3006-0208010001

MOUND

Environmental Restoration Program

Mound Site
CERCLA
Reading Room Copy

OhioEPA

MOUND PLANT
Closeout Report
Building 29

Final
August 2002

Closeout Report

Building 29

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 29 that was located at the DOE Mound Site, as shown in Figures 1 and 2 (Appendix A). The building and pad were demolished per the Work Package for Building 29 Demolition (April 30, 2002), which is included in Appendix B. The scope of work relating to this building is considered complete.

2.0 BACKGROUND

Building 29 was 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. It was constructed in 1965, and was approximately 6,600 square feet. The building had two stories with the second story penthouse only covering about one-third of the first floor. The building was concrete masonry block construction with a metal deck roof over steel beams. There were fifteen rooms and one walk-in refrigerator. Outside of the northeast side of the building was an enclosed drum storage area, and outside of the southwest side of the building was an enclosed chemical storage area (PRS 85). Both exterior storage sheds were 'lean-to' types of additions.

Services to the building were terminated prior to building demolition, but included HVAC systems providing central steam heat, chilled water for cooling, potable water, and 480 volt electric service. Refrigerants in the HVAC system and the walk-in refrigerator were drained and disposed of in 1996. Sanitary services were provided by the Mound Plant facility and were disconnected prior to demolition. No waste was stored in Building 29 or in the two exterior storage sheds.

3.0 ACTIONS TAKEN

The Building 29 Building Data Package and Work Plan were submitted for simultaneous Core Team and Public Review on May 8, 2002. The 30-day Public Review period concluded on June 7, 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. Potential Release Sites (PRSs) 85 (Solvent Storage Shed) and 338 (Septic Tank) were associated with Building 29, but had previously been determined by the Core Team to require No Further Assessment.

Building 29 was radiologically surveyed before and after demolition. All radiological sampling results were below applicable surface release criteria. Supporting documentation is provided in Appendix C.

Building demolition was completed on June 25, 2002, pad demolition on July 18, 2002, and the project was completed .on July 24, 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
Hazardous Waste (asbestos)	300 cubic yards	Landfill	Stoney Hill
Construction Debris (concrete/masonry)	1,740 cubic yards	Landfill	Stoney Hill
Clean Hard Fill Debris (concrete)	741 cubic yards	Reused	Spoils Area/ Concrete Crusher

4.0 PROBLEMS ENCOUNTERED

Building 29 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.

Table 2 - Personnel Organization for the Demolition

Agencies or Parties Involved	Contact	Description of Participation
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.
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	$ 40,000
Safe Shutdown	137,600
Characterization	50,000
Decontamination and Demolition	50,000
Hauling and Disposal	29,100
Historical Costs	1,100
Total Cost	**$307,800**

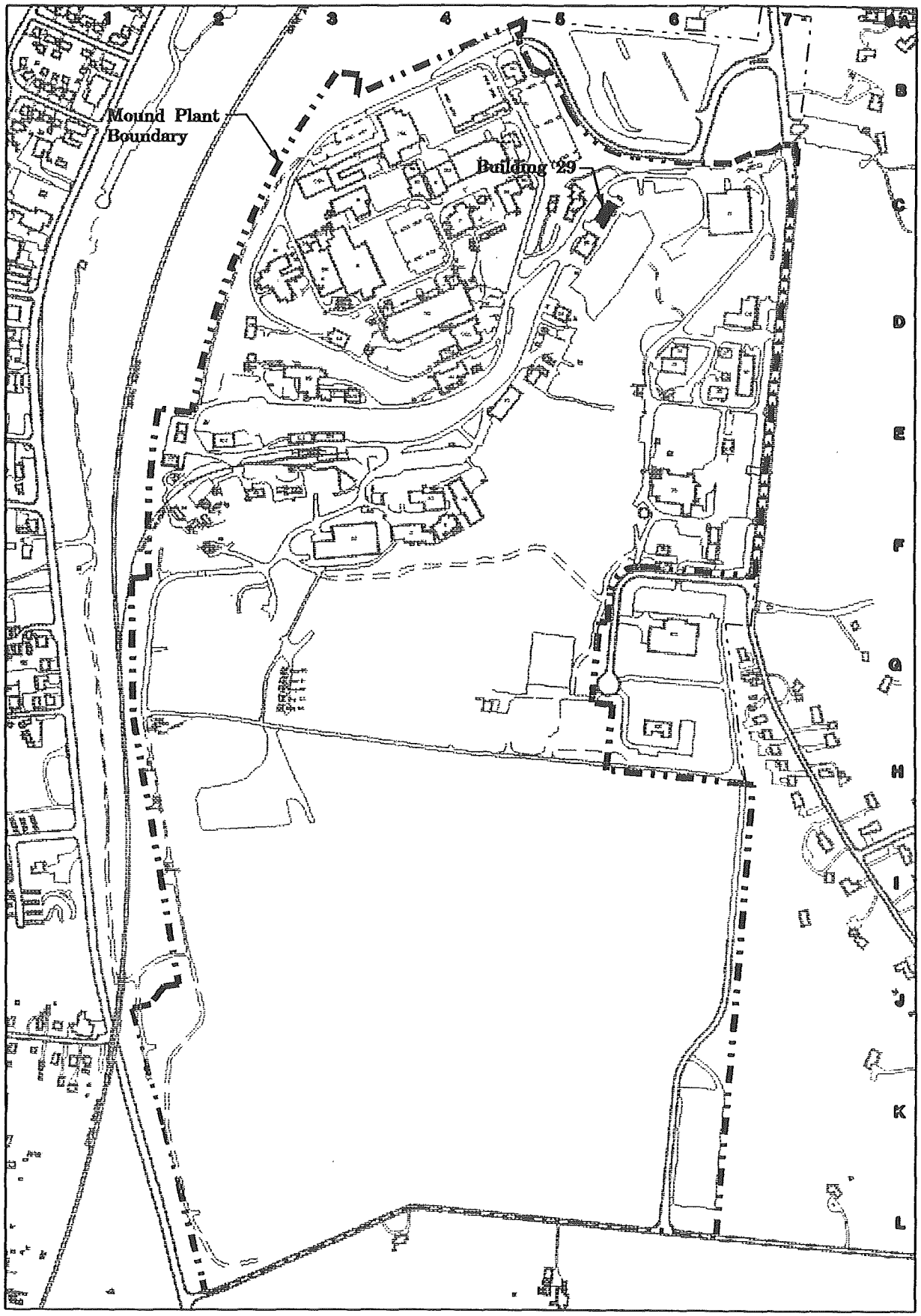
Figures

Work Package

Rad Summary

Appendix A

Figures



Legend

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

0 100 200 400 600 800 1000
Scale In Feet

SYM	DATE	REVISION	BY	CHKD	DWN	#
SS	03/12/02	ISSUE FOR GENERAL USE	SSP			

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
REVISE A
PART CLASSIFICATION

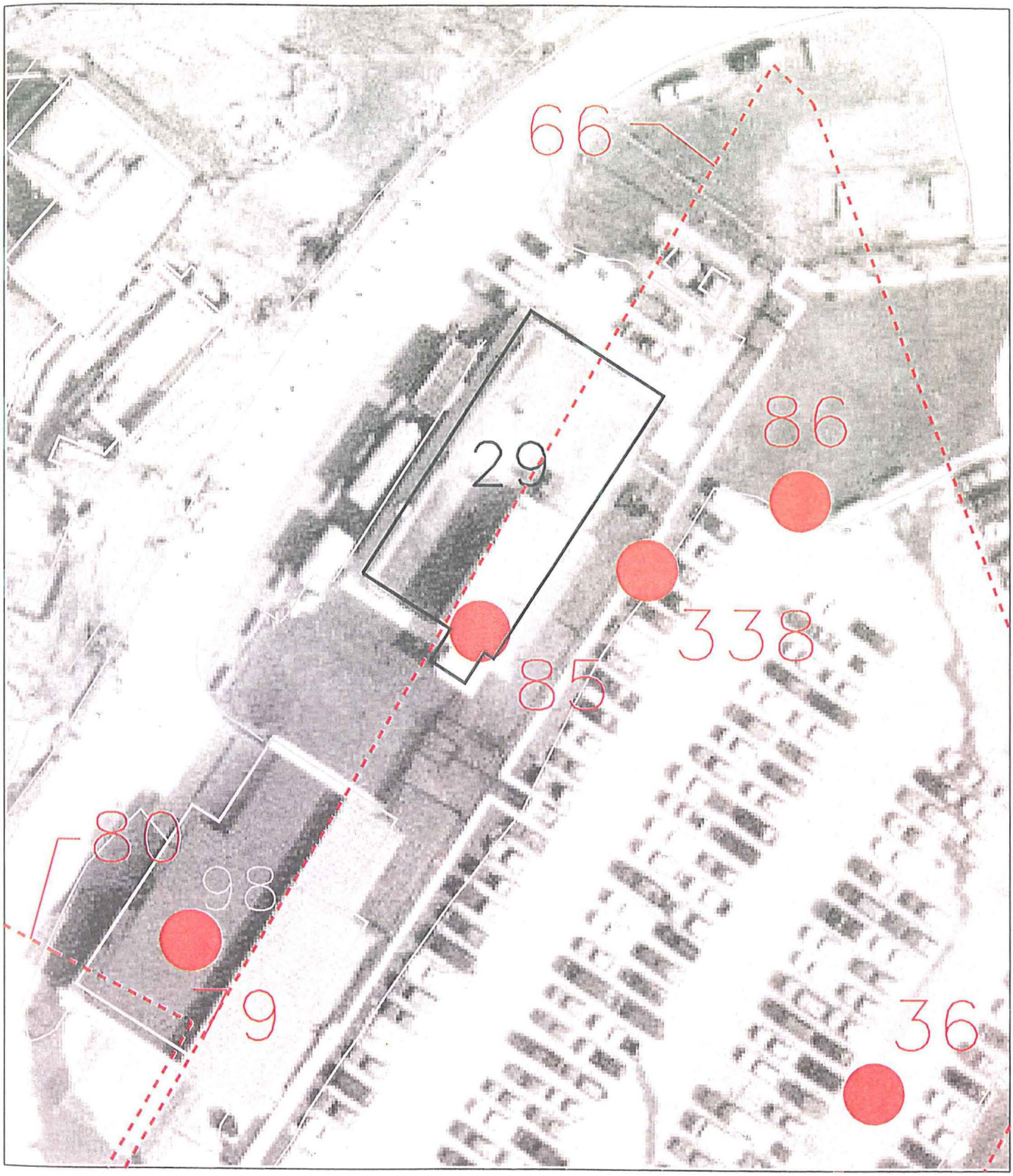
( ) TITLE CLASSIFICATION

Figure 1
Location of Building 29

MOUND CLASSIFICATION: UNCLASSIFIED
SIZE: D
MOUND FILE: gen_site_plan.dgn
JOB NUMBER
DWG TYPE: SITE
PLAN
CHECK
SCALE: Graphic
SHEET 1 OF
STATUS: MD-REL-09/14/99
DRAWN: MSTATION / J

gen_site_plan.dgn

A B C D



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

Figure 2
Building 29
and Vicinity

DRAWING CLASSIFICATION: UNCLASSIFIED

SIZE | DRAWING NUMBER: vicinity.dgn | JOB NUMBER

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

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

ISS	DATE	REVISION	BY	CHKR	ENG	LPBEC	APVD	M
	03/12/02		SSF					

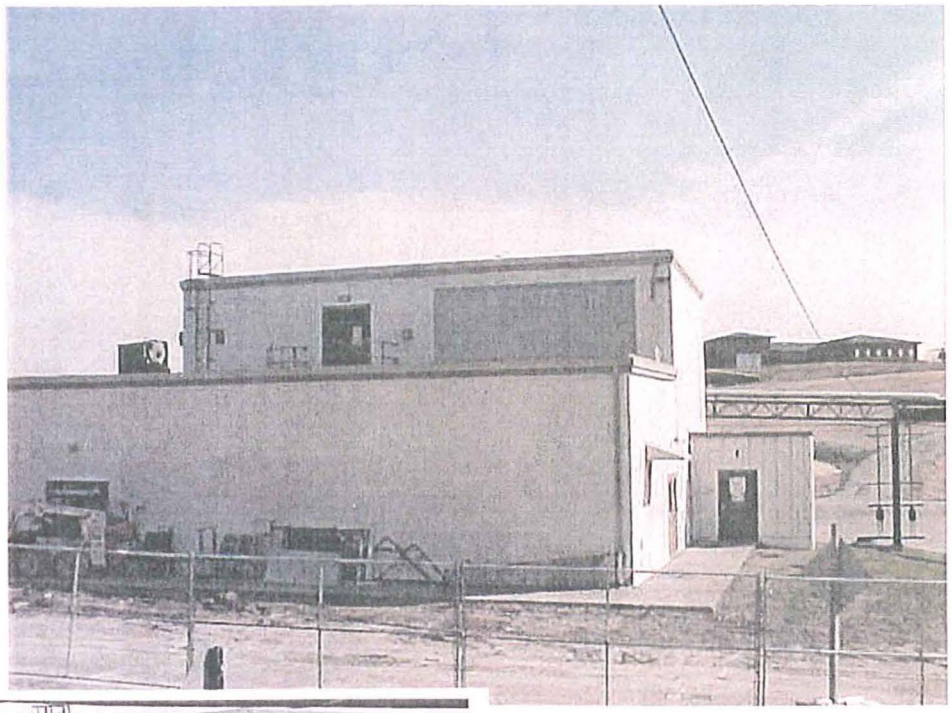


Figure 3:
Building 29

Before, During, and After Demolition

Work Package

Rad Summary

Appendix B

Work Package

WORK PACKAGE / PRELIMINARY HAZARD ANALYSIS

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

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 29 Demolition

2. WORK PACKAGE NUMBER. *SMPP/TFV- 29720-00* | **REQUESTOR: L. Koehmstedt**

1. WORK PACKAGE SCOPE:

The purpose of this effort is to demolish Building 29, see Figure 1.0. Using heavy equipment to demolish the facility, remove and dispose of the debris and provide temporary erosion protection with seeding and mulch. The area is scheduled for soil remediation in the near future;therefore permanent restoration is not warranted. Asbestos abatement and safe shutdown activities will have already been completed prior to demolition.

4. WORK PACKAGE PHASES:

1. **Establish Work Zone.**
2. **Demolish Structure.**
3. **Demolish Slab and Foundation.**
4. **Organize area for future soil remediation.**

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

5. WORK LOCATION:

Building #: 29

Room #: N/A

Other: Spoils Area

6. SPECIAL MATERIALS AND EQUIPMENT:

1. **Tracked excavator with shear, grapple, hoe ram, concrete cracker/pulverizer, or bucket attachment.**
2. **Rubber tired and tracked front-end loaders.**
3. **Rock crusher.**
4. **Transport equipment for debris as required**

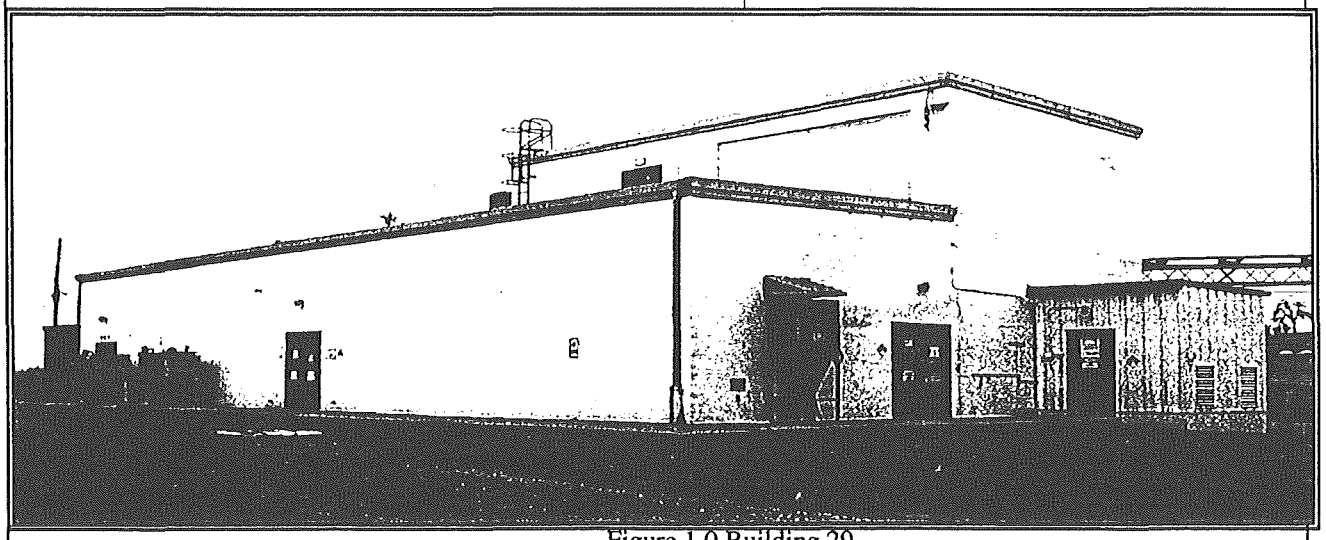


Figure 1.0 Building 29

7. DETAILED WORK STEPS: See the attached Job Specific Work Plan (JSWP)

Insert the activities to be performed during the job. Describe the specific methods of accomplishing these activities. Activities listed must be grouped under the Work Package phases listed in item 4.

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 JSHAs 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:

Job Foreman: _____ Date: 4/29/02 Phone: X4154

Superintendent/Constr. Mgr: _____ Date: 04/25/02 Phone: x-3866

Industrial Safety & ~~Hygiene~~: _____ Date: 04/26/02 Phone: 4096 /3737

Rad. Controls: _____ Date: 4/29/02 Phone: 3178

ES&C: _____ Date: 4/25/02 Phone: x4080

Waste Mgmt: _____ Date: 4/25/02 Phone: x3822

Bldg. Mgr: _____ Date: 04/29/02 Phone: 3241

Craft Review: _____ Date: 4/29/02 Phone:

Craft Review: _____ Date: 4/29/02 Phone:

Craft Review: _____ Date: 4/29/02 Phone:

Craft Review: _____ Date: / / Phone:

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

Brief Explaination _____

USQ Trained Person: _____ Date: 04/25/02 Phone: 4285

10. AUTHORIZATION SIGNATURE:

Project Manager: _____ Date: 4/30/02 Phone: 4071

11. WORK PACKAGE CLOSURE:

Job Supervisor: _____ Date: / / Phone:

Project Manager: _____ Date: / / Phone:

RETURN PHA TO IS&H AT JOB COMPLETION.

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	N/A	[EGRESS]
Blockages/obstructions (Identify)	NO	N/A	
Burning, welding, hot-work (Fire Watch)	YES	Demolition	[BURN] Possible use of cutting torch during demolition. Administrative Controls, Permit required. Keep fire extinguisher near by during cutting.
Chemical compatibility of corrosives/flammables	NO	N/A	
Chemical process safety	NO	N/A	
Compressed gas cylinders	YES	Demolition	Project work controls (use of cutting torches).
Confined space entry	NO	N/A	[CONFINE]
Crane operations, overhead or mobile	NO	N/A	
Critical lifts (heavy or high value loads)	NO	N/A	[CLIFT]
Electrical hazards	NO	N/A	[LIVEL] Electrical Isolation of facility was accomplished during safe shut down activities.
Elevated work/fall protection	NO	N/A	[ELEV]
Emergency eyewash/shower available	NO	N/A	[EWASH]
Emergency alarms or evacuation plans required	YES	All	[EMERG] Plant Public Address system will be used to announce any plant emergency over the plant radio channel, cell phones will be used also, no specific added hazards exist in the demolition of this building.
Explosive/flammable atmosphere	NO	N/A	
Explosives	NO	N/A	
Fire protection system/equipment outage	YES	Structural Demolition	[FIRE/EFIRE] Fire Alarm System isolation prior to start of structural demolition.
Fire Hazards Analysis Required of Demolition	YES	Structural Demolition	[FHA/ADJA]
Flammable liquids/gases	YES	Structural Demolition	[FLAM] Possible use of cutting torch during demolition. Administrative Controls, Permit required. Keep fire extinguisher near by during cutting.
Forklifts, aerial lifts or material handling equipment	NO	N/A	
Grounding of electrical equipment	YES	Structural Demolition	Temp. power to portable equipment. All hand held electrical tools must be equipped with GFCI.
Hazards due to condition of facility or terrain (Identify)	NO	N/A	
Hoisting and rigging	NO	N/A	[HOIST]
Lighting/illumination/adequacy	NO	N/A	[MLITE]
Excavation and Soil disturbance	YES	Slab and Foundation Demolition	A excavation and soil disturbing permit required.

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	N/A	[LOTO/ISO] Electrical/Mechanical Isolation of facility was accomplished during safe shutdown activities.
• Electrical	NO	N/A	See Above
• Mechanical (steam, hydraulic, pneumatic)	NO	N/A	See Above
• Interlocks	NO	N/A	[ILOCK]
• Chemical	NO	N/A	
• Radiological	NO	N/A	
Machine guards	NO	N/A	
Modification to Fire Wall/Door	NO	N/A	[FIREWAL]
Obstruction of fire protection equipment (pull boxes, hydrants, fire department connections, control panels, fire extinguishers, etc.)	NO	N/A	
Off-shift work	NO	N/A	
Outages of the plant public announcement (PA) system or the emergency notification system	YES	Demolition	[OUTAGE] The plant radio system transmits public announcements, which will be use to monitor for emergencies.
Overhead or underground utilities (Identify)	NO	N/A	[UITL] Electrical/Mechanical Isolation of facility was accomplished during safe shut down activities.
Penetrations into walls, floors, etc.	NO	N/A	[PENETR]
Plastic sheeting or wood framing/enclosures	NO	N/A	
Powder-actuated tools	NO	N/A	
Plant utilities (Identify)	NO	N/A	[WATER] Electrical/Mechanical Isolation of facility was accomplished during safe shut down activities.
Repetitive work	NO	N/A	[ERGO]
Structural Modification	YES	Demolition	[STRUCT] Building is being demolished.
Special Fire Protection Equipment Required	NO	N/A	[FIREQU]
Trenching/Shoring	NO	N/A	[DIG]
Temporary heating facilities	NO	N/A	
Temporary/portable buildings or structures	NO	N/A	[FACIL]
Temporary service hook-ups (Identify)	YES	Structural Demolition	Temp. electrical and water service (for dust control).
Traffic control/flagman	YES	Demolition	[TRAFIC] Loading, and demolition near the roadway.
Work in attics, ceilings, chases, or crawlspaces	NO	N/A	
Work impacting adjacent normally occupied areas	NO	N/A	[ADJAC/BMAPP/SIGNS/NOTIF]
Work Requiring Scaffolding, construction and inspection	NO	N/A	[SCAFF]
Other (Specify)	N/A	N/A	

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 Heatlh 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	N/A	
Asbestos	NO	N/A	[ASBEST] Asbestos Abatement completed.
Beryllium	NO	N/A	
Blood-borne pathogens*	NO	N/A	
Cadmium	NO	N/A	
Carcinogens (☐ MSDS available)*	NO	N/A	[CARC]
Chemicals/solvents (☐ MSDS available)*	NO	N/A	[CHEM/MSDS]
Chlorofluorcarbon (CFC)	NO	N/A	[CFC]
Coal, tar or asphalt products	YES	Structural demolition	Roofing material contains tar and asphalt products, to be disposed of as construction debris.
Coating/painting (☐ MSDS available)*	NO	N/A	
Corrosives/acids/caustics (☐ MSDS available)*	NO	N/A	
Dusty operations	YES	demolition	[POWDER] potential dust generation controlled via water misting.
Hazardous Waste Operations (HAZWOPER)*	NO	N/A	
High Pressure systems	NO	N/A	[HIPRES]
Insulation/man-made mineral fibers (☐ MSDS available)*	NO	N/A	
Lasers	NO	N/A	
Lead	YES	N/A	Paint may contain lead, do not torch cut painted surfaces.
Foam in Place Operations	NO	N/A	
Mercury	NO	N/A	
Noise in excess of 85 dBA	Yes	demolition	[NOISE] Hearing protection will be used.
Polychlorinated biphenyls (PCBs)	NO	N/A	
Removal of ceiling tiles*	NO	N/A	
Spraying/generation of mists*	YES	demolition	Demolition dust control via water mist.
Temperature extremes (heat or cold stress)	Yes	ALL	[CRYRO/COLD/HEAT] Provide heating or cooling for personnel.
Ventilation or Air Monitoring requirements	Yes	demolition	[VENTIL/IH] Air monitoring for potential silica during demolition activities will be performed.
Welding, brazing, or thermal cutting operations	Yes	demolition	[BURN] Cutting of rebar and etc. will require a permit.
Other (specify)	N/A	N/A	

***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
Location:	Controlled Area	NO	N/A	
	Contamination Area	NO	N/A	[STP]
	High Contamination Area	NO	N/A	[STP]
	Radioactive Materials Storage Area	NO	N/A	
	Airborne Radioactivity Area (STP or OBT)	NO	N/A	
	Radiation Area	NO	N/A	
	High Radiation Area	NO	N/A	
	Very High Radiation Area	NO	N/A	
	Other (Specify)	YES	demolition	Possible soil contamination within the area.
Activities:	Criticality Safety Concerns	NO	N/A	
	Digging/Soil Removal	YES	Demolition/slab and foundation demolition	[DIG] Water mist to control potential dust. Air monitoring during demolition. Sample soil following slab removal.
	Surface destruction of radioactively contaminated materials or equipment?	NO	N/A	[SURFAC]
	Welding, burning, or grinding?	NO	demolition	[SURFAC]
	Hammering, chipping or scraping?	NO	N/A	[SURFAC]
	Abrasive blasting?	NO	N/A	[SURFAC]
	Dust-collecting equipment or systems?	NO	N/A	
	Decontamination and clean-up?	NO	N/A	
	Rad Waste Storage and Disposal Required	NO	N/A	[RWSTOR/WASTE/CHAR]
	Other (Specify)	N/A		
Sources:	X-Ray machine/generator	NO	N/A	[XRAY]
	Sealed radioactive sources	NO	N/A	
	Unsealed radioactive sources	NO	N/A	
Controls:	Radiological Work Permit	NO	N/A	[RWP/RWP=JS/RWP=N/R/RPGEN]
	ALARA Plan	NO	N/A	[ALARA]
	Air Flow Studies	NO	N/A	[AIRFLOW/CAM]
	Urinalysis program	NO	N/A	
	Preliminary or in-process characterization	NO	N/A	[SURVPS/SURVIP]
	Anti-contamination clothing	NO	N/A	
	Respiratory protection	NO	N/A	[RESP]
	Needs Analysis Evaluation	NO	N/A	
	Hazards Analysis	NO	N/A	
	Engineering Controls	YES	ALL	Dust control via misting.
	Administrative Controls	YES	N/A	Barricades of construction zone
	Supplemental dosimetry	NO	N/A	
	Shielding	NO	N/A	
	Personnel monitoring (frisking)	NO	N/A	

SECTION D - OTHER CONDITIONS, CONCERNS, OR SUPPLEMENTAL INFORMATION FROM SECTIONS A THROUGH C
Identify Assembly Points: West of Building 98, Take shelter area is in building 98, basement rooms 002,003,004 -See Appendix E

Work Package Revision Form

Work Package Revision Form			
Work Package No.SMPP/TFV-29720-00		Revision No.	
Revision Description: (attach page revisions to form)			
	Name	Signature	Date
PREPARED BY:			
Revision Preparer:			
REVIEWED BY:			
Project Foreman:			
Project Superintendent/ Constr. Mgr.:			
Industrial Safety & Hygiene P o C:			
Radiological Point of Contact:			
Environmental Safeguards & Compliance P o C:			
Waste Management PoC:			
Building Manager:			
Other:			
Other:			
USQ Trained Person			
USQ SCREEN / DETERMINATION REQUIRED? ☐YES ☒NO Brief Explaination_____			
APPROVED BY:			
Project Manager:			

Work Package Revision History Form

WORK PACKAGE REVISION HISTORY FORM			
REV. NO.	REASON	SIGNATURE	DATE

Job Specific Work Plan
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Job Specific Work Plan

1. WORK SCOPE

1.1. Introduction

This Job Specific Work Package (JSWP) follows the outline of PP-1059A, Integrated Work Control Program at the Mound Site, Miamisburg, Ohio. Included are a Preliminary Hazard Analysis (PHA) and a Job Safety & Hazard Analysis (JSHA). A Pre-Job Briefing Form (ML-9657) and the Project Manager's Authorization to Commence Work signature will be completed to document that the workers were briefed on the activities covered in this JSWP before work begins.

1.2. Work package scope

The purpose of this effort is to demolish Building 29, remove the debris, and to provide temporary seeding and mulching of the area to prevent erosion protection. This will be accomplished by confirming that all utilities have been isolated during safe shutdown activities, establishing a safe work zone, and the demolition of the building using heavy-duty equipment, and removing of debris as directed by Waste Management.

1.3. Site Information

Building 29 was constructed in 1965, and is located in the plant valley area, just off the flank of the Main Hill. Building 29 contains 6,601 square feet. There have not been any large-scale additions to Building 29, based upon the collection of drawings (the only drawings are the "as-built" drawings dated June 29, 1967). The only evident modifications to the building is the enclosure of an original construction concrete slab on the western-side of the building, the construction of an enclosure on the eastern corner of the building, and the addition of walls in some of the interior rooms.

According to a 1996 appraisal of Mound plant site buildings, Building 29 was used for plastics formulation and manufacturing. The appraisal report notes that the processes in Building 29 had been "out-of-service" since 1987, and that the building at the time of the appraisal, was undergoing safe shutdown. As illustrated in a later section, this mission use remained constant until the building was shutdown, the major process changes had to do with the fibers used in the plastics formulation, as less hazardous fiber-types to substitute for asbestos were explored.

2. DRAWINGS AND REFERENCES

PP-1059A, Issue 7, "Integrated Work Control Program"
MD-50000, Issue 10, "Maintenance Work Order and Material Processing"

3. INITIAL CONDITIONS AND PREREQUISITES

3.1 Lessons Learned

A search of the Lessons Learned Database found the following relevant item:

- Driver has near miss with electrocution when overhead wires catch on truck.

See Appendix F for the full report. The result of the Lessons Learned is that heavy equipment must be kept clear of all energized wires.

3.2 Industrial Safety and Health Requirements

3.2.1 A Job Specific Hazards Analysis (JSHA) is required. The construction zone, as defined in Appendix E, identifies construction boundaries, evacuation routes, the take shelter area, and the assembly area. Debris will be cleared from the immediate construction zone as required to promote safe equipment activity.

3.2.2 Underground electrical utilities will be identified and field located by scanning the area prior to beginning any field activities. Lock-out-tag-out procedures will be followed and electrical energy detection will be performed prior to any electrical demolition activities.

3.2.3 An excavation/soil disturbance permit will be required prior to demolition activities.

3.2.4 Monitoring for fugitive dust will be performed periodically as determined by previous monitoring results and site Safety and Health. Site Safety and Health will be notified before the demolition of concrete begins.

3.2.5 Whole body vibration will be administratively controlled and by reviewing topic at pre-job meeting.

3.2.6 A Hot Work Permit will be required if a torch is used for cutting. Coordinate with site Safety and Health.

3.2.7 Monitoring of noise levels will be performed as determined by previous monitoring results and site Safety and Health. Earplugs (or other hearing protection) will be worn, as appropriate.

4. RADIATION PROTECTION REQUIREMENTS

An assessment of Building 29 was performed reviewing operational history and radiological survey information. Radiological surveys of the building and equipment indicate no elevated radioactivity levels. Additionally, the building has no known history of having handled or stored radioactive materials. Several prior assessments have concluded that the building was non-impacted from site radiological operations.

During slab and foundation removal radiological control personnel will perform radiological screening of soil and concrete surfaces that are in contact with the soil.

5. ENVIRONMENTAL PROTECTION REQUIREMENTS

5.1 CERCLA

As a result of the investigations and documentation accomplished to comply with the CERCLA cleanup process via the Federal Facilities Agreement (FFA)/DOE Environmental Restoration (ER) Program, DOE and BWXTO have tabulated all the PRSs identified under the various regulatory programs in effect at the site. Of these 440 PRSs, four are at or near Building 29. PRSs in the vicinity of Building 29 are identified in Table 1.

Table 1: PRSs in Proximity to Building 29

PRS	CERCLA or Bldg. Related	Binning Status	Comments
66	CERCLA	Removal Action (RA)	Area 7, Thorium and Polonium Wastes. Part of Building 29 located within PRS 66.
85	CERCLA	No Further Action (NFA)	Building 29 Solvent Storage Shed.
86	CERCLA	NFA	Building 29 Septic Tank (Tank 224).
338	CERCLA	NFA	Building 29 Septic Tank (Tank 270).

5.2 National Emissions Standards for Hazardous Air Pollutants (NESHAPs)

Per Environmental Practice 2.2, if buildings to be demolished have a surface area less than 72 million square feet, direct readings below MDA, and wipe results below applicable action levels, additional dose calculations are not necessary.

5.3 Notification

A Notification of Demolition and Renovation form must be filed with the Regional Air Pollution Control Agency (RAPCA) at least 10 business days before planned building demolition.

5.4 Restriction of emission of fugitive dust (OAC 3745-17-08)

Reasonably available control measures must be employed to prevent fugitive dust from becoming airborne. Visual particulate emissions from any fugitive dust source shall not exceed 20% opacity as a three-minute average. Appropriate activities would include:

5.4.1 Water misting, or other suitable dust suppression, will be used to minimize fugitive dust resulting from demolition activities.

5.4.2 Periodic application of water, or other suitable dust suppression, to adjacent roadways and parking lots will be used to prevent dust from becoming airborne.

5.4.3 Trucks hauling debris to the onsite spoils area should be covered while in transit.

5.5 Clean Water Act & Storm Water Pollution Prevention

5.5.1 All inlets to the sanitary and storm systems will be plugged to prevent accidental discharges to the wastewater treatment plant or the environment.

5.5.2 The site's National Pollutant Discharge Elimination System (NPDES) Permit No. 1IO00005*HD requires the use of control measures to ensure the quality of storm water leaving the site. These control measures and practices are outlined in the site's Storm Water Pollution Prevention Plan OPA980099. Appropriate activities would include, Redirect flow patterns around the project site to prevent stormwater run-on. 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. 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 stormwater pollution. Water that has collected in an open excavation or in sumps, must be monitored prior to discharging to the sanitary or storm sewer systems. Contact Environmental Monitoring at extension 4188 for monitoring and review of these non-routine discharges.

5.6 National Historic Preservation Act (NHPA)

Building 29 is not listed as a historic structure with the Ohio Historic Preservation Office (OHPO). No mitigative documentation package is required. However, if any items or artifacts are discovered as this project progresses, the Cultural Resource Representative will be notified at extension 3691. Work will be temporarily suspended until which time the items or artifacts have been recovered.

5.7 Safe Drinking Water Act

The potable water supply to Building 29 was turned off and capped to protect the integrity of the water supply to that portion of the plant site.

5.8 Emergency Spill Response

Building 29 has been disconnected from all utility services and the lines drained. There should be no regulated component that will be encountered. In the event of a major spill of any regulated substances, or the rupture of a non-isolated utility line (fire, domestic water, ethylene glycol) call 911 if using an onsite phone or 937-865-4040 if using a cell or other outside phone to report it, also see Emergency Preparedness section. All spills must be contained onsite and should be prevented from entering the storm drains if

possible. If spills enter the storm drains, all effluent must be retained onsite at the overflow pond.

6. CHEMICAL AND WASTE MANAGEMENT REQUIREMENTS

All waste will be managed in accordance with the Waste Management Plan for the Mound Exit Project, MD-10499. The Waste Coordinator will ensure that this is accomplished and summarize in a Job Specific Waste Management Plan.

Fluorescent tubes and non-PCB containing ballasts will be left in place, and will be demolished with the building. PCB containing ballasts had been in the building; they have been removed during Safe Shutdown activities. Note: The fluorescent tubes have been removed.

7. EMERGENCY PREPAREDNESS

7.1 Site Notification Procedures

7.1.1 Use **911** for all emergency services onsite. This is the first response for any emergency, spill, or release. If using a cell phone, dial **865-4040**. This number will ring into the plant 911 system.

7.1.2 Any injury, no matter how minor, shall be reported immediately to the Medical Department for evaluation and treatment. The injured employee shall report any injury to the supervisor in charge or designee.

7.1.3 Employees will be notified of emergency or abnormal conditions by the plant paging system or project two-way radios. Additionally, unique sheltering and evacuation signals are available should site-wide protective actions be necessary.

7.2 Evacuation Route/Assembly Areas

The assembly area is southwest of Building 29 at the east side of Building 98. See map per Appendix E.

7.3 Take Shelter Area

The take shelter area is in the basement of Building 98 in Rooms 002, 003, and 004. See map per Appendix E.

8. PRE-DEMOLITION SEQUENCE OF WORK

8.1 Site Characterization

8.1.1 Physical Characterization

A structural engineering survey was performed and documented for Building 29 to meet the requirements of OSHA 29 CFR 1926.850(a). A walkdown of the structure was used to identify potential hazards as listed in 29 CFR 1926.850(e)

through (i). It has been determined the building does not meet the criteria that cause the structure to be historically significant.

8.1.2 Radiological Characterization

An assessment of Building 29 was performed reviewing operational history and radiological survey information. Radiological surveys of the building(s) and equipment indicate no elevated radioactivity levels. Additionally, the building has no known history of having handled or stored radioactive materials. Several prior assessments have concluded that the building was non-impacted from site radiological operations.

8.1.3 Chemical and Metals Characterization

Building 29 was used to fabricate plastic parts. The primary chemicals used were plastics and dyes together with hydraulic oil, acetone, alcohols, and toluene. There is no evidence that chemicals stored in Building 29 entered the wastewater collection system. There have been no reported spills from Building 29. The building underwent Safe Shutdown in 1996 at which time these materials were removed from the building. The annual chemical inventory report found no chemicals located in the building.

8.1.4 Asbestos Characterization

An asbestos survey was completed. Asbestos was prevalent in Building 29. Asbestos-containing materials (ACM) of non-friable nature were used in floor tiles and mastic, roofing material, transite work surfaces, and fume hoods. Friable ACM included pipe joint insulation, condensation tape, pipe wrap, and thermal insulation. Much friable asbestos was used as filler material, mixed with plastic, to form molded parts. This airborne asbestos contaminated the HVAC ductwork, processing equipment, and the internal building structure. An asbestos abatement decontamination program was performed; no further action is required.

8.2 Site Preparation

8.2.1 Site Access Control

The demolition area will be identified utilizing the existing fence around the building, or at the discretion of the project construction manager/foreman, marked off with barricade tape/fencing.

8.2.2 Clearing and Grubbing

The area around the building will be mowed and insecticide will be sprayed if appropriate. Coordinate with site Safety and Health and Environmental Compliance.

HAZARD	MITIGATION
Insect bites	Mow area around building. Wear long pants and long sleeve shirt. Tape arm and leg openings, if desired .
Exposure to insecticide	Follow requirements of MD-10286 D2. Use licensed personnel. Follow label directions and MSDS.

8.2.3 Temporary Utilities

The only temporary utility that may be required is water. Coordinate with site Safety and Health. Water will be used to control dust emissions.

8.2.4 Temporary Facilities

This project may use the existing Building 44 and Building 38 shower/restroom area or utilize SMPP/TV F project new trailer complex to be located in the existing Mound "C" parking lot. Also, a portable toilet has been located at the job site.

8.2.5 Temporary Communications

Temporary communications are required (cell phone, radios) due to the difficulty of hearing plant announcements and emergency notifications. At the job site, plant announcements and emergency notifications can be heard on the Plant radio channel.

8.2.6 Staging Areas

The project site is of sufficient size to also be used as a staging area.

8.3 Preliminary Activities

8.3.1 Domestic water, fire water, electrical, fire alarm system and communications lines have been disconnected under separate safe shutdown MSR. 30034. An excavation/soil disturbance permit for slab and footing removal will be required prior to excavation activities.

8.3.2 Verify all mercury-containing switches have been removed. If found, dispose through Waste Management.

8.3.3 Confirm all Freon has been previously removed and recycled from HVAC units inside and outside of the building.

8.3.4 Fluorescent tubes, ballasts, and explosion proof lights will remain in place; asbestos abatement has been completed. If PCB-containing ballasts are encountered, remove and dispose through Waste Management. Note: Contact site Safety and Health with any concerns about fluorescent tubes, ballast, or explosion proof fixture seals.

HAZARD	MITIGATION
Fall hazard	Follow requirements of MD-10286 M-14

9. BUILDING DEMOLITION SEQUENCE OF WORK

9.1. Establish Work Zone

Establish work zone boundary using the existing fence and/or with barricade tape as directed by the Project Foreman. Proper signage will be placed at all access points to the site. This zone is not to be entered by anyone not directly involved with the demolition unless they have contacted the Project Manager/Foreman first. Initial demolition work will be scheduled to start on a Saturday, when the impact from the closure of the roadway will be minimized, since the construction boundary will force temporary closure of the roadway. Enough of the demolition of the front of the structure shall be completed on Saturday to enable the construction zone width to be out of the roadway and the re-opening of traffic on the following Monday.

Do not begin any demolition activities until the following items are completed.

All new workers assigned to this project have received a pre-job briefing prior to performing work and a walkdown of the project area. The following must be completed prior to starting work.

Review of the *Preliminary Hazard Analysis* for work package activities must be complete.

9.1.1. The *Pre-Job Briefing Record* must be completed and signed.

9.1.2. The *Job Specific Hazards Analysis (JSHA) must be reviewed.*

NOTE: All workers have Stop Work Authority. Situations where stop work authority is to be exercised are:

- **To stop unsafe work.**
- **To stop unauthorized work, for example, work outside the scope of this work package.**

9.1.3 Verify Safe Shutdown activities have isolated all the connections to Building 29, including the following systems: electric/communication/fire alarm systems, steam and glycol, sewage and potable water systems.

9.1.4. Verify that all pre-demolition notifications have been made and permits are in place.

9.1.5. Install sediment/storm water control fence around designated construction area as necessary.

9.1.6. Prepare water distribution system for the control of dust. Traffic control is ready.

9.2. Structural Demolition

9.2.1 Front Section Structure Demolition

Demolish the Front Section of the structure's block walls and structural steel using heavy equipment. Use a portion of the debris to construct a ramp for heavy equipment to access of the higher Rear Section for demolition. Use the existing slab for load out surface for loading debris and placing into appropriate hauling containers or trucks.

HAZARD	MITIGATION
Contact overhead power lines with heavy-duty equipment.	If heavy-duty equipment will be operating within 10' of overhead powers, perform LOTO.
Struck by flying debris Struck by moving equipment	Establish construction boundary. Temporary closure of the roadway to be coordinated with site wide safety, emergency and other necessary entities. Wear hard hat safety glasses, safety shoes, and reflective vest inside construction area. Maintain the following distances from operating equipment: Shear – 75 feet Hoe Ram – 50 feet Other heavy duty equipment – 30 feet Bobcat – 15 feet
Noise Hazard	Wear hearing protection while running heavy-duty equipment. Follow the requirements of MD-10286 D9.
Burns from torch cutting	Obtain and follow Hot Work permit per MD-10286 O2
Heat/Cold Stress	Follow the requirements of MD-10286 D13/D16

Exact sequence of demolition will be left up to the skill of the craft.

9.2.2 Rear Upper Section Structure Demolition

Using the ramp constructed from demolition debris and heavy equipment, raze the rear upper section of the structure working down to the concrete slab. Use the existing concrete slab for load out surface for loading debris and placing into appropriate hauling containers or trucks.

Note: The progressions of the building demolition will ultimately be determined in the field.

9.2.3 Slab and Foundation Demolition

Using heavy equipment, break apart the concrete slab, foundation, and footers to 3' below grade, torch cut the rebar as required (Hot Work Permit is required if used) to support demolition and downsizing. During the concrete demolition, use heavy equipment to assist radiological control personnel to perform radiological screening of all concrete surfaces. Based on radiological screening results, transport to Mound's spoils area, offsite disposal, or rail spur as directed by Waste Management.

HAZARD	MITIGATION
Burns/fire	Burn permit, fire protection, and PPE.
Strike underground utilities	Obtain Excavation permit and follow its requirements per MD-10286 O5

9.2.4 Organize area for future soil remediation

The last step will be to temporarily restore the area by grading and seeding. Remove any unnecessary remaining sediment/storm water control fences. Scan equipment for radiological contamination and decontaminate prior to leaving area. Remove dust control water distribution system, temporary power fencing and any traffic control. Restoration will be temporary in scope since the area is scheduled to be disturbed in the near future by the efforts of the PRS 66 removal action.

Appendix A
JSHA/HASP

Project/Activity: Building 29 Demolition
Name: Lee Koehmstedt

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 trauma/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 – 29720-0

DATE: 04/25/02	_X_ NEW ___ REV	BUILDING: 29	JOB: Demolish Building 29
DEPARTMENT/COMPANY: SMPP/TFV			SECTION: N/A
OCCUPATIONS: Heavy Duty, Demo Tech, Construction Craft, Pipefitter/Welder, Electrical Control, Fab Mechanic, RCT, IH			

SIGNATURES

ORIGINATOR: Lee Koehmstedt	4/25/02
REVIEW/REV: Jared Willis	4/25/02
REVIEW/REV: Lynn Null	
REVIEW/REV: Gary Weidenbach	04-29-02
APPROVED: CD Thompson	4/30/02

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Hard Hat, Safety Glasses with side shields, safety shoes, safety vest	**MSDS(s)/CHEMICALS ASSOCIATED WITH THE JOB:** Insecticide

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 1B - 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.
Operation of heavy equipment near electric overhead lines	Electrocution	LOTO all electrical overhead lines.

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JOB SAFETY AND HEALTH ANALYSIS FORM
(CONTINUATION SHEET)

BASIC JOB STEPS	POTENTIAL ACCIDENT/ILLNESSES OR KNOWN HAZARDS	SAFE JOB PROCEDURES
Demolish building and slab using excavator mounted shear, hoe ram, grapple, loader, and bobcat	Struck by flying debris Struck by moving equipment Noise Hazard	Establish construction boundary. Wear hard hat safety glasses, safety shoes, and reflective vest inside construction area. Make eye contact with operator when working around equipment. Use hand signals to communicate intent. Maintain the following distances from operating equipment: Shear – 75 feet Hoe Ram – 50 feet Other heavy duty equipment – 30 feet Bobcat – 15 feet Make sure equipment is in safe working order. Use spotter vision is obstructed. Install traffic control. Wear hearing protection while running heavy duty equipment Follow the requirements of MD-10286 D9
Torch cut rebar or to weaken structural members	Burns, fire Potential lead paint	Obtain and follow Hot Work permit per MD-10286 O2. Wear proper PPE, have fire extinguishers in the construction zone. Test for lead paint; do not torch cut lead paint.
Working in excessive heat/cold	Heat Stress/Cold Stress	Follow the requirements of MD-10286 D13/D16
Working outside.	Adverse weather conditions	Be aware of adverse weather conditions, assembly and take shelter areas.
Slab removal	Strike underground utilities Silica exposure	Obtain Excavation permit and follow its requirements per MD-10286 O5 Monitor for silica, keep area wet for fugitive dust suppression.

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SIGN-OFF SHEET

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

SIGNATURE	Date	Department

Appendix C
PRE-JOB BRIEFING

JOB SPECIFIC WORK PLAN
PRE-JOB UPDATE

MSR/PROCEDURE (if applicable):	JOB SUPERVISOR

A.	Time, Date and Location of PJB:
B.	Applicable Procedure Number:
C.	Job Description:
D.	Personnel Attending:

HP#	SIGNATURE	HP#	SIGNATURE

JOB SUPERVISOR – This is a reminder checklist for the update. The supervisor need only discuss and note changes from the previous day's briefing or update. (Use NC for No Change).

1.	Any changes/revisions to safety envelope for work: a. New/added assignments and responsibilities of any individual b. Changes in facility conditions, tagouts, valve lineups c. New or changed precautions/hazards d. Valid RWP or other required work permits still in effect
2.	Adequate supply of PPE
3.	New training, any training coming up on expiration
4.	New changes to relevant Category "A" or Category "B" procedures.
5.	Equipment and tools calibrations in effect
6.	Relevant lessons learned, critique reports
7.	RWP revisions: a. Changes to radiological conditions of the workplace, particularly with respect to postings. b. Change in scope, especially if it is a reduction in scope or Stop Work Levels.
8.	Changes to radiological and/or health monitoring.
9.	Open the floor to questions.

The above minimum requirements have been met; this PJB has been conducted in sufficient detail to maximize continued safe conduct of the job, and all personnel have been through a previous Pre-Job Brief.

_____ _____

Job Supervisor/Foreman Date

NOTE: Completed pre-job update sheet must be retained with the work package or maintained in your record file.

JOB SPECIFIC WORK PLAN

Daily Toolbox Safety Meeting

Project:	**Date:**
Safety Topic of Meeting:	
Work Description of Meeting:	

Review the following to determine if conditions have changed since the last Pre-Job Meeting
If this is the 1st meeting with a subcontractor, has Safe Work Authorization been done?
Check off each item that applies or mark N/A if it doesn't apply.

Hot Work Permit (torch cutting, spark producing grinding, open flame heaters, welding)		Signage and Barricades (construction area, hazard notification, rad postings, etc).	
Penetration Permit (penetrating walls, ceilings, or floors in a building)		Air Monitoring (as required by Environmental Compliance and/or Industrial Hygiene)	
Excavation Permit (digging in soil)		Dust Suppression (misting, etc.)	
Trench Plan (shoring, soil layback, etc. if over 4 feet below grade)		Water Runoff Prevention (silt fence, straw bales, collection pond, etc.)	
Confined Space Entry Permit (manhole, tank, or other confined space entry)		Radiation Work Permit (as required by Rad Controls)	
Fall Protection (person's feet over 6 feet above ground)		TLDs (as required by RWP and rad postings)	
Lockout/Tagout (all energy sources to equipment being worked on)		Waste Containers (rolloffs, sealands, dumpsters, LSA boxes, drums, etc.)	
PPE (respirators, Tyveks, safety shoes, safety glasses, hard hats, gloves, reflective vests, etc.)		Utility review especially for asbestos abatement contractor (label live utilities e.g. FAS, phone, electric)	
Personnel Training up-to-date for assigned work (Radworker II, Asbestos, Lead, etc.)		Hoisting and Rigging Review	

JOB SPECIFIC WORK PLAN
PRE-JOB UPDATE

Continuation Sheet for _____/_____/_____

HP#	SIGNATURE	HP#	SIGNATURE

JOB SPECIFIC WORK PLAN

PRE-JOB UPDATE

MSR/PROCEDURE (if applicable):	JOB SUPERVISOR

A.	Time, Date and Location of PJB:
B.	Applicable Procedure Number:
C.	Job Description:
D.	Personnel Attending:

HP#	SIGNATURE	HP#	SIGNATURE

JOB SUPERVISOR – This is a reminder checklist for the update. The supervisor need only discuss and note changes from the previous day's briefing or update. (Use NC for No Change).

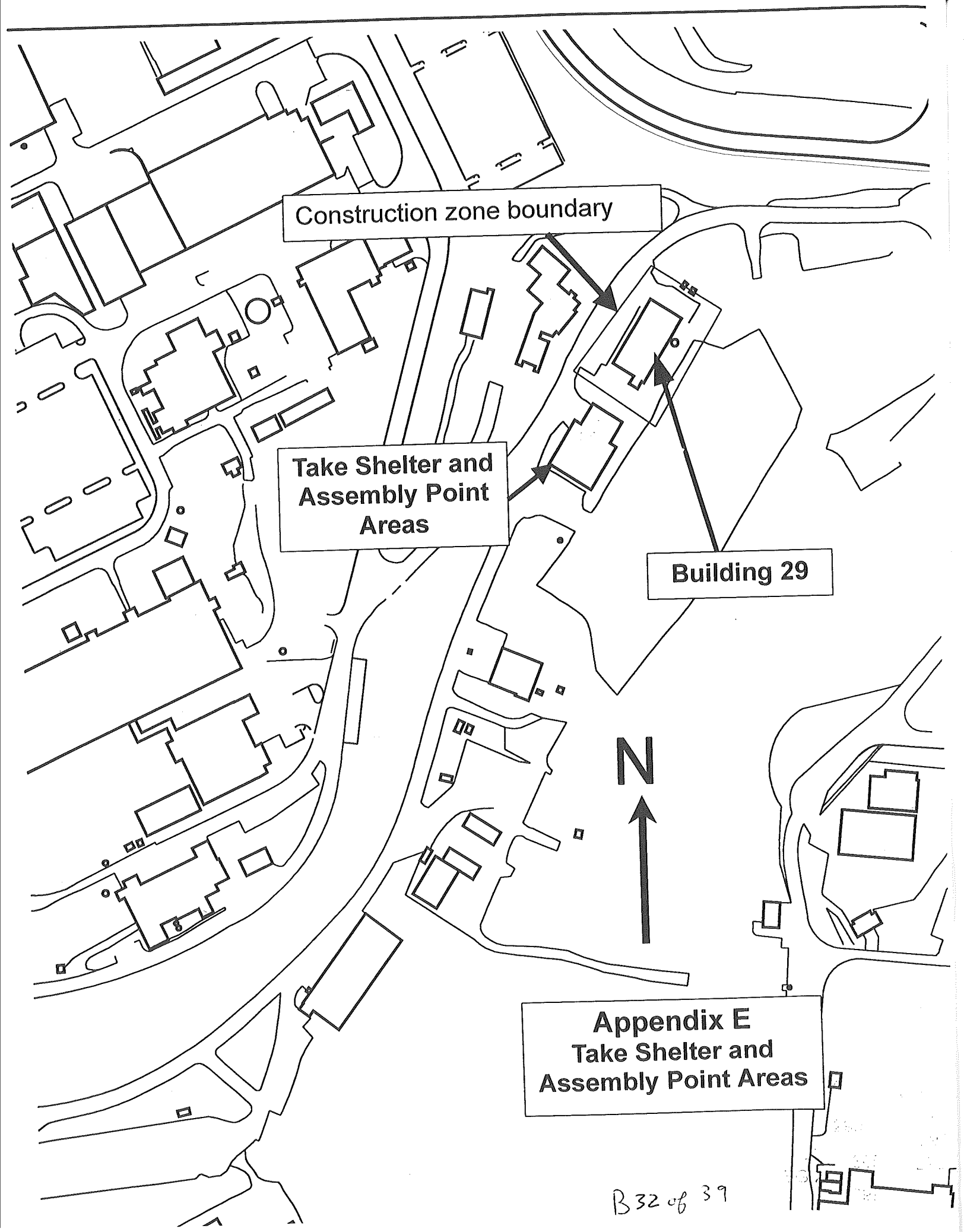
2.	Any changes/revisions to safety envelop for work: e. New/added assignments and responsibilities of any individual f. Changes in facility conditions, tagouts, valve lineups g. New or changed precautions/hazards h. Valid RWP or other required work permits still in effect
2.	Adequate supply of PPE
3.	New training, any training coming up on expiration
4.	New changes to relevant Category "A" or Category "B" procedures.
5.	Equipment and tools calibrations in effect
6.	Relevant lessons learned, critique reports
8.	RWP revisions: c. Changes to radiological conditions of the workplace, particularly with respect to postings. d. Change in scope, especially if it is a reduction in scope or Stop Work Levels.
8.	Changes to radiological and/or health monitoring.
9.	Open the floor to questions.

The above minimum requirements have been met; this PJB has been conducted in sufficient detail to maximize continued safe conduct of the job, and all personnel have been through a previous Pre-Job Brief.

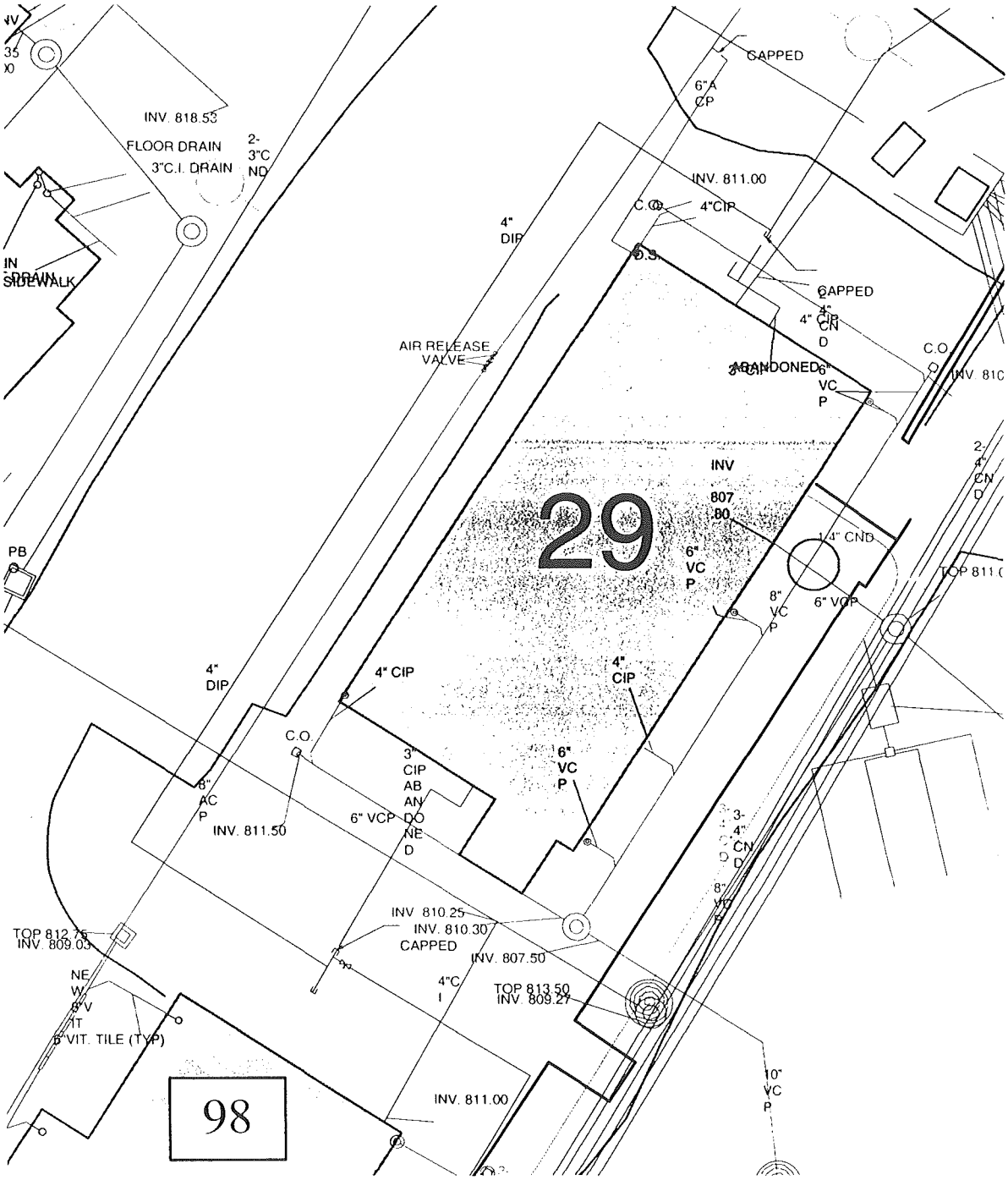
_____

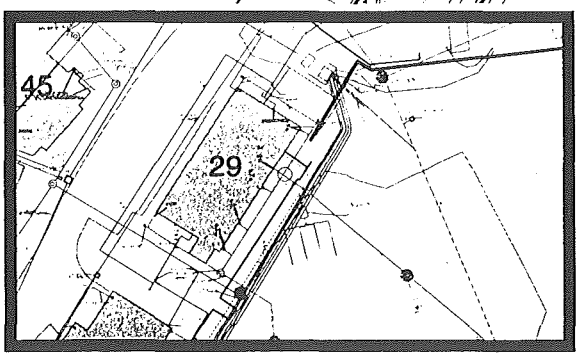
Job Supervisor/Foreman Date

Appendix E
DRAWINGS/SKETCHES



Appendix E
Take Shelter and Assembly Point Areas





Utilities around Building 29

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Appendix F
REFERENCES/ LESSONS LEARNED

DRIVER HAS NEAR MISS WITH ELECTROCUTION WHEN OVERHEAD WIRES CATCH ON TRUCK

Background:

On 9-23-99 an equipment hauling subcontractor arrived at the Rocky Flats Environmental Technology Site (RFETS) to relocate four pieces of subcontractor heavy equipment. The two pieces of equipment involved in this incident were tracked excavators, both equipped with building demolition equipment, one with a metal shear attachment and the other with a concrete crushing attachment. Both pieces of equipment had been previously delivered to RFETS by the same transporter without incident. On this day, the driver was escorted to the 960 Staging Area of the Site by another employee to retrieve the excavators. The driver deviated from his previously approved delivery and exit route and encountered interference from an overhead telecommunications line at the intersection of the south inner Patrol Road and Sixth Street west of Building 771. At this time, approximately 12:00 noon, the truck driver exited the cab of his truck, climbed the boom of the excavator and with his bare hands flipped the telecommunications line over the high point of the boom that was approximately 18' above the ground. The driver exposed himself to a fall hazard and a shock hazard from the energized electrical lines located approximately 2' above the telecommunications line. The escort told the driver that this was not acceptable practice, the escort failed however to notify supervision or to stop the activity. They then proceeded to Portal 2 and exited the Protected Area. At approximately 2:20 PM this process was repeated with the second excavator at the same location. RFETS personnel had observed this breach in safety practices and reported the incidents to their supervision.

Analysis:

Due to the construction and demolition activities currently underway in support of the Rocky Flats Environmental Technology Site (RFETS) closure mission, heavy equipment of this type is in constant movement around the Site. Unapproved field changes can create unanticipated/uncontrolled hazards. In this case, unauthorized deviation from previously approved routes of travel caused this incident during an otherwise routine activity. Work should be planned and the plan should be followed (Plan The Work/Work The Plan). Deviations from the plan (field changes) need to be reviewed and approved prior to implementation.

Lessons Learned:

The potential for this incident to occur exists on other sites, especially on construction or demolition projects where heavy equipment such as cranes, drill rigs, excavators or other tall pieces of equipment are being moved around the project. The installation of temporary overhead wiring or utilities can also increase the potential for such an incident to occur. Depending on voltage, OSHA regulation 29CFR 1926, Subpart V-Power Transmission and Distribution, specifies minimum safe distances from energized lines for equipment and personnel. In spite of good work planning, unexpected hazards can arise. In these cases, work should be stopped and re-evaluated so that appropriate hazard controls can be implemented.

Recommendations:

Briefings should be conducted to ensure that subcontractor personnel are aware of safety standards. Personnel should be informed that work should be stopped when unexpected hazards are encountered.

Contact:

Jim McLaughlin, Lessons Learned, 303-966-3471 or james.mclaughlin @rfets.gov

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Back to Lessons Learned

Appendix G
MISCELLANDOUS
(USQ, RWP, Permits, etc.)

INTER OFFICE MEMO B W XT.

Date: April 23, 2002

cc. L. Koehmstedt

From: W. L. Johanan – OSW-430

Subject: Structural Survey of Building 29, RE: 29 CFR 1926.850 (a)

To: Bud Thompson – Project Manager

Please be advised that we have performed a structural review and walk down and found them to be satisfactory based on the demolition process and the work plan.

Please call me if you have any further questions.

W. L. Johanan

W. L. Johanan P.E.
Site Structural Engineer

STATE OF OHIO
WILLIAM L. JOHANAN
E-44883
REGISTERED
PROFESSIONAL ENGINEER

B 3806 39

No USQs or RWPs are required at this time. An excavation permit will be required for the slab removal and a burn permit will be required for torch cutting rebar.

Rad Summary

Appendix C

Radiological Summary

RSDSs Before and After Asbestos Removal

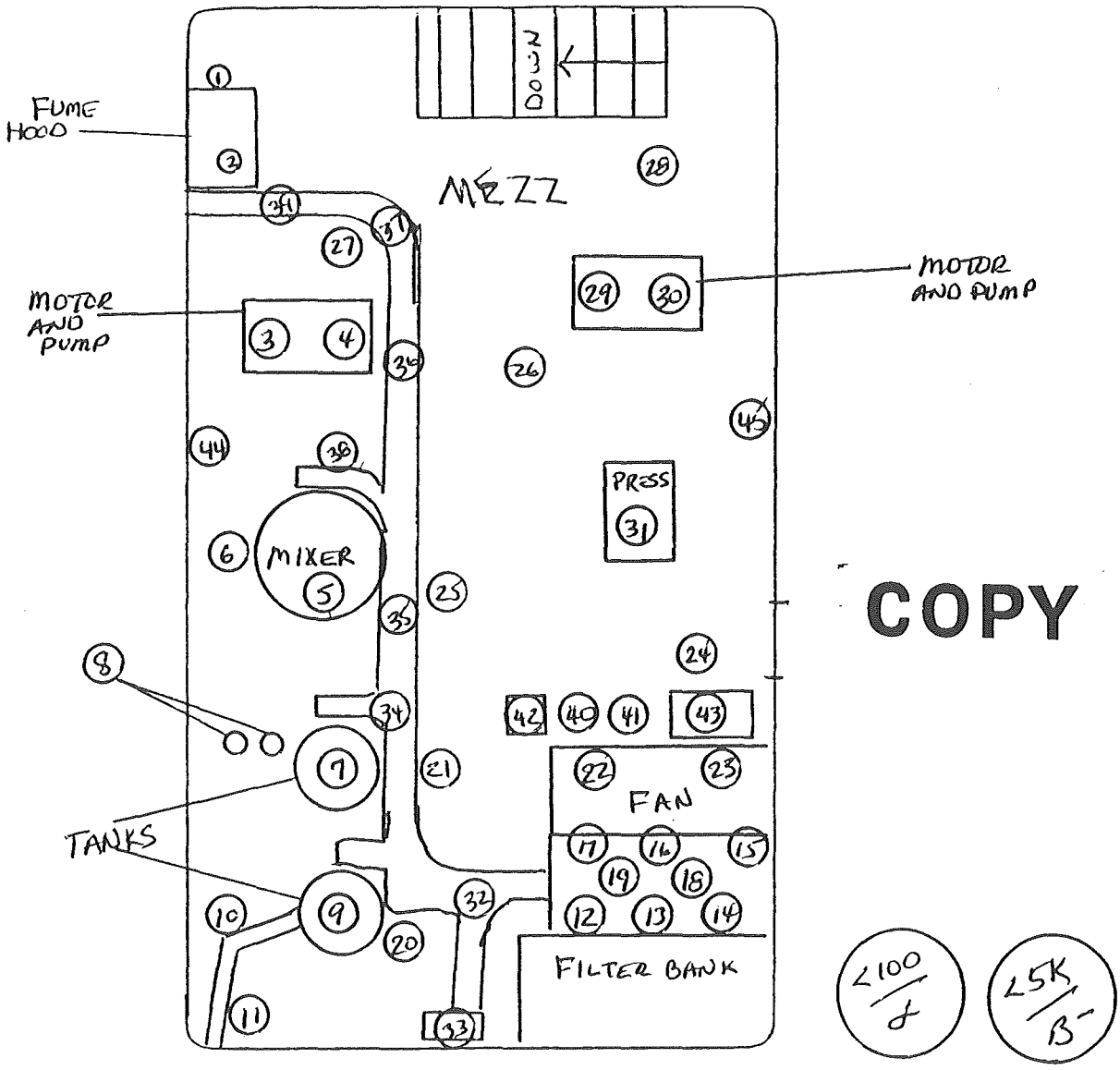
1 of 10 11

DJH 2-12-02

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLDG 29 - ROOM 6 - MEZZ	SURVEY NO. 02-TF-0098
PURPOSE: CHARACTERIZATION	RWP NO. N/A
	DATE: 1-21-02
	TIME: 1530

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact

△# = mrem/hr neutron

[#] = air sample number

(#) = swipe number

(#/α) or/β = direct cont. measurement in dpm/100cm² AND LARGE AREA WIPES

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5439/5298	12-10-02
	N/A	

Completed by: (Signature)	[redacted]	Date: 1-31-02
Completed by: (Print Name) DANIEL J. HARVEY		
Counted by: (Signature)	[redacted]	Date: 1/31/02
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP # [redacted]	Date: 02/13/02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

P2

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Survey No. 02-TF-0098

Page ____ of ____

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE	ATTACHED		FUME HOOD 1/5
2				FUME HOOD 1/5
3				MOTOR
4				PUMP
5				MIXER
6				MIXER PIPING
7				TANK
8				FILTERS
9				TANK
10-11				PIPING
12-14				FILTERS
15-17				BLADES
18-19				FLOOR
20-21				FLOOR
22-23				FAN HOUSING
24-28				FLOOR
29				MOTOR
30				PUMP
31				PRESS
32-39				VENT. DUCT
40				FILTER DRUM
41				VACUUM
42				TABLE
43				LIFT
44-45				WALLS
			A	
		N		

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

COMMENTS: N/A

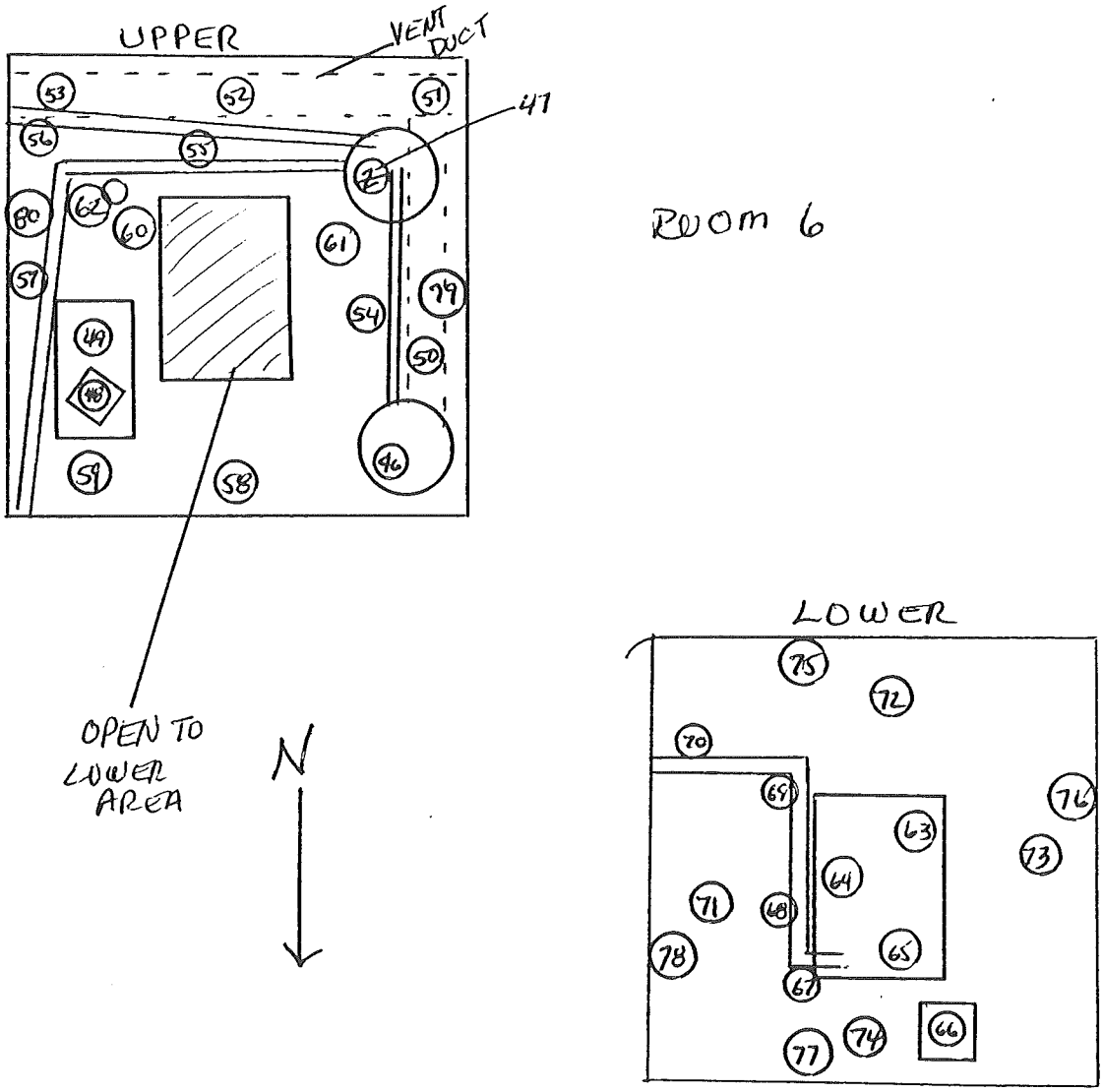
NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample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

ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLDG 29 - ROOM 6 - MEZZ	SURVEY NO. 02-TF-0098
PURPOSE: CHARACTERIZATION	RWP NO. N/A
	DATE: 1-21-02
	TIME: 1530

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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
	SEE PAGE 1	

Completed by: (Signature)	HP #	Date:
Completed by: (Print Name)		
Counted by: (Signature)	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

SEE PAGE 1

ML-9620 (2-98)

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Survey No. 02-TF-0098

Page ____ of ____

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
~~1-2~~ 46-47 SEE ATTACHED				TANK
48				MOTOR
49				PUMP
50-53				VENT DUCT
54-57				PIPING
58-61				FLOOR
62				HOPPER
63-65				TANK
66				TABLE
67-70				PIPING
71-74				FLOOR
75-80				WALLS
			A	
		N		

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

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)

Alpha/Beta Analysis

Batch ID: 02-TF-0098 HARVEY(80) BSB

Batch File: Smear Unit 1 - 200201211605
Group: C
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 1/21/2002
Count Time (min): 1.5
Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	142	0.00	0.66	1.65	4.09
2	48	0.00	0.66	0.51	3.40
3	6	3.61	5.66	0.50	3.40
4	20	0.00	0.66	0.51	3.40
5	75	1.62	4.03	2.78	4.68
6	1	3.60	5.66	5.05	5.68
7	114	1.62	4.03	0.00	2.53
8	125	0.00	0.66	0.00	2.53
9	36	1.62	4.03	1.64	4.09
10	99	3.61	5.66	2.77	4.68
11	4	3.61	5.66	0.50	3.40
12	99	0.00	0.66	6.20	6.12
13	33	1.62	4.03	3.92	5.21
14	59	0.00	0.66	0.00	2.53
15	65	0.00	0.66	0.51	3.40
16	10	0.00	0.66	1.65	4.09
17	12	0.00	0.66	0.51	3.40
18	91	1.62	4.03	2.78	4.68
19	37	0.00	0.66	1.65	4.09
20	24	0.00	0.66	1.65	4.09

DJH DJH

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
21	38	0.00	0.66	1.65	4.09
22	1	0.00	0.66	1.65	4.09
23	115	1.62	4.03	1.64	4.09
24	1	7.58	7.98	1.62	4.10
25	29	0.00	0.66	9.61	7.28
26	65	0.00	0.66	2.79	4.68
27	35	0.00	0.66	0.51	3.40
28	21	0.00	0.66	0.51	3.40
29	13	0.00	0.66	2.79	4.68
30	129	0.00	0.66	5.06	5.68
31	79	0.00	0.66	0.00	2.53
32	9	0.00	0.66	2.79	4.68
33	31	0.00	0.66	5.06	5.68
34	142	0.00	0.66	0.00	2.53
35	37	0.00	0.66	0.51	3.40
36	29	0.00	0.66	1.65	4.09
37	30	0.00	0.66	5.06	5.68
38	71	0.00	0.66	2.79	4.68
39	30	0.00	0.66	2.79	4.68
40	65	3.60	5.66	6.19	6.12
41	58	0.00	0.66	2.79	4.68
42	42	3.60	5.66	5.05	5.68
43	113	0.00	0.66	2.79	4.68
44	139	1.62	4.03	0.51	3.40
45	60	0.00	0.66	0.00	2.53
46	139	0.00	0.66	3.93	5.21
47	15	1.62	4.03	0.00	2.53

DJH DJH

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
48	108	5.59	6.91	0.49	3.41
49	139	1.62	4.03	0.51	3.40
50	38	1.62	4.03	3.92	5.21
51	60	0.00	0.66	0.51	3.40
52	73	0.00	0.66	0.51	3.40
53	33	0.00	0.66	3.93	5.21
54	22	0.00	0.66	3.93	5.21
55	133	0.00	0.66	0.00	2.53
56	131	1.62	4.03	2.78	4.68
57	18	1.62	4.03	1.64	4.09
58	3	1.62	4.03	3.92	5.21
59	39	0.00	0.66	5.06	5.68
60	15	0.00	0.66	0.51	3.40
61	41	0.00	0.66	0.51	3.40
62	144	0.00	0.66	1.65	4.09
63	112	1.62	4.03	5.06	5.68
64	11	0.00	0.66	1.65	4.09
65	40	0.00	0.66	3.93	5.21
66	23	0.00	0.66	0.00	2.53
67	87	0.00	0.66	0.51	3.40
68	12	0.00	0.66	2.79	4.68
69	92	1.62	4.03	2.78	4.68
70	140	1.62	4.03	0.51	3.40
71	115	0.00	0.66	2.79	4.68
72	114	0.00	0.66	1.65	4.09
73	92	1.62	4.03	3.92	5.21
74	109	1.62	4.03	5.06	5.68

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
75	49	0.00	0.66	3.93	5.21
76	140	1.62	4.03	3.92	5.21
77	31	0.00	0.66	1.65	4.09
78	14	1.62	4.03	2.78	4.68
79	31	0.00	0.66	1.65	4.09

DJH DJH

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02-TF-0098 HARVEY(80) BSB

Alpha/Beta Analysis

Batch ID: 02-TF-0098 HARVEY (#80) BSB

Batch File: Smear Unit 1 - 200201211821

Group: C

Device: Unit 1

Geometry: Swipe/Smear

Serial Number: 64937

Acquisition Date: 1/21/2002

Count Time (min): 9.9

Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
80 +	38	1.13	1.50	1.49	1.86
1/22/02		DJH		DJH	

C10 8102

Protocol #: 2 PW H3 #403727 User : [redacted]

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	6.77
Region B:	2.0	- 18.6	0	0.0	6.73
Region C:	40.0	- 2000	0	0.0	12.88

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0098 HARVEY(80) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT2.DAT
Count Data Filename: C:\DATA\SDATA2.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.77	6.73	12.88	556.48	4	B		0.00
0	2.00	393.50	380.53	0.00	510.75	1		817.12	84.07
1	2.00	0.73	0.42	0.00	640.26	0		1.36	7.86
2	2.00	0.00	0.00	0.00	521.16	0		0.00	0.00
3	2.00	0.00	0.00	1.12	479.98	0		0.00	0.00
4	2.00	1.23	1.27	0.00	329.74	0		3.44	12.13
5	2.00	0.00	0.00	0.00	423.05	0		0.00	0.00
6	2.00	1.23	1.18	0.00	498.06	0		2.59	9.15
7	2.00	0.00	0.00	0.00	525.49	0		0.00	0.00
8	2.00	0.00	0.00	0.00	563.55	0		0.00	0.00
9	2.00	0.00	0.00	0.00	459.34	0		0.00	0.00
10	2.00	0.00	0.00	0.12	563.10	0		0.00	0.00
11	2.00	0.56	0.45	0.00	529.34	0		1.14	8.53
12	2.00	0.73	0.64	0.00	519.44	0		1.50	8.69
13	2.00	0.10	0.14	0.00	511.60	0		0.20	8.44
14	2.00	0.00	0.00	0.00	478.19	0		0.00	0.00
15	2.00	0.00	0.00	0.00	419.14	0		0.00	0.00
16	2.00	0.00	0.00	0.00	472.88	0		0.00	0.00
17	2.00	0.23	0.27	0.00	434.28	0		0.52	9.40
18	2.00	0.00	0.00	0.00	384.87	0		0.00	0.00
19	2.00	0.00	0.00	0.00	363.84	0		0.00	0.00
20	2.00	0.00	0.00	0.00	639.43	0		0.00	0.00
21	2.00	0.00	0.00	0.00	571.96	0		0.00	0.00
22	2.00	0.00	0.00	0.00	497.66	0		0.00	0.00
23	2.00	0.00	0.00	0.00	339.13	0		0.00	0.00
24	2.00	0.00	0.00	0.00	342.67	0		0.00	0.00
25	2.00	0.23	0.00	0.62	516.90	0		0.47	8.46
26	2.00	0.00	0.00	0.00	293.98	0		0.00	0.00
27	2.00	0.00	0.00	0.00	559.64	0		0.00	0.00
28	2.00	0.00	0.00	1.90	344.39	0		0.00	0.00
29	2.00	2.21	2.25	0.00	459.31	0		4.91	10.11
30	2.00	0.00	0.00	0.62	357.34	0		0.00	0.00
31	2.00	0.00	0.00	0.00	683.04	0		0.00	0.00
32	2.00	0.00	0.00	2.62	417.67	0		0.00	0.00
33	2.00	0.00	0.00	0.00	640.54	0		0.00	0.00
34	2.00	2.73	2.53	0.00	580.05	0		5.34	9.14
35	2.00	1.23	0.68	0.00	611.32	0		2.34	8.27

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
36	2.00	0.00	0.00	0.00	622.58	0	0.00	0.00
37	2.00	0.73	0.77	0.00	606.09	0	1.39	8.08
38	2.00	1.45	1.49	0.00	651.72	0	2.68	8.10
39	2.00	1.73	1.67	0.00	502.37	0	3.63	9.34
40	2.00	2.23	2.27	0.00	492.81	0	4.73	9.69
41	2.00	1.23	1.27	0.00	545.93	0	2.47	8.73
42	2.00	0.00	0.00	2.03	450.74	0	0.00	0.00
43	2.00	2.86	2.71	0.00	557.46	0	5.71	9.37
44	2.00	0.00	0.00	0.00	610.39	0	0.00	0.00
45	2.00	0.00	0.00	0.00	548.55	0	0.00	0.00
46	2.00	0.00	0.00	0.00	544.39	0	0.00	0.00
47	2.00	0.00	0.00	0.00	506.97	0	0.00	0.00
48	2.00	1.73	0.70	0.00	485.13	0	3.71	9.54
49	2.00	1.77	1.31	0.00	581.92	0	3.46	8.71
50	2.00	2.86	2.90	0.00	586.93	0	5.56	9.14
51	2.00	0.00	0.00	0.00	548.37	0	0.00	0.00
52	2.00	0.23	0.27	0.62	515.65	0	0.47	8.47
53	2.00	0.23	0.00	0.00	529.86	0	0.47	8.37
54	2.00	1.84	1.57	0.00	615.29	0	3.49	8.50
55	2.00	0.73	0.42	2.12	641.57	0	1.35	7.85
56	2.00	2.09	2.13	0.00	600.90	0	4.02	8.71
57	2.00	3.37	3.41	2.12	617.36	0	6.39	9.12
58	2.00	1.23	1.13	0.62	526.52	0	2.52	8.88
59	2.00	2.98	3.02	0.00	594.39	0	5.77	9.14
60	2.00	1.95	1.67	0.00	621.80	0	3.68	8.50
61	2.00	0.00	0.00	1.62	237.17	0	0.00	0.00
62	2.00	0.00	0.02	0.00	534.38	0	0.00	0.00
63	2.00	0.10	0.00	0.00	529.08	0	0.21	8.31
64	2.00	1.37	1.32	0.00	498.09	0	2.89	9.21
65	2.00	2.73	2.77	0.00	684.91	0	4.92	8.42
66	2.00	0.00	0.00	0.00	289.65	0	0.00	0.00
67	2.00	0.00	0.00	2.12	498.10	0	0.00	0.00
68	2.00	1.23	1.27	1.62	612.95	0	2.34	8.25
69	2.00	2.23	1.88	0.00	660.36	0	4.08	8.36
70	2.00	2.94	2.98	0.00	621.70	0	5.56	8.92
71	2.00	0.64	0.34	0.00	636.87	0	1.20	7.84
72	2.00	0.00	0.00	0.00	501.05	0	0.00	0.00
73	2.00	2.23	1.48	0.00	605.46	0	4.27	8.74
74	2.00	1.73	1.20	0.00	485.05	0	3.71	9.54
75	2.00	0.00	0.00	0.00	593.92	0	0.00	0.00
76	2.00	0.00	0.00	0.00	533.58	0	0.00	0.00
77	2.00	0.00	0.00	0.00	540.15	0	0.00	0.00
78	2.00	0.00	0.00	0.00	407.22	0	0.00	0.00
79	2.00	0.23	0.27	0.00	651.88	0	0.42	7.56
80	2.00	0.00	0.00	0.00	615.20	0	0.00	0.00

DJH

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RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29-BUILDING	SURVEY NO 02-TF-0187
PURPOSE: INVESTIGATIVE SURVEY PRIOR TO ASBESTOS REMOVAL	RWP NO. N/A
	DATE: 2-5-2002
	TIME: 1600

MAP / DRAWING

108 SMEARS AND DIRECTS TAKEN ON SUSPECTED ASBESTOS PIPING AND VENTILATION DUCTS THROUGHOUT THE BUILDING.

SMEAR RESULTS ON PAGES 3-9

COPY

<100 / α

<5K / β-

LEGEND:

= mrem/hr (γ) whole body

#E = mrem/hr (β+η+γ) extremity on contact

K = factor of 1000

—·—·— = radiological boundary

△# = mrem/hr neutron

(#) = swipe number

[#] = air sample number

(#/α) or /β = direct contamination measurement in dpm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5603/5604	2-6-2003
	N/A	

Completed by: (Signature)	HP# [redacted]	Date: 4-12-2002
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)	[redacted]	Date: 4-12-02
Reviewed/Approved by: (Print Name) GALEN TOMLINSON		

Survey No. 02-TF-0187

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-108	SEE	ATTACHED		PIPING AND DUCTWORK
		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)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.20		0.00	2.09	
A2	2	0.00	2.24		0.00	1.49	
A3	3	0.00	2.05		0.00	1.88	
A4	4	0.00	2.03		2.19	2.96	
B1	5	1.85	2.04		0.21	1.68	
B2	6	0.00	2.07		0.27	1.72	
B3	7	0.00	1.91		0.00	1.68	
B4	8	0.00	1.89		0.78	1.59	
C1	9	1.68	2.26		1.63	4.73	
C2	10	0.00	2.14		0.88	3.32	
C3	11	0.00	1.99		0.00	2.41	
C4	12	1.66	1.94		0.00	1.93	
D1	13	0.00	2.20		0.00	1.51	
D2	14	0.00	2.17		1.05	1.97	
D3	15	0.00	2.06		0.27	1.94	
A1	16	0.00	2.19		0.00	1.63	
A2	17	1.70	2.24		0.00	1.49	
A3	18	1.58	2.04		0.00	1.41	
A4	19	0.00	2.03		2.19	2.96	
B1	20	0.00	2.04		0.35	1.68	
B2	21	0.00	2.07		0.27	1.72	
B3	22	0.00	1.94		2.17	2.37	
B4	23	0.00	1.88		0.00	1.12	
C1	24	1.67	2.28		4.32	5.10	
C2	25	0.00	2.14		0.88	3.32	
C3	26	0.00	1.98		0.00	1.60	
C4	27	3.57	2.70		0.00	1.43	
D1	28	0.00	2.21		1.13	2.02	
D2	29	0.00	2.17		1.05	1.97	
D3	30	0.00	2.06		0.00	1.44	
A1	31	1.63	2.19		0.00	1.63	
A2	32	0.00	2.25		1.14	1.99	

Carol Y. Robinson

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A3	33	0.00	2.07		2.19	2.57	
A4	34	1.49	2.02		0.80	2.68	
B1	35	0.00	2.04		0.35	1.68	
B2	36	0.00	2.13		3.91	2.72	
B3	37	0.00	1.90		0.00	1.19	
B4	38	3.38	2.67		2.75	2.25	
C1	39	0.00	2.23		0.00	3.89	
C2	40	0.00	2.15		2.28	3.60	
C3	41	0.00	1.98		0.00	1.60	
C4	42	0.00	1.95		2.65	2.65	
D1	43	0.00	2.21		1.13	2.02	
D2	44	0.00	2.15		0.00	1.42	
D3	45	0.00	2.08		2.86	2.67	
A1	46	0.00	2.20		0.00	2.09	
A2	47	0.00	2.25		1.14	1.99	
A3	48	0.00	2.04		0.00	1.41	
A4	49	0.00	2.00		0.00	2.01	
B1	50	0.00	2.04		0.35	1.68	
B2	51	0.00	2.07		0.27	1.72	
B3	52	0.98	1.92		0.84	2.05	
B4	53	0.00	1.88		0.00	1.12	
C1	54	0.00	2.25		0.41	4.53	
C2	55	1.76	2.14		0.75	3.32	
C3	56	0.00	1.99		0.00	2.04	
C4	57	0.00	1.94		1.37	2.32	
D1	58	0.00	2.20		0.00	1.51	
D2	59	0.00	2.15		0.00	1.42	
D3	60	0.00	2.07		1.56	2.34	
A1	61	0.00	2.20		0.00	2.09	
A2	62	0.00	2.24		0.00	1.49	
A3	63	1.58	2.07		2.05	2.57	
A4	64	0.00	2.03		2.19	2.96	
B1	65	0.00	2.05		1.54	2.06	
B2	66	0.00	2.06		0.00	1.22	

Carol G. Robinson

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B3	67	0.00	1.95		3.36	2.65	
B4	68	0.00	1.88		0.00	1.12	
C1	69	0.00	2.25		0.00	4.33	
C2	70	0.00	2.13		0.00	2.66	
C3	71	0.00	1.98		0.00	1.60	
C4	72	0.00	1.94		1.37	2.32	
D1	73	0.00	2.20		0.00	1.51	
D2	74	0.00	2.17		1.05	1.97	
D3	75	0.00	2.06		0.27	1.94	
A1	76	0.00	2.19		0.00	1.63	
A2	77	0.00	2.24		0.00	1.49	
A3	78	0.00	2.04		0.00	1.41	
A4	79	1.49	2.02		0.80	2.68	
B1	80	0.00	2.03		0.00	1.19	
B2	81	0.00	2.06		0.00	1.22	
B3	82	0.00	1.91		0.00	1.68	
B4	83	0.00	1.88		0.00	1.12	
C1	84	0.00	2.25		0.00	4.33	
C2	85	1.76	2.14		0.75	3.32	
C3	86	0.00	1.99		0.00	2.04	
C4	87	1.65	1.95		2.53	2.65	
D1	88	0.00	2.20		0.00	1.51	
D2	89	0.00	2.18		2.42	2.40	
D3	90	0.00	2.06		0.00	1.44	
A1	91	0.00	2.20		0.00	2.09	
A2	92	0.00	2.25		1.14	1.99	
A3	93	0.00	2.06		0.95	2.25	
A4	94	0.00	2.03		2.19	2.96	
B1	95	0.00	2.05		1.54	2.06	
B2	96	0.00	2.09		1.48	2.10	
B3	97	0.00	1.90		0.00	1.19	
B4	98	0.00	1.88		0.00	1.12	
C1	99	0.00	2.25		0.41	4.53	
C2	100	0.00	2.14		0.00	3.00	
C3	101	0.00	1.98		0.00	1.60	

DJH ~~Page 3 of 4~~ 5 of 9 DJH

Carol G. Robinson

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
C4	102	0.00	1.93		0.00	1.43	
D1	103	0.00	2.21		1.13	2.02	
D2	104	0.00	2.20		3.78	2.76	
D3	105	0.00	2.06		0.00	1.44	
A1	106	0.00	2.21		0.00	2.47	
A2	107	1.70	2.24		0.00	1.49	
A3	108	0.00	2.04		0.00	1.41	

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Carol L. Robinson

Protocol #: 2 Name:PW H3 #401387 06-Feb-2002 11:17
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
HARVEY SUR #02-TF-0187 (1-108)/BKS
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On
Data/Application Drive & Path = c:\data

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
-1	10.00	9.51	8.66	5.28	B	3	650.		20.50
0	2.00	233.19	222.49	0.00	L	0	507.	492.00	9.53
1	2.00	0.00	0.00	0.00	L	0	551.	0.00	0.00
2	2.00	0.00	0.00	0.72		0	604.	0.00	0.00
3	2.00	0.00	0.00	0.00		0	538.	0.00	0.00
4	2.00	0.00	0.00	0.00		0	569.	0.00	0.00
5	2.00	0.00	0.00	0.00		12	463.	0.00	0.00
6	2.00	0.00	0.00	0.00		0	571.	0.00	0.00
7	2.00	0.00	0.00	0.00		22	572.	0.00	0.00
8	2.00	0.00	0.00	0.00		24	501.	0.00	0.00
9	2.00	0.00	0.00	1.72		0	535.	0.00	0.00
10	2.00	0.00	0.00	0.72		7	475.	0.00	0.00
11	2.00	0.00	0.00	0.00		0	553.	0.00	0.00
12	2.00	0.00	0.00	1.72		0	613.	0.00	0.00
13	2.00	0.00	0.00	1.22		0	585.	0.00	0.00
14	2.00	0.00	0.00	1.22		0	587.	0.00	0.00
15	2.00	0.00	0.00	2.44		0	602.	0.00	0.00
16	2.00	0.00	0.00	0.22		0	600.	0.00	0.00
17	2.00	0.00	0.00	1.72		0	502.	0.00	0.00
18	2.00	1.86	1.91	0.00		0	627.	3.47	277.6
19	2.00	0.00	0.00	0.00		0	627.	0.00	0.00
20	2.00	0.00	0.00	1.22		0	551.	0.00	0.00
21	2.00	0.00	0.00	0.00		12	534.	0.00	0.00
22	2.00	0.00	0.00	0.00		0	580.	0.00	0.00
23	2.00	0.00	0.00	1.22		0	562.	0.00	0.00
24	2.00	0.00	0.00	0.00		18	558.	0.00	0.00
25	2.00	0.00	0.00	0.00		11	544.	0.00	0.00
26	2.00	0.00	0.00	0.00		0	595.	0.00	0.00
27	2.00	0.00	0.00	1.22		6	525.	0.00	0.00
28	2.00	0.00	0.00	0.72		11	584.	0.00	0.00
29	2.00	0.00	0.00	0.00		0	529.	0.00	0.00
30	2.00	0.00	0.00	1.22		14	608.	0.00	0.00
31	2.00	0.00	0.00	0.00		0	504.	0.00	0.00
32	2.00	0.00	0.00	0.00		15	501.	0.00	0.00
33	2.00	1.24	0.64	0.00		0	630.	2.31	406.3
34	2.00	0.00	0.00	0.00		14	597.	0.00	0.00
35	2.00	0.00	0.00	3.22		0	623.	0.00	0.00
36	2.00	0.00	0.00	0.00		36	585.	0.00	0.00
37	2.00	0.00	0.00	0.22		0	582.	0.00	0.00
38	2.00	0.00	0.00	0.00		0	490.	0.00	0.00
39	2.00	0.00	0.00	0.00		0	605.	0.00	0.00
40	2.00	0.00	0.00	0.86		0	630.	0.00	0.00
41	2.00	3.42	1.64	0.00		8	641.	6.33	170.1
42	2.00	0.00	0.00	0.72		12	562.	0.00	0.00
43	2.00	0.00	0.00	0.22		0	613.	0.00	0.00

AJH
Carol G. Robinson

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SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
44	2.00	0.00	0.01	0.00		0	636.	0.00	0.00
45	2.00	0.00	0.00	0.00		0	666.	0.00	0.00
46	2.00	0.00	0.00	0.72		14	637.	0.00	0.00
47	2.00	0.00	0.00	0.72		14	649.	0.00	0.00
48	2.00	1.46	0.00	20.39		5	643.	2.68	362.7
49	2.00	0.00	0.00	1.22		6	669.	0.00	0.00
50	2.00	2.61	0.96	0.22		0	594.	5.03	203.0
51	2.00	0.00	0.00	0.00		0	683.	0.00	0.00
52	2.00	0.00	0.00	0.72		18	621.	0.00	0.00
53	2.00	0.00	0.00	0.22		8	569.	0.00	0.00
54	2.00	0.00	0.00	0.00		0	627.	0.00	0.00
55	2.00	0.00	0.00	2.72		0	637.	0.00	0.00
56	2.00	0.00	0.00	1.22		0	517.	0.00	0.00
57	2.00	0.00	0.00	0.22		0	669.	0.00	0.00
58	2.00	0.00	0.00	0.00		0	579.	0.00	0.00
59	2.00	0.00	0.00	0.00		0	562.	0.00	0.00
60	2.00	0.00	0.00	0.00		0	635.	0.00	0.00
61	2.00	0.00	0.00	0.00		7	572.	0.00	0.00
62	2.00	0.00	0.00	0.00		0	608.	0.00	0.00
63	2.00	0.00	0.00	0.00		9	621.	0.00	0.00
64	2.00	1.62	0.91	0.00		0	653.	2.96	315.7
65	2.00	0.00	0.00	0.00		0	659.	0.00	0.00
66	2.00	0.00	0.00	0.00		0	649.	0.00	0.00
67	2.00	0.00	0.00	0.00		0	650.	0.00	0.00
68	2.00	0.00	0.00	0.00		0	641.	0.00	0.00
69	2.00	0.00	0.00	0.00		0	532.	0.00	0.00
70	2.00	0.00	0.00	0.00		14	603.	0.00	0.00
71	2.00	0.00	0.00	0.00		0	614.	0.00	0.00
72	2.00	0.00	0.00	0.00		0	621.	0.00	0.00
73	2.00	0.00	0.00	0.72		15	560.	0.00	0.00
74	2.00	0.00	0.00	0.00		0	620.	0.00	0.00
75	2.00	0.00	0.00	0.00		0	644.	0.00	0.00
76	2.00	0.00	0.00	0.00		7	566.	0.00	0.00
77	2.00	0.49	0.00	1.22		0	655.	0.89	1004.
78	2.00	0.00	0.00	0.00		0	592.	0.00	0.00
79	2.00	0.21	0.00	0.00		0	514.	0.43	2347.
80	2.00	0.00	0.00	0.00		0	617.	0.00	0.00

Carol G. Robinson

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Protocol #: 2 Name:PW H3 #401387 06-Feb-2002 15:57
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
HARVEY SUR #02-TF-0187 (1-108)/BKS
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On
Data/Application Drive & Path = c:\data

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
81	2.00	0.00	0.00	0.72		0	554.	0.00	0.00
82	2.00	0.00	0.00	0.00		0	559.	0.00	0.00
83	2.00	0.00	0.00	0.00		0	603.	0.00	0.00
84	2.00	0.00	0.00	1.22		0	651.	0.00	0.00
85	2.00	0.00	0.00	0.00		0	309.	0.00	0.00
86	2.00	0.00	0.00	0.00		0	575.	0.00	0.00
87	2.00	0.00	0.00	0.00		0	503.	0.00	0.00
88	2.00	0.00	0.00	1.22		0	362.	0.00	0.00
89	2.00	0.00	0.00	0.00		14	641.	0.00	0.00
90	2.00	0.00	0.00	0.00		0	509.	0.00	0.00
91	2.00	0.00	0.00	0.00		0	559.	0.00	0.00
92	2.00	0.00	0.00	0.00		0	638.	0.00	0.00
93	2.00	0.00	0.00	0.00		12	577.	0.00	0.00
94	2.00	0.00	0.00	0.00		0	598.	0.00	0.00
95	2.00	0.00	0.00	0.00		0	631.	0.00	0.00
96	2.00	9.86	3.69	0.00		0	598.	18.93	66.14
97	2.00	0.00	0.00	0.00		0	467.	0.00	0.00
98	2.00	0.00	0.00	0.72		14	595.	0.00	0.00
99	2.00	0.00	0.00	0.00		0	597.	0.00	0.00
100	2.00	0.00	0.00	0.00		0	559.	0.00	0.00
101	2.00	0.00	0.00	0.00		0	510.	0.00	0.00
102	2.00	0.00	0.00	0.00		0	424.	0.00	0.00
103	2.00	0.00	0.00	0.00		16	591.	0.00	0.00
104	2.00	0.00	0.00	1.22		0	640.	0.00	0.00
105	2.00	0.00	0.00	0.00		0	624.	0.00	0.00
106	2.00	0.00	0.00	0.22		0	533.	0.00	0.00
107	2.00	0.00	0.00	0.00		0	585.	0.00	0.00
108	2.00	0.00	0.00	0.00		0	500.	0.00	0.00

DJH
Carol Y. Robinson
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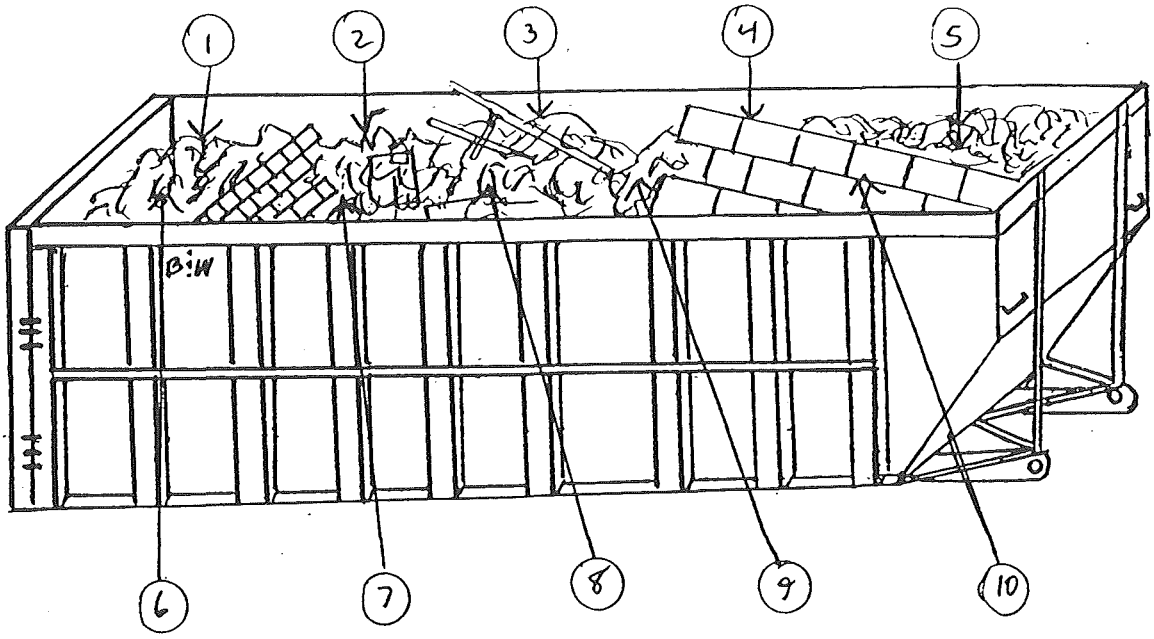
RADIOLOGICAL SURVEY DATA SHEET

PAGE 1 of 4

LOCATION: (BLDG./AREA/ROOM) Bld 29	SURVEY NO. 02-TF- ~~0386~~ 0385
PURPOSE: Roll-Off Box K190	RWP NO. N/A
	DATE: 2/28/02
	TIME: 1000

MAP/DRAWING



COPY

DIRECT SURVEY on SMEAR LOCATIONS
α: < 100 DPM/100cm² β < 5000 DPM/100cm²

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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
NE ELECTRA	5267 / 5440	01/15/03
	N/A	

Completed by: (Signature)	[redacted]	Date: 3-1-02
Completed by: (Print Name) MICHAEL J RUBADUE		
Counted by: (Signature) SEE	HP #	Date:
Counted by: (Print Name) ATTACHED		
Reviewed/Approved by: (Signature) RMCoblentz	HP # [redacted]	Date: 03/04/02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

Survey No. 02-TF-0385

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE	ATTACHED	SHEETS	ROLL OFF K190
2	↓	↓	↓	↓
3				
4				
5				
6				
7				
8				
9				
10	↓	↓	↓	↓
		N	A	

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

COMMENTS: SMEARS FIELD SCREENED <1000 dpm/100cm²

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-0620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR012
Batch Ended: 2/28/02 12:58

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE SUR #02-TF-0385 (10)/BKS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.21		0.83	2.80	
A2	2	0.00	2.29		5.12	3.04	
A3	3	0.00	2.06		0.95	2.25	
A4	4	1.48	2.04		4.56	3.45	
B1	5	1.85	2.03		0.00	1.19	
B2	6	0.00	2.11		2.70	2.43	
B3	7	0.00	1.96		4.54	2.91	
B4	8	0.00	1.88		0.00	1.12	
C1	9	0.00	2.25		0.41	4.53	
C2	10	0.00	2.12		0.00	1.77	

MR MR Carol L. Robinson

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Protocol #: 3 Name:Pw H3 #401387 28-Feb-2002 14:20
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 02-TF-0385 (L1-L10) CYR
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On
Data/Application Drive & Path = c:\data

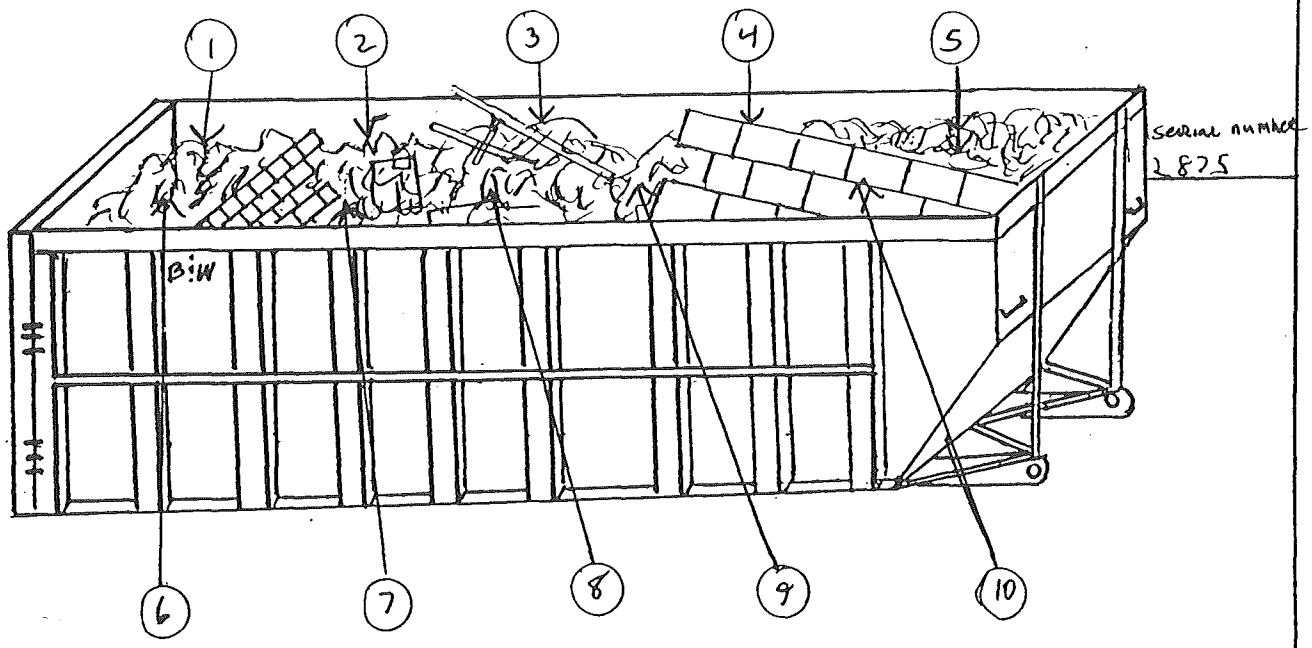
SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:25%
-1	10.00	7.49	6.99	4.49	B	7	649.		23.11
0	2.00	910.06	863.38	2.51	L	1	558.	1817.45	4.74
1	2.00	0.00	0.00	0.51	L	0	535.	0.00	0.00
2	2.00	0.00	0.00	1.01		23	503.	0.00	0.00
3	2.00	0.00	0.00	0.01		18	510.	0.00	0.00
4	2.00	3.01	2.51	1.51		0	496.	6.44	162.6
5	2.00	0.00	0.00	1.51		16	528.	0.00	0.00
6	2.00	0.00	0.00	3.01		14	462.	0.00	0.00
7	2.00	0.00	0.00	0.51		0	461.	0.00	0.00
8	2.00	0.00	0.00	0.01		0	490.	0.00	0.00
9	2.00	0.00	0.00	0.51		0	517.	0.00	0.00
10	2.00	0.00	0.00	3.01		0	522.	0.00	0.00

MGR
Carol Y. Robinson
#413

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Bldg 29 out side	SURVEY NO. 02-TF-0384
PURPOSE: Roll-Off S/N 2875	RWP NO. N/A
	DATE: 2/28/02
	TIME: 1000

MAP/DRAWING



COPY

Direct survey on smear locations

$\alpha\beta < 100$ dpm/100cm² $\beta^- < 5000$ dpm/100cm²

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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
NE ELECTRA	5293/5300	2/27/03

Completed by: (Signature)	HP # [redacted]	Date: 3-1-02
Completed by: (Print Name) Sean P Kubera		
Counted by: (Signature) see	HP #	Date:
Counted by: (Print Name) attached		
Reviewed/Approved by: (Signature) RM Coblentz	H [redacted]	Date: 03/04/02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

Survey No.
02-TF-0386

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	see	ATTACHED	SHEETS	ROLL OFF # 2875
2	↓	↓	↓	↓
3	↓	↓	↓	↓
4	↓	↓	↓	↓
5	↓	↓	↓	↓
6	↓	↓	↓	↓
7	↓	↓	↓	↓
8	↓	↓	↓	↓
9	↓	↓	↓	↓
10	↓	↓	↓	↓
		N/A	N/A	

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

COMMENTS: SMEARS FIELD SCREENED <1000 dpm/100cm²

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)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR011
Batch Ended: 2/28/02 12:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: RUBADUE SUR #02-TF-0386 (10)/BKS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.20		0.00	2.09	
A2	2	0.00	2.26		2.46	2.39	
A3	3	0.00	2.05		0.00	1.88	
A4	4	0.00	2.02		0.94	2.68	
B1	5	0.00	2.05		1.54	2.06	
B2	6	0.00	2.06		0.00	1.22	
B3	7	0.00	1.94		2.17	2.37	
B4	8	0.00	1.89		0.78	1.59	
C1	9	3.85	3.08		0.00	3.65	
C2	10	8.02	4.20		0.38	3.32	

MK MK

Carol G. Robinson

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Protocol# 5 - Smears.lsa User: [redacted]

~~COLEMAN 02-R-0251 (Y1-Y10) AC~~ 2-28-02 cyR

Rubadue 02-TF-0386 (I1-I10) CYR

Cycle 1 Results

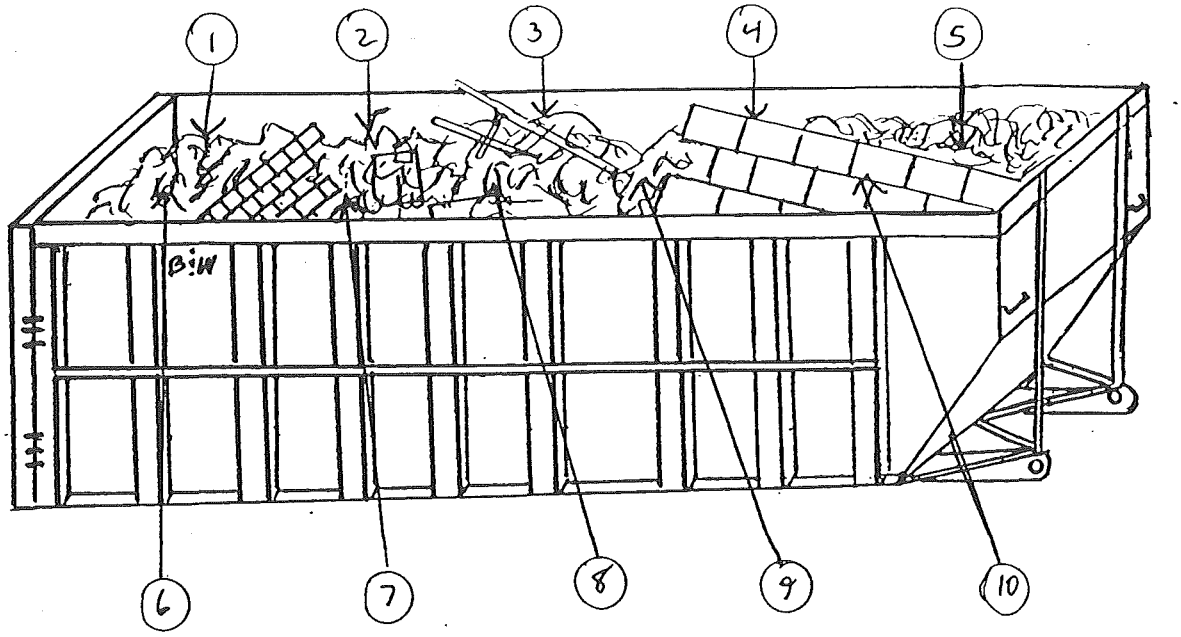
S#	Count Time	CPMA	CPMB	CPMC	LUM	tSIE	DPM1	A:2S%	MESSAGES
-1	10.00	14	9	6	1	652.61	0	17.2	B
0	2.00	1171	1063	0	0	572.87	2146	4.2	
1	2.00	0	0	0	5	525.30	0	0.0	
2	2.00	0	0	0	0	565.70	0	0.0	
3	2.00	0	0	0	9	609.10	0	0.0	
4	2.00	0	0	0	4	602.34	0	0.0	
5	2.00	0	0	1	0	565.50	0	0.0	
6	2.00	0	0	1	6	618.93	0	0.0	
7	2.00	0	0	0	0	631.14	0	0.0	
8	2.00	0	0	0	0	625.56	0	0.0	
9	2.00	0	1	0	0	595.79	0	0.0	
10	2.00	0	0	0	7	589.29	0	0.0	

MT Carol G. Robinson
#413

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29	SURVEY NO. 02-TF-0404
PURPOSE: Roll-Off Survey Box # B&W 12	RWP NO. N/A
	DATE: 3-5-02
	TIME: 1400

MAP/DRAWING



DIRECT MEASUREMENTS TAKEN AT SMEAR LOCATIONS

α < 100 dpm/100 cm² β^- < 5000 dpm/100 cm²

COPY

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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	5207	1-15-03
SAC-4	5247/5114	10-19-02

Completed by: (Signature)	[redacted]	Date: 4-2-02
Completed by: (Print Name) MICHAEL J RUBADUE		
Counted by: (Signature)	HP # [redacted]	Date: 3-5-02
Counted by: (Print Name) MICHAEL J RUBADUE		
Reviewed/Approved by: (Signature)	HP # [redacted]	Date: 4-5-02
Reviewed/Approved by: (Print Name) RMGblentz		

ML-9620 (2-98)

Survey No. 02-TF-0404

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-10	<1000	<20	N/A	SEE MAP

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

COMMENTS: N/A

N/A

NOTES:

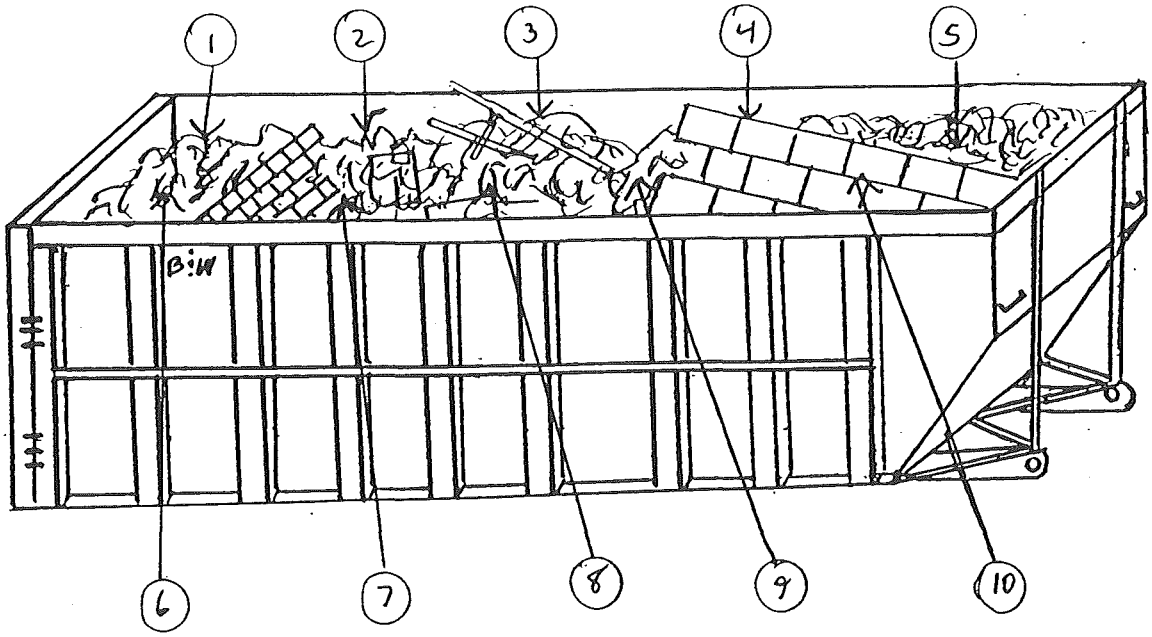
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type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

ML-0620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29	SURVEY NO. 02-TF-0410
PURPOSE: Roll-OFF SURVEY	RWP NO. N/A
	DATE: 3-6-02
	TIME: 0900

MAP/DRAWING



DIRECT MEASUREMENTS TAKEN AT SMEAR LOCATIONS:

$\alpha < 100$ dpm/100 cm^2 $\beta < 5000$ dpm/100 cm^2

COPY

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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	5267/5440	1-15-03
SAC-4	5247/5114	10-19-02

Completed by: (Signature)	[redacted]	Date: 4-2-02
Completed by: (Print Name) MICHAEL J. RUBADUE		
Counted by: (Signature)	[redacted]	Date: 3-6-02
Counted by: (Print Name) MICHAEL J. RUBADUE		
Reviewed/Approved by: (Signature)	[redacted]	Date: 04-5-02
Reviewed/Approved by: (Print Name) RM Coblentz		

ML-9620 (2-98)

Survey No. 02-TF-0410

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-10	<100	<20	N/A	SEE MAP

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

COMMENTS: N/A

N/A

NOTES:

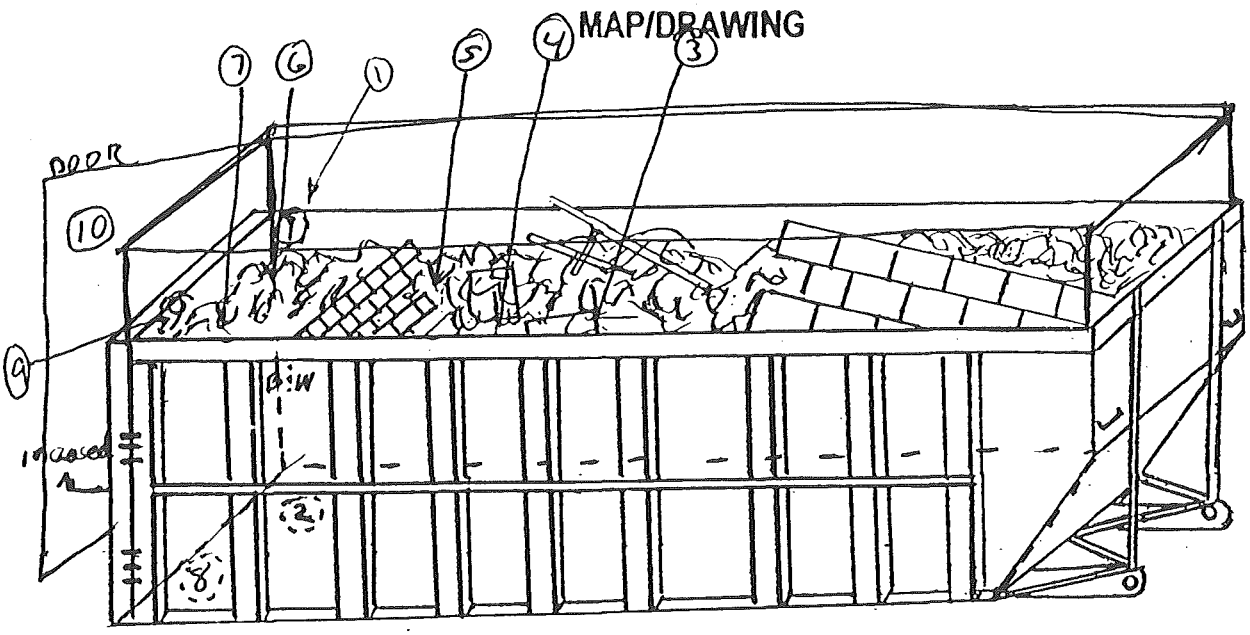
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type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

ML-0620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29 outside	SURVEY NO. 02-TF-0449
PURPOSE: ~~Rollout~~ Roll off survey of Box # B+W 30	RWP NO. N/A
	DATE: 3-13-02
	TIME: 1233

MAP/DRAWING



Box # B+W 30

COPY

DIRECT SURVEY α: <100 dpm/100cm² β: < 5000 dpm/100cm²

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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
NE ELECTRA	5443/5444	03/06/03

Completed by: (Signature) [signature]	HP # [redacted]	Date: 3/14/02
Completed by: (Print Name) Sean P Kubera		
Counted by: (Signature) See [signature] 3-18-02	HP #	Date:
Counted by: (Print Name) Attached		
Reviewed/Approved by: (Signature) RMCobleritz	HP # [redacted]	Date: 03/18/02
Reviewed/Approved by: (Print Name) RMCobleritz		

ML-9620 (2-98)

Survey No.
02-TF-0449

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See	ATTACHED	SHEET	(L) WALL
2				(L) FLOOR
3				CONTAINTS
4				
5				
6				
7				
8				(R) WALL
9				(R) FLOOR
10				DOOR inside
		N/A		

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

COMMENTS: Field scan of smears <1000 dpm/100cm²
N/A 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-0620A (4-98)

Alpha/Beta Analysis

Batch ID: 02-TF-0449 KUBERA(10) BSB

Batch File: Smear Unit 3 - 200203131547
Group: A
Device: Unit 3
Geometry: Swipe/Smear
Serial Number: 59123

Acquisition Date: 3/13/2002
Count Time (min): 1.5
Recalibration Date: 5/24/2003

ample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	11	0.00	0.90	0.79	5.50
2	103	0.00	0.90	0.79	5.50
3	133	0.00	0.90	0.00	4.85
4	29	0.00	0.90	0.79	5.50
5	36	1.19	3.89	0.00	4.85
6	11	3.08	5.43	3.36	6.61
7	24	0.00	0.90	3.38	6.60
8	18	0.00	0.90	0.79	5.50
9	42	1.19	3.89	2.08	6.08
10	18	0.00	0.90	0.00	4.10

SPT HK

B Smith Brown

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Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	8.88
Region B:	2.0 -	18.6	0	0.0	8.53
Region C:	40.0 -	2000	0	0.0	11.52

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0449 KUBERA(10) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT3.dat
Count Data Filename: C:\DATA\SDATA3.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	8.88	8.53	11.52	501.87	2	B		0.00
0	2.00	313.02	299.89	0.00	500.06	0		658.65	72.05
1	2.00	1.62	1.97	1.48	659.26	0		2.97	9.09
2	2.00	0.00	0.00	0.00	541.58	0		0.00	0.00
3	2.00	0.00	0.00	0.00	540.52	0		0.00	0.00
4	2.00	0.00	0.00	0.00	562.55	0		0.00	0.00
5	2.00	0.00	0.00	1.48	590.83	0		0.00	0.00
6	2.00	0.00	0.00	0.00	587.54	0		0.00	0.00
7	2.00	0.00	0.19	0.00	585.73	0		0.00	0.00
8	2.00	0.00	0.00	0.00	624.67	7		0.00	0.00
9	2.00	0.00	0.00	0.00	412.45	0		0.00	0.00
10	2.00	0.62	0.58	1.98	667.61	0		1.13	8.66

SJC

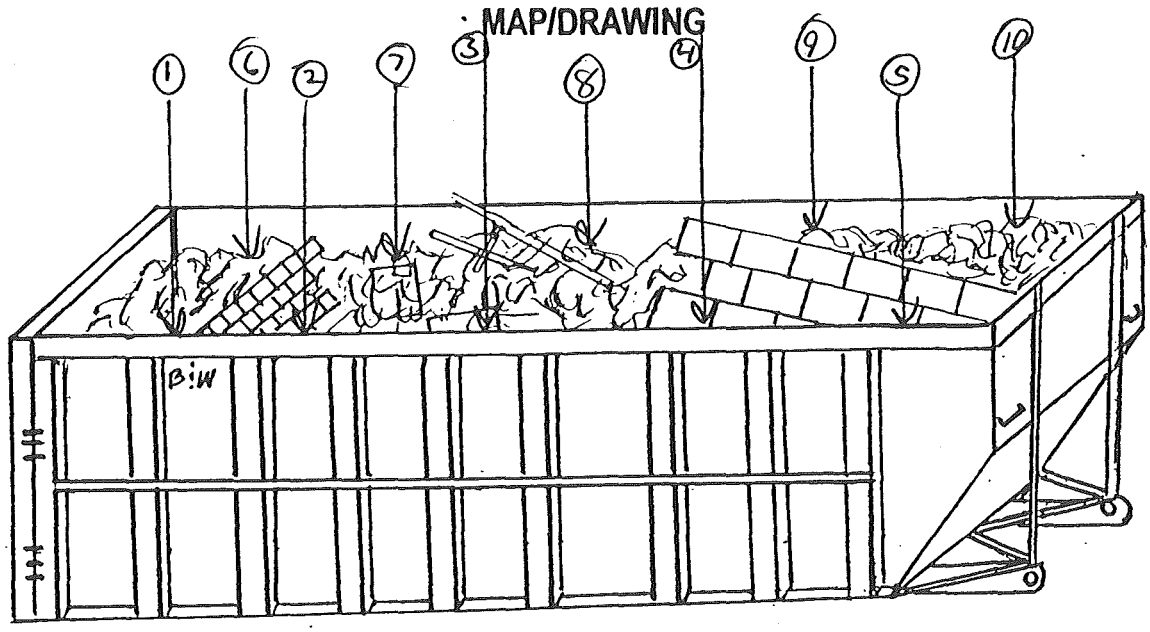
B Smith Brown

C37-6 102

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29 out side	SURVEY NO. 02-TF-0450
PURPOSE: ROLL off Survey of Box # B&W 12	RWP NO. N/A
	DATE: 3/13/02
	TIME: 1243

MAP/DRAWING



B&W 12

COPY

Direct Survey α: < 100 dpm/100cm² β⁻: < 5000 dpm/100cm²

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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
NE ELECTRA	5443/5444	03/06/03

Completed by: (Signature)	HP # [redacted]	Date: 3/14/02
Completed by: (Print Name) Sean P Kubeisa		
Counted by: (Signature) See	HP #	Date:
Counted by: (Print Name) ATTACHED		
Reviewed/Approved by: (Signature) RMCoblentz	HP # [redacted]	Date: 03/18/02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

Survey No.: 02-TF-0450

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See	ATTACHED	SHEETS	contents (L) side
2	↓	↓	↓	↓
3				
4				
5				↓
6				contents (R) side
7				
8				
9				
10	↓	↓	↓	↓
		N/A		

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

COMMENTS: Field scan of smears < 1000dpm/100cm²
N/A 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)

Alpha/Beta Analysis

Batch ID: 02-TF-0450 LIBERA(10) BSB

Batch File: Smear Unit 3 - 200203131547

Group: E

Device: Unit 3

Geometry: Swipe/Smear

Serial Number: 59123

Acquisition Date: 3/13/2002

Count Time (min): 1.5

Recalibration Date: 5/24/2003

ample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	56	1.19	3.89	5.96	7.55
2	14	1.19	3.89	2.08	6.08
3	1	3.08	5.43	0.00	4.10
4	140	1.19	3.89	0.00	4.85
5	127	0.00	0.90	0.00	4.10
6	12	0.00	0.90	0.79	5.50
7	100	1.19	3.89	0.00	4.10
8	89	0.00	0.90	3.38	6.60
9	17	1.19	3.89	0.78	5.50
10	93	1.19	3.89	3.37	6.61

SPK SPK

B Smith Brown

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	5.71
Region B:	2.0 -	18.6	0	0.0	5.43
Region C:	40.0 -	2000	0	0.0	11.30

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0450 KUBERA(10) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA1.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	5.71	5.43	11.30	612.13	7	B		0.00
0	2.00	791.57	763.26	1.20	536.49	0		1607.02	142.90
1	2.00	4.79	4.14	0.00	618.89	0		9.07	9.18
2	2.00	1.79	1.32	0.00	587.42	0		3.48	8.11
3	2.00	0.00	0.00	0.00	503.84	0		0.00	0.00
4	2.00	0.33	0.61	0.00	552.04	0		0.67	7.62
5	2.00	0.00	0.00	0.20	547.74	0		0.00	0.00
6	2.00	0.60	0.88	0.70	508.07	0		1.25	8.06
7	2.00	0.00	0.00	0.00	570.92	0		0.00	0.00
8	2.00	0.26	0.54	0.00	517.97	0		0.55	7.81
9	2.00	1.29	1.38	0.00	550.41	0		2.59	8.17
10	2.00	0.79	0.85	0.57	567.68	0		1.56	7.75

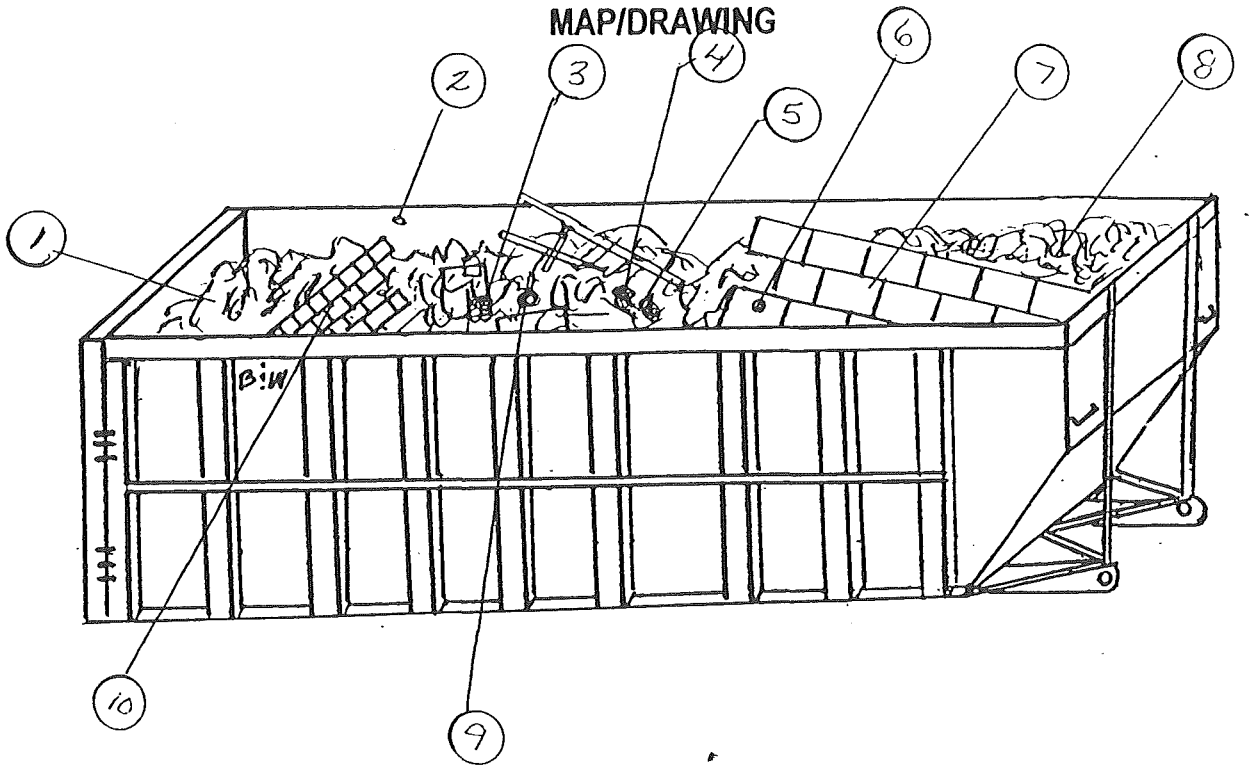
SPK

B Smith Brown

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM)	SURVEY NO. 02-TF-0451
PURPOSE: Roll OFF Survey of Box #30227	RWP NO. NA
	DATE: 03 13 02
	TIME: 1235

MAP/DRAWING



COPY

Direct Survey α <100 dpm/100cm² β <5000 dpm/100cm²

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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
NE Electra	5306/5318	022603

Completed by: (Signature)	HP # [redacted]	Date: 031402
Completed by: (Print Name) Winfield Cunningham II		
Counted by: (Signature) see attachment	HP #	Date:
Counted by: (Print Name) see Attachment		
Reviewed/Approved by: (Signature)	HP # [redacted]	Date: 03/18/02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

Survey No. CB TF 0451

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See	Attached	Sheets	Contents
2	↓	↓	↓	↓
3				
4				
5				
6				
7				
8				
9				
10	↓	↓	↓	↓
		N/A		

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

COMMENTS: Field scan of smears < 1000 dpm/100 cm²

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-0620A (4-98)

Alpha/Beta Analysis

Batch ID: 02-TF-0451 CUNNINGHAM(10) BSB

Batch File: Smear Unit 3 - 200203131548
Group: B
Device: Unit 3
Geometry: Swipe/Smear
Serial Number: 59123

Acquisition Date: 3/13/2002
Count Time (min): 1.5
Recalibration Date: 5/24/2003

ample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	134	0.00	0.90	0.79	5.50
2	51	1.19	3.89	0.00	3.18
3	108	0.00	0.90	0.00	4.10
4	137	0.00	0.90	2.09	6.08
5	149	0.00	0.90	0.00	3.18
6	19	1.19	3.89	0.78	5.50
7	91	1.19	3.89	0.78	5.50
8	33	0.00	0.90	2.09	6.08
9	13	0.00	0.90	2.09	6.08
10	23	1.19	3.89	0.00	4.85
		Chom		Chom	

B Smiththorn

C 44 of 102

14 Mar 2002 08:00 ALPHA/BETA - 1.09
Protocol #: 5 PW H3 403727 User : [redacted]

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	6.91
Region B:	2.0 -	18.6	0	0.0	6.09
Region C:	40.0 -	2000	0	0.0	11.40

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TF-0451 CUNNINGHAM(10) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT5.dat
Count Data Filename: C:\DATA\SDATA5.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.91	6.09	11.40	641.34	1	B		0.00
0	2.00	561.73	542.45	0.00	523.54	0		1153.37	109.24
1	2.00	0.59	1.41	0.00	415.52	7		1.39	9.92
2	2.00	5.09	5.91	0.00	592.60	0		0.85	10.04
3	2.00	6.59	6.60	2.60	504.88	0		13.78	11.45
4	2.00	0.59	1.41	0.60	647.00	0		1.09	7.81
5	2.00	3.99	4.54	0.00	597.08	0		7.69	9.58
6	2.00	3.09	3.91	1.10	421.65	10		7.21	11.15
7	2.00	4.90	5.72	0.60	389.72	0		12.08	12.70
8	2.00	1.61	2.43	2.10	529.78	0		3.29	9.09
9	2.00	1.14	1.69	0.00	522.63	0		2.35	8.93
10	2.00	1.09	0.65	0.00	553.35	13		2.18	8.67

Cham

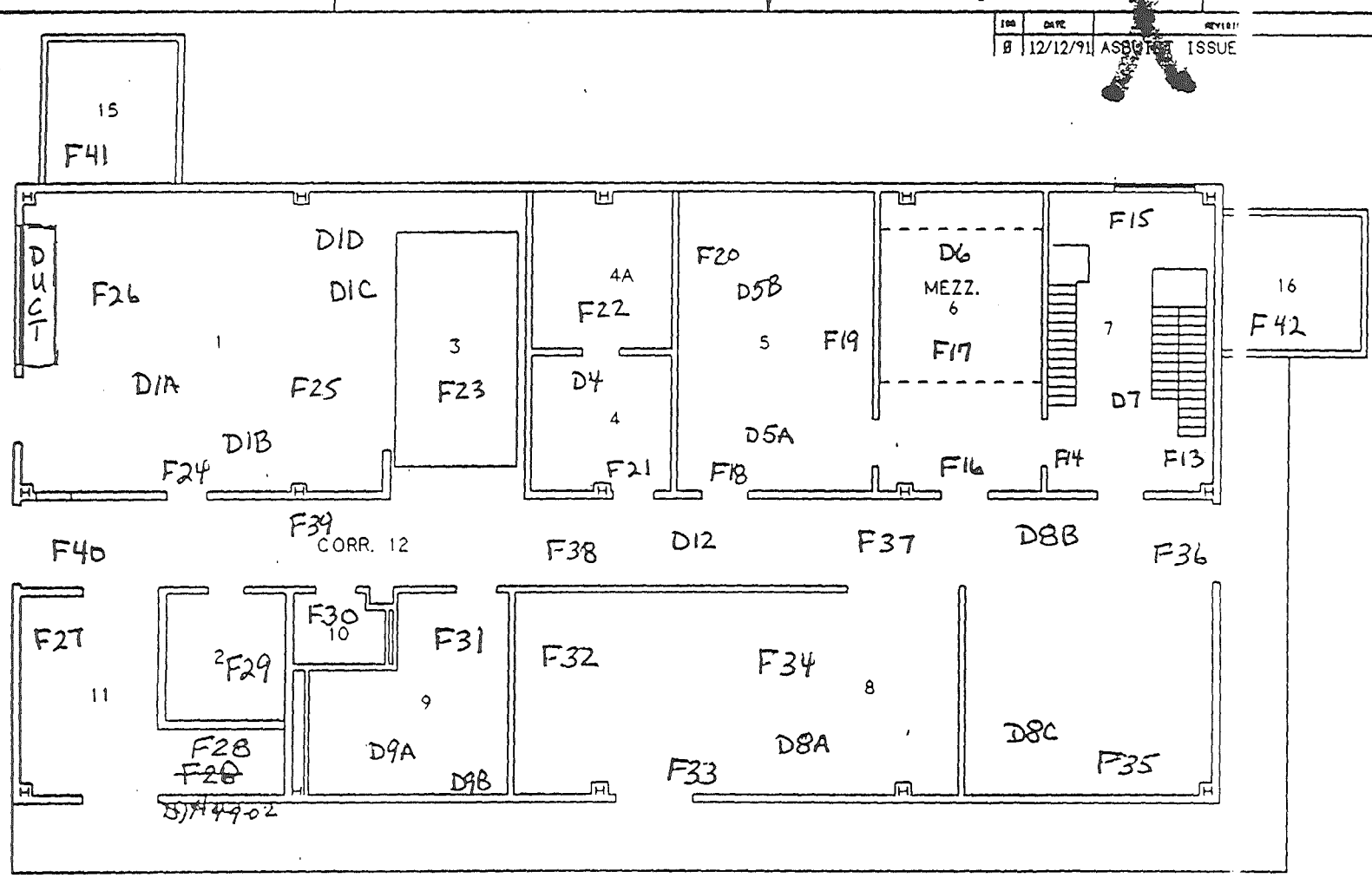
RSDSs Prior to Demolition

Building 29 – RSDS Results

RSDS #	Building Section	Sample Location	All Samples Meet Surface Release Criteria
02-TF-0098	Room 6	Equipment, floors and wall	Yes
02-TF-0187	All areas of building	Asbestos piping and ventilation ducts	Yes
02-TF-0565	All areas of building	Floors and drains	Yes

All radiological surveys of Building 29 are below surface release criteria; there were no elevated readings. Survey areas included all areas of the building, as shown on the attached sketch for 02-TF-0565. During and after demolition, all rolloffs and debris piles will be radiologically surveyed to determine disposition of demolition debris. Disposition will be per the direction of Waste Management.

ISS	DATE	REVISION	DWN	CHKD	DES	VERIF	APPD	R
B	12/12/91	ASBUILT ISSUE						



NOTE: F = FLOOR
D = DRAIN

02-TF-0565

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DOES NOT CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Reviewing Official: Paul D. Sand
Sr. Classification Consultant to BWXTQ
Date: 7-29-02

20/C1/n
0/1/A

8 3' 6' 18' 28'

BLDG #29
FIRST FLOOR
BLDG CODE:3029

NOT FOR PUBLIC DISSEMINATION

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

APPROVALS: DATE:
SAFETY COMMITTEE REQUIRED
NONE TRUEDOC TEDOC DDOC
TECH. REVIEW
ISL MGR.
TRUEDOC
TEDOC

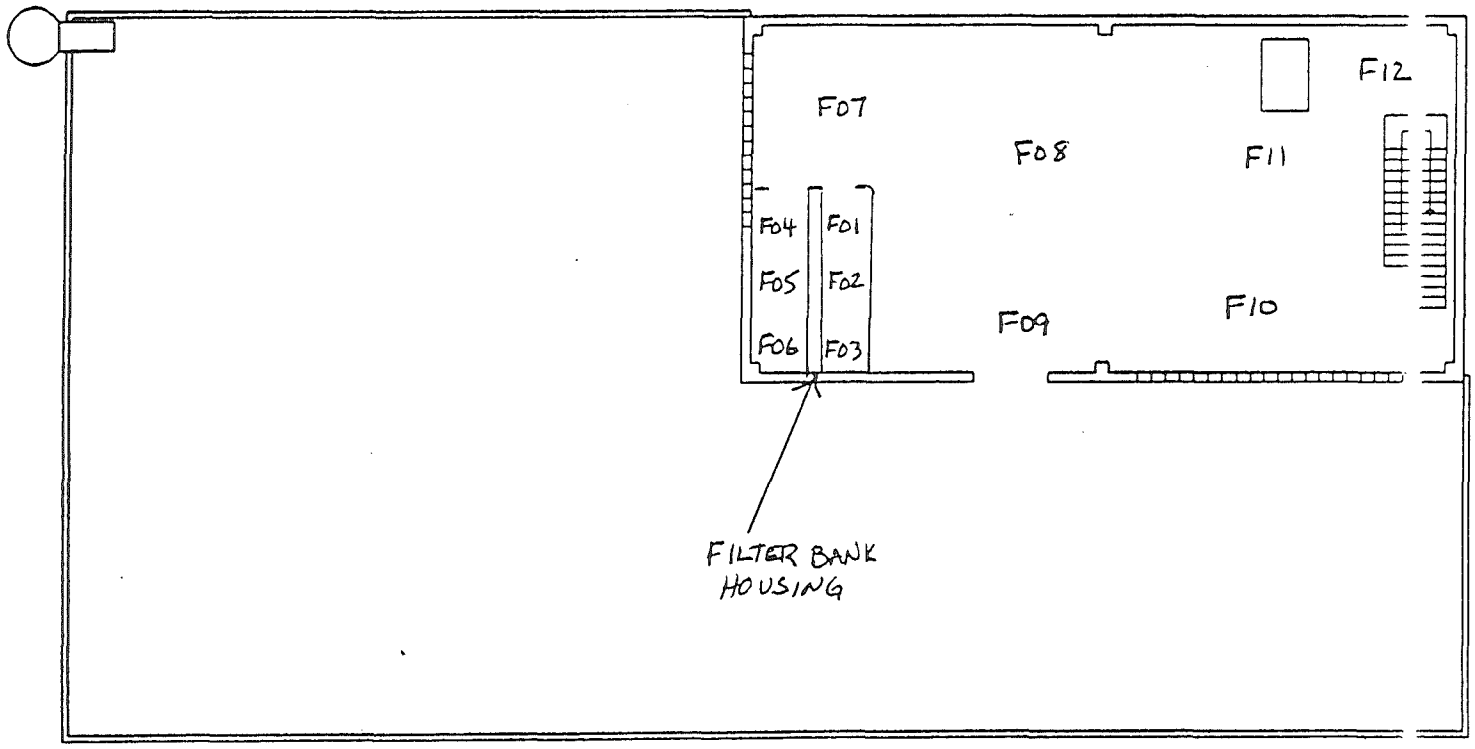
SHEET	1	2	3	4	1	4
SCALE	B	B				

TITLE (U) TITLE CLASSIFICATION
BLDG #29
FLOOR PLANS

FIRST CLASSIFICATION
[redacted]
DRAWING CLASSIFICATION
[redacted]

DWG TYPE	SFP	DWG NUMBER	JOB NUMBER
	BLDG #29	C FSC911241	12335
STATUS	MD-REL-1	/12/91	ORIGIN MD-BRJ-V3.3

SHEET 1 OF 2



NOTE: F = FLOOR

DOES NOT CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Reviewing Official: Paul B. Dowd
Sr. Classification Consultant to BWXTO
Date: 7-29-02

02-TF-0565
A9A

C-49 of 102

20(c)(n)

N

0 3' 6' 18' 28'

BLDG #29
PENTHOUSE
BLDG CODE:3029

NOT FOR PUBLIC DISSEMINATION

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

DRAWING NUMBER	FSC911241
JOB NUMBER	12335
DRAWING CLASSIFICATION	[redacted]
SIZE C	CHECK 14865
SCALE AS NOTED	
TEMPLATE B	SHEET 2
STATUS MO-REL-12/12/91	

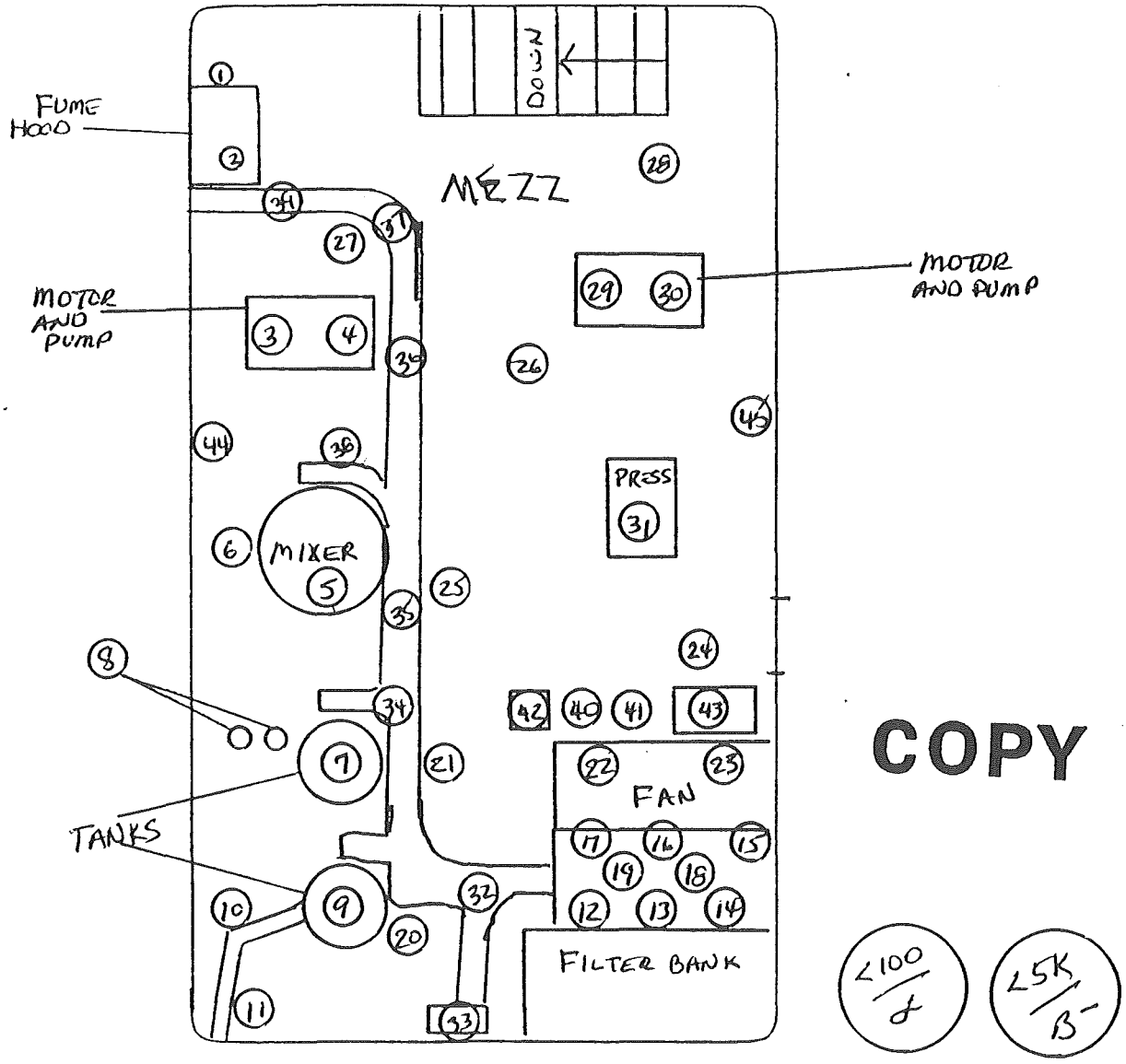
Unclassified

RADIOLOGICAL SURVEY DATA SHEET

1 of 10 11
DJH 2-12-02

LOCATION: (BLDG./AREA/ROOM) BLDG 29 - ROOM 6 - MEZZ	SURVEY NO. 02-TF-0098
PURPOSE: CHARACTERIZATION	RWP NO. N/A
	DATE: 1-21-02
	TIME: 1530

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²
AND LARGE AREA WIPES

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5439/5298	12-10-02
	N/A	

Completed by: (Signature)	[redacted]	Date: 1-31-02
Completed by: (Print Name) DANIEL J. HARVEY		
Counted by: (Signature)	[redacted]	Date: 1/31/02
Counted by: (Print Name) Smith-Brown		
Reviewed/Approved by: (Signature)	[redacted]	Date: 02/13/02
Reviewed/Approved by: (Print Name) RMCoblentz		

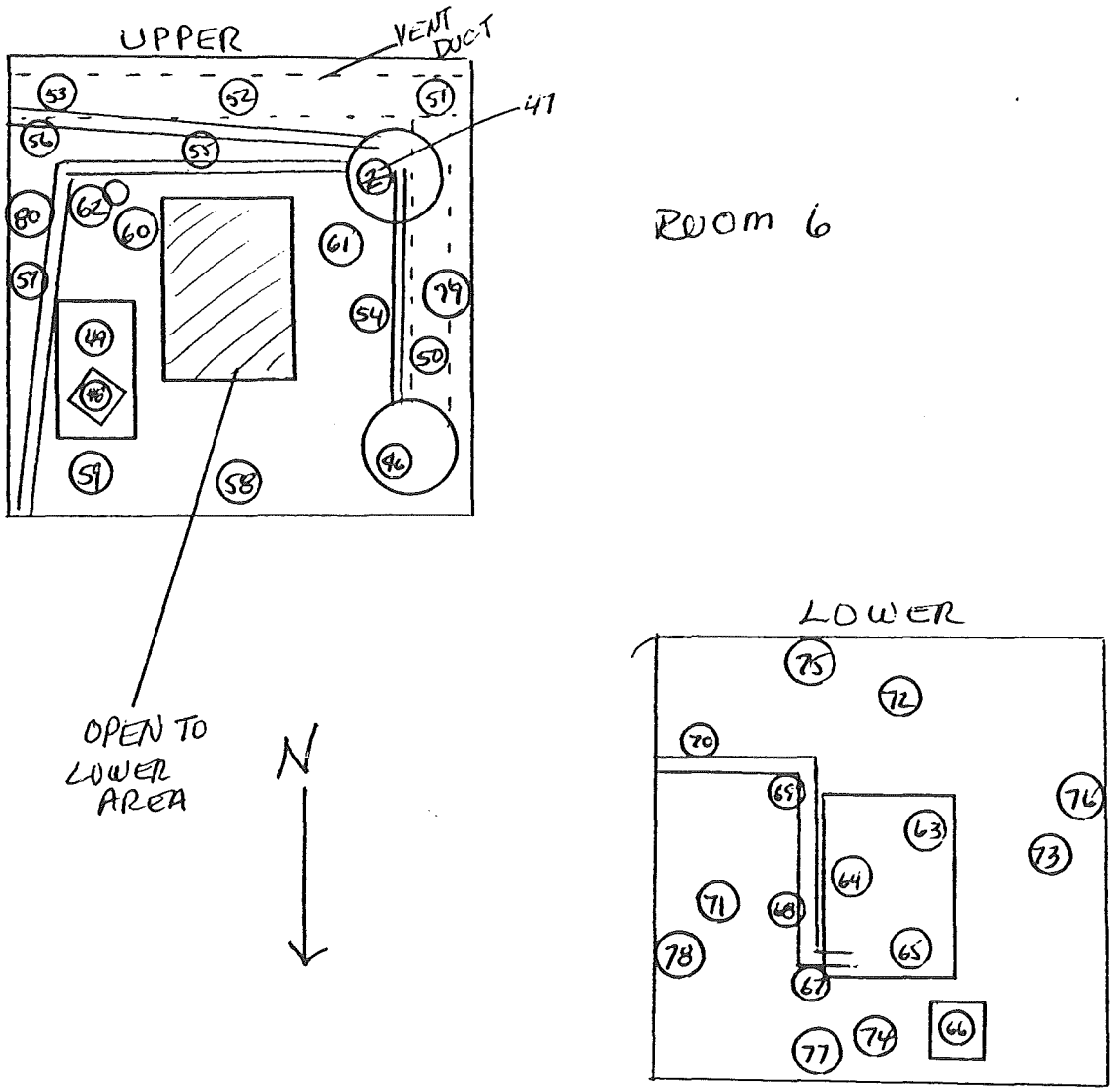
ML-9620 (2-98)

P2

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLDG 29 - Room 6 - MEZZ	SURVEY NO. 02-TF-0098
PURPOSE: CHARACTERIZATION	RWP NO. N/A
	DATE: 1-21-02
	TIME: 1530

MAP/DRAWING



LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on 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
	SEE PAGE 1	

Completed by: (Signature)	HP #	Date:
Completed by: (Print Name)		
Counted by: (Signature) SEE PAGE 1	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP #	Date:
Reviewed/Approved by: (Print Name)		

ML-9620 (2-98)

Alpha/Beta Analysis

Batch ID: 02-TF-0098 HARVEY(80) BSB

Batch File: Smear Unit 1 - 200201211605
Group: C
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 1/21/2002
Count Time (min): 1.5
Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	142	0.00	0.66	1.65	4.09
2	48	0.00	0.66	0.51	3.40
3	6	3.61	5.66	0.50	3.40
4	20	0.00	0.66	0.51	3.40
5	75	1.62	4.03	2.78	4.68
6	1	3.60	5.66	5.05	5.68
7	114	1.62	4.03	0.00	2.53
8	125	0.00	0.66	0.00	2.53
9	36	1.62	4.03	1.64	4.09
10	99	3.61	5.66	2.77	4.68
11	4	3.61	5.66	0.50	3.40
12	99	0.00	0.66	6.20	6.12
13	33	1.62	4.03	3.92	5.21
14	59	0.00	0.66	0.00	2.53
15	65	0.00	0.66	0.51	3.40
16	10	0.00	0.66	1.65	4.09
17	12	0.00	0.66	0.51	3.40
18	91	1.62	4.03	2.78	4.68
19	37	0.00	0.66	1.65	4.09
20	24	0.00	0.66	1.65	4.09

DJH DJH

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
21	38	0.00	0.66	1.65	4.09
22	1	0.00	0.66	1.65	4.09
23	115	1.62	4.03	1.64	4.09
24	1	7.58	7.98	1.62	4.10
25	29	0.00	0.66	9.61	7.28
26	65	0.00	0.66	2.79	4.68
27	35	0.00	0.66	0.51	3.40
28	21	0.00	0.66	0.51	3.40
29	13	0.00	0.66	2.79	4.68
30	129	0.00	0.66	5.06	5.68
31	79	0.00	0.66	0.00	2.53
32	9	0.00	0.66	2.79	4.68
33	31	0.00	0.66	5.06	5.68
34	142	0.00	0.66	0.00	2.53
35	37	0.00	0.66	0.51	3.40
36	29	0.00	0.66	1.65	4.09
37	30	0.00	0.66	5.06	5.68
38	71	0.00	0.66	2.79	4.68
39	30	0.00	0.66	2.79	4.68
40	65	3.60	5.66	6.19	6.12
41	58	0.00	0.66	2.79	4.68
42	42	3.60	5.66	5.05	5.68
43	113	0.00	0.66	2.79	4.68
44	139	1.62	4.03	0.51	3.40
45	60	0.00	0.66	0.00	2.53
46	139	0.00	0.66	3.93	5.21
47	15	1.62	4.03	0.00	2.53
		DJH		DJH	

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
48	108	5.59	6.91	0.49	3.41
49	139	1.62	4.03	0.51	3.40
50	38	1.62	4.03	3.92	5.21
51	60	0.00	0.66	0.51	3.40
52	73	0.00	0.66	0.51	3.40
53	33	0.00	0.66	3.93	5.21
54	22	0.00	0.66	3.93	5.21
55	133	0.00	0.66	0.00	2.53
56	131	1.62	4.03	2.78	4.68
57	18	1.62	4.03	1.64	4.09
58	3	1.62	4.03	3.92	5.21
59	39	0.00	0.66	5.06	5.68
60	15	0.00	0.66	0.51	3.40
61	41	0.00	0.66	0.51	3.40
62	144	0.00	0.66	1.65	4.09
63	112	1.62	4.03	5.06	5.68
64	11	0.00	0.66	1.65	4.09
65	40	0.00	0.66	3.93	5.21
66	23	0.00	0.66	0.00	2.53
67	87	0.00	0.66	0.51	3.40
68	12	0.00	0.66	2.79	4.68
69	92	1.62	4.03	2.78	4.68
70	140	1.62	4.03	0.51	3.40
71	115	0.00	0.66	2.79	4.68
72	114	0.00	0.66	1.65	4.09
73	92	1.62	4.03	3.92	5.21
74	109	1.62	4.03	5.06	5.68

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
75	49	0.00	0.66	3.93	5.21
76	140	1.62	4.03	3.92	5.21
77	31	0.00	0.66	1.65	4.09
78	14	1.62	4.03	2.78	4.68
79	31	0.00	0.66	1.65	4.09

DJH DJH

CSS of 102

Alpha/Beta Analysis

Batch ID: 02-TF-0098 HARVEY (#80) BSB

Batch File: Smear Unit 1 - 200201211821
Group: C
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 1/21/2002
Count Time (min): 9.9
Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
80 +	38	1.13	1.50	1.49	1.86
1/22/02		DJH		DJH	

C56 of 102

Protocol #: 2 PW H3 #403727 User : [redacted]

Time: 2.00
Data Mode: DPM Nuclide: H3 QUENCH Quench Set: H3QUENCH
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	6.77
Region B:	2.0 -	18.6	0	0.0	6.73
Region C:	40.0 -	2000	0	0.0	12.88

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
02-TR-0098 HARVEY(50) BSB
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT2.DAT
Count Data Filename: C:\DATA\SDATA2.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.77	6.73	12.88	556.48	4	B		0.00
0	2.00	393.50	380.53	0.00	510.75	1		817.12	84.07
1	2.00	0.73	0.42	0.00	640.26	0		1.36	7.86
2	2.00	0.00	0.00	0.00	521.16	0		0.00	0.00
3	2.00	0.00	0.00	1.12	479.98	0		0.00	0.00
4	2.00	1.23	1.27	0.00	329.74	0		3.44	12.13
5	2.00	0.00	0.00	0.00	423.05	0		0.00	0.00
6	2.00	1.23	1.18	0.00	498.06	0		2.59	9.15
7	2.00	0.00	0.00	0.00	525.49	0		0.00	0.00
8	2.00	0.00	0.00	0.00	563.55	0		0.00	0.00
9	2.00	0.00	0.00	0.00	459.34	0		0.00	0.00
10	2.00	0.00	0.00	0.12	563.10	0		0.00	0.00
11	2.00	0.56	0.45	0.00	529.34	0		1.14	8.53
12	2.00	0.73	0.64	0.00	519.44	0		1.50	8.69
13	2.00	0.10	0.14	0.00	511.60	0		0.20	8.44
14	2.00	0.00	0.00	0.00	478.19	0		0.00	0.00
15	2.00	0.00	0.00	0.00	419.14	0		0.00	0.00
16	2.00	0.00	0.00	0.00	472.88	0		0.00	0.00
17	2.00	0.23	0.27	0.00	434.28	0		0.52	9.40
18	2.00	0.00	0.00	0.00	384.87	0		0.00	0.00
19	2.00	0.00	0.00	0.00	363.84	0		0.00	0.00
20	2.00	0.00	0.00	0.00	639.43	0		0.00	0.00
21	2.00	0.00	0.00	0.00	571.96	0		0.00	0.00
22	2.00	0.00	0.00	0.00	497.66	0		0.00	0.00
23	2.00	0.00	0.00	0.00	339.13	0		0.00	0.00
24	2.00	0.00	0.00	0.00	342.67	0		0.00	0.00
25	2.00	0.23	0.00	0.62	516.90	0		0.47	8.46
26	2.00	0.00	0.00	0.00	293.98	0		0.00	0.00
27	2.00	0.00	0.00	0.00	559.64	0		0.00	0.00
28	2.00	0.00	0.00	1.90	344.39	0		0.00	0.00
29	2.00	2.21	2.25	0.00	459.31	0		4.91	10.11
30	2.00	0.00	0.00	0.62	357.34	0		0.00	0.00
31	2.00	0.00	0.00	0.00	683.04	0		0.00	0.00
32	2.00	0.00	0.00	2.62	417.67	0		0.00	0.00
33	2.00	0.00	0.00	0.00	640.54	0		0.00	0.00
34	2.00	2.73	2.53	0.00	580.05	0		5.34	9.14
35	2.00	1.23	0.68	0.00	611.32	0		2.34	8.27

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
36	2.00	0.00	0.00	0.00	622.58	0	0.00	0.00
37	2.00	0.73	0.77	0.00	606.09	0	1.39	8.08
38	2.00	1.45	1.49	0.00	651.72	0	2.68	8.10
39	2.00	1.73	1.67	0.00	502.37	0	3.63	9.34
40	2.00	2.23	2.27	0.00	492.81	0	4.73	9.69
41	2.00	1.23	1.27	0.00	545.93	0	2.47	8.73
42	2.00	0.00	0.00	2.03	450.74	0	0.00	0.00
43	2.00	2.86	2.71	0.00	557.46	0	5.71	9.37
44	2.00	0.00	0.00	0.00	610.39	0	0.00	0.00
45	2.00	0.00	0.00	0.00	548.55	0	0.00	0.00
46	2.00	0.00	0.00	0.00	544.39	0	0.00	0.00
47	2.00	0.00	0.00	0.00	506.97	0	0.00	0.00
48	2.00	1.73	0.70	0.00	485.13	0	3.71	9.54
49	2.00	1.77	1.31	0.00	581.92	0	3.46	8.71
50	2.00	2.86	2.90	0.00	586.93	0	5.56	9.14
51	2.00	0.00	0.00	0.00	548.37	0	0.00	0.00
52	2.00	0.23	0.27	0.62	515.65	0	0.47	8.47
53	2.00	0.23	0.00	0.00	529.86	0	0.47	8.37
54	2.00	1.84	1.57	0.00	615.29	0	3.49	8.50
55	2.00	0.73	0.42	2.12	641.57	0	1.35	7.85
56	2.00	2.09	2.13	0.00	600.90	0	4.02	8.71
57	2.00	3.37	3.41	2.12	617.36	0	6.39	9.12
58	2.00	1.23	1.13	0.62	526.52	0	2.52	8.88
59	2.00	2.98	3.02	0.00	594.39	0	5.77	9.14
60	2.00	1.95	1.67	0.00	621.80	0	3.68	8.50
61	2.00	0.00	0.00	1.62	237.17	0	0.00	0.00
62	2.00	0.00	0.02	0.00	534.38	0	0.00	0.00
63	2.00	0.10	0.00	0.00	529.08	0	0.21	8.31
64	2.00	1.37	1.32	0.00	498.09	0	2.89	9.21
65	2.00	2.73	2.77	0.00	684.91	0	4.92	8.42
66	2.00	0.00	0.00	0.00	289.65	0	0.00	0.00
67	2.00	0.00	0.00	2.12	498.10	0	0.00	0.00
68	2.00	1.23	1.27	1.62	612.95	0	2.34	8.25
69	2.00	2.23	1.88	0.00	660.36	0	4.08	8.36
70	2.00	2.94	2.98	0.00	621.70	0	5.56	8.92
71	2.00	0.64	0.34	0.00	636.87	0	1.20	7.84
72	2.00	0.00	0.00	0.00	501.05	0	0.00	0.00
73	2.00	2.23	1.48	0.00	605.46	0	4.27	8.74
74	2.00	1.73	1.20	0.00	485.05	0	3.71	9.54
75	2.00	0.00	0.00	0.00	593.92	0	0.00	0.00
76	2.00	0.00	0.00	0.00	533.58	0	0.00	0.00
77	2.00	0.00	0.00	0.00	540.15	0	0.00	0.00
78	2.00	0.00	0.00	0.00	407.22	0	0.00	0.00
79	2.00	0.23	0.27	0.00	651.88	0	0.42	7.56
80	2.00	0.00	0.00	0.00	615.20	0	0.00	0.00

DJH

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RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29-BUILDING	SURVEY NO 02-TF-0187
PURPOSE: INVESTIGATIVE SURVEY PRIOR TO ASBESTOS REMOVAL	RWP NO. N/A
	DATE: 2-5-2002
	TIME: 1600

MAP / DRAWING

108 SMEARS AND DIRECTS TAKEN ON SUSPECTED ASBESTOS PIPING AND VENTILATION DUCTS THROUGHOUT THE BUILDING.

SMEAR RESULTS ON PAGES 3-9

COPY

<100 / α

<5K / β-

LEGEND:

= mrem/hr (γ) whole body

#E = mrem/hr (β+η+γ) extremity on contact

K = factor of 1000

— · — · — = radiological boundary

△# = mrem/hr neutron

(#) = swipe number

[#] = air sample number

(#/α) or /β = direct contamination measurement in dpm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5603/5604	2-6-2003
	N/A	

Completed by: (Signature)	HP# [redacted]	Date: 4-12-2002
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)	HP# [redacted]	Date: 4-12-02
Reviewed/Approved by: (Print Name) GALEN TOMLINSON		

Survey No. 02-TF-0187

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-108	SEE	ATTACHED		PIPING AND DUCTWORK
		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)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A1	1	0.00	2.20		0.00	2.09	
A2	2	0.00	2.24		0.00	1.49	
A3	3	0.00	2.05		0.00	1.88	
A4	4	0.00	2.03		2.19	2.96	
B1	5	1.85	2.04		0.21	1.68	
B2	6	0.00	2.07		0.27	1.72	
B3	7	0.00	1.91		0.00	1.68	
B4	8	0.00	1.89		0.78	1.59	
C1	9	1.68	2.26		1.63	4.73	
C2	10	0.00	2.14		0.88	3.32	
C3	11	0.00	1.99		0.00	2.41	
C4	12	1.66	1.94		0.00	1.93	
D1	13	0.00	2.20		0.00	1.51	
D2	14	0.00	2.17		1.05	1.97	
D3	15	0.00	2.06		0.27	1.94	
A1	16	0.00	2.19		0.00	1.63	
A2	17	1.70	2.24		0.00	1.49	
A3	18	1.58	2.04		0.00	1.41	
A4	19	0.00	2.03		2.19	2.96	
B1	20	0.00	2.04		0.35	1.68	
B2	21	0.00	2.07		0.27	1.72	
B3	22	0.00	1.94		2.17	2.37	
B4	23	0.00	1.88		0.00	1.12	
C1	24	1.67	2.28		4.32	5.10	
C2	25	0.00	2.14		0.88	3.32	
C3	26	0.00	1.98		0.00	1.60	
C4	27	3.57	2.70		0.00	1.43	
D1	28	0.00	2.21		1.13	2.02	
D2	29	0.00	2.17		1.05	1.97	
D3	30	0.00	2.06		0.00	1.44	
A1	31	1.63	2.19		0.00	1.63	
A2	32	0.00	2.25		1.14	1.99	

Carol Y. Robinson

C 61 of 102

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A3	33	0.00	2.07		2.19	2.57	
A4	34	1.49	2.02		0.80	2.68	
B1	35	0.00	2.04		0.35	1.68	
B2	36	0.00	2.13		3.91	2.72	
B3	37	0.00	1.90		0.00	1.19	
B4	38	3.38	2.67		2.75	2.25	
C1	39	0.00	2.23		0.00	3.89	
C2	40	0.00	2.15		2.28	3.60	
C3	41	0.00	1.98		0.00	1.60	
C4	42	0.00	1.95		2.65	2.65	
D1	43	0.00	2.21		1.13	2.02	
D2	44	0.00	2.15		0.00	1.42	
D3	45	0.00	2.08		2.86	2.67	
A1	46	0.00	2.20		0.00	2.09	
A2	47	0.00	2.25		1.14	1.99	
A3	48	0.00	2.04		0.00	1.41	
A4	49	0.00	2.00		0.00	2.01	
B1	50	0.00	2.04		0.35	1.68	
B2	51	0.00	2.07		0.27	1.72	
B3	52	0.98	1.92		0.84	2.05	
B4	53	0.00	1.88		0.00	1.12	
C1	54	0.00	2.25		0.41	4.53	
C2	55	1.76	2.14		0.75	3.32	
C3	56	0.00	1.99		0.00	2.04	
C4	57	0.00	1.94		1.37	2.32	
D1	58	0.00	2.20		0.00	1.51	
D2	59	0.00	2.15		0.00	1.42	
D3	60	0.00	2.07		1.56	2.34	
A1	61	0.00	2.20		0.00	2.09	
A2	62	0.00	2.24		0.00	1.49	
A3	63	1.58	2.07		2.05	2.57	
A4	64	0.00	2.03		2.19	2.96	
B1	65	0.00	2.05		1.54	2.06	
B2	66	0.00	2.06		0.00	1.22	

AJH AJH

Carol G. Robinson

C 62 of 102

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
B3	67	0.00	1.95		3.36	2.65	
B4	68	0.00	1.88		0.00	1.12	
C1	69	0.00	2.25		0.00	4.33	
C2	70	0.00	2.13		0.00	2.66	
C3	71	0.00	1.98		0.00	1.60	
C4	72	0.00	1.94		1.37	2.32	
D1	73	0.00	2.20		0.00	1.51	
D2	74	0.00	2.17		1.05	1.97	
D3	75	0.00	2.06		0.27	1.94	
A1	76	0.00	2.19		0.00	1.63	
A2	77	0.00	2.24		0.00	1.49	
A3	78	0.00	2.04		0.00	1.41	
A4	79	1.49	2.02		0.80	2.68	
B1	80	0.00	2.03		0.00	1.19	
B2	81	0.00	2.06		0.00	1.22	
B3	82	0.00	1.91		0.00	1.68	
B4	83	0.00	1.88		0.00	1.12	
C1	84	0.00	2.25		0.00	4.33	
C2	85	1.76	2.14		0.75	3.32	
C3	86	0.00	1.99		0.00	2.04	
C4	87	1.65	1.95		2.53	2.65	
D1	88	0.00	2.20		0.00	1.51	
D2	89	0.00	2.18		2.42	2.40	
D3	90	0.00	2.06		0.00	1.44	
A1	91	0.00	2.20		0.00	2.09	
A2	92	0.00	2.25		1.14	1.99	
A3	93	0.00	2.06		0.95	2.25	
A4	94	0.00	2.03		2.19	2.96	
B1	95	0.00	2.05		1.54	2.06	
B2	96	0.00	2.09		1.48	2.10	
B3	97	0.00	1.90		0.00	1.19	
B4	98	0.00	1.88		0.00	1.12	
C1	99	0.00	2.25		0.41	4.53	
C2	100	0.00	2.14		0.00	3.00	
C3	101	0.00	1.98		0.00	1.60	

DJH DJH

Carol Y. Robinson

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 2/6/02 9:53

Crosstalk correction performed.

Recalibration Date: 4/3/02
Serial Number: 26966-1

Batch ID: HARVEY 02-TF-0187 (108) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	102	0.00	1.93		0.00	1.43	
D1	103	0.00	2.21		1.13	2.02	
D2	104	0.00	2.20		3.78	2.76	
D3	105	0.00	2.06		0.00	1.44	
A1	106	0.00	2.21		0.00	2.47	
A2	107	1.70	2.24		0.00	1.49	
A3	108	0.00	2.04		0.00	1.41	

C 64 of 102

Carol Y. Robinson

Protocol #: 2 Name:PW H3 #401387 06-Feb-2002 11:17
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
HARVEY SUR #02-TF-0187 (1-108)/BKS
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On
Data/Application Drive & Path = c:\data

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
-1	10.00	9.51	8.66	5.28	B	3	650.		20.50
0	2.00	233.19	222.49	0.00	L	0	507.	492.00	9.53
1	2.00	0.00	0.00	0.00	L	0	551.	0.00	0.00
2	2.00	0.00	0.00	0.72		0	604.	0.00	0.00
3	2.00	0.00	0.00	0.00		0	538.	0.00	0.00
4	2.00	0.00	0.00	0.00		0	569.	0.00	0.00
5	2.00	0.00	0.00	0.00		12	463.	0.00	0.00
6	2.00	0.00	0.00	0.00		0	571.	0.00	0.00
7	2.00	0.00	0.00	0.00		22	572.	0.00	0.00
8	2.00	0.00	0.00	0.00		24	501.	0.00	0.00
9	2.00	0.00	0.00	1.72		0	535.	0.00	0.00
10	2.00	0.00	0.00	0.72		7	475.	0.00	0.00
11	2.00	0.00	0.00	0.00		0	553.	0.00	0.00
12	2.00	0.00	0.00	1.72		0	613.	0.00	0.00
13	2.00	0.00	0.00	1.22		0	585.	0.00	0.00
14	2.00	0.00	0.00	1.22		0	587.	0.00	0.00
15	2.00	0.00	0.00	2.44		0	602.	0.00	0.00
16	2.00	0.00	0.00	0.22		0	600.	0.00	0.00
17	2.00	0.00	0.00	1.72		0	502.	0.00	0.00
18	2.00	1.86	1.91	0.00		0	627.	3.47	277.6
19	2.00	0.00	0.00	0.00		0	627.	0.00	0.00
20	2.00	0.00	0.00	1.22		0	551.	0.00	0.00
21	2.00	0.00	0.00	0.00		12	534.	0.00	0.00
22	2.00	0.00	0.00	0.00		0	580.	0.00	0.00
23	2.00	0.00	0.00	1.22		0	562.	0.00	0.00
24	2.00	0.00	0.00	0.00		18	558.	0.00	0.00
25	2.00	0.00	0.00	0.00		11	544.	0.00	0.00
26	2.00	0.00	0.00	0.00		0	595.	0.00	0.00
27	2.00	0.00	0.00	1.22		6	525.	0.00	0.00
28	2.00	0.00	0.00	0.72		11	584.	0.00	0.00
29	2.00	0.00	0.00	0.00		0	529.	0.00	0.00
30	2.00	0.00	0.00	1.22		14	608.	0.00	0.00
31	2.00	0.00	0.00	0.00		0	504.	0.00	0.00
32	2.00	0.00	0.00	0.00		15	501.	0.00	0.00
33	2.00	1.24	0.64	0.00		0	630.	2.31	406.3
34	2.00	0.00	0.00	0.00		14	597.	0.00	0.00
35	2.00	0.00	0.00	3.22		0	623.	0.00	0.00
36	2.00	0.00	0.00	0.00		36	585.	0.00	0.00
37	2.00	0.00	0.00	0.22		0	582.	0.00	0.00
38	2.00	0.00	0.00	0.00		0	490.	0.00	0.00
39	2.00	0.00	0.00	0.00		0	605.	0.00	0.00
40	2.00	0.00	0.00	0.86		0	630.	0.00	0.00
41	2.00	3.42	1.64	0.00		8	641.	6.33	170.1
42	2.00	0.00	0.00	0.72		12	562.	0.00	0.00
43	2.00	0.00	0.00	0.22		0	613.	0.00	0.00

AJH
Carol G. Robinson

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
44	2.00	0.00	0.01	0.00		0	636.	0.00	0.00
45	2.00	0.00	0.00	0.00		0	666.	0.00	0.00
46	2.00	0.00	0.00	0.72		14	637.	0.00	0.00
47	2.00	0.00	0.00	0.72		14	649.	0.00	0.00
48	2.00	1.46	0.00	20.39		5	643.	2.68	362.7
49	2.00	0.00	0.00	1.22		6	669.	0.00	0.00
50	2.00	2.61	0.96	0.22		0	594.	5.03	203.0
51	2.00	0.00	0.00	0.00		0	683.	0.00	0.00
52	2.00	0.00	0.00	0.72		18	621.	0.00	0.00
53	2.00	0.00	0.00	0.22		8	569.	0.00	0.00
54	2.00	0.00	0.00	0.00		0	627.	0.00	0.00
55	2.00	0.00	0.00	2.72		0	637.	0.00	0.00
56	2.00	0.00	0.00	1.22		0	517.	0.00	0.00
57	2.00	0.00	0.00	0.22		0	669.	0.00	0.00
58	2.00	0.00	0.00	0.00		0	579.	0.00	0.00
59	2.00	0.00	0.00	0.00		0	562.	0.00	0.00
60	2.00	0.00	0.00	0.00		0	635.	0.00	0.00
61	2.00	0.00	0.00	0.00		7	572.	0.00	0.00
62	2.00	0.00	0.00	0.00		0	608.	0.00	0.00
63	2.00	0.00	0.00	0.00		9	621.	0.00	0.00
64	2.00	1.62	0.91	0.00		0	653.	2.96	315.7
65	2.00	0.00	0.00	0.00		0	659.	0.00	0.00
66	2.00	0.00	0.00	0.00		0	649.	0.00	0.00
67	2.00	0.00	0.00	0.00		0	650.	0.00	0.00
68	2.00	0.00	0.00	0.00		0	641.	0.00	0.00
69	2.00	0.00	0.00	0.00		0	532.	0.00	0.00
70	2.00	0.00	0.00	0.00		14	603.	0.00	0.00
71	2.00	0.00	0.00	0.00		0	614.	0.00	0.00
72	2.00	0.00	0.00	0.00		0	621.	0.00	0.00
73	2.00	0.00	0.00	0.72		15	560.	0.00	0.00
74	2.00	0.00	0.00	0.00		0	620.	0.00	0.00
75	2.00	0.00	0.00	0.00		0	644.	0.00	0.00
76	2.00	0.00	0.00	0.00		7	566.	0.00	0.00
77	2.00	0.49	0.00	1.22		0	655.	0.89	1004.
78	2.00	0.00	0.00	0.00		0	592.	0.00	0.00
79	2.00	0.21	0.00	0.00		0	514.	0.43	2347.
80	2.00	0.00	0.00	0.00		0	617.	0.00	0.00

Carol G. Robinson

8 of 9

Protocol #: 2 Name:PW H3 #401387 06-Feb-2002 15:57
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
HARVEY SUR #02-TF-0187 (1-108)/BKS
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On
Data/Application Drive & Path = c:\data

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
81	2.00	0.00	0.00	0.72		0	554.	0.00	0.00
82	2.00	0.00	0.00	0.00		0	559.	0.00	0.00
83	2.00	0.00	0.00	0.00		0	603.	0.00	0.00
84	2.00	0.00	0.00	1.22		0	651.	0.00	0.00
85	2.00	0.00	0.00	0.00		0	309.	0.00	0.00
86	2.00	0.00	0.00	0.00		0	575.	0.00	0.00
87	2.00	0.00	0.00	0.00		0	503.	0.00	0.00
88	2.00	0.00	0.00	1.22		0	362.	0.00	0.00
89	2.00	0.00	0.00	0.00		14	641.	0.00	0.00
90	2.00	0.00	0.00	0.00		0	509.	0.00	0.00
91	2.00	0.00	0.00	0.00		0	559.	0.00	0.00
92	2.00	0.00	0.00	0.00		0	638.	0.00	0.00
93	2.00	0.00	0.00	0.00		12	577.	0.00	0.00
94	2.00	0.00	0.00	0.00		0	598.	0.00	0.00
95	2.00	0.00	0.00	0.00		0	631.	0.00	0.00
96	2.00	9.86	3.69	0.00		0	598.	18.93	66.14
97	2.00	0.00	0.00	0.00		0	467.	0.00	0.00
98	2.00	0.00	0.00	0.72		14	595.	0.00	0.00
99	2.00	0.00	0.00	0.00		0	597.	0.00	0.00
100	2.00	0.00	0.00	0.00		0	559.	0.00	0.00
101	2.00	0.00	0.00	0.00		0	510.	0.00	0.00
102	2.00	0.00	0.00	0.00		0	424.	0.00	0.00
103	2.00	0.00	0.00	0.00		16	591.	0.00	0.00
104	2.00	0.00	0.00	1.22		0	640.	0.00	0.00
105	2.00	0.00	0.00	0.00		0	624.	0.00	0.00
106	2.00	0.00	0.00	0.22		0	533.	0.00	0.00
107	2.00	0.00	0.00	0.00		0	585.	0.00	0.00
108	2.00	0.00	0.00	0.00		0	500.	0.00	0.00

DJH
Carol G. Robinson

[redacted]

9 of 9

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29-BUILDING / ALL ROOMS	SURVEY NO 02-TF-0565
PURPOSE: CHARACTERIZATION SURVEY	RWP NO. N/A
	DATE: 4-5-2002
	TIME: 1415

MAP / DRAWING

DIRECT READING WITH THE LUDLUM 2350 THROUGHOUT THE BUILDING.
MAPS ARE ON PAGES 2-3
RESULTS ARE ON PAGES 4-5

COPY

- ALL DIRECT SURVEY RESULTS: <100dpm/100cm2 ALPHA AND <5K dpm/100cm2 BETA
- LARGE AREA WIPES TAKEN ON ALL HORIZONTAL SURFACES AND IN THE VENTILATION DUCTS RESULTS: <100 dpm/100cm2 ALPHA AND <5K dpm/100cm2 BETA

INTEGRATED COUNT PERFORMED IF AUDIBLE RESPONSE DETECTED. ALL OTHER DIRECT SURVEY RESULTS: <100dpm/100cm2 ALPHA, WITH NO AUDIBLE RESPONSE.

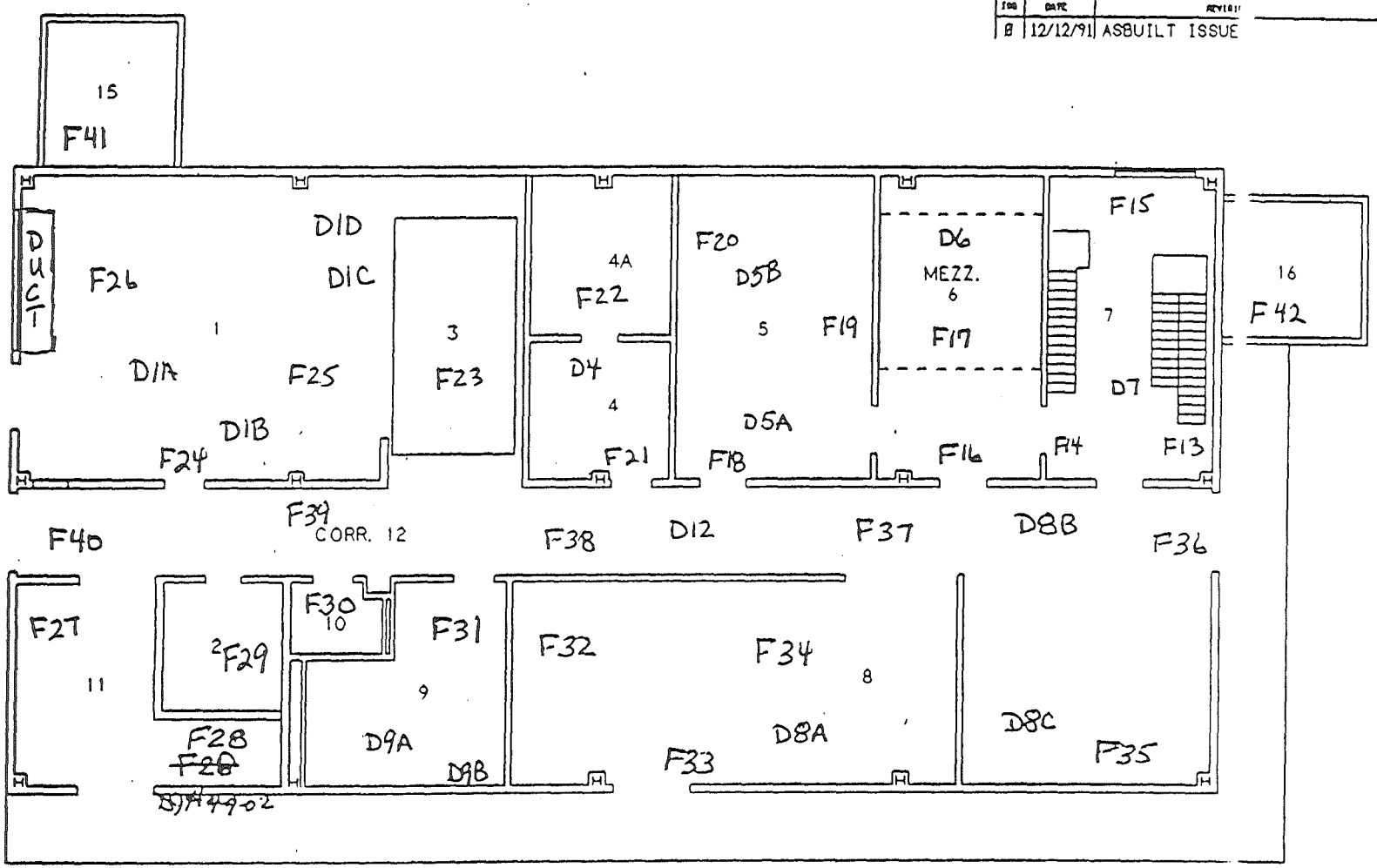
LEGEND:
= mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
K = factor of 1000
— · — · — = radiological boundary
△# = mrem/hr neutron
(#) = swipe number
[#] = air sample number
(#/α) or /β = direct contamination measurement in dpm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5603/5604	2-6-2003
ELECTRA	5347/5352	3-6-2003
	N/A	

Completed by: (Signature)	HP [redacted]	Date: 4-8-2002
Completed by: (Print Name) DANIEL J. HARVEY STEVE WIGGINS		
Counted by: (Signature) N/A	HP# N/A	Date: N/A
Counted by: (Print Name) N/A		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date: 4-9-02
Reviewed/Approved by: (Print Name) RM Coblentz		

ISS	DATE	REVISION	BY	CHKD	DWG	UPRED	APVD	R
B	12/12/91	ASBUILT ISSUE	DCW				DVD	



NOTE: F = FLOOR
D = DRAIN

02-TF-0565
A 69

C 69 of 102

0 3' 6' 10' 20'

BLDG #29
FIRST FLOOR
BLDG CODE:3028

CONTROLLED NUCLEAR INFORMATION

Reviewing Official: Paul D. Sund
Sr. Classification Consultant to BWXTO
Date: 7-29-92

NOT FOR PUBLIC DISSEMINATION

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

APPROVALS: DATE:
SAFETY COMMITTEE REVIEWED:
NONE TRUDOC TEDOC DNOC
TECH. REP.
CL. ADM.
TRUDOC
TEDOC
DNOC

SECTION DWG	PROJ MGR
APVDS	DWG SUPV
UP & DE	PROD REV
DWG MGR	
APVD	DATE

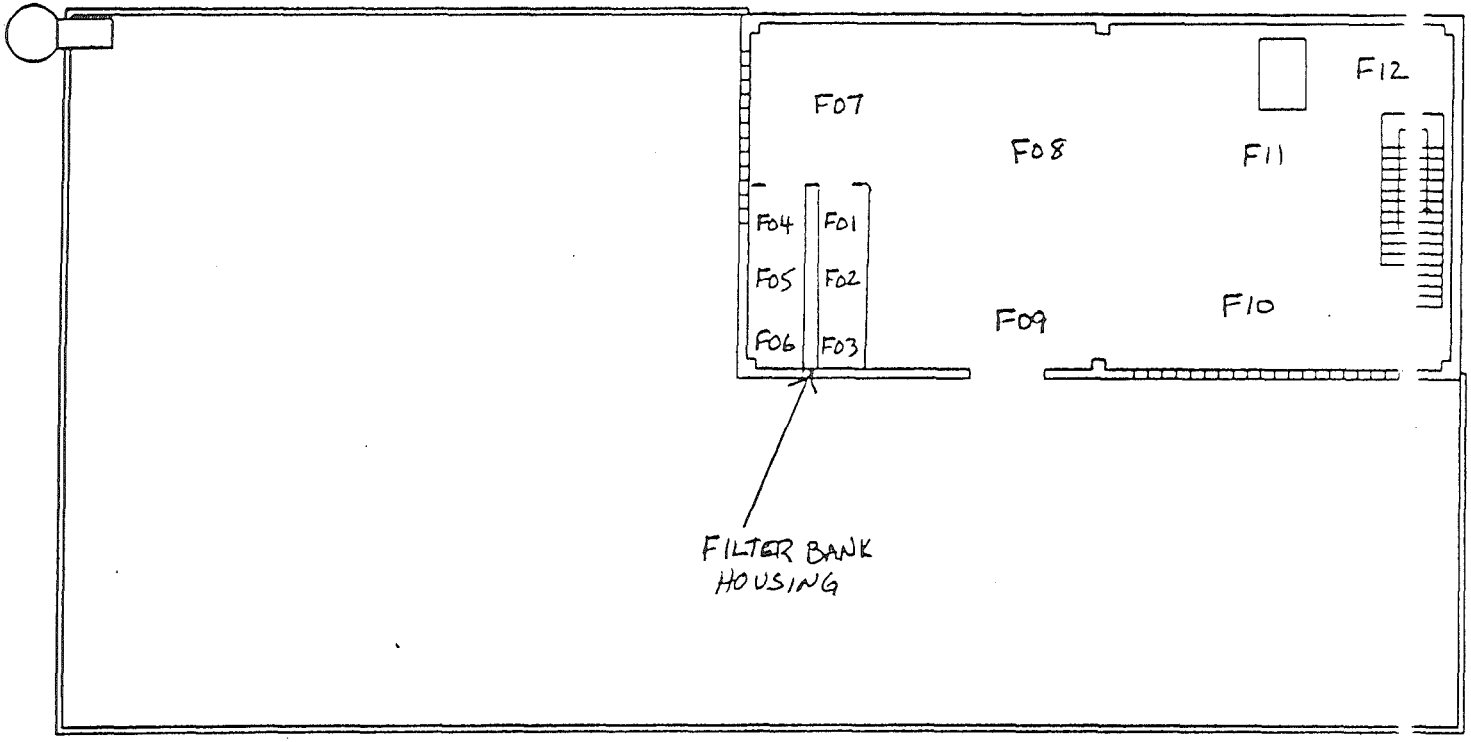
SHEET	1	2	3	4	5	6
TOTAL	8	8				

PART CLASSIFICATION
DRAWING CLASSIFICATION: Unclassified

TITLE (U) TITLE CLASSIFICATION
BLDG #29
FLOOR PLANS

SIZE	DRAWING NUMBER	JOB NUMBER
C	FSC911241	12333

DWG TYPE SFP	PROD BLDG #29	CHGE 14865	SCALE AS NOTED	SHEET 1 OF 2
STATUS MD-REL-1	12/12/91	ORIGIN MD-BRJ-V3.3	



NOTE: F = FLOOR

DOES NOT CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Reviewing Official: Paul B. Dowd
Sr. Classification Consultant to BWXTO
Date: 7-29-02

0 3' 6' 18' 28'

N

BLDG #29
PENTHOUSE
BLDG CODE:3029

NOT FOR PUBLIC DISSEMINATION

MAY CONTAIN UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION SUBJECT TO SECTION 148 OF THE ATOMIC ENERGY ACT OF 1954, AS AMENDED (42 USC 2168). APPROVAL BY THE DEPARTMENT OF ENERGY PRIOR TO RELEASE IS REQUIRED.

DRAWING NUMBER	JOB NUMBER
FSC911241	12335
DRAWING CLASSIFICATION: Unclassified	
SIZE C	SHEET 14865 / SCALE AS NOTED
FORMAT B	SHEET 2

02-TF-0565
A94

C70 of 102

29-BLDG M-2350 SURVEY

RSDS# 02-TF-0565 RCT: 29A RCT: _____

43-20 BKG:	0	EFF:	0.193	PROBE AREA:	181	cm2	Surface Eff:		0.5	Detector # :	2
43-37 BKG:	0	EFF:	0.166	PROBE AREA:	584	cm2	Surface Eff:		0.5	Detector # :	3
LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2	
SRC BKG	5673	[redacted]	5676	3		4/5/02	12:04	26	300	11	
SRCCHECK	5673	[redacted]	5676	3		4/5/02	12:16	2014	60	4155	
SRCCHECK	5673	[redacted]	5676	3		4/5/02	12:18	2113	60	4359	
SRCCHECK	5673	[redacted]	5676	3		4/5/02	12:19	2129	60	4392	
SRCCHECK	5673	[redacted]	5676	3		4/5/02	12:21	2069	60	4268	
SRCCHECK	5673	[redacted]	5676	3		4/5/02	12:22	2020	60	4167	
SRCCHECK	5673	[redacted]	5676	3		4/5/02	12:24	2250	60	4642	
BLD29 D11	5673	[redacted]	5676	3	1	4/5/02	13:00	7	30	29	
BLD29 D1B	5673	[redacted]	5676	3	2	4/5/02	13:02	6	30	25	
BLD29 D1A	5673	[redacted]	5676	3	3	4/5/02	13:03	1	30	4	
BLD29 D1C	5673	[redacted]	5676	3	4	4/5/02	13:04	5	30	21	
BLD29 D1D	5673	[redacted]	5676	3	5	4/5/02	13:04	4	30	17	
BLD29 D9A	5673	[redacted]	5676	3	6	4/5/02	13:08	4	30	17	
BLD29 D9B	5673	[redacted]	5676	3	7	4/5/02	13:09	0	30	0	
BLD29 D4	5673	[redacted]	5676	3	8	4/5/02	13:12	4	30	17	
BLD29 D12	5673	[redacted]	5676	3	9	4/5/02	13:13	7	30	29	
BLD29 D8A	5673	[redacted]	5676	3	10	4/5/02	13:15	0	30	0	
BLD29 D8B	5673	[redacted]	5676	3	11	4/5/02	13:16	3	30	12	
BLD29 D8C	5673	[redacted]	5676	3	12	4/5/02	13:17	3	30	12	
BLD29 D5A	5673	[redacted]	5676	3	13	4/5/02	13:19	5	30	21	
BLD29 D5B	5673	[redacted]	5676	3	14	4/5/02	13:20	4	30	17	
BLD29 D6	5673	[redacted]	5676	3	15	4/5/02	13:21	5	30	21	
BLD29 D7	5673	[redacted]	5676	3	16	4/5/02	13:22	2	30	8	
BLD29 F01	5673	[redacted]	5676	3	17	4/5/02	13:27	10	30	41	
BLD29 F02	5673	[redacted]	5676	3	18	4/5/02	13:28	7	30	29	
BLD29 F03	5673	[redacted]	5676	3	19	4/5/02	13:28	9	30	37	
BLD29 F04	5673	[redacted]	5676	3	20	4/5/02	13:30	3	30	12	
BLD29 F05	5673	[redacted]	5676	3	21	4/5/02	13:31	3	30	12	
BLD29 F06	5673	[redacted]	5676	3	22	4/5/02	13:31	2	30	8	
BLD29 F07	5673	[redacted]	5676	3	23	4/5/02	13:33	7	30	29	
BLD29 F08	5673	[redacted]	5676	3	24	4/5/02	13:34	0	30	0	
BLD29 F09	5673	[redacted]	5676	3	25	4/5/02	13:35	0	30	0	
BLD29 F10	5673	[redacted]	5676	3	26	4/5/02	13:36	2	30	8	
BLD29 F11	5673	[redacted]	5676	3	27	4/5/02	13:37	6	30	25	
BLD29 F12	5673	[redacted]	5676	3	28	4/5/02	13:38	5	30	21	

29-BLDG M-2350 SURVEY

RSDS# 02-TF-0565 RCT: DJH RCT: _____

LOCATION	2350#	RCT ID	PROBE	DET #	ITEM #	DATE	TIME	CNTS	CT TIME	dpm/100cm2
BLD29 F13	5673	[redacted]	5676	3	29	4/5/02	13:40	5	30	21
BLD29 F14	5673	[redacted]	5676	3	30	4/5/02	13:41	4	30	17
BLD29 F15	5673	[redacted]	5676	3	31	4/5/02	13:42	1	30	4
BLD29 F16	5673	[redacted]	5676	3	32	4/5/02	13:43	6	30	25
BLD29 F17	5673	[redacted]	5676	3	33	4/5/02	13:44	2	30	8
BLD29 F18	5673	[redacted]	5676	3	34	4/5/02	13:45	1	30	4
BLD29 F19	5673	[redacted]	5676	3	35	4/5/02	13:46	5	30	21
BLD29 F20	5673	[redacted]	5676	3	36	4/5/02	13:47	1	30	4
BLD29 F21	5673	[redacted]	5676	3	37	4/5/02	13:48	3	30	12
BLD29 F22	5673	[redacted]	5676	3	38	4/5/02	13:49	3	30	12
BLD29 F23	5673	[redacted]	5676	3	39	4/5/02	13:50	5	30	21
BLD29 F24	5673	[redacted]	5676	3	40	4/5/02	13:51	7	30	29
BLD29 F25	5673	[redacted]	5676	3	41	4/5/02	13:52	4	30	17
BLD29 F26	5673	[redacted]	5676	3	42	4/5/02	13:53	3	30	12
BLD29 F27	5673	[redacted]	5676	3	43	4/5/02	13:54	5	30	21
BLD29 F28	5673	[redacted]	5676	3	44	4/5/02	13:55	4	30	17
BLD29 F29	5673	[redacted]	5676	3	45	4/5/02	13:56	1	30	4
BLD29 F30	5673	[redacted]	5676	3	46	4/5/02	13:57	0	30	0
BLD29 F31	5673	[redacted]	5676	3	47	4/5/02	13:59	5	30	21
BLD29 F32	5673	[redacted]	5676	3	48	4/5/02	14:00	3	30	12
BLD29 F33	5673	[redacted]	5676	3	49	4/5/02	14:01	1	30	4
BLD29 F34	5673	[redacted]	5676	3	50	4/5/02	14:02	6	30	25
BLD29 F35	5673	[redacted]	5676	3	51	4/5/02	14:02	4	30	17
BLD29 F36	5673	[redacted]	5676	3	52	4/5/02	14:03	3	30	12
BLD29 F37	5673	[redacted]	5676	3	53	4/5/02	14:04	4	30	17
BLD29 F38	5673	[redacted]	5676	3	54	4/5/02	14:05	5	30	21
BLD29 F39	5673	[redacted]	5676	3	55	4/5/02	14:06	4	30	17
BLD29 F40	5673	[redacted]	5676	3	56	4/5/02	14:07	1	30	4
BLD29 F41	5673	[redacted]	5676	3	57	4/5/02	14:08	4	30	17
BLD29 F42	5673	[redacted]	5676	3	58	4/5/02	14:11	6	30	25

C7206 102

RSDSs After Demolition

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29 BUILDING	SURVEY NO 02-TF-1084
PURPOSE: DEBRIS PILE SURVEY FOR RELEASE TO WASTEMANAGEMENT	RWP NO. N/A
	DATE: 6-14-2002
	TIME 1535

MAP / DRAWING

COPY

- 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+η+γ) extremity on contact

K = factor of 1000

—·—·— = radiological boundary

△# = mrem/hr neutron

○# = swipe number

□# = air sample number

#/α/β = direct contamination

INSTRUMENTS USED

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

Completed by: (Signature)	HP# [redacted]	Date: 6-17-2002
Completed by: (Print Name) DANIEL J. HARVEY / VICTOR FILEPPI		
Counted by: (Signature) RECORD ON FILE	HP# NA	Date: NA
Counted by: (Print Name) NA		
Reviewed/Approved by: (Signature)	[redacted]	Date: 6-17-02
Reviewed/Approved by: (Print Name) RM Cablenta		

Survey No. 02-TF-1084

Page ____ of ____

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-38	SEE ATTACHED			DEBRIS
				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)

2 of 4

Alpha/Beta Analysis

Batch ID: FILEPPI SUR #02-TF-1084 (38)/BH

Batch File: Smear Unit 1 - 200206141259
Group: D
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 15764-3

Acquisition Date: 6/14/02
Count Time (min): 1.5
Recalibration Date: 3/1/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	133	0.00	0.00	8.63	7.05
2	83	0.00	0.00	10.07	7.62
3	53	0.00	0.00	8.63	7.05
4	124	0.00	0.00	5.76	5.76
5	14	0.00	0.00	7.20	6.44
6	78	0.00	0.00	4.32	4.99
7	125	2.47	4.95	14.38	9.10
8	38	0.00	0.00	5.76	5.76
9	66	0.00	0.00	4.32	4.99
10	21	0.00	0.00	7.20	6.44
11	130	0.00	0.00	2.88	4.07
12	36	0.00	0.00	5.76	5.76
13	117	0.00	0.00	14.39	9.10
14	93	0.00	0.00	4.32	4.99
15	119	0.00	0.00	4.32	4.99
16	27	0.00	0.00	8.63	7.05
17	82	0.00	0.00	5.76	5.76
18	95	2.47	4.95	10.07	7.62
19	96	0.00	0.00	1.44	2.88
20	88	0.00	0.00	8.63	7.05
21	27	0.00	0.00	1.44	2.88
22	44	0.00	0.00	10.07	7.62
23	15	2.47	4.95	1.43	2.88

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
24	20	0.00	0.00	5.76	5.76
25	138	0.00	0.00	2.88	4.07
26	18	0.00	0.00	8.63	7.05
27	41	2.47	4.95	5.75	5.76
28	122	0.00	0.00	5.76	5.76
29	13	0.00	0.00	4.32	4.99
30	143	0.00	0.00	1.44	2.88
31	64	0.00	0.00	2.88	4.07
32	22	2.47	4.95	2.87	4.07
33	54	0.00	0.00	2.88	4.07
34	52	0.00	0.00	10.07	7.62
35	104	0.00	0.00	2.88	4.07
36	139	2.47	4.95	2.87	4.07
37	39	0.00	0.00	2.88	4.07
38	99	0.00	0.00	5.76	5.76

Brenda Hilepe 6-17-02

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RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29 BUILDING	SURVEY NO 02-TF-1085
PURPOSE: DEBRIS PILE SURVEY FOR.RELEASE TO WASTEMANAGEMENT	RWP NO. N/A
	DATE: 6-15-2002
	TIME 1435

MAP / DRAWING

COPY

SWIPES (1) THRU (100) TAKEN AT VARIOUS LOCATIONS IN DEBRIS PILE.

- 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+η+γ) extremity on contact

K = factor of 1000

— · — · - = radiological boundary

△ # = mrem/hr neutron

○ # = swipe number

□ # = air sample number

○ #α/β = direct contamination

INSTRUMENTS USED

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

Completed by: (Signature)	HP# [redacted]	Date: 6-17-2002
Completed by: (Print Name) DANIEL J. HARVEY / VICTOR FILEPPI		
Counted by: (Signature) RECORD ON FILE	HP# NA	Date: NA
Counted by: (Print Name) NA		
Reviewed/Approved by: (Signature)	[redacted]	Date: 6-17-02
Reviewed/Approved by: (Print Name) RNCoblentz		

2 of 1

Survey No. 02-TF-1085

Page ____ of ____

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-100	SEE ATTACHED			DEBRIS PILE
			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)

2 of

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR013
Batch Ended: 6/17/02 8:29
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1085 HARVEY(100) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.14		9.14	3.86	
A2	2	0.00	1.95		0.41	1.70	
A3	3	0.00	2.14		0.44	1.75	
A4	4	0.00	2.03		2.70	2.36	
B1	5	1.56	2.06		2.63	2.50	
B2	6	1.31	2.00		0.00	1.20	
B3	7	0.00	2.16		5.21	3.15	
B4	8	3.44	2.83		0.00	1.64	
C1	9	0.00	2.14		5.50	3.07	
C2	10	1.32	1.84		0.00	1.16	
C3	11	5.80	3.62		0.21	1.76	
C4	12	0.00	1.96		0.00	1.60	
D1	13	0.00	1.98		2.84	2.48	
D2	14	1.57	2.09		0.00	1.22	
D3	15	1.62	2.21		6.59	3.40	
D4	16	0.00	2.10		0.36	1.69	
A1	17	0.00	2.05		0.00	1.28	
A2	18	0.00	1.95		0.41	1.70	
A3	19	3.79	3.02		0.15	1.75	
A4	20	0.00	2.01		0.34	1.67	
B1	21	0.00	2.02		0.00	1.25	
B2	22	1.31	2.03		1.32	2.06	
B3	23	5.75	3.62		0.00	1.29	
B4	24	0.00	2.00		0.00	1.16	
C1	25	0.00	2.09		0.51	1.77	
C2	26	0.00	1.84		0.00	1.16	
C3	27	1.66	2.12		3.01	2.50	

AJA AJH

C 8 of 102

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR013
Batch Ended: 6/17/02 8:29
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1085 HARVEY(100) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.00	1.96		0.00	1.60	
D1	29	3.31	2.74		0.01	1.75	
D2	30	1.57	2.10		0.20	1.72	
D3	31	1.62	2.17		2.76	2.56	
D4	32	0.00	2.11		1.55	2.07	
A1	33	1.44	2.08		2.61	2.56	
A2	34	0.00	1.95		0.41	1.70	
A3	35	1.68	2.16		2.77	2.48	
A4	36	1.47	2.00		0.00	1.18	
B1	37	1.56	2.02		0.00	1.25	
B2	38	0.00	2.03		1.49	2.06	
B3	39	0.00	2.13		2.65	2.57	
B4	40	0.00	2.00		0.00	1.16	
C1	41	1.56	2.12		2.85	2.50	
C2	42	0.00	1.88		2.84	2.32	
C3	43	0.00	2.15		5.65	3.06	
C4	44	0.00	1.99		0.63	2.52	
D1	45	1.40	1.96		1.43	2.14	
D2	46	0.00	2.10		0.37	1.72	
D3	47	1.62	2.20		5.32	3.15	
D4	48	0.00	2.11		1.55	2.07	
A1	49	0.00	2.05		0.00	1.28	
A2	50	0.00	1.96		1.61	2.08	
A3	51	0.00	2.20		6.63	3.29	
A4	52	0.00	2.01		0.34	1.67	
B1	53	1.56	2.08		5.13	3.07	
B2	54	1.31	2.03		1.32	2.06	
B3	55	0.00	2.16		5.21	3.15	
B4	56	0.00	2.00		0.00	1.16	
C1	57	0.00	2.08		0.00	1.25	

DJH DJH

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR013
Batch Ended: 6/17/02 8:29
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1085 HARVEY(100) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C2	58	0.00	1.86		0.53	1.64	
C3	59	0.00	2.08		0.00	1.25	
C4	60	0.00	1.96		0.00	1.60	
D1	61	0.00	1.93		0.00	1.24	
D2	62	0.00	2.09		0.00	1.21	
D3	63	0.00	2.16		1.64	2.22	
D4	64	3.56	2.96		0.07	1.69	
A1	65	1.45	2.05		0.00	1.28	
A2	66	0.00	1.95		0.41	1.70	
A3	67	0.00	2.16		2.91	2.48	
A4	68	0.00	2.04		3.88	2.65	
B1	69	0.00	2.06		2.79	2.50	
B2	70	0.00	2.13		9.82	3.79	
B3	71	1.59	2.13		2.49	2.57	
B4	72	0.00	2.00		0.00	1.16	
C1	73	0.00	2.13		4.25	2.80	
C2	74	0.00	1.87		1.68	2.00	
C3	75	0.00	2.11		1.91	2.16	
C4	76	0.00	1.95		0.00	1.14	
D1	77	0.00	1.98		2.84	2.48	
D2	78	3.64	2.95		0.00	1.22	
D3	79	0.00	2.14		0.36	1.81	
D4	80	1.48	2.10		0.21	1.69	
A1	81	1.44	2.06		0.06	1.81	
A2	82	5.43	3.36		0.00	1.70	
A3	83	0.00	2.13		0.00	1.24	
A4	84	3.45	2.82		0.00	1.18	
B1	85	1.56	2.02		0.00	1.25	
B2	86	5.27	3.45		0.00	1.19	
B3	87	0.00	2.15		3.93	2.87	

DJH DJH

C828 of 102

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR013
Batch Ended: 6/17/02 8:29
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1085 HARVEY(100) BSB

See next pg. for #93-96 6/17/02

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
B4	88	3.44	2.83		0.00	1.64	
C1	89	0.00	2.14		5.50	3.07	
C2	90	1.32	1.84		0.00	1.16	
C3	91	0.00	2.12		3.16	2.50	
C4	92	3.41	2.76		0.00	1.60	
D1	93	?	---		?	---	
D2	94	?	---		?	---	
D3	95	?	---		?	---	
D4	96	?	---		?	---	
A1	97	0.00	2.06		0.21	1.81	
A2	98	0.00	1.95		0.41	1.70	
A3	99	0.00	2.13		0.00	1.24	
A4	100	0.00	2.02		1.52	2.05	

N7H N7H

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR015
Batch Ended: 6/17/02 8:58
Cal. Due Date: 4/25/03
Serial Number: 26966-3
Batch ID: 02-TF-~~10845~~ 1085 (#93-96) BSB
DJH 6-17-02

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	93	3.48	2.92		3.74	2.86	
A2	94	0.00	2.01		6.41	3.19	
A3	95	0.00	2.14		0.44	1.75	
A4	96	3.45	2.83		0.06	1.67	

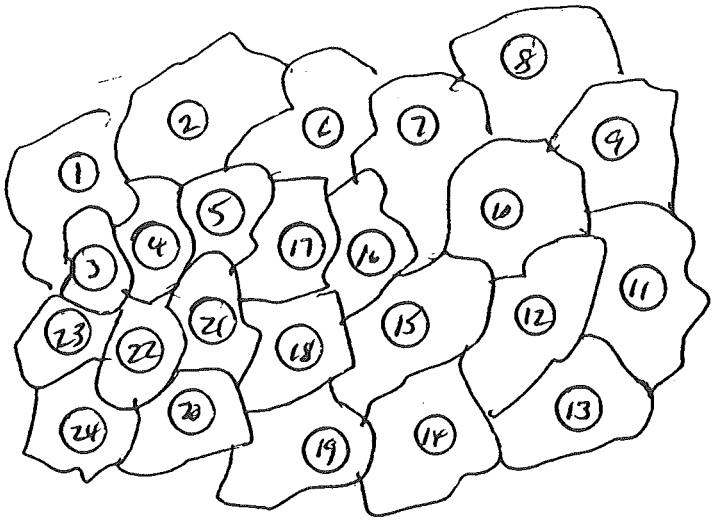
DJH DJH

C84 of 102

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29 BUILDING	SURVEY NO 02-TF-1138
PURPOSE: CONCRETE PILE SURVEY FOR RELEASE TO WASTEMANAGEMENT JOB COVERAGE	RWP NO. 1182
	DATE: 6-28-2002
	TIME 1600

MAP / DRAWING



COPY

25-26 TAKEN ON RAM HOE

- 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+η+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)	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)	[redacted]	Date: 7-2-02
Reviewed/Approved by: (Print Name) RMCoblentz		

L02-TF-1138

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-24	SEE		N/A	CONCRETE SLAB
25-26	ATTACHED		N/A	RAM HOE
			N/A	

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

COMMENTS:

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-0620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR074
Batch Ended: 7/1/02 8:22
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1138 HARVEY(26) BSB

CBBrown

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A1	1	1.44	2.09		3.89	2.86	
A2	2	0.00	1.94		0.00	1.20	
A4	3	1.47	2.00		0.00	1.18	
B1	4	1.56	2.02		0.00	1.25	
B2	5	1.31	2.00		0.00	1.19	
B3	6	0.00	2.13		2.65	2.57	
C1	7	0.00	2.08		0.00	1.25	
C2	8	0.00	1.86		0.53	1.64	
C3	9	1.66	2.09		0.00	1.25	
C4	10	0.00	1.95		0.00	1.14	
D1	11	1.39	1.99		3.90	2.77	
D3	12	1.62	2.17		2.76	2.56	
D4	13	1.48	2.09		0.00	1.19	
A1	14	0.00	2.05		0.00	1.28	
A2	15	0.00	1.95		0.41	1.70	
A4	16	0.00	2.02		1.52	2.05	
B1	17	1.56	2.02		0.00	1.26	
B2	18	1.31	2.01		0.13	1.69	
B3	19	1.59	2.10		0.00	1.29	
C1	20	0.00	2.10		1.76	2.16	
C2	21	0.00	1.84		0.00	1.16	
C3	22	0.00	2.08		0.00	1.25	
C4	~~22~~ 23	0.00	1.99		0.63	2.52	
D1	~~23~~ 24	0.00	1.96		1.60	2.14	
D3	~~24~~ 25	0.00	2.18		4.20	2.87	
D4	~~25~~ 26	0.00	2.14		3.93	2.67	

DJH DJH

7/1/02
bob

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RADIOLOGICAL SURVEY DATA SHEET

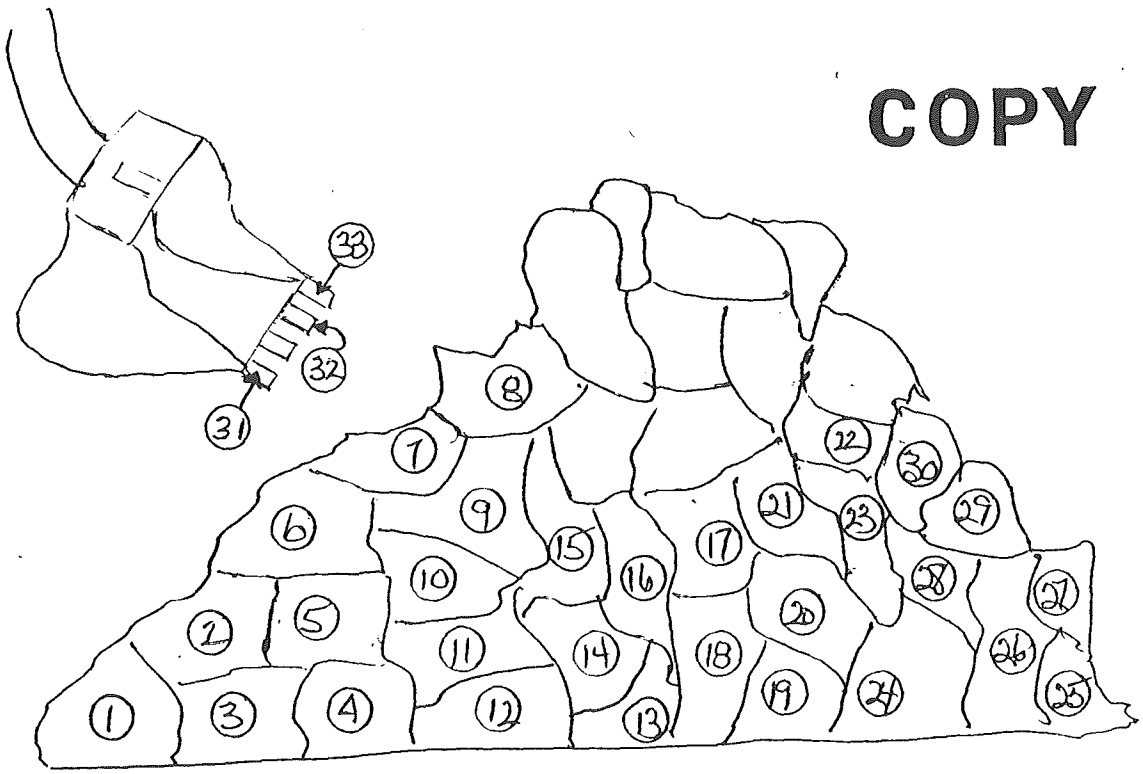
LOCATION: (BLDG./AREA/ROOM) 29/ 0/5	SURVEY NO. 02-TF 1141
PURPOSE: SLAB CONCRETE CHARACTERIZATION	RWP NO. 1182
	DATE: 7-3-02
	TIME: 0945

MAP/DRAWING

NOTE: INTEGRATED COUNT PERFORMED IF AUDIBLE α DETECTED.

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

COPY



LEGEND:
= mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on 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	5-9-03
BICRON	3815/3846	1-7-03
	N	
	A	

Completed by: (Signature) PGRadley / Kim Long	HP# [redacted]	Date: 7-3-02
Completed by: (Print Name) PG RADLEY / K.B. LONG		
Counted by: (Signature) SEE	HP#	Date:
Counted by: (Print Name) ATTACHED		
Reviewed/Approved by: (Signature) RMCoblentz	HP# [redacted]	Date: 7-9-02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

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RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination					Removable Contamination				
Swipes (dpm/100cm²)					Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments	Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED			CONCRETE DEBRIS					
2			N/A						
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18							N/A	N/A	
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31				690 ELC-BUCKET					
32									
33									
N/A	N/A	N/A	N/A	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-9620 (4-98)

Alpha/Beta Analysis

Batch ID:	Smear Unit 2 - 200207031039	**Count Date:**	7/3/2002
Group:	F	**Count Minutes:**	1.5
Serial Number:	78218-2	**Count Mode:**	Simultaneous
Batch ID:	02-TF-~~141~~ 1141 RADLEY(30) BSB PGR	**Operating Volts:**	1380
Selected Geometry:	Swipe/Smear	**Cal Due Dates:**	6/19/2004

	Efficiency (%)				Spillover (%)			
Alpha:	34.80	±	0.11		**Alpha to Beta:**	11.15	±	0.00
Beta:	45.81	±	0.13		**Beta to Alpha:**	0.07	±	0.00

Sample ID	Carrier ID	Alpha (dpm)	σ	Beta (dpm)	σ
1	73	0.00	0.00	2.51	2.06
2	72	0.00	0.00	2.51	2.06
3	71	0.00	0.00	1.25	1.46
4	70	0.00	0.00	2.51	2.06
5	82	2.05	1.92	4.88	2.92
6	79	2.05	1.92	3.62	2.53
7	78	0.00	0.00	1.25	1.46
8	77	0.00	0.00	3.76	2.52
9	76	0.00	0.00	0.00	0.00
10	87	0.00	0.00	3.76	2.52
11	86	0.00	0.00	6.27	3.25
12	85	0.00	0.00	1.25	1.46
13	84	0.00	0.00	1.25	1.46
14	83	0.00	0.00	1.25	1.46
15	92	0.00	0.00	2.51	2.06
16	91	0.00	0.00	3.76	2.52
17	8	2.05	1.92	2.37	2.06
18	90	0.00	0.00	1.25	1.46
19	89	4.10	2.71	2.23	2.07
20	88	0.00	0.00	5.02	2.91
21	100	0.00	0.00	1.25	1.46
22	99	0.00	0.00	0.00	0.00
23	98	0.00	0.00	2.51	2.06
24	97	0.00	0.00	3.76	2.52
25	96	4.10	2.71	0.00	0.23
26	95	0.00	0.00	1.25	1.46
27	94	0.00	0.00	1.25	1.46
28	93	0.00	0.00	2.51	2.06
29	37	2.05	1.92	0.00	0.16
30	41	0.00	0.00	2.51	2.06
		PGR		PGR	

Brittle Brown

Batch ID: 02-TF-~~141~~ 1141 RADLEY(30) BSB PGR

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR001
Batch Ended: 7/8/02 8:45
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1141 RADLEY

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B1	31	1.56	2.03		0.13	1.77	
B2	32	5.27	3.51		6.94	3.38	
B3	33	1.59	2.19		7.61	3.65	

✓ PGR ✓ PGR

C91 of 102

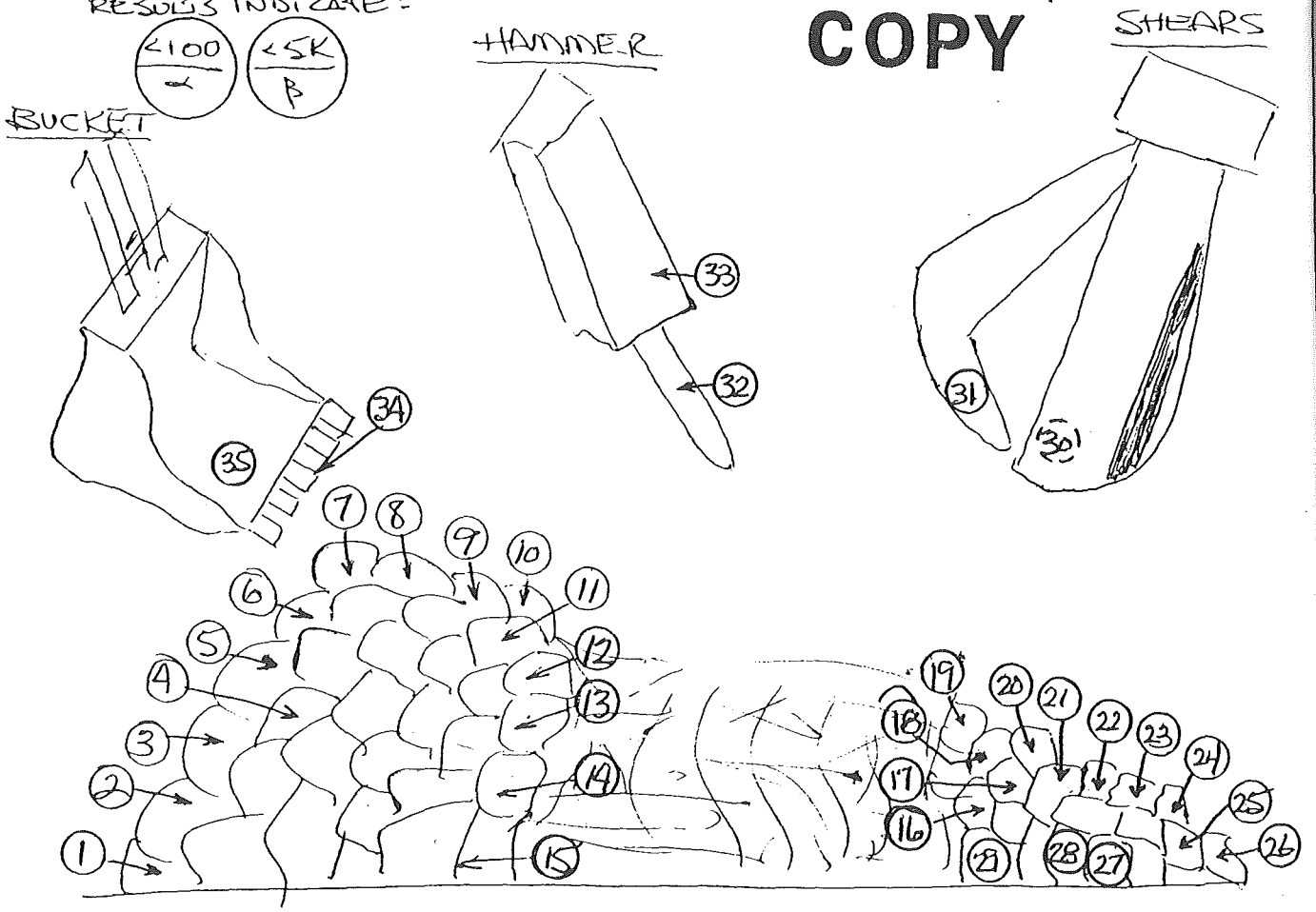
LOCATION: (BLDG./AREA/ROOM) 29 / O/S	SURVEY NO. 02-TF-1142
PURPOSE: SLAB CONCRETE CHARACTERIZATION	RWP NO. 1182
	DATE: 7-9-02
	TIME: 0800

NOTE: INTEGRATED COUNT PEFORMED WHEN AUDIBLE α DETECTED. DIRECT FRISK RESULTS INDICATE:

<100 / α <5K / β

MAP/DRAWING

COPY



LEGEND:
= mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on 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	5-9-03
BICRON	3815 / 3846	1-7-03

Completed by: (Signature) PG Radley	HP# [redacted]	Date: 7-9-02
Completed by: (Print Name) PG RADLEY		
Counted by: (Signature) SEE	HP#	Date:
Counted by: (Print Name) ATTACHED		
Reviewed/Approved by: (Signature) Daniel J. Harvey	HP# [redacted]	Date: 7-11-02
Reviewed/Approved by: (Print Name) DANIEL J. HARVEY		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE	ATTA	CHED	SLAB CONCRETE
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				SHEARS
31				↓
32				HAMMER
33				↓
34				BUCKET
35	↓	↓	↓	↓

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

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-9620 (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR009
Batch Ended: 7/9/02 8:15
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1142 RADLEY(35) 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	0.00	1.94		0.00	1.20	
A3	3	0.00	2.16		2.91	2.48	
A4	4	0.00	2.00		0.00	1.18	
B1	5	0.00	2.03		0.29	1.77	
B2	6	0.00	2.06		3.87	2.67	
B3	7	0.00	2.09		0.00	1.29	
B4	8	1.45	2.01		0.03	1.64	
C1	9	1.56	2.09		0.36	1.77	
C2	10	0.00	1.84		0.00	1.16	
C3	11	1.66	2.16		6.74	3.31	
C4	12	0.00	1.96		0.00	1.60	
D1	13	0.00	1.96		1.60	2.14	
D2	14	0.00	2.10		0.37	1.72	
D3	15	0.00	2.17		2.92	2.56	
D4	16	0.00	2.09		0.00	1.19	
A1	17	0.00	2.05		0.00	1.28	
A2	18	1.58	1.96		1.46	2.08	
A3	19	0.00	2.13		0.00	1.24	
A4	20	0.00	2.01		0.34	1.67	
B1	21	1.56	2.06		2.63	2.50	
B2	22	0.00	2.04		2.68	2.39	
B3	23	0.00	2.11		0.08	1.81	
B4	24	0.00	2.02		1.33	2.01	
C1	25	0.00	2.12		3.01	2.50	
C2	26	0.00	1.87		1.68	2.00	
C3	27	3.73	2.95		0.00	1.25	

PGR PGR

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B Smith Brown

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR009
Batch Ended: 7/9/02 8:15
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-1142 RADLEY(35) BSB

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.00	1.98		0.00	2.26	
D1	29	1.40	1.96		1.43	2.14	
D2	30	1.57	2.10		0.20	1.72	
D3	31	0.00	2.14		0.36	1.81	
D4	32	1.48	2.13		2.59	2.39	
A1	33	0.00	2.06		0.21	1.81	
A2	34	0.00	1.96		1.61	2.08	
A3	35	0.00	2.17		4.15	2.78	

PGR PGR

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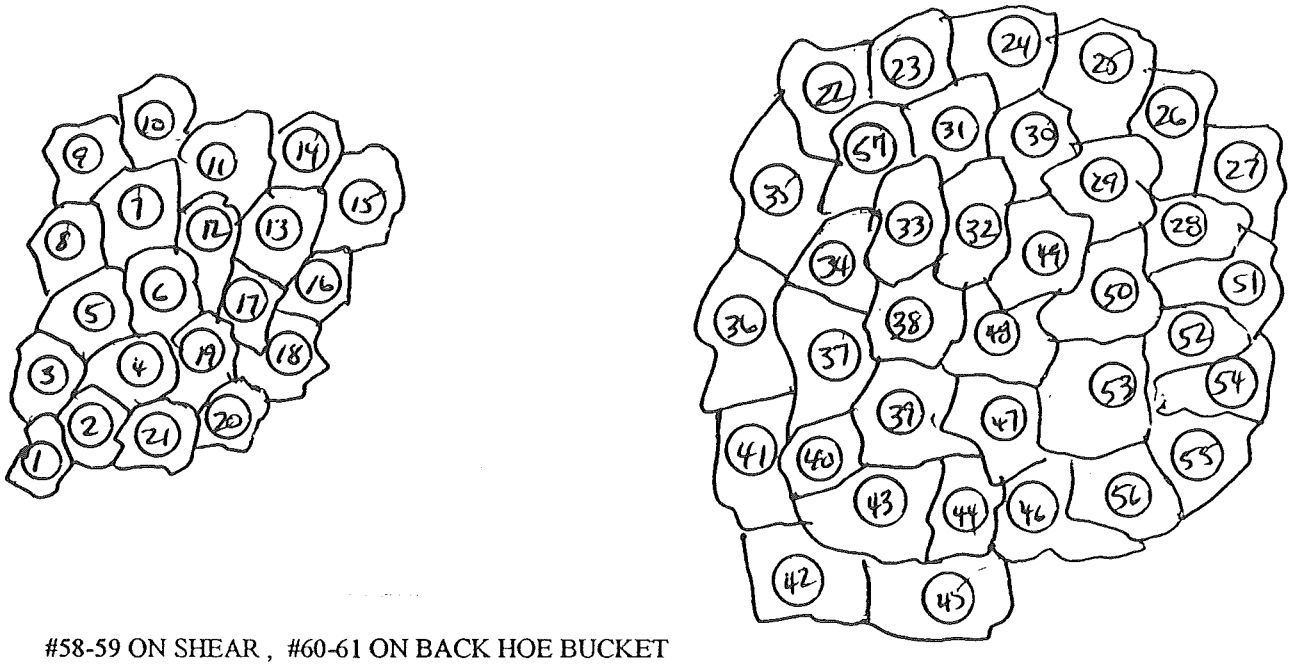
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 29 BUILDING	SURVEY NO 02-TF-1144
PURPOSE: CONCRETE PILE SURVEY FOR RELEASE TO WASTEMANAGEMENT JOB COVERAGE	RWP NO. 1182
	DATE: 7-12-2002
	TIME 1530

MAP / DRAWING

COPY



#58-59 ON SHEAR , #60-61 ON BACK HOE BUCKET

- 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+η+γ) extremity on contact

K = factor of 1000

— · — · - = radiological boundary

△# = mrem/hr neutron

(#) = swipe number

[#] = air sample number

(#/α) or /β = direct contamination measurement in dpm/100 cm²

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)	HP [redacted]	Date: 7-12-2002
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)	[redacted]	Date: 7-15-02
Reviewed/Approved by: (Print Name) RMGoblentz		

ML-9620

(2-98)

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Survey No. 02-TF-1144

Page ___ of ___

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-57	SEE		N/A	CONCRETE
58-59	↓	ATTACHED	↓	SHEAR
60-61	↓	↓	↓	BUCKET
		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)

Alpha/Beta Analysis

Batch ID: HARVEY SUR #02-TF-1144 (61)/BH

Batch File: Smear Unit 2 - 200207121505
Group: C
Device: Unit 2
Geometry: Swipe/Smear
Serial Number: 15764-2

Acquisition Date: 7/12/02
Count Time (min): 1.5
Recalibration Date: 2/23/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	30	0.00	0.00	2.95	4.18
2	93	0.00	0.00	2.95	4.18
3	147	0.00	0.00	0.00	0.00
4	72	0.00	0.00	1.48	2.95
5	58	0.00	0.00	4.43	5.11
6	115	0.00	0.00	4.43	5.11
7	149	0.00	0.00	0.00	0.00
8	26	0.00	0.00	1.48	2.95
9	32	0.00	0.00	0.00	0.00
10	142	0.00	0.00	5.91	5.91
11	43	0.00	0.00	1.48	2.95
12	17	0.00	0.00	2.95	4.18
13	112	0.00	0.00	1.48	2.95
14	65	2.51	5.03	1.46	2.95
15	2	0.00	0.00	0.00	0.00
16	126	0.00	0.00	0.00	0.00
17	127	0.00	0.00	1.48	2.95
18	30	0.00	0.00	0.00	0.00
19	39	0.00	0.00	0.00	0.00
20	56	0.00	0.00	2.95	4.18
21	10	0.00	0.00	1.48	2.95
22	6	0.00	0.00	4.43	5.11
23	6	0.00	0.00	5.91	5.91

DGH DGH

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
24	38	0.00	0.00	1.48	2.95
25	144	0.00	0.00	0.00	0.00
26	108	0.00	0.00	2.95	4.18
27	93	0.00	0.00	2.95	4.18
28	49	0.00	0.00	2.95	4.18
29	150	0.00	0.00	4.43	5.11
30	47	2.51	5.03	5.89	5.91
31	86	0.00	0.00	0.00	0.00
32	39	0.00	0.00	2.95	4.18
33	27	0.00	0.00	2.95	4.18
34	139	0.00	0.00	2.95	4.18
35	61	0.00	0.00	2.95	4.18
36	149	12.57	11.24	1.42	2.98
37	57	0.00	0.00	7.38	6.60
38	122	0.00	0.00	4.43	5.11
39	83	2.51	5.03	1.46	2.95
40	14	0.00	0.00	2.95	4.18
41	39	0.00	0.00	2.95	4.18
42	14	0.00	0.00	4.43	5.11
43	48	0.00	0.00	1.48	2.95
44	52	0.00	0.00	2.95	4.18
45	29	0.00	0.00	1.48	2.95
46	98	0.00	0.00	13.29	8.86
47	125	0.00	0.00	5.91	5.91
48	25	0.00	0.00	4.43	5.11
49	31	0.00	0.00	5.91	5.91
50	55	2.51	5.03	2.94	4.18
51	38	5.03	7.11	4.41	5.12
52	28	0.00	0.00	2.95	4.18
53	24	2.51	5.03	2.94	4.18
54	35	5.03	7.11	1.45	2.96

09H 09H

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Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
55	36	0.00	0.00	4.43	5.11
56	3	0.00	0.00	1.48	2.95
57	41	0.00	0.00	2.95	4.18
58	141	0.00	0.00	4.43	5.11
59	114	0.00	0.00	2.95	4.18
60	66	0.00	0.00	2.95	4.18
61	119	2.51	5.03	1.46	2.95
			DGH		DGH

Brenda Hislope 7-15-02

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Protocol# 4 - Smears.lsa User: [redacted]

HARVEY SUR #02-TF-1144 (U1-U61)/BH

T-416

Cycle 1 Results

S#	Count Time	CPMA	CPMB	CPMC	LUM	tSIE	DPM1	A:2S%	MESSAGES
-1	10.00	8	7	5	0	647.81	0	22.0	B
0	2.00	255	238	1	0	505.70	494	9.0	
1	2.00	0	0	2	7	560.61	0	0.0	
2	2.00	0	0	3	13	500.08	0	0.0	
3	2.00	0	0	0	20	566.20	0	0.0	
4	2.00	0	0	0	0	639.66	0	0.0	
5	2.00	5	6	1	3	581.59	10	102.1	
6	2.00	0	0	7	7	601.27	0	0.0	
7	2.00	0	0	0	0	581.80	0	0.0	
8	2.00	0	0	0	0	556.97	0	0.0	
9	2.00	0	0	0	0	542.75	0	0.0	
10	2.00	0	0	0	0	684.55	0	0.0	
11	2.00	0	0	1	0	565.66	0	0.0	
12	2.00	0	0	0	0	614.51	0	0.0	
13	2.00	0	0	1	20	547.34	0	0.0	
14	2.00	0	0	0	0	592.72	0	0.0	
15	2.00	0	0	0	0	623.24	0	0.0	
16	2.00	0	0	0	0	497.59	0	0.0	
17	2.00	0	0	0	0	583.84	0	0.0	
18	2.00	0	0	0	0	600.28	0	0.0	
19	2.00	0	0	0	11	449.11	0	0.0	
20	2.00	0	0	0	0	580.46	0	0.0	
21	2.00	0	0	1	0	605.79	0	0.0	
22	2.00	0	0	1	0	578.53	0	0.0	
23	2.00	0	0	0	0	559.98	0	0.0	
24	2.00	0	0	0	0	599.39	0	0.0	
25	2.00	0	0	0	0	595.75	0	0.0	
26	2.00	0	0	2	0	611.71	0	0.0	
27	2.00	0	0	0	0	609.51	0	0.0	
28	2.00	0	0	2	0	607.74	0	0.0	
29	2.00	0	0	0	0	578.15	0	0.0	
30	2.00	0	0	0	0	572.91	0	0.0	
31	2.00	0	0	0	0	593.44	0	0.0	
32	2.00	0	0	0	0	563.63	0	0.0	
33	2.00	0	1	1	0	589.38	0	*****	
34	2.00	0	0	0	0	585.92	0	0.0	
35	2.00	0	0	1	0	517.76	0	0.0	
36	2.00	0	0	0	0	552.59	0	0.0	
37	2.00	0	1	0	6	588.54	0	0.0	
38	2.00	0	0	0	0	644.99	0	0.0	
39	2.00	0	0	0	0	633.50	0	0.0	
40	2.00	0	0	3	0	594.88	0	0.0	
41	2.00	0	0	0	0	614.25	0	0.0	
42	2.00	0	0	0	0	609.23	0	0.0	
43	2.00	0	0	0	0	594.12	0	0.0	
44	2.00	0	0	1	0	590.27	0	0.0	
45	2.00	0	0	0	0	365.14	0	0.0	
46	2.00	0	0	0	0	339.20	0	0.0	
47	2.00	0	0	0	0	535.52	0	0.0	
48	2.00	0	0	0	0	419.16	0	0.0	
49	2.00	0	0	0	0	592.62	0	0.0	
50	2.00	0	0	1	0	473.80	0	0.0	
51	2.00	0	0	0	0	533.02	0	0.0	
52	2.00	0	0	0	0	528.60	0	0.0	
53	2.00	0	0	2	0	556.63	0	0.0	
54	2.00	0	0	0	0	549.75	0	0.0	
55	2.00	0	0	0	0	509.18	0	0.0	
56	2.00	0	0	0	0	426.87	0	0.0	
57	2.00	0	0	2	0	363.53	0	0.0	

~~N~~ 6 of 7

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HARVEY SUR #02-TF-1144 (U1-U61)/BH

58	2.00	0	0	0	0	417.87	0	0.0
59	2.00	0	0	3	0	461.81	0	0.0
60	2.00	0	0	1	0	466.88	0	0.0
61	2.00	0	0	0	0	405.23	0	0.0

Brenda Hislope 7-15-02 BH

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