROOM) BRICKMAKER TENTS	SURVEY NO. 02-TF-1083
PURPOSE: SURVEY FOR RELEASE TO LSA WASTE	RWP NO. NA
	DATE: 061102
	TIME: 0800

MAP/DRAWING



COPY

LEGEND: # = mrem/hr (γ) whole body

= 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
ELECTRA	5435/5495	5/8/03
	N	
	A	

Completed by: (Signature) V. Filepp	HP # [redacted]	Date: 6/11/02
Completed by: (Print Name) V. FILEPPI		
Counted by: (Signature) See Attached	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature) RM Coblentz	HP # [redacted]	Date: 6-14-02
Reviewed/Approved by: (Print Name) RM Coblentz		

ML-9620 (2-98)

C2 of 11

Survey No. 02-TF-7083

Page ____ of ____

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-34	See			WALLS
35-38		Attached		I/S CEILING
39-44				O/S ROOF
45-46				I/S CEILING
47-48				O/S ROOF
49-50				I/S CEILING
			N/A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
			N/A	

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 β/γ, 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 (4-98)

C306 11

2 of 4

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR004
Batch Ended: 6/13/02 13:11
Cal. Due Date: 4/25/03
Serial Number: 26966-3

B J Brown

Batch ID: 02-TF-1083 FILLEPPI(50) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	7.54	4.13		7.26	3.63	
A2	2	3.51	2.76		2.51	2.40	
A3	3	1.68	2.16		2.77	2.48	
A4	4	0.00	2.03		2.70	2.36	
B1	5	0.00	2.08		5.29	3.07	
B2	6	0.00	2.01		0.29	1.69	
B3	7	0.00	2.09		0.00	1.29	
B4	8	1.45	2.01		0.03	1.64	
C1	9	1.56	2.17		7.84	3.55	
C2	10	1.32	1.86		0.36	1.64	
C3	11	1.66	2.16		6.74	3.31	
C4	12	0.00	1.99		0.63	2.52	
D1	13	0.00	1.93		0.00	1.24	
D2	14	0.00	2.13		2.80	2.43	
D3	15	1.62	2.17		2.76	2.56	
D4	16	0.00	2.13		2.74	2.39	
A1	17	3.48	2.93		5.01	3.14	
A2	18	1.58	1.99		3.86	2.69	
A3	19	0.00	2.20		6.63	3.29	
A4	20	1.47	2.05		4.92	2.90	
B1	21	0.00	2.08		5.29	3.07	
B2	22	1.31	2.04		2.51	2.39	
B3	23	1.59	2.13		2.49	2.57	
B4	24	0.00	2.03		2.49	2.33	
C1	25	0.00	2.12		3.01	2.50	
C2	26	0.00	1.84		0.00	1.16	
C3	27	0.00	2.13		4.40	2.79	

C4 of 11

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR004
Batch Ended: 6/13/02 13:11
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1083 FILLEPPI(50) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.00	1.99		0.63	2.52	
D1	29	0.00	1.95		0.37	1.75	
D2	30	0.00	2.10		0.37	1.72	
D3	31	0.00	2.13		0.00	1.28	
D4	32	0.00	2.10		0.36	1.69	
A1	33	1.44	2.16		11.55	4.27	
A2	34	5.43	3.38		3.55	2.69	
A3	35	1.68	2.16		2.77	2.48	
A4	36	1.47	2.04		3.74	2.64	
B1	37	1.56	2.03		0.13	1.77	
B2	38	0.00	2.03		1.49	2.06	
B3	39	1.59	2.21		10.18	4.09	
B4	40	0.00	2.04		3.65	2.60	
C1	41	0.00	2.12		3.01	2.50	
C2	42	0.00	1.88		2.84	2.32	
C3	43	5.80	3.62		1.45	2.16	
C4	44	1.48	1.97		0.00	1.96	
D1	45	1.39	1.98		2.66	2.47	
D2	46	5.71	3.63		2.29	2.43	
D3	47	5.85	3.74		7.55	3.64	
D4	48	0.00	2.10		0.36	1.69	
A1	49	3.48	2.93		5.01	3.14	
A2	50	0.00	2.01		6.41	3.19	

CS8 11

RSDSs After Demolition

The Brickmaker tent and poles were disposed of as low-level radiological waste. Accordingly, post-demolition radiological surveys were not indicated.

The concrete jersey guards were reused onsite.

The sump fluid and sediment, the sump, and a sample of soil under the sump were radiologically tested and all results were below applicable criteria; the RSDS is included herein.

RADIOLOGICAL SURVEY DATA SHEET

Pg. 1 of 5

LOCATION: (BLDG./AREA/ROOM) Bldg# ~~BRICKYARD~~ / O/S	SURVEY NO. 02-TF-1468
PURPOSE: 9-12-02 BRICKMAKER RELEASE OF SUMP	RWP NO. N/A
	DATE: 9-12-02
	TIME: 08:15

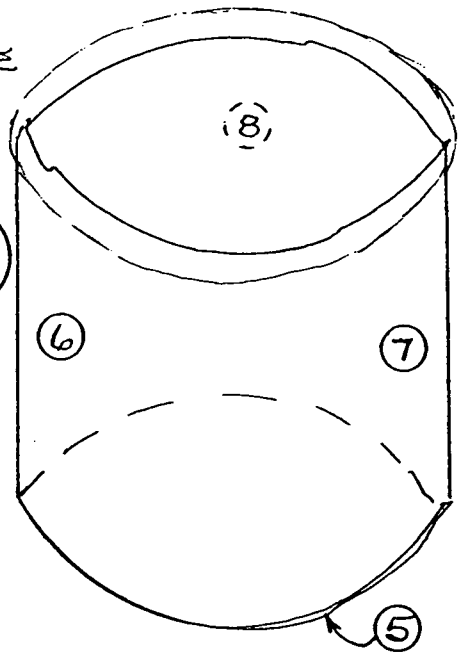
MAP/DRAWING

NOTE:

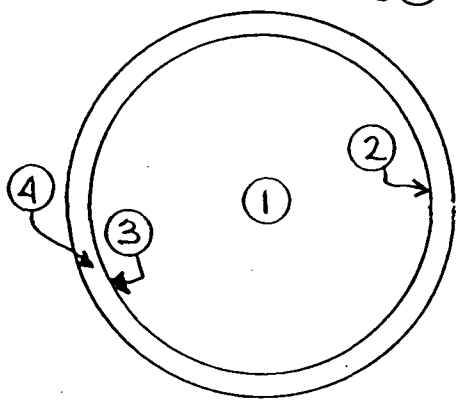
INTEGRATED COUNT PERFORMED IF AUDIBLE ALPHA DETECTED.

DIRECT FRISK RESULTS INDICATE: <100/α <5K/β

SUMP - SIDE VIEW



COPY



SUMP - TOP VIEW

LEGEND: # = mrem/hr (γ) whole body

(#) = mrem/hr (γ) extremity or contact

△# = mrem/hr neutron

□# = 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	5-9-02
	N	
	A	

Completed by: (Signature) Daniel J. Harney / P.G. Radley	HP # [redacted]	Date: 9-12-02
Completed by: (Print Name) DANIEL J. HARNEY / P.G. RADLEY		
Counted by: (Signature) SEE	HP #	Date:
Counted by: (Print Name) ATTACHED		
Reviewed/Approved by: (Signature) RM Coblentz	HP # [redacted]	Date: 9-12-02
Reviewed/Approved by: (Print Name) RM Coblentz		

ML-9620 (2-98)

C 7 of 11

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED			I/S SUMP
2				
3				
4				TOP RIM
5				BOTTOM
6				O/S SIDES
7				
8				
			N/A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N/A		

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 β/γ, 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 (4-98)

C806 11

Alpha/Beta Analysis

Batch ID:	Smear Unit 1 - 200209120931	**Count Date:**	9/12/2002
Group:	J	**Count Minutes:**	1.5
Serial Number:	78218-1	**Count Mode:**	Simultaneous
Batch ID:	02-TF-1468 RADLEY(8) BSB	**Operating Volts:**	1410
Selected Geometry:	Swipe/Smear	**Cal Due Dates:**	6/19/2004

	Efficiency (%)				Spillover (%)			
Alpha:	34.73	±	0.13		**Alpha to Beta:**	11.39	±	0.00
Beta:	46.13	±	0.13		**Beta to Alpha:**	0.07	±	0.00

Sample ID	Carrier ID	Alpha (dpm)	σ	Beta (dpm)	σ
1	37	2.18	1.92	8.06	3.54
2	14	2.18	1.92	5.32	2.90
3	71	6.56	3.33	0.90	1.47
4	41	2.18	1.92	6.69	3.24
5	65	2.18	1.92	3.95	2.51
6	11	0.00	0.00	6.85	3.23
7	29	0.00	0.00	2.74	2.04
8	62	2.18	1.92	5.32	2.90

PGR PGR

02-TF-1468

Pg. 4 of 5

BWXT of Ohio, Inc.

ANALYTICAL SERVICES REQUEST FOR ANALYSIS

DATE SUBMITTED:	SAMPLE TYPE:	COLLECTED BY:	NUMBER OF SAMPLES
7-31-02	WATER	RADLEY	1
PROJECT/FUNCTION:	PRIMARY CONTACT/PHONE NO.: HARVEY 3163		MAIL STOP:
CHARGE NUMBER: SinPP/TFU	DATE(S) COLLECTED: 7-22-02	RSDS# (if applicable):	ATTACHMENTS (list):

ANALYSES REQUESTED (check):

- [x] ^3H
- [ ] Characterize/Approve for Sanitary or Storm Discharge. Estimate of Total Volume for Release_____ Approved_____
- [x] Gross Alpha
- [ ] Air Filter – Isotopic Analysis
- [ ] Characterization per MD-80036, Operation #10015
- [ ] Isotopic Analysis: Pu____ U____ Th____ Am____ Other____
- [ ] Other _____

ADDITIONAL INFORMATION:

NOTE: Attach additional information (e.g. RSDS, screening results, collection data, and gamma spec. results) if applicable

LAB IDENTIFICATION	SAMPLE LOCATION	SAMPLE NUMBER	RESULTS
0208949	BRICK MAKER SUMP	1	<0.60 nCi/L 3H <0.19 dpm/mL
			Screening level 1,000 nCi/L 3H

COMMENTS:

ANALYZED BY: [signature]

DATE: 8/3/02

ML-5222 (1/01)

02-TF-1468

Pg. 5 of 5

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML14822
File ID: MG301034.s0
Priority: Yes

Description\Location
Brick Yard Sump Sediment

Collector: 7868
Date Received: 9/5/02
Date Collected: 9/4/02

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0	0.02	45,000
Cs-137	*	0.01	0.02	45,000
Pb-210		0.75	0.37	45,000
Ra-226		0.65	0.3	800
Ac-227 (D)	*	0	0.16	40
Th-230	*	0	3	800
Th-232 (D)		0.19	0.06	130
Pu-238	*	0	9.51	500
Am-241	*	0.01	0.03	500

Other Nuclides

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)

Σ_{DOT} 0.01 nCi/g $\Sigma_{Respirator}$ 0.03

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Σ_{DOT} 2nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is Assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation

Instrument type: High Purity Germanium

Comments:

Date: 9/9/02 Counted By: 5801 Analyzed By: 5801 Initials

C 11 of 11