3006-0204010001

MOUND

Environmental Restoration Program

Mound Site
CERCLA
Reading Room Copy

OhioEPA

MOUND PLANT
Closeout Report
Buildings 71 and 73

Final
April 2002

Closeout Report

Buildings 71 and 73

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.

TABLE OF CONTENTS

Section Page

1.0 Purpose 1
2.0 Background 1
  2.1 Building 71 1
  2.2 Building 73 1
3.0 Actions Taken 1
4.0 Problems Encountered 2
5.0 Resources Committed 2

Tables

Table 1: Materials Disposition 2
Table 2: Personnel Organization for the Demolition 2
Table 3: Total Cost 3

Appendices

Appendix A Figures
  Figure 1: Locations of Building 71 & 73
  Figure 2: Buildings 71 & 73 and Vicinity
  Figure 3: Buildings 71 and 73 – Buildings, Pads, and After Demolition

Appendix B Work Package

Appendix C Radiological Summary

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1.0 PURPOSE

This is the final report documenting completion of the demolition of Buildings 71 and 73 located at the DOE Mound Site, as shown in Figures 1 and 2 (Appendix A). The buildings were sold as private property, and the pads were demolished per the Work Package for Building 71 and 73 Pad Demolition (November 2001), which is included in Appendix B. The scope of work relating to these buildings is considered complete.

2.0 BACKGROUND

2.1 Building 71

Built in 1984, Building 71 was an 800-square foot building used for storage of flammable liquids (Figure 3). Solvents were stored in Building 71 until they were distributed to other buildings onsite, but no processes were conducted in the building. The building was of steel frame construction with metal sides and roof, and a raised concrete pad. Docks were located on the building's two open sides. There was no heating or water services. The building had 240-volt electrical service.

Building 71 was located southwest of Buildings 73 and 61, and east of an 800,000-gallon stormwater retention impoundment (Figures 1 and 2).

2.2 Building 73

Built in 1983, Building 73 was a 2,200-square foot building used for storage of gas cylinders (Figure 3). Gas cylinders were stored in Building 73 until they were distributed to other buildings onsite, but no processes were conducted in the building. The building was of steel frame construction with metal sides and roof, and a raised concrete pad. Docks were located on the building's two open sides. There was no heating or water services. The building had 240-volt electrical service.

Building 73 was located southwest of Building 61, northeast of Building 71, and east of an 800,000-gallon stormwater retention impoundment (Figures 1 and 2).

3.0 ACTIONS TAKEN

Buildings 71 and 73 were considered private property and therefore did not require a work package for removal. The buildings were sold at auction and removed from the Mound Site in 1998, leaving the concrete pads in place. This Closeout Report documents the completion of the removal of the pads, foundations, and footers.

All preparation and demolition activities were performed in accordance with a detailed Work Plan (Appendix B) to characterize existing liquids and subsurface soil, perform safe shutdown of utilities, maintain site access control, and perform demolition and debris removal. There were no Potential Release Sites (PRSs) associated with Buildings 71 and 73.

The pads of Buildings 71 and 73 were radiologically surveyed before and after demolition. All radiological sampling results were below applicable surface release criteria (Appendix C).

The demolition and removal of the pads, foundations, and footers for Buildings 71 and 73 was accomplished as a non-CERCLA project. Demolition was completed in February of 2001. Photographs taken before and after demolition are provided in Figure 3.

Demolition material was dispositioned as noted in Table 1. All material from this demolition was reused onsite.

Table 1 - Materials Disposition

Material	Quantity	Method	Location
Construction Debris* (concrete)	4,860 cubic feet	Crusher / Volvo	TFV Spoils Area

** Includes debris from pads, foundation, and footers; buildings were sold at auction and removed from Site.*

4.0 PROBLEMS ENCOUNTERED

Buildings 71 and 73 were sold at auction and removed from the Mound Site with no documented problems. The pads, foundations, and footers were successfully demolished per the Work Package.

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.

Table 2 - Personnel Organization for the Demolition

Agencies or Parties Involved	Contact	Description of Participation
DOE/MEMP P.O. Box 66 1 Mound Road Miamisburg, OH 45343-0066 937-865-3620	Ronald Church / Frank Schmaltz	DOE/MEMP Project Manager responsible for project oversight and success.
BWXT of Ohio, Inc. Main Hill Project P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 937-865-4071	Budd Thompson	Provided the DOE/MEMP Project Manager with technical assistance, administrative support, sampling, decontamination, photo and site documentation, site safety, and report preparation.
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.

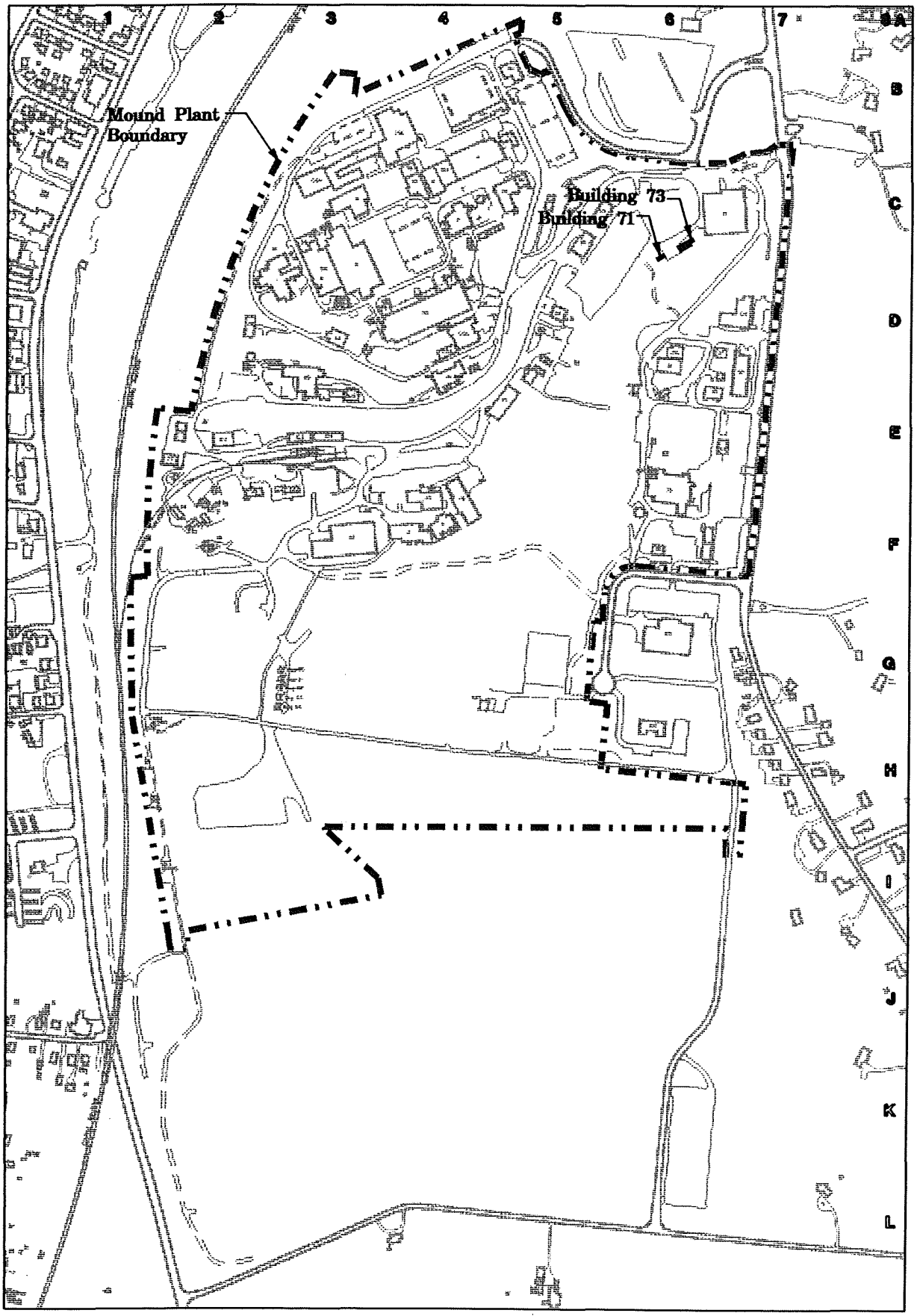
Table 3 - Total Cost

Summary Activity	Cost
Work Planning	$1,109
Safe Shutdown	$450
Characterization	$3,288
Decontamination and Demolition	$47,600
Hauling and Disposal	$0*
Historical Costs	$6,991
Total Cost	**$59,438**

** All debris resulting from the demolition of the Building 71 and 73 pads was transported to the spoils area and reused onsite.*

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

03/28/02	ISSUE FOR GENERAL USE	SSP				
DATE	REVISION	BY	CHKR	ENG	M	

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 A

PART CLASSIFICATION

( ) TITLE CLASSIFICATION

Figure 1– Locations of Building 71 & 73

DRAWING CLASSIFICATION: UNCLASSIFIED

SIZE: D

DRAWING NUMBER: gen_site_plan.dgn

JOB NUMBER

DWG TYPE: SITE

PRNC

CHKCC

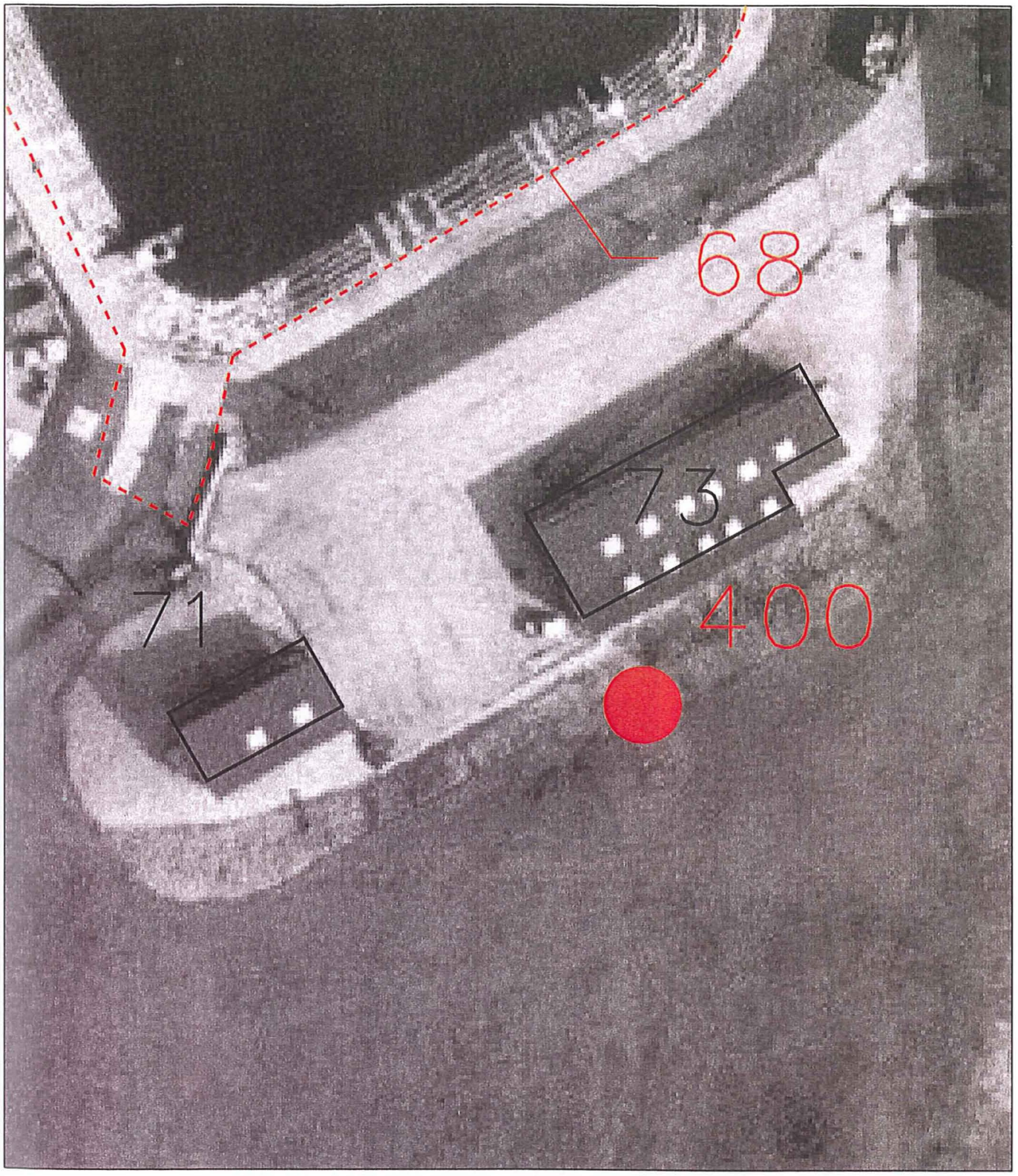
SCALE: Graphic

SHEET 1 OF

STATUS: MD-REL-03/14/03

ORIGIN: MSTATION / J

gen_site_plan.dgn



PRS Point

PRS Area

RSS	03/28/02 DATE	REVISION	SSP BY	CHKR	ENG	LPREC	APVD	M

MOUND

Environmental Restoration Geographic Information System

SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
ISSUE																					
SHEET	1	2	3	4	5	6															
ISSUE	*																				

PART CLASSIFICATION

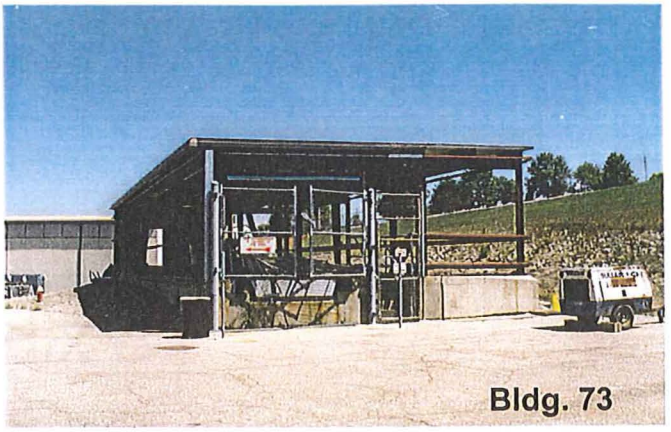
DRAWING CLASSIFICATION: UNCLASSIFIED

SIZE | DRAWING NUMBER: vicinity.dgn | JOB NUMBER

ORG TYPE: STE | PROJ: ER-GIS | CADD | SCALE | SHEET 1 OF

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

Figure 2
Buildings 71 & 73 and Vicinity



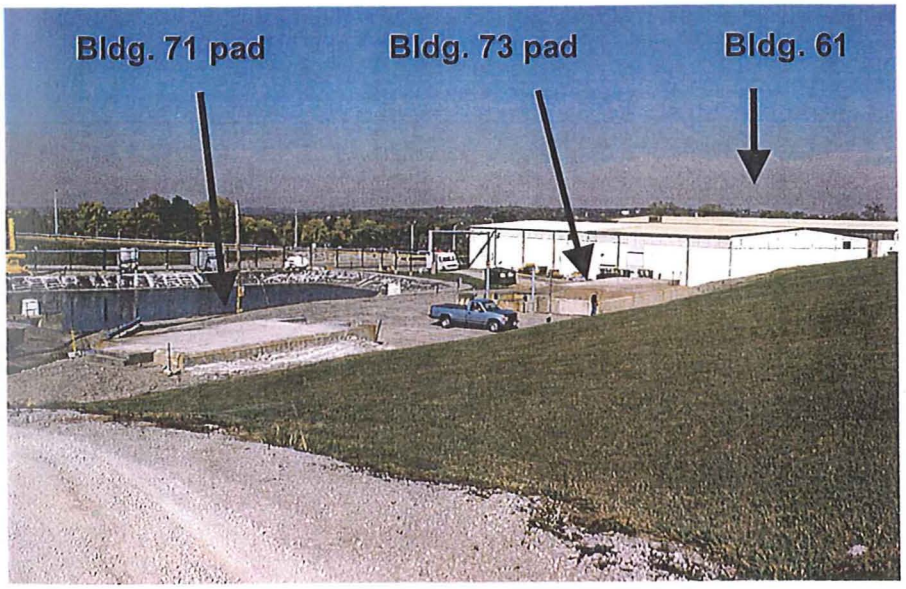
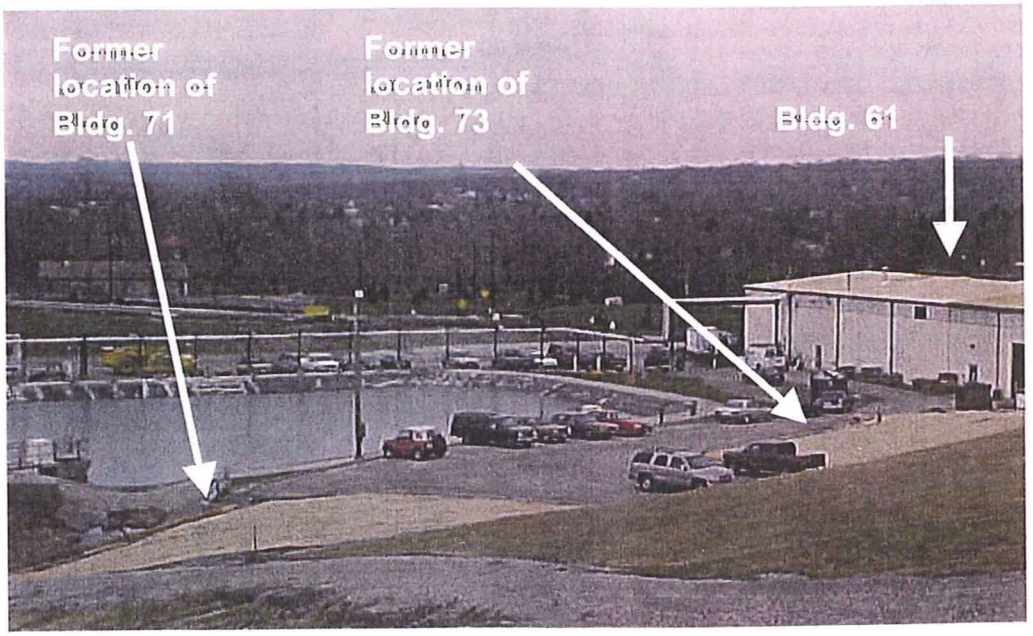


Figure 3:
Buildings 71 & 73

Buildings, Pads, and
After Demolition



Appendix B

Work Package

WORK PACKAGE / PRELIMINARY HAZARD ANALYSIS

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 71 & 73 Pad Demolition

2. WORK PACKAGE NUMBER: SM-27905-01

3. WORK PACKAGE SCOPE:

Demolition and Surface Reclamation of Building 71 & 73 Pads, see Figure 1.0

4. WORK PACKAGE PHASES:

1. Isolate Utilities
2. Demolition of Pad 71, see Figure 2.0
3. Demolition of Pad 73, see Figure 3.0
4. Surface Reclamation

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 #: Building Pads 71 & 73

Room #: N/A

Other:

6. SPECIAL MATERIALS AND EQUIPMENT:

1. Hoeram
2. Backhoe
3. Loader
4. Hauler

7. DETAILED WORK STEPS:

1.0 Isolate utilities surrounding 71 & 73 Pads, See Figure 4.0

a. Locate and verify Fire Water Supply lines are isolated

Verified By: _____

Core Pipefitter/Welder Date

Verified By: _____

Core Pipefitter/Welder Date

b. Locate and verify underground electrical power has been de-energized

Verified By: _____

Core Team Electrician Date

Verified By : _____

Core Team Electrician Date

c. Re-establish power pole support lines if necessary

d. Verify pads are radiologically clean

2.0 Demolition of Pad 71, See Figure 4.0.

a. Establish personnel and equipment work control area with identified barrier
b. Establish erosion control around identified culvert
c. Establish waste collection area and place all generated metal components in container for potential radiological disposal
d. Demo 71 Pad

3.0 Demolition of Pad 73, See Figure 4.0.

a. Establish personnel and equipment work control area with identified barrier
b. Establish erosion control around identified culvert
c. Establish waste collection area and place all generated metal components in container for potential radiological disposal
d. Demo 73 Pad

4.0 Surface Reclamation a. Re-establish and grade work area surface b. Re-establish drainage ditch to original grade c. Cover and compact surface of work area and drainage ditch with generated stone and concrete spoils to control erosion
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.

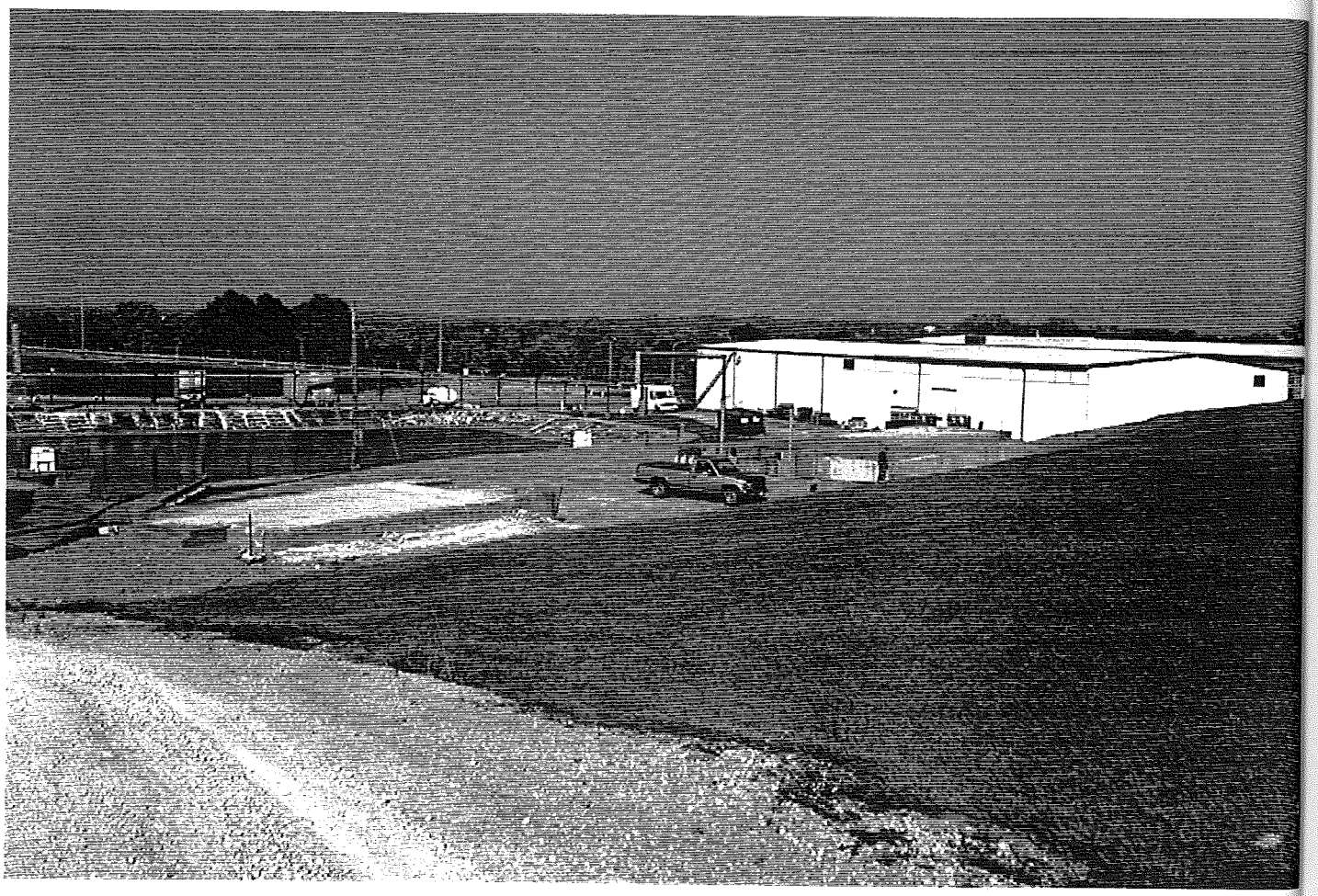


Figure 1.0 Building 71 & 73 Pads

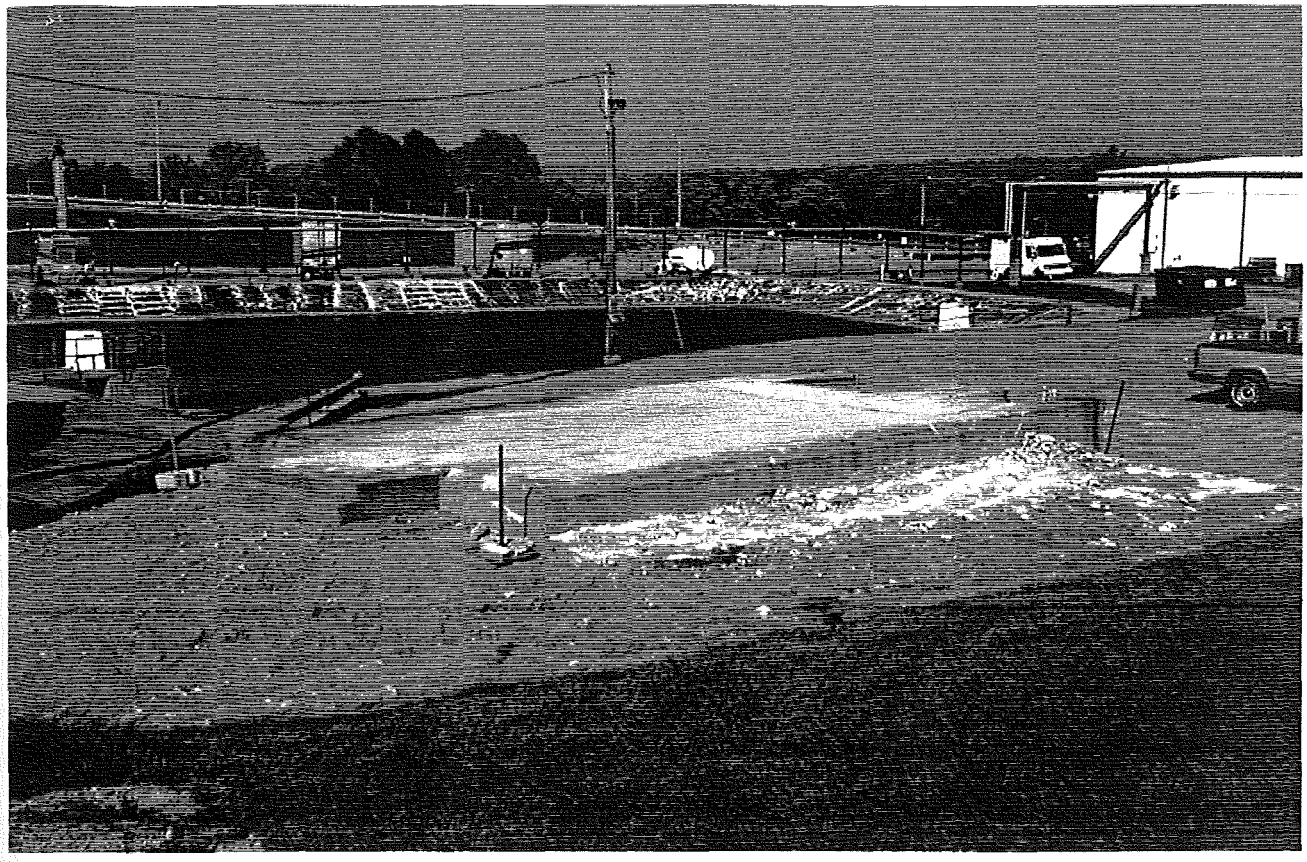


Figure 2.0 Building 71 Pad

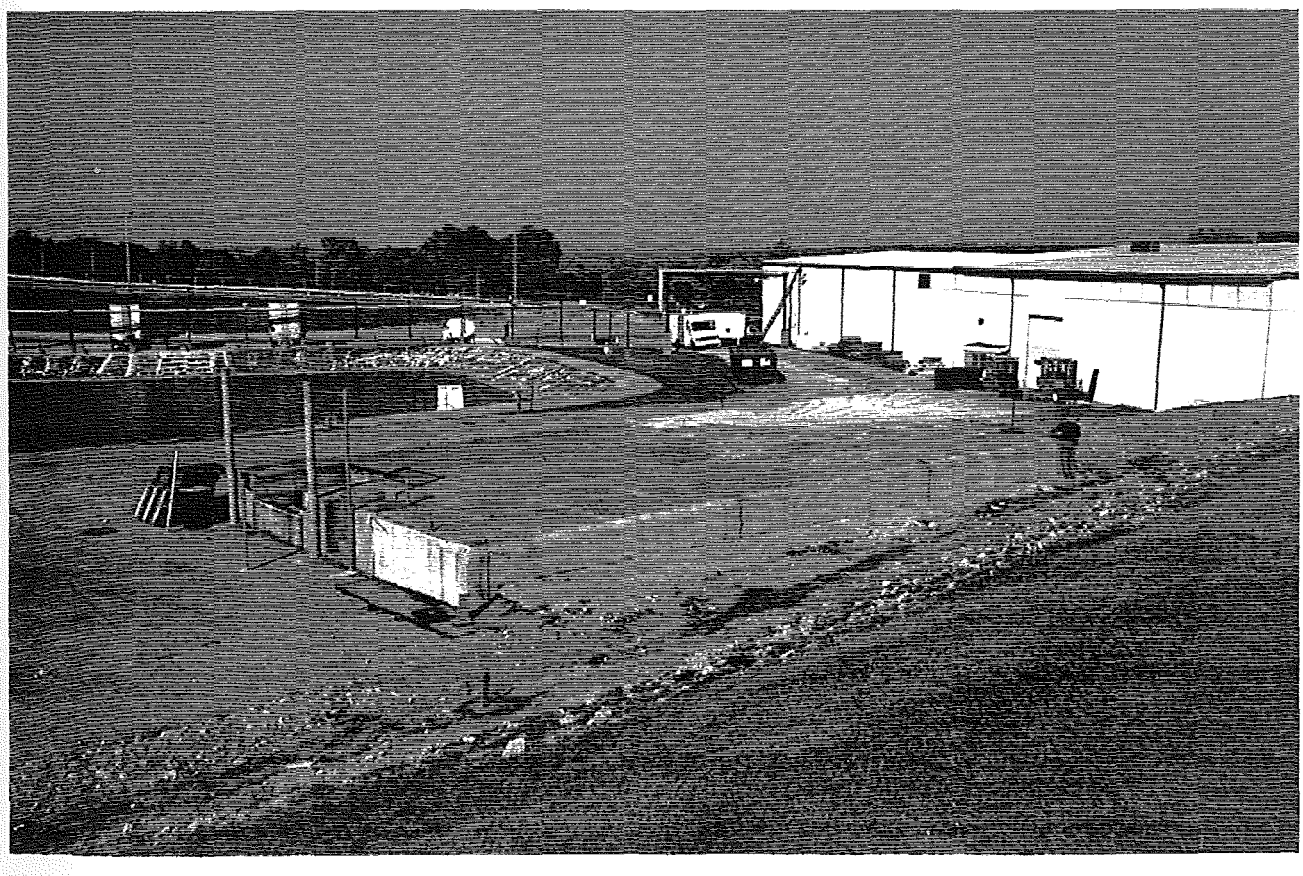


Figure 3.0 Building 73 Pad

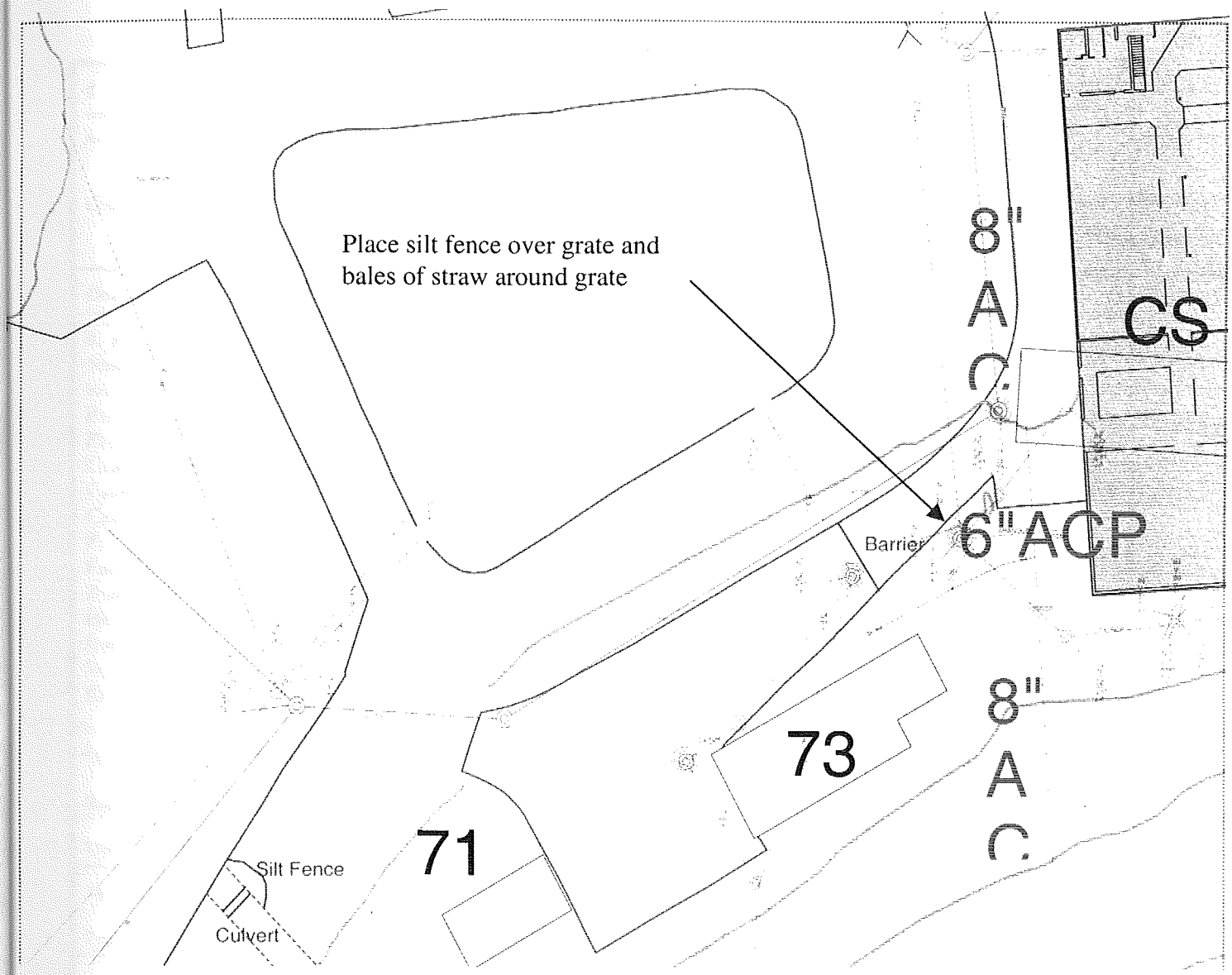


Figure 4.0 Demolition Site

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:**

Control of personnel around working equipment

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

9. REVIEW SIGNATURES:

Name	Signature	Date
Responsible Person	Stanley R. Richards	11-14-01
Project Engineer	Stanley R. Richards	11-14-01
Project Foreman	[illegible]	11-13-01
Craft Core Team	[illegible]	11-13-2001
Craft Core Team	Douglas [illegible]	11-13-2001
Craft Core Team	R. K. Burrowbed	11-13-2001
Project Superintendent	Michael M. [illegible]	11-14-01
Facility Manager	Gary L. Weidenbach	11-13-01
Building Manager	Gary L. Weidenbach	11-13-01
Health Physics (RPOC)	[illegible]	11/13/01
Industrial Safety & Health	[illegible]	11/13/01
WM Waste Coordinator	[illegible]	11-14-01
Environmental Compliance	Ronald [illegible]	11-20-01

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

Brief Explanation: All utilities were disconnected when facilities were previously removed.

USQ Trained Person: Stanley R. Richards / Gary Weidenbach Date: 10 / 12 / 01 Phone: 3867 / 3241

10. AUTHORIZATION SIGNATURE:

Project Manager: [illegible] Date: 11/20/01 Phone: X-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)	No	N/A	[BURN]
Chemical compatibility of corrosives/flammables	No	N/A	
Chemical process safety	No	N/A	
Compressed gas cylinders	No	N/A	
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]
Elevated work/fall protection	No	N/A	[ELEV]
Emergency eyewash/shower available	Yes	2 & 3	[EWASH] Portable eye wash station with be provided on site
Emergency alarms or evacuation plans required	No	N/A	[EMERG]
Explosive/flammable atmosphere	No	N/A	
Explosives	No	N/A	
Fire protection system/equipment outage	No	1	[FIRE/EFIRE] Confirm Fire Water Supply isolated
Fire Hazards Analysis Required of Demolition	No	N/A	[FHA/ADJA]
Flammable liquids/gases	No	N/A	[FLAM]
Forklifts, aerial lifts or material handling equipment	No	N/A	
Grounding of electrical equipment	No	N/A	
Hazards due to condition of facility or terrain (Identify)	No	N/A	
Hoisting and rigging	No	N/A	[HOIST]
Lighting/illumination/adequacy	Yes	2 & 3	[MLITE] Operations will take place during daylight hours

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:	Yes	N/A	[LOTO/ISO]
☐ Electrical	Yes	N/A	12 KVA overhead line will be LOTO daily
☐ Mechanical (steam, hydraulic, pneumatic)	No	N/A	
☐ 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	No	N/A	[OUTAGE]
Overhead or underground utilities (Identify)	No	N/A	[UITL]
Penetrations into walls, floors, etc.	No	N/A	[PENETR]
Plastic sheeting or wood framing/enclosures	No	N/A	
Powder-actuated tools	No	N/A	
Public utilities (Identify)	Yes	1	[WATER] During verification of Fire Water Supply isolation
Repetitive work	No	N/A	[ERGO]
Structural Modification	No	N/A	[STRUCT]
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)	No	N/A	
Traffic control/flagman	No	N/A	[TRAFIC]
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) Excavation	Yes	3,4,&5	Dig Permit

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

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

Item	Exist	Work Package Phase	Comments, Controls, Methods of Compliance
Abrasive blast (☐ MSDS available)*	No	N/A	
Asbestos	No	N/A	[ASBEST]
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	No	N/A	
Coating/painting (☐ MSDS available)*	No	N/A	
Corrosives/acids/caustics (☐ MSDS available)*	No	N/A	
Dusty operations	Yes	2 & 3	[POWDER] To control dust, water misting will be employed to not exceed 20 opacity during demolition
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	No	N/A	
Foam in Place Operations	No	N/A	
Mercury	No	N/A	
Noise in excess of 85 dBA	Yes	2 & 3	[NOISE] Heavy duty operators and personnel within construction zone will wear hearing protection and other personnel will be positioned outside of the construction zone during demolition
Polychlorinated biphenyls (PCBs)	No	N/A	
Removal of ceiling tiles*	No	N/A	
Spraying/generation of mists*	Yes	2 & 3	A water mist will be used to control dust
Temperature extremes (heat or cold stress)	Yes	All	[CRYRO/COLD/HEAT] The demolition may take place during winter conditions
Ventilation or Air Monitoring requirements	Yes	2 & 3	[VENTIL/IH] Air will be monitored for dust, silica, and airborne rad
Welding, brazing, or thermal cutting operations	Yes	2 & 3	[BURN] The cutting of rebar within the concrete will be controlled with a burn permit and fire watch
Other - Unnecessary personnel exposure	Yes	All	Access to the construction area will be controlled

***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)	No	N/A	
Activities:	Criticality Safety Concerns			
	Digging/Soil Removal	Yes	2 & 3	[DIG] The removal of soil will be controlled via excavation Permit and construction zone control
	Surface destruction of radioactively contaminated materials or equipment?	Yes	2 & 3	[SURFAC] During demolition of concrete pads intermittent Rad surveys will be performed on underside of pads
	Welding, burning, or grinding?	No	N/A	[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?	Yes	2 & 3	If contamination is found during demolition, all equipment in contact will be monitored and if found clean will be released.
	Rad Waste Storage and Disposal Required	No	N/A	[RWSTOR/WASTE/CHAR]
	Other (Specify)			
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	All	[RWP/RWP=JS/RWP=N/R/RPGEN] However, the surfaces will be controlled via water mist.
	ALARA Plan	No	N/A	[ALARA]
	Air Flow Studies	No	N/A	[AIRFLOW/CAM]
	Urinalysis program	No	N/A	
	Preliminary or in-process characterization	Yes	2 & 3 & 4	[SURVPS/SURVIP] Debris generated will be monitored
	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	No	N/A	

Administrative Controls	No	N/A	
Supplemental dosimetry	No	N/A	
Shielding	No	N/A	
Personnel monitoring (frisking)	Yes	2 & 3	If radiologically contamination is found, personnel entering or leaving the area will be monitored.

SECTION D - OTHER CONDITIONS, CONCERNS, OR SUPPLEMENTAL INFORMATION FROM SECTIONS A THROUGH C
Identify Assembly Points: NONE

WORK PACKAGE REVISION FORM

Work Package Revision Form			
Work Package No.		Revision No.	
Revision Description: (attach page revisions to form)			
	Name	Signature	Date
PREPARED BY:			
Revision Preparer:			
REVIEWED BY:			
Project Foreman:			
Project Superintendent:			
Industrial Safety & Hygiene PoC:			
Radiological Point of Contact:			
Environmental Safeguards & Compliance PoC:			
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

JSHA/HASP

Project/Activity: Building 71 & 73 Pad Removal
Name: Stanley Richards

JSHA CRITERIA CHECKLIST	YES	NO	N/A
1. Work performed with a 6 ft. or greater fall hazard		X	
2. Roof work requiring the use of fall protection (within 6 ft of an unprotected edge) or special fall protection procedures.		X	
3. Excavation deeper than 4 ft where personnel entry is necessary.		X	
4. Potential hazardous chemical exposure above action levels or permissible exposure limits (PELs), or ACGIH Threshold Limit Values (TLVs).		X	
5. Work activity in an immediately dangerous to life or health (IDLH) breathing hazard environment.		X	
6. Fire or explosion hazards. Are fire hazards beyond a Hot Work Permit? (Reference O2, MD-10286)		X	
7. Work with energetic material where no safety procedure is in place or when the safety procedure established does not include the full scope of work hazard analysis equivalent to the JSHA process.		X	
8. 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	
9. Any maintenance or repair of equipment under pressure where the pressure cannot be shut off and de-energized.		X	
10. Work involving the use of bubble suits.		X	
11. Work with high or extreme exposure to ionizing or non-ionizing radiation (reference MD-80036, Op 10002), noise, or heat or cold stress (reference D9, D13, & D16, MD-10286)		X	
12. Work involving hoisting and/or rigging considerations with nuclear material or where the lift weight is at or above 75% of the hoisting equipment's rated capacity.		X	
13. Maintenance work requiring a high hazard work package as defined by Section FM-MO-001, MD-50000, *Maintenance Work Control System.*		X	
14. Determined by an appropriate core team, building manager, member of general or executive management, or the IS&H manager to require a JSHA.	X		
15. Any onsite construction or service project directed to have JSHAs based on I2, of MD-10286 and/or instruction from project personnel or IS&H staff.		X	
16. Near-miss event with the potential for loss of life or limb or disabling injury/illness if repeated.		X	
17. Excessive trauma/motion/vibration work situations or manual lifting involving heavy, large, and/or awkward-to-handle objects (reference MD-10407, *Ergonomics Program.*		X	
18. Unguarded, unmarked close clearance, pinch point, exposed moving machinery parts.		X	
19. 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		
20. The use of powder-actuated tools (reference O1, MD-10286).		X	
21. Confined Space hazardous atmosphere or high-risk confined space (reference M11, MD-10286).		X	

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

JOB SAFETY & HEALTH ANALYSIS

JSHA MASTER DOCUMENT CONTROL NO:

JSHA No.: SMPP/TV-027905

DATE:		**BUILDING:**	**JOB:**
9-5-01	☐ _X_ **NEW** ☐ ___ **REV**	71 & 73	D & D of Building 71 & 73 Pads
DEPARTMENT/COMPANY: MHNR		**SECTION:**	
SMPP/TFV		TFV Project Team	
OCCUPATIONS: **RCTs, Crafts, HDs, and DTs**			

SIGNATURES

ORIGINATOR: Stanley R. Richards	Stanley R. Richards
REVIEW/REV:	11/14/01
REVIEW/REV:	11/14/01
APPROVED:	11/14/01
APPROVED:	11/20/01

REQUIRED PERSONAL PROTECTIVE EQUIPMENT:	MSDS(s)/CHEMICALS ASSOCIATED WITH THE JOB:
----------See RWP Requirements----------	NAOH and Ferric Sulfate MSDSs

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. Electrically Isolate Pads 2. Establish Erosion Control 3. Establish Construction Zone 4. Remove and Dispose of Concrete Pads 5. Reclaim Surface	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 CO - Caught on Cb - Contacted by CB - Caught between SA - Struck against F - Fall CW - Contact with SO - Strain-overexertion* CI - Caught in 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	N/A	This project engages in Enhanced Work Planning, a ISM process that evaluates and improves the approach by which work is identified, planned, approved, controlled, and executed.
1) Isolate electrical energy sources	Cb) Exposure to high voltage Exposure to underground utilities	Pre-scan site for underground electrical lines- LOTO per MD-10444 Verify underground electrical utilities are isolated Ensure guide wires for power line poles are protected and/or out of construction zone Excavation permit required- See MD-10286, O5

3,4, &5) D & D of building 71 & 73 pads	SB) Exposure to HD equipment	Access control of construction site enforced. Barricade area 75 + Ft. from work area Hard hats, safety glasses, toe protection required, and Orange vests
	Cb) Exposure to hot metal (rebar) and torch cutting	Burn permit, gloves, and coveralls, See MD-10286, O2
	E) Exposure to noise	Wear hearing protection Access control of construction site enforced Data collected for similar process in B Bldg. Indicated Level C clothes and respirator unnecessary with HEPA vac attached to scabbler exhaust Wash hands and face prior to eating, smoking, or applying cosmetics

SIGN-OFF SHEET

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

Signature	Date	Department

DM ACTIVE WORK ORDER FORM

11/13/2001

27905
PAD 71,73 D&D
GENBUILDING **GENERAL SITE**

Warranty Date	03/29/1999		
Location	SITE	**Actual Hrs.**	
Priority		**Actual Down Time**	
Work Type	PROJECT	**Shift**	1 2 3
Shift		**Completion Date**	/ /
Charge No.	J01307		
Maintenance Area	SMPPTF		

Date Issued 10/11/2001 **Requested** 12/20/2001 **Date Started** 10/11/2001

Completion Dat

BM Review	Description	Labor Code	Est. Hours
NOTIF	NOTIFICATION REQUIRED BEFORE WORK (INCLUDE SPECIFICS , NAME, NUMBER, ETC.. IN WORK PKG)	BM	0.00
SURFAC		BM	0.00
JSHA=Y		BM	0.00
LOTO		BM	0.00
DIG		BM	0.00

Part No.	Part Name	Qty Allocated	Qty. Pulled

Employee No.	Employee Name	Labor Code	Est. Hours

Tool Description

Description

D&D OF PADS 71 AND 73 PER STAN RICAHRDS X3867
10/15/2001 :See Work Plan # SMPP/TV-27215-01 for details
10/30/2001 :
In review stage by SMPP/TFV Core team; Gary Weidenbach

Appendix C

Radiological Summary

Building 71

Purpose:
Assess radiological status of Building 71 (pad) to allow project support to determine the most appropriate method of disposition.

Historical Information:
Building 71 was a chemical storage facility used to store flammable liquids. The building included a raised 800 ft^2 concrete pad, a block and metal structure open on two sides, and a metal roof. It is located southwest of Building 61 (warehouse) and Building 73 (pad–gas cylinder storage area), and south of an 800,000-gallon stormwater impoundment. The building was constructed in 1984 with the structure (walls, roof & electrical service) above the pad being removed in 1998. The remaining pad includes a drainage collection system intended to contain chemical spills. While the building was in use, the drain was routed to a nearby hold-up tank, which remains in place although, after cessation of building operations, the line connecting the pad to the tank was severed and the tank was evacuated.

Mound Facility Physical Characterization (12-1-93) indicates that no research, development, or production activities using radioactive or energetic materials occurred in the building. A review of available building history and radiological surveys uncovered no evidence that the building was impacted from site radiological operations.

Radiological Information:

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm^2)	SURFACE CONTAMINATION GUIDELINES (dpm/100 cm^2) (Note 1)	COMMENTS
Highest Alpha Smearable Activity	00-TF-286	Horizontal Surfaces	14.04	20	
Highest Alpha Total Activity	98-TF-835	Horizontal Surfaces	600	5,000	Note 2
Highest Beta Smearable Activity	00-TF-286	Horizontal Surfaces	13.97	1,000	
Highest Beta Total Activity	Note 3	Horizontal Surfaces	< 5000	5,000	
Highest Tritium Smearable Activity	98-TF-833	Horizontal Surfaces	21.14	10,000	

Note 1: Core Team determined values
Note 2: Initial screening criteria of 100 dpm/100cm^2 was exceeded; however, that screening level applies to transuranics. Based on alpha and gamma spectroscopy analysis, the source was identified as naturally occurring uranium, which has a screening criteria of 5,000 dpm/100cm^2, which was not exceeded.
Note 3: All surveys indicated < 5000 dpm/100cm^2 beta

Surveys were performed during and after removal of the building slab. As noted in the chart above, field instrumentation identified several areas that exceeded the initial screening guideline for total alpha activity (100 dpm/cm^2), which applies to transuranics. Concrete samples obtained from the affected areas were analyzed by gamma and

alpha spectroscopy and the isotopes identified were determined to be naturally occurring uranium, which has a release limit of 5,000 dpm/100 cm^2 (per DOE 5400.5, Table 1, Surface Activity Guidelines–Allowable Total Residual Surface Activity, and 10 CFR 835). The total alpha activity results are well below the applicable screening criteria.

Summary:
Survey results on accessible surfaces met applicable release criteria. The concrete was released to the spoils area for reuse.

As applicable, requirements of MD 80036, Op. 10004 *RADIOLOGICAL EVALUATION FOR UNRESTRICTED RELEASE OF PROPERTY/WASTE* and MD 80043, Op. 400 *RADIOACTIVE MATERIAL TRANSFER AND UNRESTRICTED RELEASE OF PROPERTY/WASTE* was adhered to.

PAD / SLAB

- Representative radiological surveys were performed on the underside of the slab, including direct and loose contamination surveys, to confirm that radioactivity levels met applicable release criteria
- Soil beneath the slab was scanned using a Bicron FIDLER or equivalent to identify areas of elevated activity
- Loose soil was removed from the slab to the extent practical prior to performing surveys
- Surface soil samples were obtained and analyzed by gamma spectroscopy to characterize the area beneath the slab and results made available to the soils group.

Building 73

Purpose:
Assess radiological status of Building 73 (pad) to allow project support to determine the most appropriate method of disposition.

Historical Information:
Building 73 was a compressed gas cylinder storage facility. The building included a raised 2,200 ft^2 concrete pad, a block and metal structure open on two sides, and a metal roof. It is located southwest of Building 61 (warehouse), east of Building 71 (pad - a chemical/flammable liquids storage area), and south of an 800,000-gallon stormwater impoundment. The building was constructed in 1983 with the structure (walls, roof & electrical service) above the pad being removed in 1998.

Mound Facility Physical Characterization (12-1-93) indicates that no research, development, or production activities using radioactive or energetic materials occurred in the building. A review of available building history uncovered no evidence that the building was impacted from site radiological operations.

Radiological Information:

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm^2)	SURFACE CONTAMINATION GUIDELINES (dpm/100 cm^2) (Note 1)	COMMENTS
Highest Alpha Smearable Activity	98-TF-837	Building Surfaces	10.08	20	
Highest Alpha Total Activity	Note 2	Building Surfaces	600	5,000	Note 2
	98-TF-1205	Metal Surface	383	100	Note 3
Highest Beta Smearable Activity	98-TF-837	Building Surfaces	12.53	1,000	
Highest Beta Total Activity	Note 4	Building Surfaces	< 5000	5,000	Note 4
Highest Tritium Smearable Activity	**98-TF-1101**	Building Surfaces	694.08	10,000	

Note 1: Core Team determined values
Note 2: Initial screening criteria of 100 dpm/100cm^2 was exceeded; however, that screening level applies to transuranics. Based on alpha and gamma spectroscopy analysis, the source was identified as naturally occurring uranium, which has a screening criteria of 5,000 dpm/100cm^2, which was not exceeded.
Note 3: One sample on a metal clean-out cover several feet away from the pad showed levels slightly above background for Pu-238 and Th-227; the more restrictive limit of 100 dpm/100cm^2 applies.
Note 4: All surveys indicated < 5000 dpm/100cm^2 beta

Surveys were performed during and after removal of the building slab. As noted in the chart above, field instrumentation identified several areas on the concrete pad that exceeded the initial screening guideline for total alpha activity (100 dpm/cm^2), which applies to transuranics. Concrete samples obtained from the affected areas were analyzed by gamma and alpha spectroscopy and the isotopes identified were determined to be naturally occurring uranium, which has a release limit of 5,000 dpm/100 cm^2 (per DOE 5400.5, Table 1, Surface Activity Guidelines–Allowable Total

Residual Surface Activity, and 10 CFR 835). The total alpha activity results were well below the applicable screening criteria.

A sample from a metal (clean-out type) cover several feet away from the pad showed levels slightly above background for Pu-238 and Th-227 by alpha spectroscopy. The field survey indicated 383 dpm/100 cm2 total (direct) contamination and the more restrictive limit of 100 dpm/100cm^2 applies to this item.

Summary:

Survey results on accessible surfaces of the concrete pad met applicable release criteria. As such, concrete was released to the spoils area for reuse. Slightly elevated (above background) levels of Pu-238 and Th-227 were found on a metal cover near the pad. Accordingly, we surveyed and retrieved any metal debris that exceeded 100 dpm/100cm^2 for disposal as radioactive waste.

As applicable, requirements of MD 80036, Op. 10004 *RADIOLOGICAL EVALUATION FOR UNRESTRICTED RELEASE OF PROPERTY/WASTE* and MD 80043, Op. 400 *RADIOACTIVE MATERIAL TRANSFER AND UNRESTRICTED RELEASE OF PROPERTY/WASTE* were adhered to.

PAD / SLAB

- Representative radiological surveys were performed on the underside of the slab, including direct and loose contamination surveys, to confirm that radioactivity levels meet applicable release criteria
- Soil beneath the slab was scanned using a Bicron FIDLER or equivalent to identify areas of elevated activity
- Loose soil was removed from the slab to the extent practical prior to performing surveys
- Surface soil samples were obtained and analyzed by gamma spectroscopy to characterize the area beneath the slab and results were below screening criteria.
- Any metal which exceeds 100 dpm/100cm2 total (direct) contamination was retrieved and disposed of as radioactive waste

RADIOLOGICAL SURVEY DATA SHEET

Page 14 of 130 K12 30-11 1-125

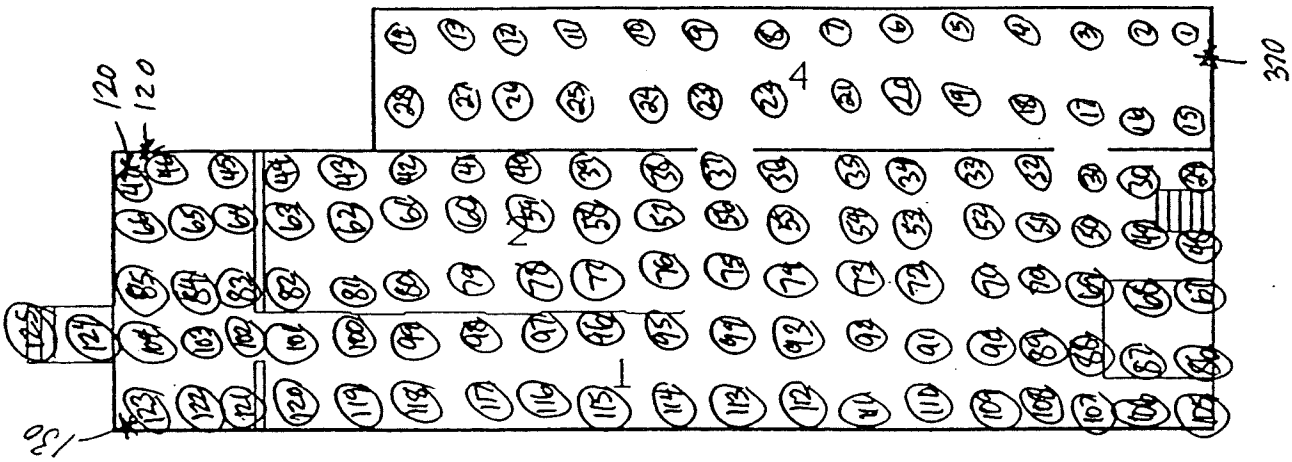
LOCATION: (BLDG/AREA/ROOM) 73	SURVEY NO. 98-TF-837
PURPOSE: Investigative survey	RWP NO. N/A
	DATE: 8-11-98
	TIME: 1300

MAP/DRAWING

AREA Survey'd UNCONTROLLED AREA

0	12/12/91	ASBUILT ISSUE	

COPY



Dpm/100 cm² Alpha

SHED e73
FIRST FLOOR
BLDG CODE:3473

SHED #73 FLOOR PLANS			
UNCLASSIFIED	C	FSC911357	12335
SFP	SHED #73	14845	1 of 1
HO-REL-12/12/91		HLARL.V3.0	

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	5303/5315	9-30-98
	N/A	

Completed by: (Signature) Gary Wooley	HP# [redacted]	Date: 8-11-98
Completed by: (Print Name) B Smith Brown / Tom Kahl		
Counted by: (Signature) B Smith Brown	HP# [redacted]	Date: 8/11/98
Counted by: (Print Name) B SMITH-BROWN		
Reviewed/Approved by: (Signature)	[redacted]	Date: 8/13/98
Reviewed/Approved by: (Print Name) K. C. JOHNSON		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
71	SEE	ATTAched		
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				
101				
102				
103				
104				
105	↓	↓	↓	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
106	SEE	ATTAched		
107				
108				
109				
110				
111				
112				
113				
114				
115				
116				
117				
118				
119				
120				
121				
122				
123				
124				
125	↓	↓	↓	
N/A				

COMMENTS: All Results < Limits

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 re[sults] 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.

Smear Analysi

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR01
Batch Ended: 8/11/98 13:
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 AREA 73-WOOLEY

Detector ID	ample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	5.30	3.48	<AL	1.42	2.42	<MDA
A2	2	3.86	3.00	<AL	3.13	2.81	<AL
A3	3	0.00	1.99	<MDA	3.11	2.66	<AL
A4	4	7.58	3.98	<AL	5.27	3.23	<AL
B1	5	0.00	2.20	<MDA	0.00	1.62	<MDA
B2	6	0.00	2.16	<MDA	1.59	2.45	<MDA
B3	7	0.00	2.00	<MDA	1.61	2.32	<MDA
B4	8	1.63	2.00	<AL	0.00	1.40	<MDA
C1	9	0.00	2.00	<MDA	1.70	2.40	<MDA
C2	10	1.61	2.05	<MDA	0.00	1.50	<MDA
C3	11	3.51	2.86	<AL	0.00	2.01	<MDA
D1	12	1.62	2.07	<MDA	3.05	2.78	<MDA
D2	13	0.00	2.10	<MDA	0.00	1.47	<MDA
D3	14	1.79	2.14	<AL	0.00	1.55	<MDA
D4	15	0.00	2.18	<MDA	0.45	2.02	<MDA
A1	16	1.30	2.16	<MDA	12.53	4.52	<AL
A2	17	1.76	2.20	<MDA	7.40	3.68	<AL
A3	18	0.00	2.00	<MDA	4.40	2.96	<AL
A4	19	3.64	2.85	<AL	8.12	3.72	<AL
B1	20	0.00	2.22	<MDA	1.37	2.55	<MDA
B2	21	0.00	2.14	<MDA	0.00	1.51	<MDA
B3	22	0.00	2.00	<MDA	1.61	2.32	<MDA
B4	23	1.62	2.03	<AL	4.17	2.91	<AL
C1	24	3.31	2.79	<AL	4.11	3.05	<AL
C2	25	0.00	2.05	<MDA	0.00	1.50	<MDA
C3	26	1.50	2.05	<MDA	1.40	2.40	<MDA
D1	27	0.00	2.07	<MDA	3.16	2.78	<AL

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR01
Batch Ended: 8/11/98 13:[illegible]7
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 / AREA 73-WOOLEY

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
D2	28	1.54	2.10	<MDA	0.00	1.47	<MDA
D3	29	0.00	2.14	<MDA	0.53	2.08	<MDA
D4	30	0.00	2.18	<MDA	0.45	2.02	<MDA
A1	31	1.35	2.05	<MDA	0.41	2.01	<MDA
A2	32	1.78	2.16	<AL	3.29	2.81	<AL
A3	33	3.66	2.79	<AL	2.87	2.66	<MDA
A4	34	0.00	2.03	<MDA	3.22	2.67	<AL
B1	35	1.83	2.22	<AL	1.23	2.55	<MDA
B2	36	0.00	2.14	<MDA	0.00	1.51	<MDA
B3	37	0.00	2.00	<MDA	1.61	2.32	<MDA
B4	38	0.00	2.04	<MDA	5.57	3.18	<AL
C1	39	0.00	1.98	<MDA	0.00	1.50	<MDA
C2	40	1.61	2.05	<MDA	0.00	1.50	<MDA
C3	41	0.00	2.04	<MDA	0.21	2.01	<MDA
D1	42	0.00	2.06	<MDA	0.00	1.50	<MDA
D2	43	0.00	2.13	<MDA	4.70	3.09	<AL
D3	44	1.79	2.14	<AL	0.00	1.55	<MDA
D4	45	0.00	2.18	<MDA	0.00	1.49	<MDA
A1	46	5.27	3.52	<AL	9.50	4.09	<AL
~~A1~~	~~46~~	3.32	2.87	<AL	2.93	2.77	<MDA
A2	47	3.85	3.02	<AL	5.87	3.41	<AL
~~A2~~	~~47~~	10.08	4.73	<AL	9.48	4.16	<AL
A3	48	0.00	1.98	<MDA	0.51	1.93	<MDA
~~A3~~	~~48~~	1.68	2.02	<AL	8.18	3.72	<AL
A4	49	7.59	3.97	<AL	2.68	2.67	<MDA
~~A4~~	~~49~~	0.00	2.04	<MDA	5.81	3.23	<AL
B1	50	0.00	2.21	<MDA	0.00	2.13	<MDA
~~B1~~	~~50~~	0.00	2.21	<MDA	0.00	2.13	<MDA
B2	51	1.65	2.14	<MDA	0.00	1.51	<MDA

Delete Duplicates 8/12/98 [illegible]

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR01.
Batch Ended: 8/11/98 13:57
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-8 AREA 73-WOOLEY

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
~~B2~~	~~51~~	0.00	2.14	<MDA	0.00	1.51	<MDA
B3	52	0.00	1.98	<MDA	0.00	1.44	<MDA
~~B3~~	~~52~~	0.00	1.98	<MDA	0.00	1.44	<MDA
B4	53	1.63	2.01	<AL	0.35	1.89	<MDA
~~B4~~	~~53~~	0.00	2.01	<MDA	1.75	2.28	<MDA
C1	54	0.00	2.00	<MDA	1.70	2.40	<MDA
~~C1~~	~~54~~	3.37	2.78	<AL	1.46	2.40	<MDA
C2	55	0.00	2.05	<MDA	0.49	2.00	<MDA
~~C2~~	~~55~~	0.00	2.05	<MDA	0.00	1.50	<MDA
C3	56	0.00	2.05	<MDA	1.53	2.40	<MDA
~~C3~~	~~56~~	0.00	2.04	<MDA	0.00	1.52	<MDA
D1	57	0.00	2.06	<MDA	0.45	2.02	<MDA
~~D1~~	~~57~~	1.64	2.07	<AL	1.69	2.43	<MDA
D2	58	1.52	2.11	<MDA	0.49	2.00	<MDA
~~D2~~	~~58~~	0.00	2.10	<MDA	0.00	1.47	<MDA
D3	59	0.00	2.15	<MDA	1.92	2.50	<MDA
~~D3~~	~~59~~	1.81	2.14	<AL	0.00	1.55	<MDA
D4	60	0.00	2.18	<MDA	0.00	1.49	<MDA
~~D4~~	~~60~~	5.86	3.71	<AL	0.00	1.49	<MDA
A1	61	3.33	2.85	<AL	0.24	2.01	<MDA
A2	62	1.79	2.14	<AL	0.56	2.04	<MDA
A3	63	1.71	1.99	<AL	1.69	2.32	<MDA
A4	64	3.64	2.84	<AL	5.54	3.23	<AL
B1	65	4.00	3.09	<AL	0.00	2.13	<MDA
B2	66	0.00	2.18	<MDA	4.32	3.12	<AL
B3	67	0.00	1.98	<MDA	0.00	1.44	<MDA
B4	68	0.00	2.01	<MDA	1.75	2.28	<MDA
C1	69	1.43	2.00	<MDA	1.58	2.40	<MDA
C2	70	0.00	2.05	<MDA	0.00	1.50	<MDA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR01(
Batch Ended: 8/11/98 13: 7
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 AREA 73-WOOLEY

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C3	71	0.00	2.04	<MDA	0.00	1.52	<MDA
D1	72	0.00	2.06	<MDA	0.00	1.50	<MDA
D2	73	0.00	2.11	<MDA	0.63	2.00	<MDA
D3	74	0.00	2.14	<MDA	0.53	2.08	<MDA
D4	75	0.00	2.18	<MDA	0.00	1.49	<MDA
A1	76	5.31	3.46	<AL	0.00	1.49	<MDA
A2	77	1.76	2.20	<MDA	7.40	3.68	<AL
A3	78	3.66	2.79	<AL	2.87	2.66	<MDA
A4	79	0.00	2.00	<MDA	0.00	1.44	<MDA
B1	80	0.00	2.20	<MDA	0.00	1.62	<MDA
B2	81	0.00	2.15	<MDA	0.23	2.04	<MDA
B3	82	3.59	2.78	<AL	0.06	1.93	<MDA
B4	83	0.00	2.00	<MDA	0.00	1.40	<MDA
C1	84	0.00	2.01	<MDA	4.35	3.05	<AL
C2	85	1.56	2.06	<MDA	1.68	2.40	<MDA
C3	86	1.52	2.04	<MDA	0.09	2.01	<MDA
D1	87	0.00	2.06	<MDA	0.00	1.50	<MDA
D2	88	3.61	2.94	<AL	0.00	1.47	<MDA
D3	89	0.00	2.16	<MDA	3.31	2.86	<AL
D4	90	0.00	2.22	<MDA	7.29	3.67	<AL
A1	91	0.00	2.04	<MDA	0.00	1.49	<MDA
A2	92	3.86	3.01	<AL	4.50	3.13	<AL
A3	93	0.00	2.00	<MDA	4.40	2.96	<AL
A4	94	1.69	2.01	<AL	0.50	1.94	<MDA
B1	95	0.00	2.21	<MDA	0.00	2.13	<MDA
B2	96	1.64	2.15	<MDA	0.07	2.04	<MDA
B3	97	0.00	1.98	<MDA	0.00	1.44	<MDA
B4	98	0.00	2.00	<MDA	0.00	1.40	<MDA
C1	99	0.00	1.98	<MDA	0.00	1.50	<MDA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR01
Batch Ended: 8/11/98 13:[illegible]7
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 AREA 73-WOOLEY

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C2	100	1.58	2.05	<MDA	0.36	2.00	<MDA
C3	101	0.00	2.04	<MDA	0.00	1.52	<MDA
D1	102	0.00	2.06	<MDA	0.00	1.50	<MDA
D2	103	3.59	2.93	<AL	0.00	1.47	<MDA
D3	104	0.00	2.14	<MDA	0.53	2.08	<MDA
D4	105	0.00	2.18	<MDA	0.00	1.49	<MDA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR01
Batch Ended: 8/11/98 14
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 AREA 73-WOOLEY

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	106	0.00	2.06	<MDA	1.92	2.42	<MDA
A2	107	0.00	2.18	<MDA	6.19	3.41	<AL
A3	108	0.00	1.99	<MDA	3.11	2.66	<AL
A4	109	1.69	2.01	<AL	0.50	1.94	<MDA
B1	110	0.00	2.23	<MDA	2.75	2.90	<MDA
B2	111	1.64	2.16	<MDA	1.44	2.45	<MDA
B3	112	1.64	2.01	<AL	4.05	2.95	<AL
B4	113	0.00	2.00	<MDA	0.00	1.40	<MDA
C1	114	0.00	1.98	<MDA	0.00	1.50	<MDA
C2	115	0.00	2.07	<MDA	3.13	2.74	<AL
C3	116	1.54	2.04	<MDA	0.00	1.52	<MDA
D1	117	0.00	2.08	<MDA	4.52	3.10	<AL
D2	118	1.50	2.11	<MDA	1.85	2.42	<MDA
D3	119	1.79	2.14	<AL	0.00	1.55	<MDA
D4	120	0.00	2.18	<MDA	0.00	1.49	<MDA

Smear Analysi

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR012
Batch Ended: 8/11/98 15:0
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 WOOLEY

Detector ID	ample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	121	3.31	2.88	<AL	4.28	3.08	<AL
A2	122	8.02	4.22	<AL	4.18	3.13	<AL
A3	123	1.72	1.98	<AL	0.40	1.93	<MDA
A4	124	0.00	2.02	<MDA	1.92	2.33	<MDA
B1	125	1.84	2.20	<AL	0.00	1.62	<MDA

Protocol #: 3 Pw H3 20cc #407906 User : [redacted]

Time: 2.00
Data Mode: DPM Nuclide: SM VIAL Quench Set: SM VIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	7.52
Region B:	2.0 -	18.6	0	0.0	7.26
Region C:	40.0 -	2000	0	0.0	12.83

p 11 of 13 14

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-TF-837 AREA 73-WOOLEY(30-11 1-125)
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA3.DAT
Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
-1	10.00	7.52	7.26	1	B	555.25		0.000	12.83
0	2.00	1686.22	1523.18	0		580.17	3521.75	219.833	0.00
1	2.00	0.00	0.00	0		541.78	0.00	0.000	0.00
2	2.00	0.00	0.00	0		517.09	0.00	0.000	0.00
3	2.00	0.00	0.00	0		413.26	0.00	0.000	0.00
4	2.00	0.00	0.00	0		454.16	0.00	0.000	0.00
5	2.00	0.98	0.00	0		470.14	2.29	10.446	0.00
6	2.00	2.94	2.94	0		516.86	6.54	10.899	0.00
7	2.00	0.00	0.00	0		503.99	0.00	0.000	0.67
8	2.00	0.48	0.60	0		522.69	1.06	9.648	0.00
9	2.00	0.21	0.47	0		563.25	0.45	9.098	0.00
10	2.00	0.00	0.00	0		543.69	0.00	0.000	0.00
11	2.00	0.00	0.00	0		449.37	0.00	0.000	0.00
12	2.00	2.98	3.24	0		545.86	6.42	10.554	0.00
13	2.00	4.98	5.05	0		553.50	10.62	11.303	0.00
14	2.00	2.18	2.22	0		518.22	4.84	10.530	0.00
15	2.00	0.57	0.82	0		524.53	1.25	9.672	0.00
16	2.00	2.48	2.06	0		496.31	5.65	10.939	0.00
17	2.00	2.48	1.34	0		557.78	5.27	10.201	0.00
18	2.00	0.98	1.21	0		464.81	2.30	10.480	0.00
19	2.00	0.48	0.74	0		439.81	1.14	10.373	0.00
20	2.00	3.19	2.09	0		527.49	7.03	10.888	0.00
21	2.00	1.05	0.81	0		553.76	2.25	9.576	0.00
22	2.00	2.98	2.82	0		404.05	7.33	12.051	0.00
23	2.00	3.94	3.57	0		516.80	8.77	11.350	0.00
24	2.00	0.00	0.00	0		554.17	0.00	0.000	0.00
25	2.00	0.00	0.00	0		474.87	0.00	0.000	0.00
26	2.00	0.48	0.00	0		525.62	1.06	9.617	0.00
27	2.00	0.00	0.00	0		554.92	0.00	0.000	0.00
28	2.00	4.48	3.56	0		546.48	9.64	11.191	0.00
29	2.00	1.65	1.91	0		499.99	3.76	10.493	0.00
30	2.00	1.98	1.24	0		483.33	4.58	10.859	0.00
31	2.00	1.98	2.24	0		525.60	4.37	10.351	0.00
32	2.00	3.17	2.93	0		471.30	7.39	11.529	0.00
33	2.00	0.25	0.51	0		476.16	0.58	10.020	0.00
34	2.00	5.00	4.07	0		550.72	10.71	11.348	0.00

12 Aug 1998 08:09 TRI-CARB - 1.08 Page No. 10 of 12
Protocol #: 3 Pw H3 20cc #407906 User :

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
35	2.00	0.98	1.24	0		381.54	2.51	11.466	0.00
36	2.00	0.00	0.00	0		511.40	0.00	0.000	0.00
37	2.00	1.48	1.60	0		526.23	3.26	10.105	0.00
38	2.00	0.98	0.00	0		486.21	2.26	10.317	0.00
39	2.00	0.00	0.00	0		494.97	0.00	0.000	0.00
40	2.00	4.98	4.56	0		548.40	10.69	11.371	0.67
41	2.00	0.69	0.06	0		546.67	1.48	9.478	0.00
42	2.00	2.48	2.39	0		365.01	5.56	12.698	0.00
43	2.00	3.48	3.74	0		490.81	7.98	11.430	0.00
44	2.00	0.00	0.00	0		459.83	0.00	0.000	0.00
45	2.00	1.48	1.74	0		496.59	3.37	10.447	0.42
46	2.00	3.20	2.62	0		512.10	7.17	11.079	0.00
47	2.00	2.98	2.21	0		520.67	6.61	10.873	0.00
48	2.00	0.00	0.00	0		542.88	0.00	0.000	0.00
49	2.00	1.98	0.38	0		546.27	4.26	10.097	0.00
50	2.00	1.23	0.99	0		534.51	2.69	9.892	0.00
51	2.00	0.00	0.00	0		434.29	0.00	0.000	0.00
52	2.00	1.98	1.46	0		555.82	4.22	9.991	0.00
53	2.00	1.69	1.73	0		570.52	3.56	9.743	0.00
54	2.00	0.00	0.00	0		562.00	0.00	0.000	0.00
55	2.00	4.48	4.08	0		568.62	9.44	10.964	0.00
56	2.00	5.48	5.74	0		551.78	11.71	11.526	0.00
57	2.00	0.00	0.00	0		435.18	0.00	0.000	0.00
58	2.00	3.98	2.81	0		567.65	8.40	10.766	0.00
59	2.00	0.98	1.24	0		555.61	2.09	9.526	0.00
60	2.00	0.00	0.00	0		527.76	0.00	0.000	0.00
61	2.00	0.24	0.00	0		534.65	0.53	9.401	0.00
62	2.00	6.48	5.74	0		530.79	14.21	12.236	0.00
63	2.00	0.00	0.00	0		453.52	0.00	0.000	0.00
64	2.00	0.00	0.00	0		422.59	0.00	0.000	0.00
65	2.00	0.00	0.00	0		395.78	0.00	0.000	0.00
66	2.00	0.70	0.91	0		473.06	1.63	10.279	0.00
67	2.00	0.00	0.00	0		546.82	0.00	0.000	0.00
68	2.00	0.00	0.00	0		546.81	0.00	0.000	0.00
69	2.00	3.20	2.51	0		512.12	7.17	11.079	0.00
70	2.00	1.98	2.18	0		458.11	4.66	11.038	0.00
71	2.00	0.00	0.00	0		448.55	0.00	0.000	0.00
72	2.00	1.98	1.97	0		594.36	4.09	9.692	0.00
73	2.00	0.00	0.00	0		443.40	0.00	0.000	0.00
74	2.00	0.22	0.20	0		469.87	0.52	10.042	0.00
75	2.00	0.98	1.09	0		531.42	2.15	9.804	0.00
76	2.00	4.27	4.36	0		536.48	9.29	11.242	1.67
77	2.00	1.98	1.13	0		506.10	4.46	10.579	1.67
78	2.00	0.00	0.00	0		497.44	0.00	0.000	0.00
79	2.00	2.48	2.24	0		557.86	5.27	10.200	0.00
80	2.00	0.98	1.05	0		553.03	2.09	9.546	0.00
81	2.00	2.68	2.74	0		569.34	5.64	10.193	0.00
82	2.00	0.98	0.98	0		519.14	2.18	9.939	0.00
83	2.00	4.98	3.95	0		526.65	10.97	11.675	0.00
84	2.00	1.98	1.74	0		568.22	4.18	9.893	0.00
85	2.00	0.00	0.18	0		457.72	0.00	0.000	0.00
86	2.00	0.00	0.00	0		578.19	0.00	0.000	0.00
87	2.00	1.19	0.95	0		591.84	2.47	9.356	0.00
88	2.00	1.98	1.51	0		572.67	4.16	9.858	0.00
89	2.00	2.34	2.26	0		540.85	5.07	10.331	0.00
90	2.00	0.00	0.00	0		560.61	0.00	0.000	0.00

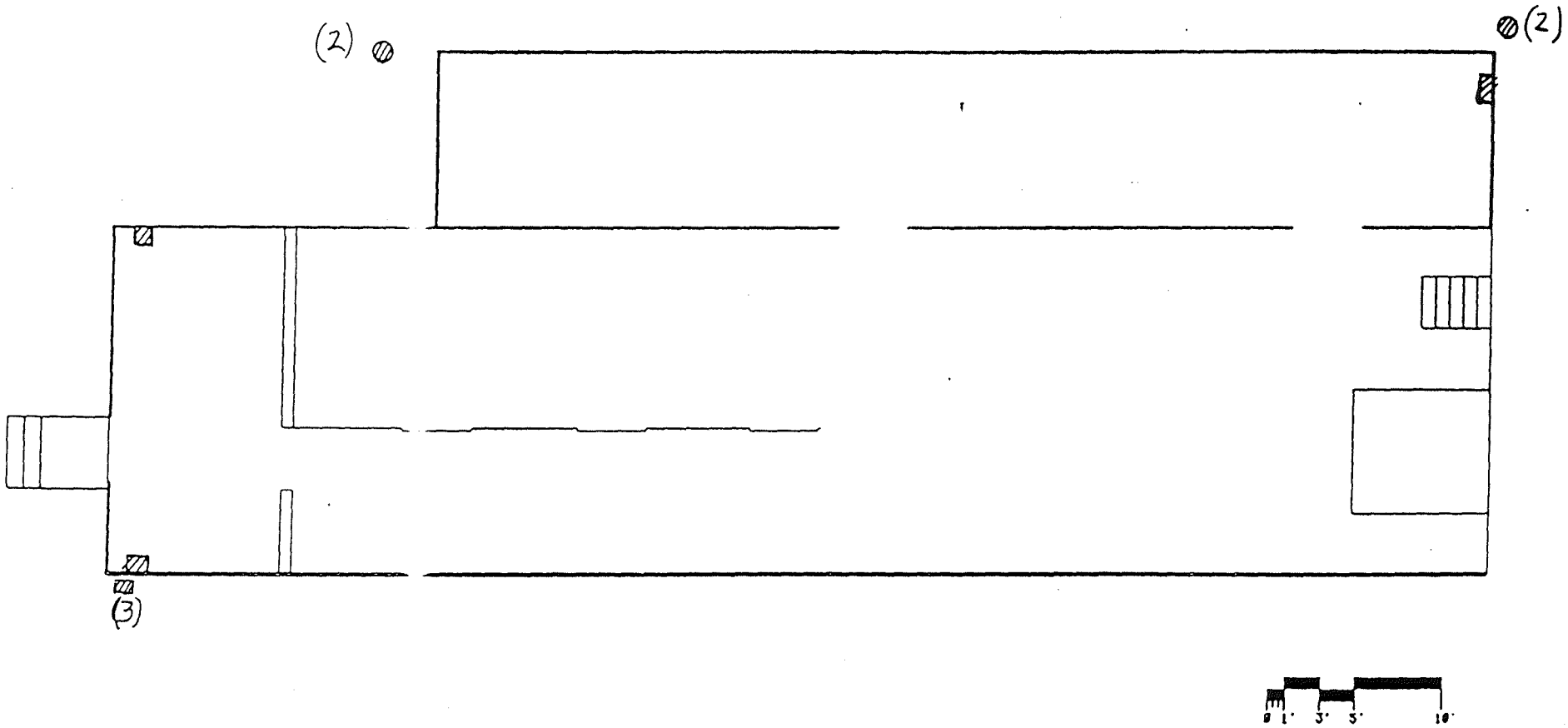
98-TF-837

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
91	2.00	2.56	2.57	0		583.95	5.33	10.027	0.00
92	2.00	7.37	7.17	0		572.31	15.48	12.058	0.00
93	2.00	2.45	1.74	0		549.12	5.32	10.288	0.00
94	2.00	0.00	0.00	0		563.14	0.00	0.000	0.00
95	2.00	0.00	0.00	0		540.42	0.00	0.000	0.00
96	2.00	1.48	0.53	0		562.90	3.13	9.705	0.00
97	2.00	0.00	0.00	0		561.95	0.00	0.000	0.00
98	2.00	0.57	0.68	0		572.68	1.83	9.346	0.00
99	2.00	0.00	0.00	0		568.39	0.00	0.000	0.00
100	2.00	0.00	0.00	0		558.10	0.00	0.000	0.00
101	2.00	0.98	1.24	0		539.27	2.13	9.711	3.17
102	2.00	0.00	0.00	0		581.89	0.00	0.000	0.00
103	2.00	2.95	2.97	0		577.47	6.18	10.248	0.01
104	2.00	4.13	4.58	0		568.61	8.70	10.818	0.00
105	2.00	0.00	0.00	0		492.68	0.00	0.000	0.00
106	2.00	0.98	1.24	0		564.23	2.07	9.461	0.00
107	2.00	5.09	4.15	0		555.75	10.83	11.326	0.00
108	2.00	0.17	0.24	0		579.65	0.36	8.960	0.00
109	2.00	0.00	0.00	0		533.14	0.00	0.000	0.00
110	2.00	3.36	3.11	0		542.28	7.27	10.770	0.00
111	2.00	1.98	2.24	0		495.63	4.52	10.706	0.00
112	2.00	0.00	0.00	0		514.03	0.00	0.000	2.17
113	2.00	0.00	0.00	0		566.97	0.00	0.000	1.38
114	2.00	0.00	0.00	0		512.78	0.00	0.000	0.00
115	2.00	0.00	0.00	0		574.38	0.00	0.000	0.00
116	2.00	4.98	5.03	0		560.60	10.56	11.239	0.17
117	2.00	1.48	0.00	0		553.63	3.16	9.777	0.00
118	2.00	0.51	0.26	0		550.84	1.08	9.340	0.00
119	2.00	3.78	3.38	0		537.40	8.23	11.020	0.00
120	2.00	0.00	0.00	0		543.03	0.00	0.000	0.00
121	2.00	0.00	0.00	0		550.51	0.00	0.000	0.00
122	2.00	5.48	5.74	0		585.48	11.40	11.218	0.00
123	2.00	0.00	0.00	0		527.79	0.00	0.000	0.00
124	2.00	0.98	0.82	0		563.14	2.08	9.469	0.00
125	2.00	0.00	0.00	0	E	611.76	0.00	0.000	0.67
~~126~~	~~2.00~~	~~0.00~~	~~0.00~~	0		512.54	0.00	0.000	0.00

Delete 8/12/98

98-TF-837

(1) = MANHOLE COVER
(2) = CLEANOUT COVER
(3) = SIDE OF SLAB

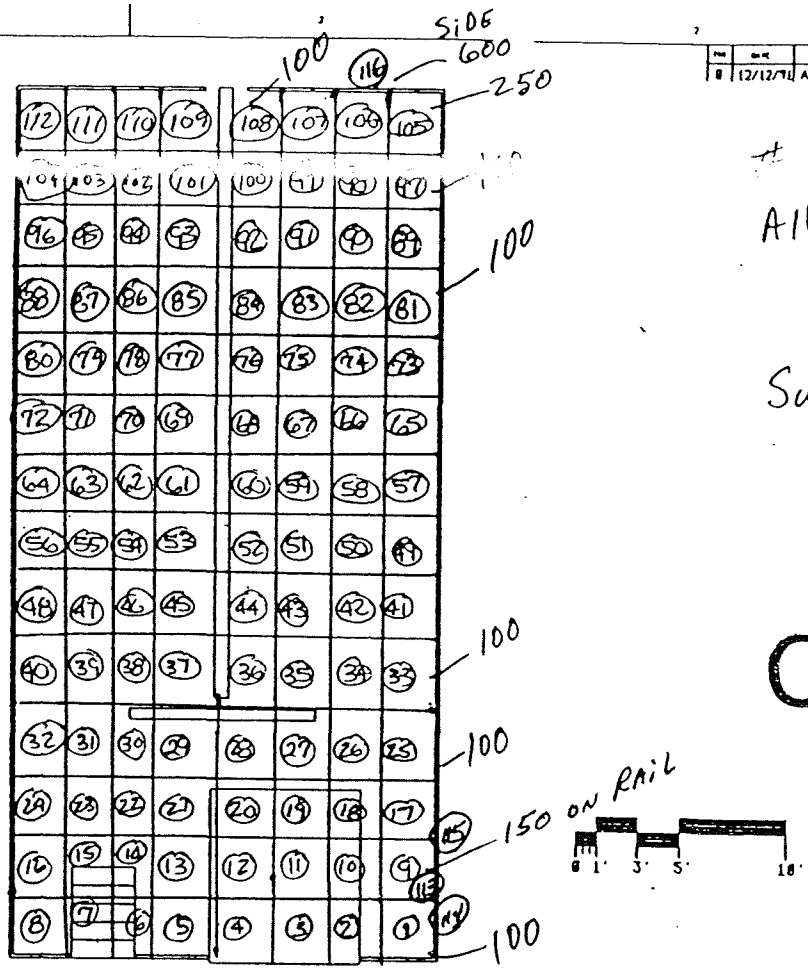


SHED #73

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) BLDG 71	SURVEY NO. 98-TF-833
PURPOSE: Investigative	RWP NO. N/A
	DATE: 8-10-98
	TIME: 1400

MAP/DRAWING



± Dpm/100 cm² α

All β⁻ < 5 KDpm/100 cm²

Survey in uncontrolled AREA.

COPY

SHED #71
FIRST FLOOR
BLDG CODE:3471

SHED #71
FLOOR PLANS

UNCLASSIFIED C FSC911355 12335

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	5439 5440	11-28-98
ELECTRA	5303/5315	9-30-96

Completed by: (Signature)	HP# [redacted]	Date: 8-10-98
Completed by: (Print Name) T. Karl, R Stone, P. Ryan		
Counted by: (Signature) B Smith-Brown	H [redacted]	Date: 8/11/98
Counted by: (Print Name) B SMITH-BROWN		
Reviewed/Approved by: (Signature)	[redacted]	Date: 8/13/98
Reviewed/Approved by: (Print Name) R L. Johnson		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
71	SEE	ATTA	Ched	
72	↓	↓	↓	
73	↓	↓	↓	
74	↓	↓	↓	
75	↓	↓	↓	
76	↓	↓	↓	
77	↓	↓	↓	
78	↓	↓	↓	
79	↓	↓	↓	
80	↓	↓	↓	
81	↓	↓	↓	
82	↓	↓	↓	
83	↓	↓	↓	
84	↓	↓	↓	
85	↓	↓	↓	
86	↓	↓	↓	
87	↓	↓	↓	
88	↓	↓	↓	
89	↓	↓	↓	
90	↓	↓	↓	
91	↓	↓	↓	
92	↓	↓	↓	
93	↓	↓	↓	
94	↓	↓	↓	
95	↓	↓	↓	
96	↓	↓	↓	
97	↓	↓	↓	
98	↓	↓	↓	
99	↓	↓	↓	
100	↓	↓	↓	
101	↓	↓	↓	
102	↓	↓	↓	
103	↓	↓	↓	
104	↓	↓	↓	
105	↓	↓	↓	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
106	SEE	ATTA	Ched	
107	↓	↓	↓	
108	↓	↓	↓	
109	↓	↓	↓	
110	↓	↓	↓	
111	↓	↓	↓	
112	↓	↓	↓	
113	↓	↓	↓	
114	↓	↓	↓	
115	↓	↓	↓	
116	↓	↓	↓	
		N/A		

COMMENTS: All Results < Limits
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.

Smear Analysi

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR00
Batch Ended: 8/11/98 5:5
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 BD. 71-KARL

Detector ID	ample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	1.32	2.11	<MDA	7.14	3.62	<AL
A2	2	3.87	3.00	<AL	1.76	2.46	<MDA
A3	3	3.66	2.79	<AL	1.58	2.32	<MDA
A4	4	0.00	2.03	<MDA	4.51	2.96	<AL
B1	5	0.00	2.20	<MDA	0.00	1.62	<MDA
B2	6	3.73	3.03	<AL	4.01	3.12	<AL
B3	7	0.00	2.00	<MDA	1.61	2.32	<MDA
B4	8	0.00	2.05	<MDA	6.85	3.42	<AL
C1	9	0.00	2.00	<MDA	3.03	2.74	<MDA
C2	10	5.59	3.50	<AL	0.09	2.00	<MDA
C3	11	0.00	2.04	<MDA	0.21	2.01	<MDA
D1	12	0.00	2.07	<MDA	3.16	2.78	<AL
D2	13	0.00	2.15	<MDA	7.41	3.63	<AL
D3	14	0.00	2.14	<MDA	0.53	2.08	<MDA
D4	15	0.00	2.18	<MDA	0.00	1.49	<MDA
A1	16	1.34	2.08	<MDA	3.10	2.77	<AL
A2	17	5.93	3.67	<AL	5.71	3.41	<AL
A3	18	0.00	1.99	<MDA	3.11	2.66	<AL
A4	19	0.00	2.03	<MDA	4.51	2.96	<AL
B1	20	1.83	2.23	<AL	2.62	2.90	<MDA
B2	21	0.00	2.17	<MDA	2.96	2.80	<MDA
B3	22	0.00	2.00	<MDA	1.61	2.32	<MDA
B4	23	1.63	2.00	<AL	0.00	1.40	<MDA
C1	24	0.00	2.00	<MDA	1.70	2.40	<MDA
C2	25	0.00	2.05	<MDA	0.49	2.00	<MDA
C3	26	0.00	2.04	<MDA	0.00	1.52	<MDA
D1	27	1.69	2.06	<AL	0.00	1.50	<MDA

Smear Analysi

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR00
Batch Ended: 8/11/98 5:5
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-8 BD. 71-KARL

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
D2	28	3.51	2.96	<AL	4.43	3.09	<AL
D3	29	1.73	2.17	<AL	4.57	3.18	<AL
D4	30	0.00	2.19	<MDA	1.82	2.44	<MDA
A1	31	5.30	3.48	<AL	1.42	2.42	<MDA
A2	32	1.78	2.15	<AL	1.93	2.46	<MDA
A3	33	0.00	1.99	<MDA	1.81	2.32	<MDA
A4	34	0.00	2.03	<MDA	4.51	2.96	<AL
B1	35	1.84	2.20	<AL	0.00	1.62	<MDA
B2	36	0.00	2.14	<MDA	0.00	1.51	<MDA
B3	37	0.00	2.00	<MDA	2.89	2.65	<MDA
B4	38	0.00	2.00	<MDA	0.00	1.40	<MDA
C1	39	0.00	2.00	<MDA	1.70	2.40	<MDA
C2	40	0.00	2.05	<MDA	0.00	1.50	<MDA
C3	41	0.00	2.04	<MDA	0.00	1.52	<MDA
D1	42	0.00	2.06	<MDA	0.00	1.50	<MDA
D2	43	0.00	2.10	<MDA	0.00	1.47	<MDA
D3	44	0.00	2.15	<MDA	1.92	2.50	<MDA
D4	45	1.55	2.20	<MDA	3.06	2.80	<MDA
A1	46	3.32	2.87	<AL	2.93	2.77	<MDA
A2	47	0.00	2.16	<MDA	3.46	2.81	<AL
A3	48	3.67	2.78	<AL	0.28	1.93	<MDA
A4	49	3.66	2.81	<AL	0.36	1.94	<MDA
B1	50	0.00	2.23	<MDA	2.75	2.90	<MDA
B2	51	0.00	2.14	<MDA	0.00	1.51	<MDA
B3	52	1.65	1.98	<AL	0.00	1.44	<MDA
B4	53	0.00	2.01	<MDA	1.75	2.28	<MDA
C1	54	0.00	1.98	<MDA	0.00	1.50	<MDA
C2	55	0.00	2.05	<MDA	0.49	2.00	<MDA
C3	56	0.00	2.07	<MDA	4.16	3.04	<AL

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR00
Batch Ended: 8/11/98 5:5
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 BD. 71-KARL

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
D1	57	1.66	2.06	<AL	0.34	2.02	<MDA
D2	58	0.00	2.10	<MDA	0.00	1.47	<MDA
D3	59	0.00	2.14	<MDA	0.00	1.55	<MDA
D4	60	1.55	2.20	<MDA	3.06	2.80	<MDA
A1	61	1.32	2.11	<MDA	7.14	3.62	<AL
A2	62	1.78	2.15	<AL	1.93	2.46	<MDA
A3	63	1.72	1.98	<AL	0.40	1.93	<MDA
A4	64	0.00	2.03	<MDA	3.22	2.67	<AL
B1	65	0.00	2.20	<MDA	0.00	1.62	<MDA
B2	66	0.00	2.16	<MDA	1.59	2.45	<MDA
B3	67	1.64	2.00	<AL	1.48	2.32	<MDA
B4	68	0.00	2.04	<MDA	5.57	3.18	<AL
C1	69	1.37	2.01	<MDA	4.23	3.05	<AL
C2	70	3.54	2.88	<AL	2.87	2.74	<MDA
C3	71	0.00	2.04	<MDA	0.00	1.52	<MDA
D1	72	0.00	2.07	<MDA	3.16	2.78	<AL
D2	73	1.54	2.10	<MDA	0.00	1.47	<MDA
D3	74	0.00	2.15	<MDA	1.92	2.50	<MDA
D4	75	0.00	2.18	<MDA	0.00	1.49	<MDA
A1	76	5.29	3.50	<AL	5.46	3.36	<AL
A2	77	1.78	2.16	<AL	3.29	2.81	<AL
A3	78	0.00	1.99	<MDA	1.81	2.32	<MDA
A4	79	7.60	3.96	<AL	0.09	1.94	<MDA
B1	80	4.00	3.09	<AL	0.00	2.13	<MDA
B2	81	1.63	2.19	<MDA	5.53	3.41	<AL
B3	82	1.64	2.00	<AL	1.48	2.32	<MDA
B4	83	1.63	2.01	<AL	0.35	1.89	<MDA
C1	84	3.34	2.79	<AL	2.78	2.74	<MDA
C2	85	0.00	2.05	<MDA	0.49	2.00	<MDA

Smear Analysi

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR00
Batch Ended: 8/11/98 5:5
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-83 BD. 71-KARL

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C3	86	0.00	2.06	<MDA	2.85	2.74	<MDA
D1	87	0.00	2.06	<MDA	0.00	1.50	<MDA
D2	88	1.46	2.13	<MDA	4.56	3.09	<AL
D3	89	3.90	3.00	<AL	0.00	1.55	<MDA
D4	90	1.55	2.20	<MDA	3.06	2.80	<MDA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR0
Batch Ended: 8/11/98 6:
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Batch ID: T 98-TF-8 -KARL

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	91	5.29	3.49	<AL	4.11	3.08	<AL
A2	92	1.79	2.14	<AL	0.56	2.04	<MDA
A3	93	1.73	1.97	<AL	0.00	1.43	<MDA
A4	94	0.00	2.02	<MDA	1.92	2.33	<MDA
B1	95	0.00	2.21	<MDA	0.00	2.13	<MDA
B2	96	1.65	2.14	<MDA	0.00	1.51	<MDA
B3	97	0.00	2.00	<MDA	1.61	2.32	<MDA
B4	98	0.00	2.02	<MDA	3.02	2.61	<AL
C1	99	1.45	1.99	<MDA	0.25	2.00	<MDA
C2	100	0.00	2.07	<MDA	3.13	2.74	<AL
C3	101	1.56	2.04	<MDA	0.00	1.52	<MDA
D1	102	0.00	2.08	<MDA	4.52	3.10	<AL
D2	103	0.00	2.11	<MDA	1.98	2.42	<MDA
D3	104	0.00	2.16	<MDA	3.31	2.86	<AL
D4	105	0.00	2.18	<MDA	0.45	2.02	<MDA
A1	106	3.33	2.85	<AL	0.24	2.01	<MDA
A2	107	0.00	2.15	<MDA	2.09	2.46	<MDA
A3	108	0.00	1.99	<MDA	1.81	2.32	<MDA
A4	109	1.68	2.03	<AL	4.38	2.96	<AL
B1	110	0.00	2.21	<MDA	0.00	2.13	<MDA
B2	111	1.64	2.17	<MDA	2.80	2.80	<MDA
B3	112	1.65	1.99	<AL	0.19	1.93	<MDA
B4	113	0.00	2.00	<MDA	0.00	1.40	<MDA
C1	114	3.34	2.79	<AL	2.78	2.74	<MDA
C2	115	0.00	2.06	<MDA	1.81	2.40	<MDA
C3	116	0.00	2.05	<MDA	1.53	2.40	<MDA

p 4 of 2

Protocol #: 1 Pw H3 20cc #405828 User : [redacted]

ime: 2.00
ata Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
ackground Subtract: 1st Vial

	LL	UL	LCR	2SI	BKG
egion A:	0.5	- 18.6	0	0.0	5.50
egion B:	2.0	- 18.6	0	0.0	5.43
egion C:	40.0	- 2000	0	0.0	11.49

ench Indicator: tSIE/AEC
Ext Std Terminator: Count
8-TF-833 BD. 71-KARL,STONE,RYAN(30-11 1-116)
ainescence Correction On
oincidence Time(ns): 18
elay Before Burst(ns): Normal
rotocol Data Filename: c:\data\PROT1.DAT
ount Data Filename: c:\data\SDATA1.DAT
pectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	5.50	5.43	0	B	633.28		0.00	11.49
0	2.00	1353.72	1251.90	0		623.24	2983.75	254.24	4.51
1	2.00	4.00	3.39	0		634.27	8.73	10.07	0.00
2	2.00	4.00	3.50	0		604.42	8.96	10.34	0.00
3	2.00	2.50	2.29	0		600.39	5.62	9.60	1.51
4	2.00	3.69	3.26	0		620.46	8.16	10.04	1.01
5	2.00	0.00	0.00	0		621.76	0.00	0.00	1.01
6	2.00	4.97	4.70	0		636.82	10.83	10.51	0.00
7	2.00	5.00	4.40	0		632.77	10.93	10.56	0.00
8	2.00	0.00	0.00	0		630.39	0.00	0.00	0.51
9	2.00	1.95	2.02	0		635.54	4.25	9.02	0.00
10	2.00	5.78	5.34	0		542.70	13.76	11.90	0.00
11	2.00	3.50	3.57	0		602.36	7.86	10.11	0.00
12	2.00	0.00	0.00	0		562.65	0.00	0.00	0.00
13	2.00	0.00	0.00	0		638.26	0.00	0.00	0.00
14	2.00	2.00	2.07	0		620.73	4.42	9.17	0.00
15	2.00	1.30	0.87	0		626.70	2.86	8.74	0.00
16	2.00	4.00	4.07	0		621.42	8.83	10.19	0.76
17	2.00	3.65	3.72	0		617.76	8.08	10.05	2.01
18	2.00	0.00	0.00	0		632.89	0.00	0.00	0.00
19	2.00	2.00	1.76	0		619.17	4.42	9.18	0.00
20	2.00	3.25	2.55	0		594.15	7.35	10.05	0.01
21	2.00	1.31	0.60	0		597.48	2.95	8.97	0.51
22	2.00	0.00	0.00	0		584.24	0.00	0.00	0.00
23	2.00	1.50	1.24	0		628.36	3.29	8.84	2.00
24	2.00	3.21	2.95	0		629.84	7.03	9.72	3.51
25	2.00	6.75	6.40	0		564.31	15.74	12.11	0.00
26	2.00	2.88	1.67	0		601.96	6.47	9.79	1.51
27	2.00	4.00	3.55	0		589.09	9.08	10.48	0.00
28	2.00	2.10	1.36	0		614.73	4.66	9.27	0.00
29	2.00	3.00	3.07	0		556.50	7.05	10.31	0.00
30	2.00	1.00	0.57	0		632.59	2.19	8.53	0.00
31	2.00	0.00	0.00	0		610.50	0.00	0.00	0.00
32	2.00	4.50	3.60	0		626.88	9.89	10.38	3.06
33	2.00	0.54	0.11	0		581.55	1.24	8.65	0.01

98-TF-833 p 10 of 11

Protocol #: 1 Pw H3 20cc #405828 User :

S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	1.50	1.07	0	541.47	3.58	9.60	0.00
36	2.00	0.24	0.31	0	623.21	0.53	8.15	0.00
37	2.00	5.50	5.57	0	611.68	12.25	10.99	0.00
38	2.00	0.50	0.57	0	596.08	1.13	8.51	0.00
39	2.00	2.50	2.26	0	618.47	5.53	9.45	0.00
40	2.00	1.52	0.79	0	609.34	3.39	8.99	0.00
41	2.00	1.00	0.61	0	533.20	2.40	9.38	0.00
42	2.00	1.50	1.25	0	624.99	3.30	8.86	4.51
43	2.00	1.00	1.07	0	613.08	2.22	8.67	0.00
44	2.00	0.00	0.00	0	551.59	0.00	0.00	0.51
45	2.00	2.00	1.76	0	616.17	4.44	9.20	0.51
46	2.00	3.50	3.26	0	619.61	7.74	9.96	0.00
47	2.00	3.06	3.12	0	582.59	6.99	10.07	0.00
48	2.00	3.50	2.36	0	643.87	7.60	9.78	0.00
49	2.00	4.52	3.29	0	609.93	10.07	10.54	1.51
50	2.00	4.19	3.98	0	599.68	9.42	10.48	0.00
51	2.00	2.85	2.80	0	510.20	7.00	10.71	0.00
52	2.00	9.50	8.47	0	612.49	21.14	12.73	0.01
53	2.00	0.00	0.00	0	628.33	0.00	0.00	2.01
54	2.00	3.84	3.32	0	556.07	9.02	10.76	0.00
55	2.00	0.00	0.07	0	591.21	0.00	0.00	0.00
56	2.00	0.00	0.00	0	601.99	0.00	0.00	1.51
57	2.00	2.00	1.48	0	611.38	4.45	9.24	0.00
58	2.00	0.00	0.07	0	615.90	0.00	0.00	0.00
59	2.00	1.55	1.38	0	582.34	3.55	9.24	0.00
60	2.00	1.50	1.57	0	631.60	3.28	8.81	0.00
61	2.00	2.98	2.92	0	518.37	7.28	10.70	0.00
62	2.00	0.50	0.30	0	593.70	1.13	8.53	0.00
63	2.00	1.73	1.79	0	623.27	3.81	9.00	0.00
64	2.00	0.00	0.00	0	608.67	0.00	0.00	0.00
65	2.00	4.00	3.78	0	606.26	8.95	10.32	0.00
66	2.00	4.50	4.57	0	609.29	10.04	10.54	0.00
67	2.00	3.19	2.57	0	584.54	7.28	10.11	0.00
68	2.00	1.34	1.13	0	599.35	3.01	8.97	0.00
69	2.00	3.00	2.57	0	521.69	7.30	10.68	0.00
70	2.00	3.00	2.43	0	485.02	7.57	11.07	0.00
71	2.00	0.00	0.00	0	353.00	0.00	0.00	0.00
72	2.00	0.00	0.07	0	406.95	0.00	0.00	0.00
73	2.00	3.93	4.00	0	515.27	9.62	11.26	0.00
74	2.00	0.50	0.57	0	514.84	1.23	9.23	0.00
75	2.00	2.50	2.07	0	506.70	6.18	10.55	0.00
76	2.00	2.00	0.92	0	532.14	4.81	9.99	0.00
77	2.00	0.00	0.00	0	521.14	0.00	0.00	0.00
78	2.00	0.00	0.00	0	382.96	0.00	0.00	0.00
79	2.00	1.00	0.99	0	489.51	2.51	9.80	3.51
80	2.00	6.50	6.20	0	549.45	15.38	12.17	0.00
81	2.00	0.00	0.00	0	382.13	0.00	0.00	0.00
82	2.00	0.00	0.00	0	492.24	0.00	0.00	0.00
83	2.00	0.00	0.00	0	566.13	0.00	0.00	0.00
84	2.00	4.50	4.44	0	519.19	10.98	11.52	0.00
85	2.00	3.00	2.83	0	514.21	7.36	10.76	1.51
86	2.00	3.00	1.89	0	495.77	7.49	10.96	0.00
87	2.00	0.50	0.57	0	493.63	1.25	9.43	0.00
88	2.00	3.00	2.67	0	558.97	7.03	10.28	2.17
89	2.00	2.50	2.07	0	473.53	6.38	10.90	1.51

p 11 of 11

Protocol #: 1 Pw H3 20cc #405828 User : [redacted]

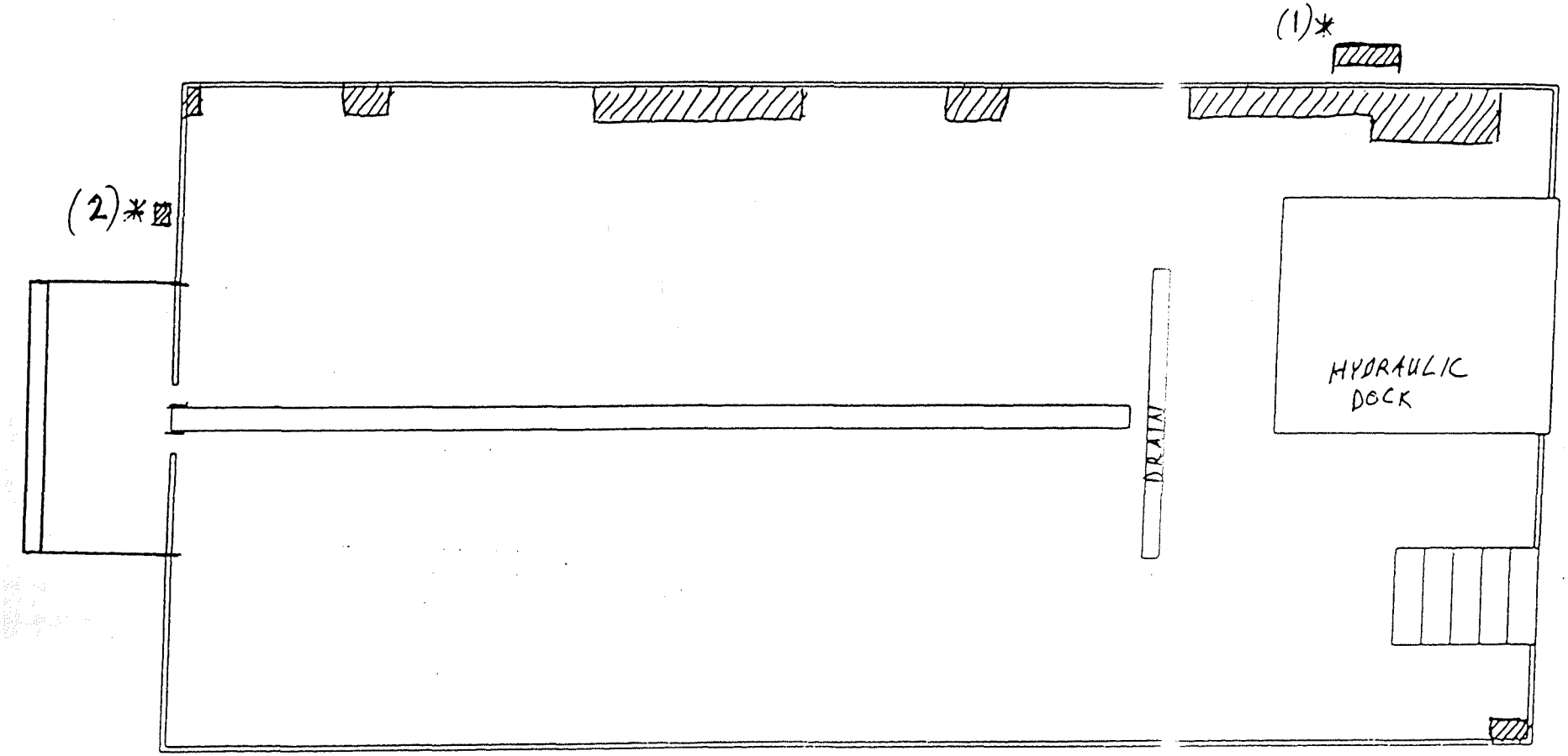
S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
91	2.00	6.26	6.16	0	542.19	14.92	12.14	0.00
92	2.00	1.00	0.94	0	517.74	2.44	9.53	0.00
93	2.00	1.50	1.07	0	552.39	3.54	9.50	3.01
94	2.00	0.00	0.00	0	488.80	0.00	0.00	0.01
95	2.00	0.00	0.00	0	366.33	0.00	0.00	0.00
96	2.00	6.87	6.94	0	545.48	16.32	12.39	0.00
97	2.00	3.00	2.57	0	500.90	7.45	10.90	0.00
98	2.00	2.00	1.57	0	480.52	5.07	10.52	2.01
99	2.00	2.00	2.07	0	368.16	6.14	12.74	0.51
100	2.00	3.50	3.45	0	514.01	8.58	11.04	0.00
101	2.00	0.50	0.00	0	493.85	1.25	9.43	2.01
102	2.00	5.00	4.88	0	499.90	12.43	12.02	0.14
103	2.00	4.00	3.74	0	539.19	9.56	11.03	3.51
104	2.00	3.65	3.13	0	498.72	9.09	11.29	0.51
105	2.00	0.00	0.00	0	397.33	0.00	0.00	0.00
106	2.00	2.00	1.91	0	491.15	5.02	10.41	0.00
107	2.00	0.00	0.00	0	517.08	0.00	0.00	1.01
108	2.00	1.00	0.88	0	552.10	2.36	9.20	1.01
109	2.00	0.00	0.00	0	528.57	0.00	0.00	0.00
110	2.00	6.00	5.15	0	563.48	14.00	11.76	0.00
111	2.00	6.07	6.00	0	523.57	14.74	12.27	1.01
112	2.00	0.00	0.00	0	534.90	0.00	0.00	0.00
113	2.00	0.00	0.00	0	540.58	0.00	0.00	0.00
114	2.00	2.50	2.28	0	609.07	5.58	9.53	0.00
115	2.00	0.00	0.00	0	581.31	0.00	0.00	0.00
116	2.00	3.50	3.25	0	623.98	7.71	9.92	0.01

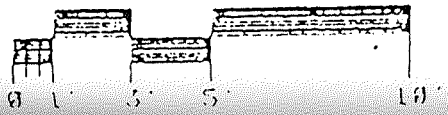
98-TF-833

▨ = DIRECT MEASUREMENTS > 100 dpm/100 cm²

(1) = SECTION OF HORIZONTAL SUPPORT STRUCTURE (3' ABOVE SLAB)

(2) = SIDE OF SLAB

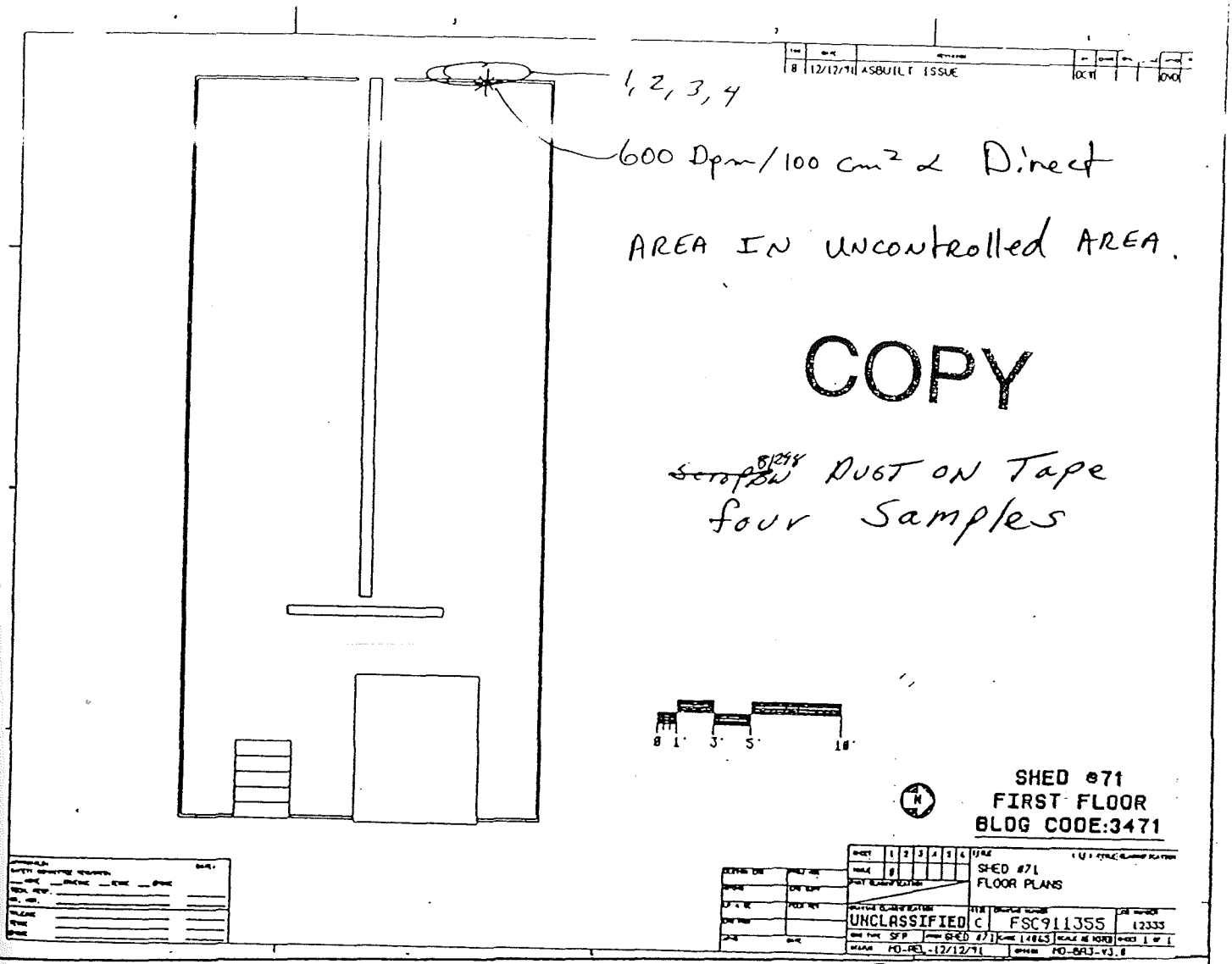




RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) 71	SURVEY NO. 98-TF-835
PURPOSE: IDentify Contaminate	RWP NO. N/A
	DATE: 8-11-98
	TIME: 0730

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
NE Electra	5439/5440	11-27-98

Completed by: (Signature)	[redacted]	Date: 8-11-98
Completed by: (Print Name) Tom Karl		
Counted by: (Signature)	[redacted]	Date: 8/12/98
Counted by: (Print Name) Keith McCartney		
Reviewed/Approved by: (Signature)	[redacted]	Date: 8/13/98
Reviewed/Approved by: (Print Name) R.L. JOHNSON		

ML-9620 (2-98)

98-TF-835

Alpha Spectrum Analysis

Sample Description:	1
Batch Identification:	$980811
Sample Identification:	98-TF-835
Sample Geometry:	Shelf 2
Protocol Description:	12 HOUR COUNT
Detector Name:	1a
Spectrum Directory:	c:\aanalyst\seibirs\$980811
Spectrum File:	0.cnf
Sample Size:	1 Sample
Acquisition Date:	8/11/98
Acquisition Time:	8:52 AM
Acquisition Live Time (s):	43,200

Calibration Due Date: 11/20/98
Detector Serial Number: 08966033A

Peak Activity Report

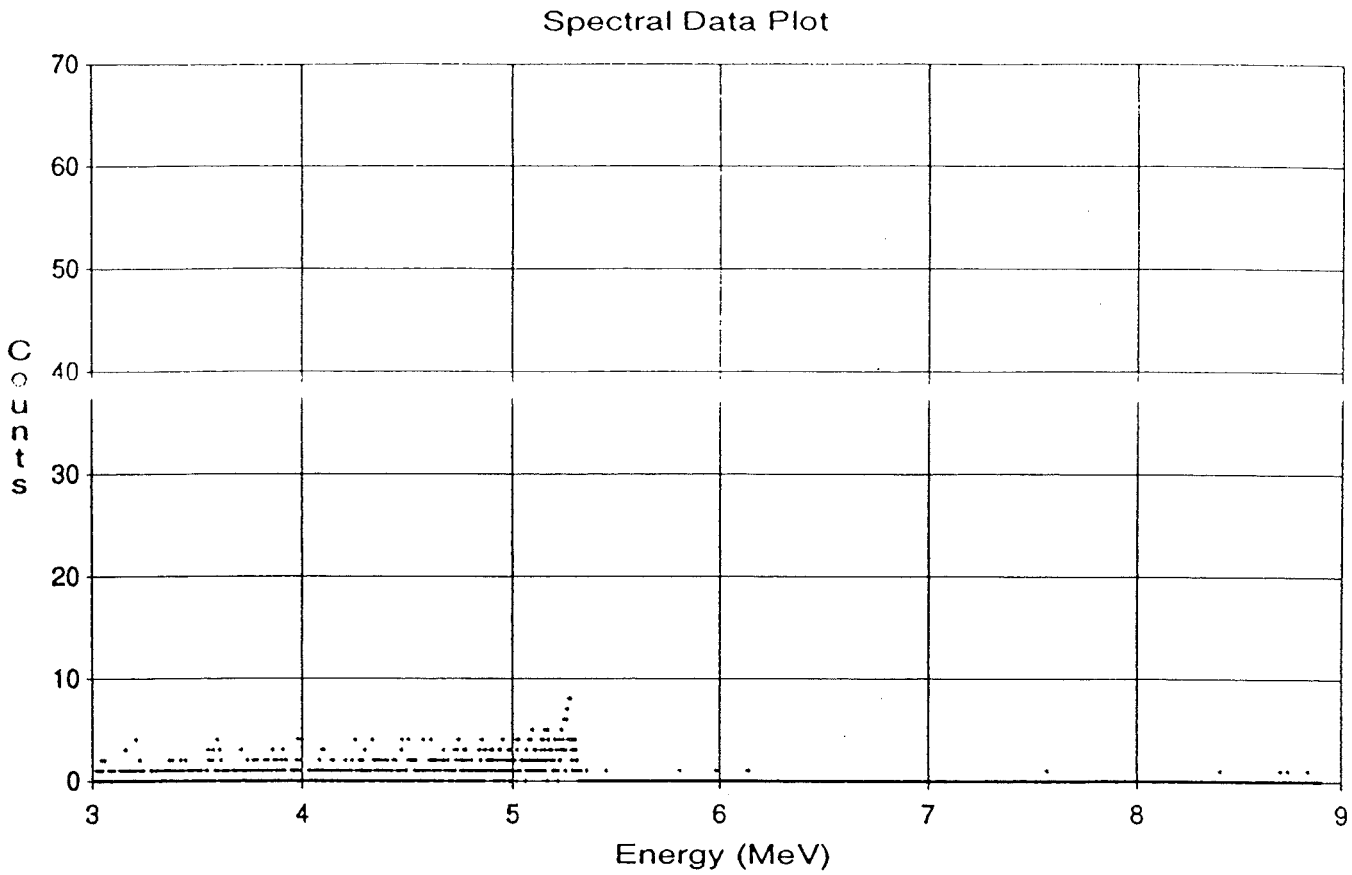
Peak Energy (keV)	Total Counts	Net Counts	Activity (dpm)	Error (dpm)
5300	787	779.00	ID Only	

Possible Nuclides

Peak Energy (keV)	Possible Nuclides	Nuclide Peak Energy (keV)	Comments
5300	Po-210	5304	

3rd 10 QN 8/11/98 11

98-TF-835



Datasource: 0.CNF
Live Time: 43200 sec
Real Time: 43200 sec
Acq. Start: 8-11-98 8:52:55 AM
Start: 1 : 3.02 (MeV)
Stop: 2048 : 8.90 (MeV)

98-11

Alpha Spectrum Analysis

Sample Description:	2
Batch Identification:	$980811
Sample Identification:	98-TF-835
Sample Geometry:	Shelf 2
Protocol Description:	12 HOUR COUNT
Detector Name:	1b
Spectrum Directory:	c:\aanalyst\selbits\$980811
Spectrum File:	1.cnf
Sample Size:	1 Sample
Acquisition Date:	8/11/98
Acquisition Time:	8:52 AM
Acquisition Live Time (s):	43,200

Calibration Due Date: 11/20/98
Detector Serial Number: 08966033B

Peak Activity Report

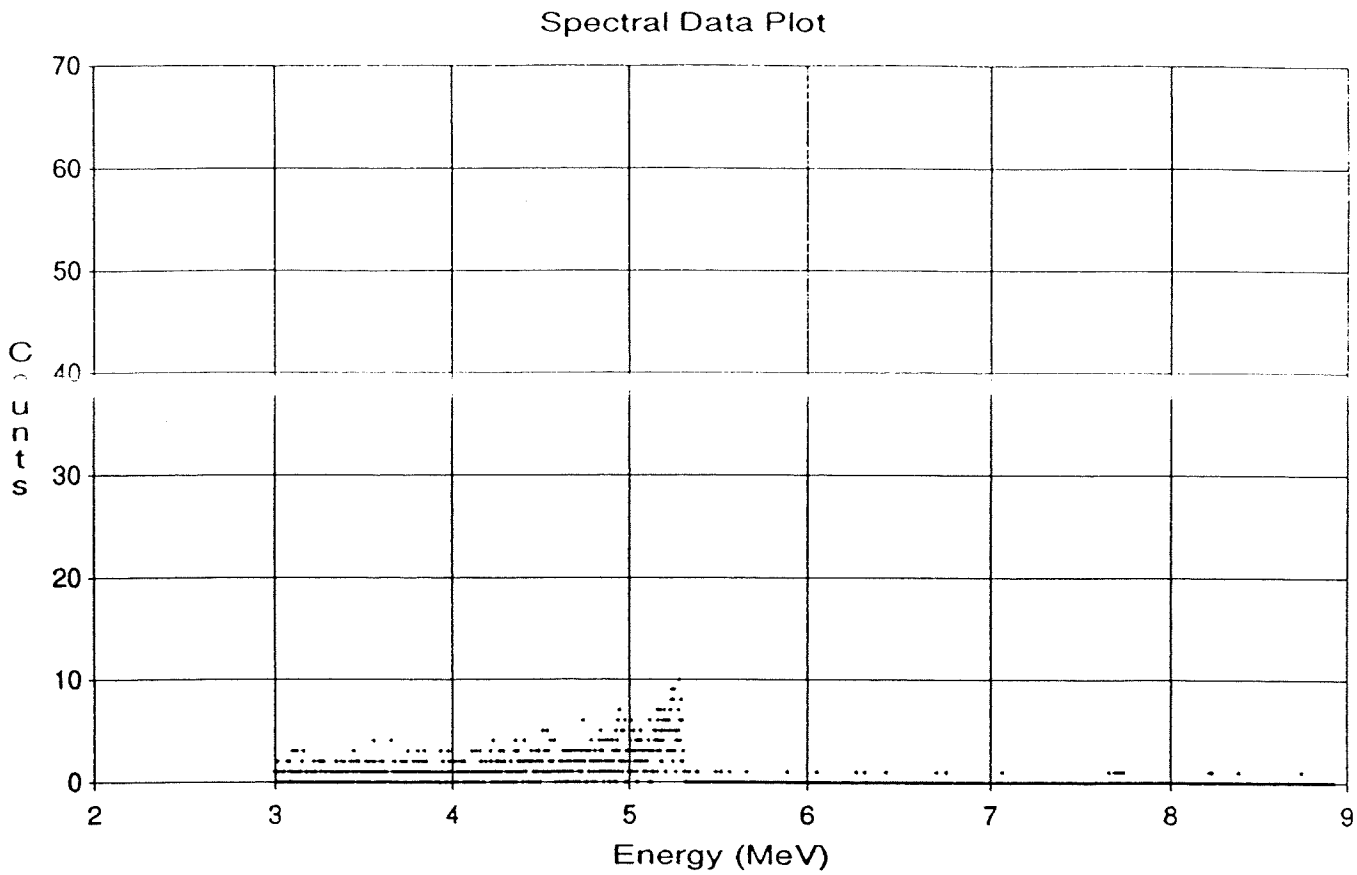
Peak Energy (keV)	Total Counts	Net Counts	Activity (dpm)	Error (dpm)
5300	1,161	1040.99	ID Only	

Possible Nuclides

Peak Energy (keV)	Possible Nuclides	Nuclide Peak Energy (keV)	Comments
5300	Po-210	5304	

5 of 10 8/17/98 11

98-TF-835



Datasource: 1.CNF
Live Time: 43200 sec
Real Time: 43200 sec
Acq. Start: 8-11-98 8:52:56 AM
Start: 1 : 3.00 (MeV)
Stop: 2048 : 8.92 (MeV)

bat 10/8/98 BN 11

98-TF-835

Alpha Spectrum Analysis

Sample Description:	3
Batch Identification:	$980811
Sample Identification:	98-TF-835
Sample Geometry:	Shelf 2
Protocol Description:	12 HOUR COUNT
Detector Name:	2a
Spectrum Directory:	c:\aanalyst\selbins\$980811
Spectrum File:	2.cnf
Sample Size:	1 Sample
Acquisition Date:	8/11/98
Acquisition Time:	8:52 AM
Acquisition Live Time (s):	43,200

Calibration Due Date: 11/20/98
Detector Serial Number: 08966034A

Peak Activity Report

Peak Energy (keV)	Total Counts	Net Counts	Activity (dpm)	Error (dpm)
5300	856	847.00	ID Only	

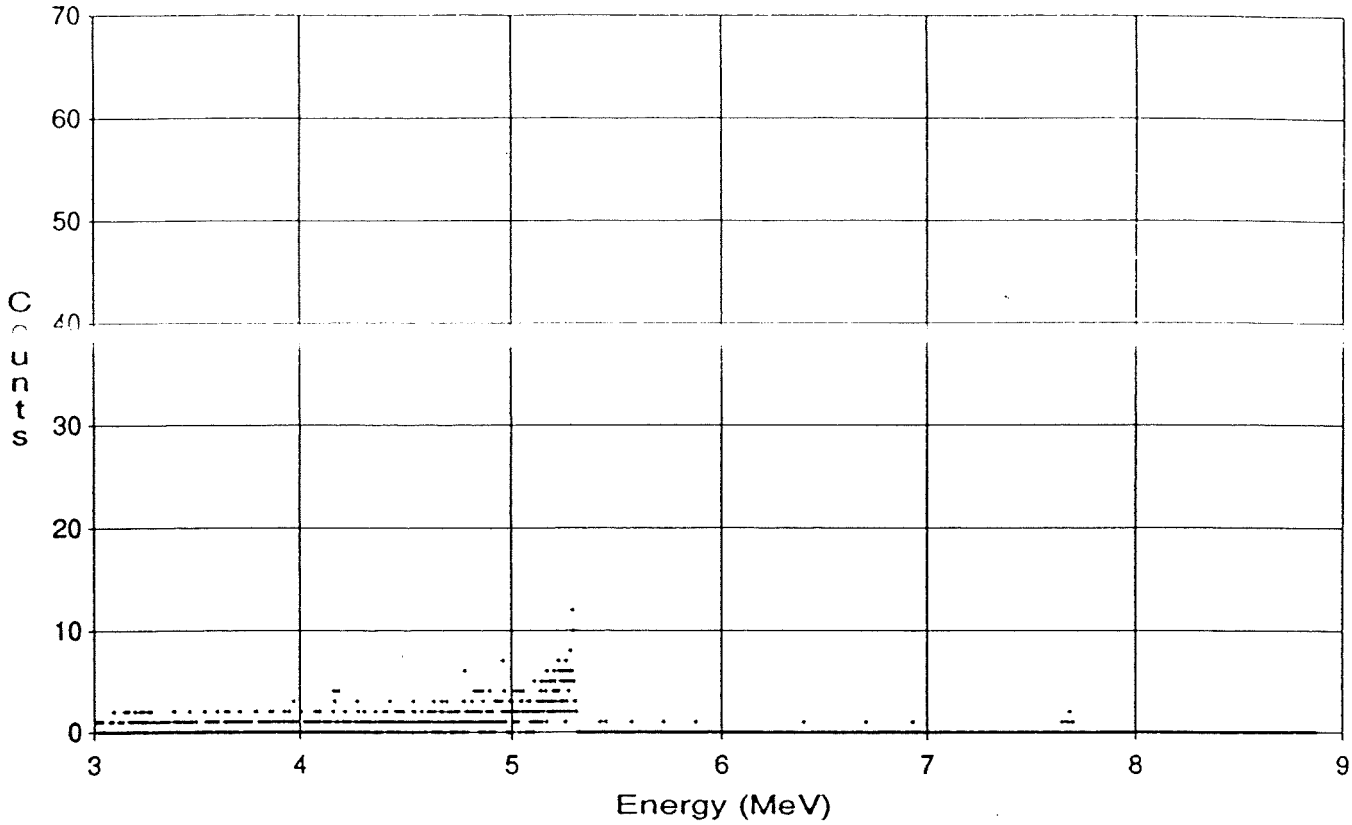
Possible Nuclides

Peak Energy (keV)	Possible Nuclides	Nuclide Peak Energy (keV)	Comments
5300	Po-210	5304	

Tot. 10 8/28/98 11

98-TF-835

Spectral Data Plot



Datasource: 2.CNF
Live Time: 43200 sec
Real Time: 43200 sec
Acq. Start: 8-11-98 8:57:59 AM
Start: 1 : 3.01 (MeV)
Stop: 2048 : 8.87 (MeV)

8 of 10 11

98-TF-835

Alpha Spectrum Analysis

Sample Description:	4
Batch Identification:	$980811
Sample Identification:	98-TF-835
Sample Geometry:	Shelf 2
Protocol Description:	12 HOUR COUNT
Detector Name:	2b
Spectrum Directory:	c:\aanalyst\selbifs\$980811
Spectrum File:	3.cnf
Sample Size:	1 Sample
Acquisition Date:	8/11/98
Acquisition Time:	8:52 AM
Acquisition Live Time (s):	43,200

Calibration Due Date: 11/20/98
Detector Serial Number: 08966034B

Peak Activity Report

Peak Energy (keV)	Total Counts	Net Counts	Activity (dpm)	Error (dpm)
5300	789	777.00	ID Only	

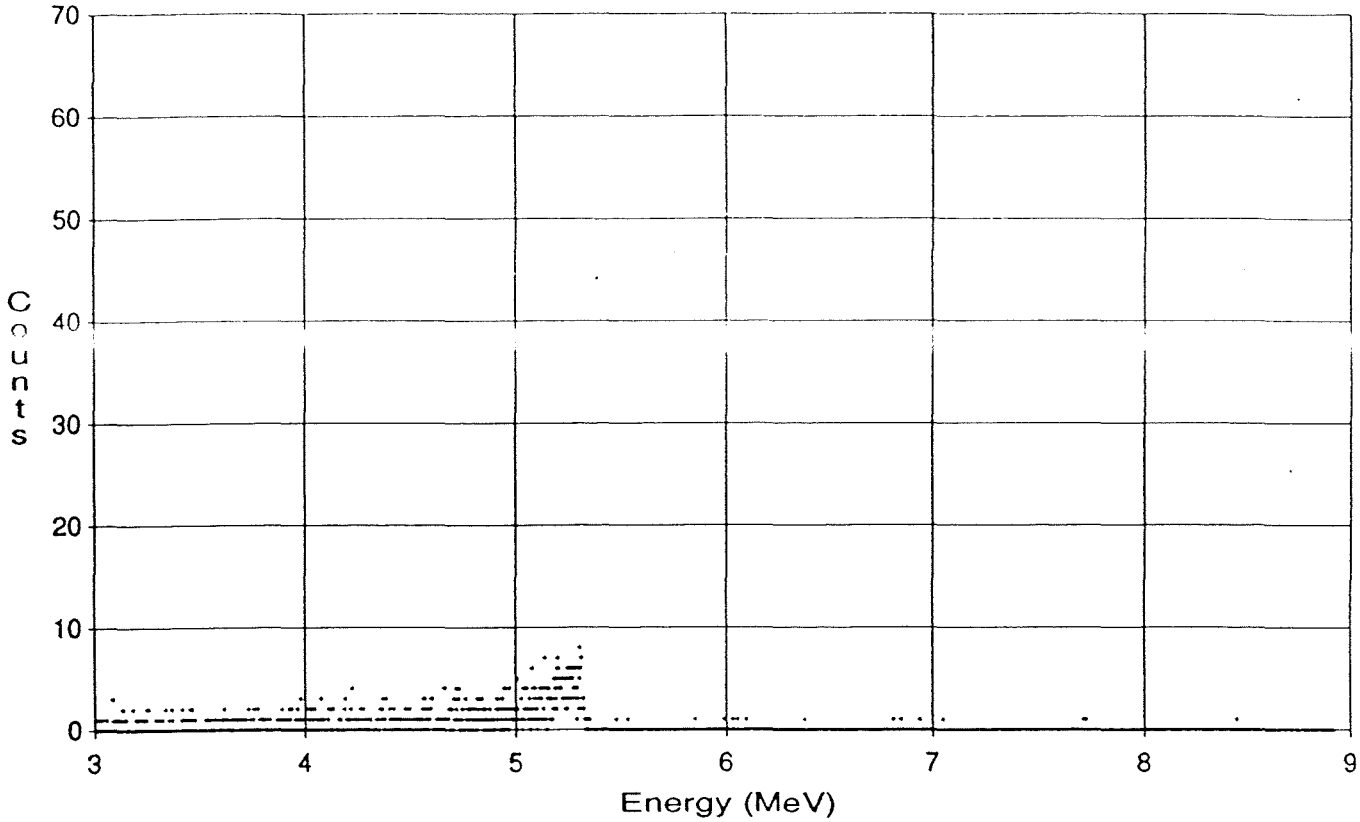
Possible Nuclides

Peak Energy (keV)	Possible Nuclides	Nuclide Peak Energy (keV)	Comments
5300	Po-210	5304	

9 of 18 8/17/98 BW 11

98-TF-835

Spectral Data Plot



Datasource: 3.CNF
Live Time: 43200 sec
Real Time: 43200 sec
Acq. Start: 8-11-98 8:58:00 AM
Start: 1 : 3.00 (MeV)
Stop: 2048 : 8.92 (MeV)

Gamma Spectroscopy Report

Requested By: Bob Johnson

HP#:

Description:
BD 71 Tape/Dust

Sample ID#: HPG02709

Project ID#:

Filename: HPG02709.S0

Detector: Ge-F

Geometry: Special

Mass (g):

Count Time (sec.): 63000

Priority: Y

Isotope	*Concentration*	pCi/g	*MDA*	pCi/g
Pb-210				
Be-7				

Comments:

Energy Calibration File ECA_GEF.S0	Efficiency Calibration File
Resolution Calibration File WIP00009.S0	Library File SOILSCRN.LIB

(D) denotes the isotope was identified by its daughter products

Sample Received: 8/11/98

Sample Counted: 8/11/98

Sample Analyzed: 8/12/98

Product Cycle Time: 1 Days

Analyst: J S Stapleton HP #: [redacted] Date: 9/12/98

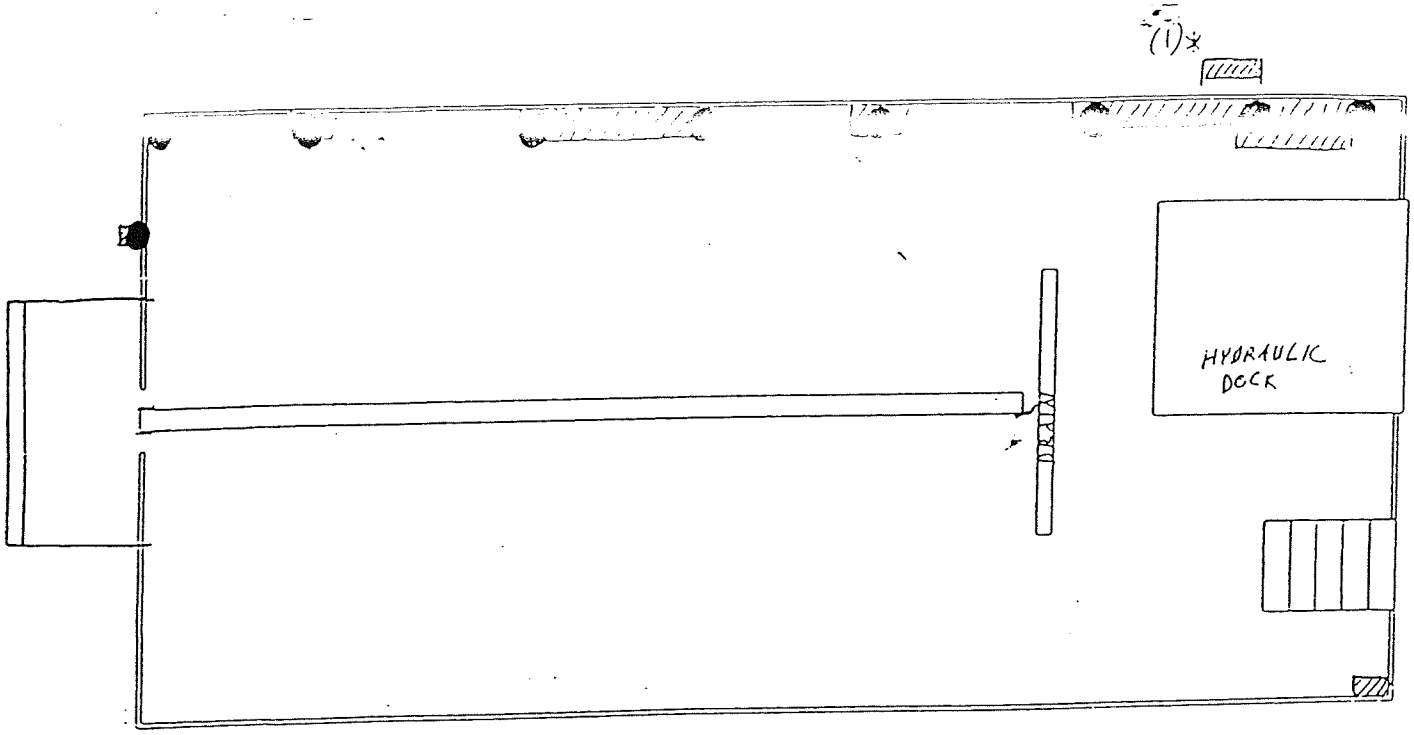
GG-TF-R35 11.f 11

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 71	SURVEY NO. 98-TF-848
PURPOSE: Concrete Samples	RWP NO. TF-019-98
	DATE: 8-12-98
	TIME: 1445

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/100cm^2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE	5267/5283	1-27-99

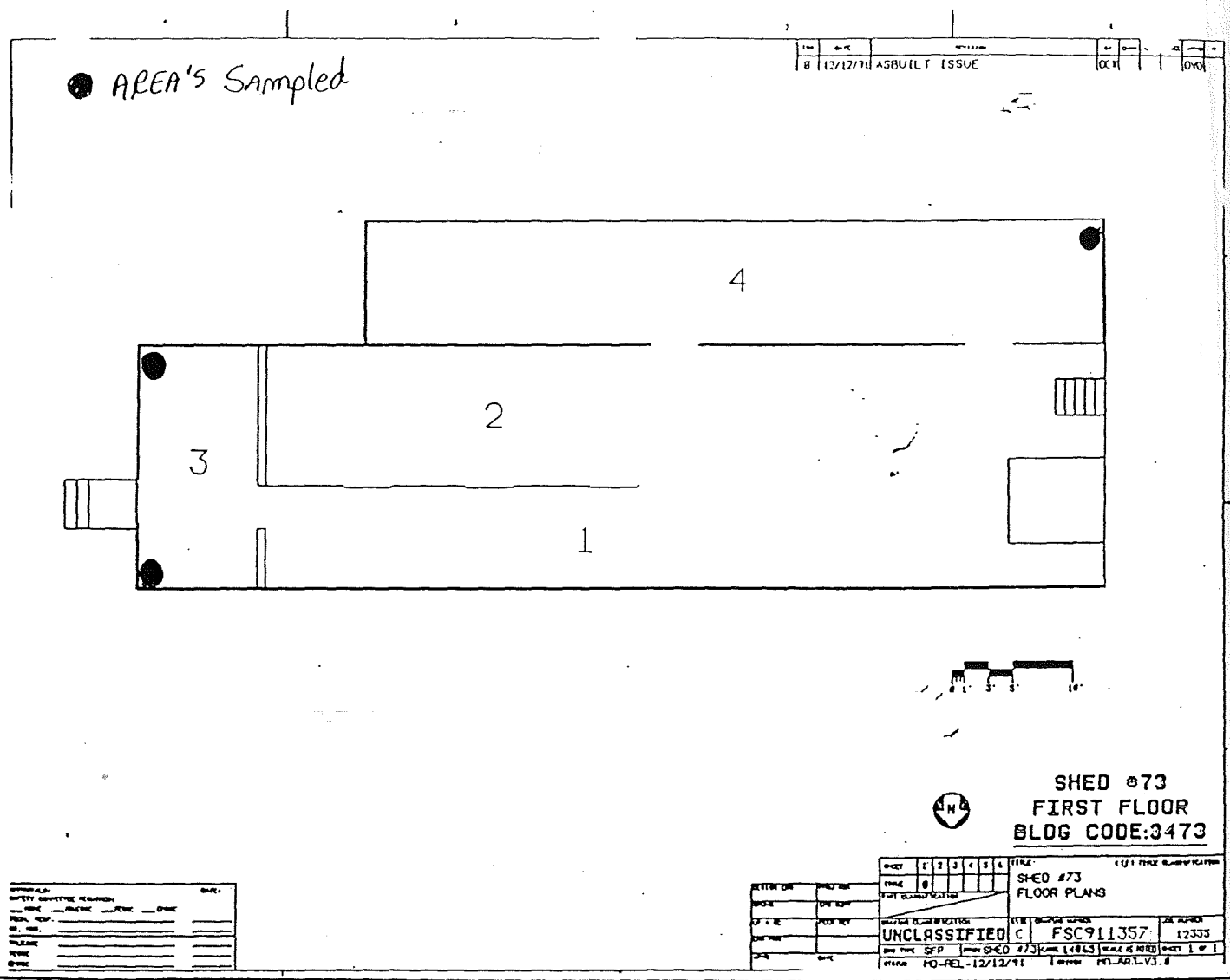
Completed by: (Signature) Bill Wehler	HP# [redacted]	Date: 8-13-98
Completed by: (Print Name) Bill Wehler		
Counted by: (Signature)	HP#	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date: 8/13/98
Reviewed/Approved by: (Print Name) RL Johnson		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION (BLDG./AREA/ROOM) 73	SURVEY NO. 98-TF-848
PURPOSE: Concrete Samples	RWP NO. TF-019-98
	DATE: 8-12-98
	TIME: 1445

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

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)		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

COMMENTS: Carpenter used a hammer and chisel to get a composite sample of the ~~fixed contamination area~~ BW areas with direct readings on each Bldg. 8/13/98

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 (2-98)

Gamma Spectroscopy Report

Requested By:

HP#: [redacted]

Description:
Concrete Chips, BD-71

Sample ID#: HPG02715

Project ID#:

Filename: GEA00440.S0

Detector: Ge-A

Geometry: EPA Dish

Mass (g): 408

Count Time (sec.): 49795

Priority:

Isotope	*MDA*
K-40	
U-238 (D)	
Th-232 (D)	

Comments:
ID only. The isotopes detected are normal constituents of concrete.

Energy Calibration File ECAL_GEA.S0	Efficiency Calibration File N/A
Resolution Calibration File GEA00266.S0	Library File SOILSCRN.LIB

(D) denotes the isotope was identified by its daughter products

Sample Received: 8/12/98

Sample Counted: 8/12/98

Sample Analyzed: 8/13/98

Product Cycle Time: 1 Days

Analyst: EJR HP #: [redacted] Date: 8/13/98

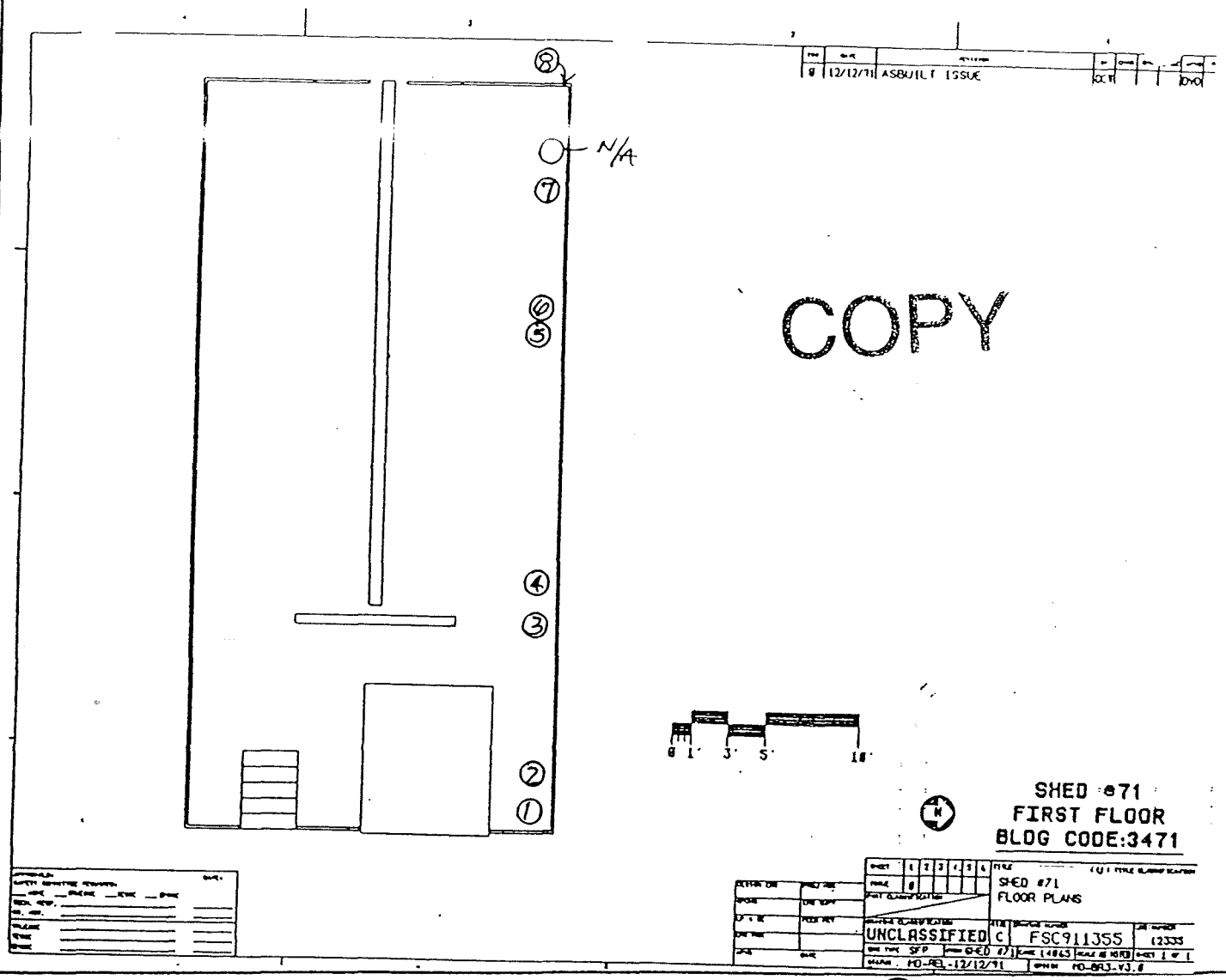
98-TF 848

RADIOLOGICAL SURVEY DATA SHEET

AS 8.18.98

LOCATION: (BLDG./AREA/ROOM) BLDG 71	SURVEY NO. 98.TF.846
PURPOSE: Post Job Survey	RWP NO. TF.019.98
	DATE: 8.12.98
	TIME: 1530

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	5394/5414	10.27.98

Completed by: (Signature)	[redacted]	Date: 8.12.98
Completed by: (Print Name) Robert Stone		
Counted by: (Signature)	[redacted]	Date: 8-13-98
Counted by: (Print Name) Mike Ball		
Reviewed/Approved by: (Signature)	[redacted]	Date: 8/19/98
Reviewed/Approved by: (Print Name) K.L. JOHNSON		

ML-9620 (2-98)

Health Physics Counting Lab -- Wipe Analysis

Date: 8/17/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2D000.csv
Batch Ended: 8/13/98 13:54
Crosstalk Correction: Applied
Cal. Due Date: 11/26/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: 98-TF-846 STONE (8) SHED #71 MB

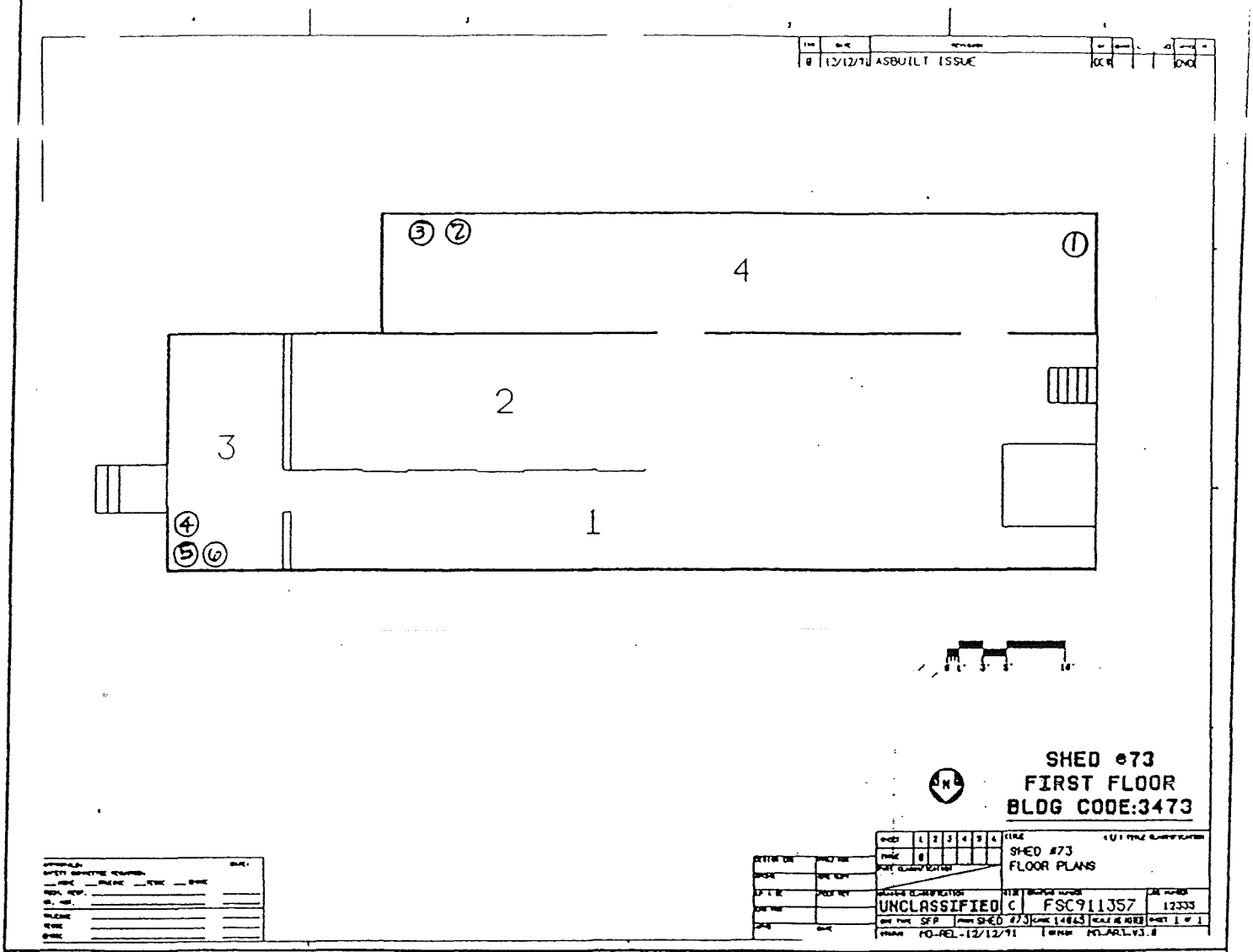
		Alpha Activity			Beta Activity			Count	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
60	1	0.000	1.99	<MDA	1.41	2.78	<MDA	1.50	8/13/98 13:42
39	2	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	8/13/98 13:44
2	3	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	8/13/98 13:45
12	4	2.403	2.74	<MDA	4.09	3.51	<AL	1.50	8/13/98 13:47
2	5	2.690	2.71	<AL	0.00	1.77	<MDA	1.50	8/13/98 13:49
7	6	2.547	2.73	<MDA	1.06	2.78	<MDA	1.50	8/13/98 13:51
126	7	0.470	2.03	<MDA	5.78	3.83	<AL	1.50	8/13/98 13:52
70	8	2.690	2.71	<AL	0.00	1.77	<MDA	1.50	8/13/98 13:54

RADIOLOGICAL SURVEY DATA SHEET

4 RS 8.18.98
3

LOCATION: (BLDG/AREA/ROOM) BLDG 73	SURVEY NO. 98-TF-846
PURPOSE: Post Job Survey	RWP NO. TF-019-98
	DATE: 8-12-98
	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
ELECTRA	5394/5414	10-27-98

Completed by: (Signature) Robert Stone	HP# [redacted]	Date: 8-12-98
Completed by: (Print Name) Robert Stone		
Counted by: (Signature) [redacted]		Date: 8-13-98
Counted by: (Print Name) Mike Scall		
Reviewed/Approved by: (Signature) [redacted]		Date: 8/19/98
Reviewed/Approved by: (Print Name) R. Johnson		

ML-9620 (2-98)

Paul T

Health Physics Counting Lab -- Wipe Analysis

Date: 8/17/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2J000.csv
Batch Ended: 8/13/98 13:40
Crosstalk Correction: Applied
Cal. Due Date: 11/26/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544
Batch ID: 98-TF-846 STONE (6) SHED #73 MB .

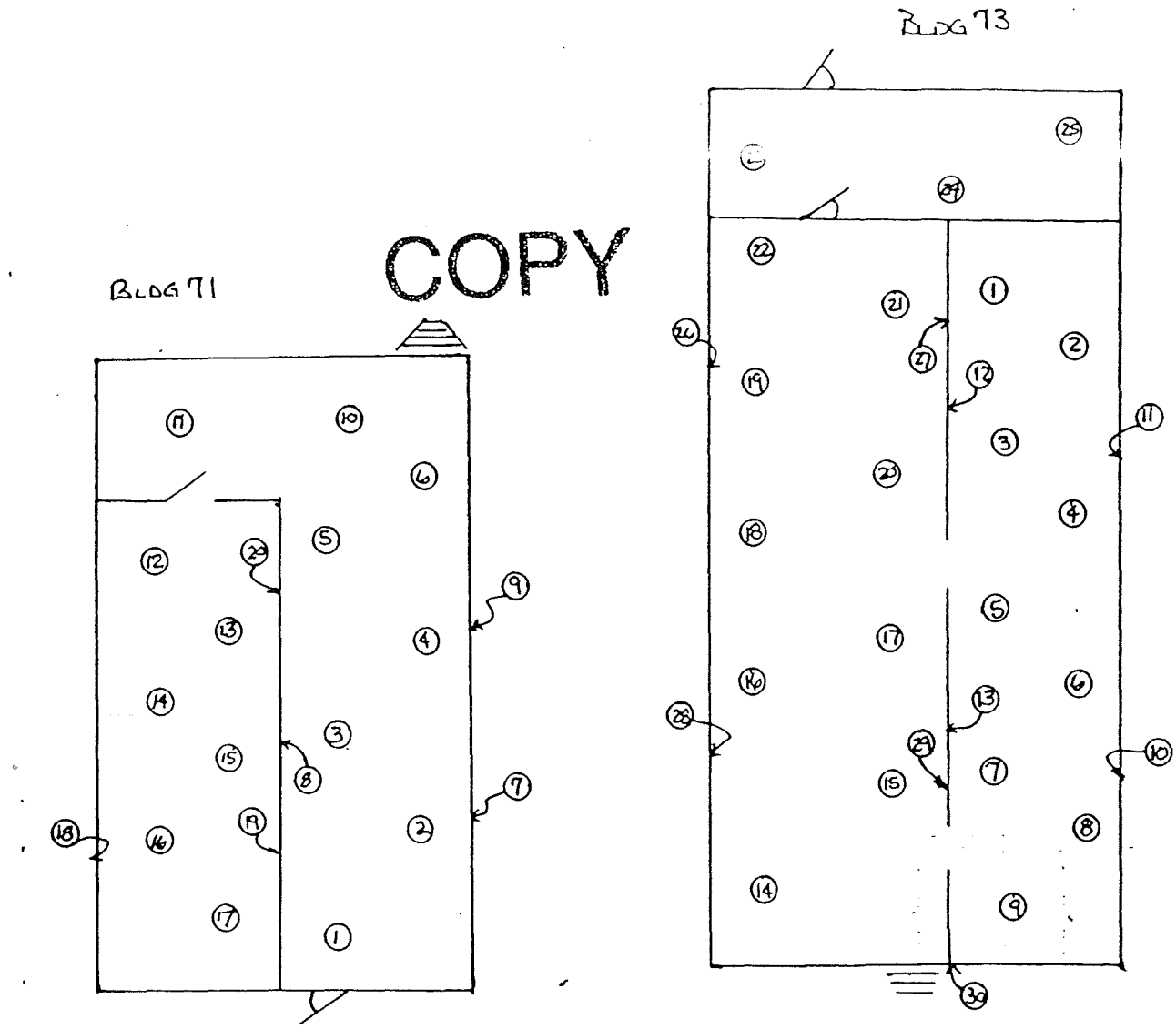
		Alpha Activity			Beta Activity				
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	Count time (min)	Completion Date - Time
68	1	0.757	1.98	<MDA	0.00	2.33	<MDA	1.50	8/13/98 13:32
56	2	0.000	1.99	<MDA	1.41	2.78	<MDA	1.50	8/13/98 13:34
129	3	2.690	2.71	<AL	0.00	1.77	<MDA	1.50	8/13/98 13:35
90	4	0.614	2.01	<MDA	2.75	3.17	<MDA	1.50	8/13/98 13:37
105	5	0.000	1.98	<MDA	0.00	2.33	<MDA	1.50	8/13/98 13:39
130	6	0.757	1.98	<MDA	0.00	2.33	<MDA	1.50	8/13/98 13:40

C1/C2D F1 30-11 P3 D1/D

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 71/73	SURVEY NO. 98-TF 749
PURPOSE: Annual Req. Survey	RWP NO. N/A
	DATE: 7-15-98
	TIME: 1300

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
ELECTRA	5440/5439	11-28-98
	A	
	N	

Completed by: (Signature) Robert Stone	HP# [redacted]	Date: 7-15-98
Completed by: (Print Name) ROBERT STONE		
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 7-15-98
Counted by: (Print Name) CAROL Y. ROBINSON		
Reviewed/Approved by: (Signature)	[redacted]	Date: 8/4/98
Reviewed/Approved by: (Print Name) JOHNSON		

ML-9620 (2-98) Bldg 71

Health Physics Counting Lab -- Wipe Analysis

Date: 7/15/98
Counting Unit id: 1
Data file name: C:\LBXL\UNIT1\Sme1C004.csv
Batch Ended: 7/15/98 13:28
Crosstalk Correction: Applied
Cal. Due Date: 12/18/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 64937
Batch ID: T 98-TF-749 STONE BLDG.71 GR.C (20) CYR

		Alpha Activity			Beta Activity			Cou	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (min)	Date - Time
99	1	0.000	1.76	<MDA	1.87	2.74	<MDA	1.5	7/15/98 12:56
9	2	0.858	1.75	<MDA	0.15	2.28	<MDA	1.5	7/15/98 12:58
71	3	0.790	1.77	<MDA	3.18	3.13	<MDA	1.5	7/15/98 13:00
24	4	0.000	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:01
54	5	0.000	1.77	<MDA	3.39	3.13	<MDA	1.5	7/15/98 13:03
90	6	0.892	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:05
22	7	0.000	1.76	<MDA	1.87	2.74	<MDA	1.5	7/15/98 13:06
41	8	0.000	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:08
64	9	0.892	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:10
57	10	0.824	1.76	<MDA	1.67	2.74	<MDA	1.5	7/15/98 13:12
22	11	0.000	1.75	<MDA	0.35	2.28	<MDA	1.5	7/15/98 13:13
46	12	2.450	2.43	<AL	2.98	3.13	<MDA	1.5	7/15/98 13:15
2	13	0.000	1.78	<MDA	4.91	3.48	<AL	1.5	7/15/98 13:16
134	14	0.000	1.75	<MDA	0.35	2.28	<MDA	1.5	7/15/98 13:18
125	15	0.000	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:20
24	16	0.000	1.76	<MDA	1.87	2.74	<MDA	1.5	7/15/98 13:21
33	17	2.450	2.43	<AL	2.98	3.13	<MDA	1.5	7/15/98 13:23
23	18	0.892	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:25
1	19	0.000	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:26
111	20	0.000	1.74	<MDA	0.00	1.70	<MDA	1.5	7/15/98 13:28

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2SZ	BKG
Region A:	0.5	18.6	0	0.0	7.10
Region B:	2.0	18.6	0	0.0	6.80
Region C:	40.0	2000	0	0.0	12.30

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-TF-749 STONE BLDG.71 (30-11 C1-C20) CYR
Luminescence Correction On
Coincidence Time(ns): 15
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	7.10	6.80	12.30	595.07	1	B		0.00
0	2.00	1536.90	1454.70	3.20	615.64	0		3431.28	280.17
1	2.00	0.00	0.00	1.20	548.52	0		0.00	0.00
2	2.00	0.00	0.00	0.00	572.41	0		0.00	0.00
3	2.00	0.00	0.00	0.00	536.02	0		0.00	0.00
4	2.00	0.40	0.70	0.00	547.05	0		0.97	10.20
5	2.00	0.00	0.00	0.00	570.27	0		0.00	0.00
6	2.00	0.90	1.20	0.00	564.72	0		2.13	10.28
7	2.00	1.90	2.20	0.00	611.36	0		4.26	10.24
8	2.00	2.90	3.20	0.00	557.81	0		6.92	11.42
9	2.00	0.00	0.00	0.00	589.66	0		0.00	0.00
10	2.00	0.90	1.20	0.00	536.44	0		2.20	10.60
11	2.00	2.90	3.20	0.00	560.58	0		6.90	11.38
12	2.00	2.40	2.20	0.00	564.60	0		5.69	11.08
13	2.00	0.00	0.00	0.00	513.55	0		0.00	0.00
14	2.00	0.00	0.00	0.00	548.63	0		0.00	0.00
15	2.00	0.00	0.00	0.00	484.92	0		0.00	0.00
16	2.00	2.40	2.70	0.00	544.83	0		5.81	11.32
17	2.00	0.40	0.70	0.00	589.97	0		0.92	9.68
18	2.00	0.00	0.00	0.00	469.96	0		0.00	0.00
19	2.00	2.40	2.70	0.00	644.80	0	E	5.19	10.12
20	2.00	0.90	0.70	0.00	549.85	0		2.17	10.45

Health Physics Counting Lab -- Wipe Analysis

Date: 7/15/98
Counting Unit id: 2
Data file name: C:\LBXL\UNIT2\Sme2G000.csv
Batch Ended: 7/15/98 13:46
Crosstalk Correction: Applied
Cal. Due Date: 11/26/98

Alpha activity action level (DPM): 20.00
Beta activity action level (DPM): 200.00

System Serial #: 59544 PS 7/22/98
Batch ID: T 98-38-749 STONE BLDG.73 GR.G (30) CYR

		Alpha Activity			Beta Activity			Cour	Completion
Carrier	Sample	DPM	σ	flags	DPM	σ	flags	time (n n)	Date - Time
66	1	0.000	2.01	<MDA	2.93	3.17	<MDA	1.5	7/15/98 12:57
39	2	0.000	2.02	<MDA	4.45	3.51	<AL	1.5	7/15/98 12:59
93	3	0.470	2.03	<MDA	5.78	3.83	<AL	1.5	7/15/98 13:01
65	4	0.757	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:02
128	5	0.000	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:04
136	6	0.000	1.99	<MDA	1.41	2.78	<MDA	1.5	7/15/98 13:06
89	7	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:07
106	8	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:09
82	9	0.901	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:11
73	10	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:12
136	11	0.901	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:14
39	12	0.000	2.01	<MDA	2.93	3.17	<MDA	1.5	7/15/98 13:16
144	13	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:17
5	14	0.000	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:19
2	15	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:21
143	16	0.829	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:22
139	17	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:24
7	18	0.000	2.02	<MDA	4.45	3.51	<AL	1.5	7/15/98 13:26
17	19	0.000	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:28
103	20	0.000	1.99	<MDA	1.41	2.78	<MDA	1.5	7/15/98 13:29
7	21	0.614	2.01	<MDA	2.75	3.17	<MDA	1.5	7/15/98 13:31
26	22	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:33
141	23	0.000	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:34
33	24	0.757	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:36
75	25	0.829	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:38
10	26	0.685	1.99	<MDA	1.24	2.78	<MDA	1.5	7/15/98 13:39
60	27	0.000	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:41
40	28	0.000	2.01	<MDA	2.93	3.17	<MDA	1.5	7/15/98 13:43
7	29	0.000	1.97	<MDA	0.00	1.77	<MDA	1.5	7/15/98 13:44
22	30	0.000	1.98	<MDA	0.00	2.33	<MDA	1.5	7/15/98 13:46

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL Quench Set: SMVIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2SX	BKG
Region A:	0.5 -	18.6	0	0.0	5.80
Region B:	2.0 -	18.6	0	0.0	5.50
Region C:	40.0 -	2000	0	0.0	10.90

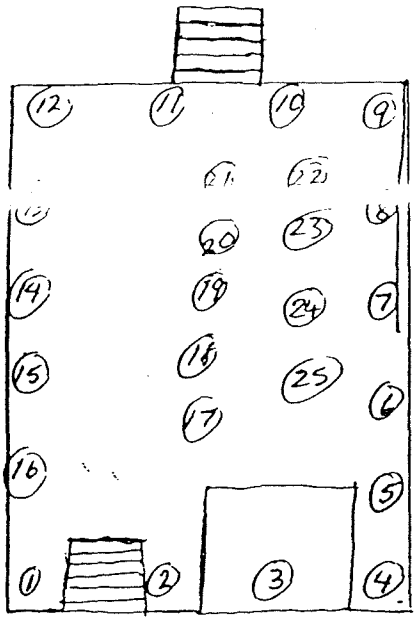
Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
T 98-TF-749 STONE BLDG.73 (30-11 D1-D30) CYR
Luminescence Correction On
Coincidence Time(ns): 10
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT3.DAT
Count Data Filename: C:\DATA\SDATA3.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	5.80	5.50	10.90	578.78	2	B		0.00
0	2.00	1528.70	1453.00	1.60	625.65	0		3376.67	275.82
1	2.00	1.20	1.50	0.00	546.47	0		2.90	9.75
2	2.00	1.20	1.50	0.10	460.14	0		3.08	10.36
3	2.00	2.20	2.50	0.00	479.38	0		5.64	10.99
4	2.00	0.70	0.50	0.00	465.84	0		1.80	10.04
5	2.00	2.20	2.50	1.10	494.64	0		5.62	10.94
6	2.00	1.20	1.50	0.00	547.03	0		2.89	9.75
7	2.00	0.00	0.00	0.00	470.17	0		0.00	0.00
8	2.00	1.70	1.50	1.10	482.67	0		4.36	10.68
9	2.00	4.20	4.50	2.10	561.73	0		9.97	11.24
10	2.00	0.00	0.00	0.00	506.37	0		0.00	0.00
11	2.00	2.20	2.00	0.00	516.04	0		5.49	10.69
12	2.00	1.20	1.00	0.00	554.21	0		2.87	9.67
13	2.00	4.20	4.50	0.00	506.44	0		10.59	11.94
14	2.00	0.00	0.00	2.10	493.88	0		0.00	0.00
15	2.00	1.70	2.00	2.10	506.06	0		4.29	10.50
16	2.00	0.00	0.00	0.00	480.88	0		0.00	0.00
17	2.00	0.00	0.00	0.00	522.58	0		0.00	0.00
18	2.00	0.00	0.00	0.00	477.98	0		0.00	0.00
19	2.00	0.70	1.00	0.00	520.64	0		1.74	9.72
20	2.00	0.00	0.00	0.00	497.27	0		0.00	0.00
21	2.00	0.70	1.00	0.00	559.71	0		1.67	9.32
22	2.00	0.20	0.50	1.10	472.53	0		0.51	9.71
23	2.00	3.70	4.00	0.00	578.91	0		8.60	10.74
24	2.00	0.00	0.00	0.00	533.89	0		0.00	0.00
25	2.00	2.70	3.00	0.00	473.26	0		6.93	11.29
26	2.00	1.20	1.50	0.00	511.29	0		3.01	10.13
27	2.00	0.70	0.50	0.00	548.42	0		1.69	9.43
28	2.00	0.20	0.50	0.00	503.63	0		0.51	9.57
29	2.00	2.20	2.50	0.00	424.85	0		5.90	11.48
30	2.00	2.70	2.50	0.00	588.15	0		6.20	10.10

RADIOLOGICAL SURVEY DATA SHEET

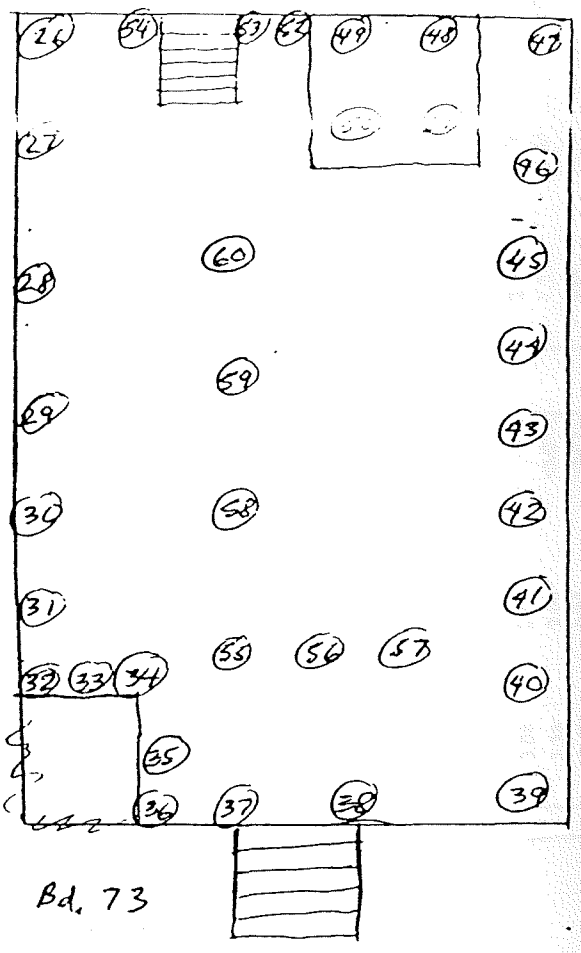
LOCATION: (BLDG./AREA/ROOM) 71 + 73 SLABS	SURVEY NO. 98-TF-1101
PURPOSE: EVALUATION - POST REMOVAL OF FREESTANDING WALLS	RWP NO. N/A
	DATE: 102698
	TIME: 1500

MAP/DRAWING



Bd. 71

ALL DIRECT MEASUREMENTS:
<100/α
<5K/β



Bd. 73

N

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	5364/5285	041599

Completed by: (Signature) P E Ryan	HP# [redacted]	Date: 102698
Completed by: (Print Name) P E RYAN		
Counted by: (Signature) Smith-Brown	HP# [redacted]	Date: 10/27/98
Counted by: (Print Name) SMITH-BROWN		
Reviewed/Approved by: (Signature) B Wahler	[redacted]	Date: 11498
Reviewed/Approved by: (Print Name) B Wahler for R. Johnson		

ML-9620 (2-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR085
Batch Ended: 10/27/98 8:31
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-1101 RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	6.40	3.71	<AL	0.00	2.03	<MDA
A2	2	1.42	2.04	<MDA	1.50	2.40	<MDA
B1	3	1.52	2.18	<MDA	1.38	2.58	<MDA
B2	4	0.00	2.07	<MDA	0.11	2.03	<MDA
B3	5	3.11	2.88	<AL	0.00	1.49	<MDA
B4	6	1.61	2.04	<AL	0.00	1.52	<MDA
C1	7	1.49	2.02	<MDA	1.07	2.38	<MDA
C2	8	0.00	2.01	<MDA	0.00	1.88	<MDA
C3	9	1.58	2.14	<MDA	1.36	2.27	<MDA
D1	10	0.00	2.01	<MDA	1.33	2.45	<MDA
D2	11	0.00	2.03	<MDA	0.00	1.49	<MDA
D3	12	3.79	3.14	<AL	0.00	2.04	<MDA
D4	13	1.57	2.25	<MDA	0.11	2.05	<MDA
A1	14	2.74	2.68	<AL	1.48	2.75	<MDA
A2	15	1.41	2.07	<MDA	4.13	3.04	<AL
B1	16	3.53	3.05	<AL	6.85	3.81	<AL
B2	17	5.40	3.52	<AL	2.37	2.77	<MDA
B3	18	3.08	2.89	<AL	2.51	2.76	<MDA
B4	19	1.58	2.06	<MDA	1.35	2.43	<MDA
C1	20	1.49	2.01	<MDA	0.00	1.99	<MDA
C2	21	0.00	2.04	<MDA	3.63	2.83	<AL
C3	22	1.58	2.12	<MDA	0.00	1.41	<MDA
D1	23	3.35	2.78	<AL	0.00	1.53	<MDA
D2	24	3.32	2.85	<AL	6.91	3.67	<AL
D3	25	0.00	2.25	<MDA	0.03	2.04	<MDA
D4	26	1.55	2.26	<MDA	1.48	2.47	<MDA
A1	28	0.90	2.01	<MDA	5.63	3.57	<AL

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR085
Batch Ended: 10/27/98 8:31
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-1101 RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A2	29	5.35	3.48	<AL	5.11	3.31	<AL
B1	30	0.00	2.18	<MDA	1.51	2.58	<MDA
B2	31	0.00	2.07	<MDA	0.11	2.03	<MDA
B3	32	0.00	2.09	<MDA	2.72	2.76	<MDA
B4	33	1.58	2.06	<MDA	1.35	2.43	<MDA
C1	34	1.48	2.07	<MDA	7.59	3.77	<AL
C2	35	0.00	2.02	<MDA	1.18	2.24	<MDA
C3	36	0.00	2.16	<MDA	5.26	3.14	<AL
D1	37	0.00	1.99	<MDA	0.00	1.53	<MDA
D2	38	3.37	2.82	<AL	0.16	2.01	<MDA
D3	39	1.60	2.26	<MDA	1.27	2.44	<MDA
D4	40	0.00	2.24	<MDA	0.00	1.52	<MDA
A1	41	2.74	2.69	<AL	2.79	3.05	<MDA
A2	42	5.35	3.46	<AL	2.49	2.74	<MDA
B1	43	0.00	2.21	<MDA	7.12	3.81	<AL
B2	44	1.37	2.10	<MDA	5.29	3.35	<AL
B3	45	1.06	2.10	<MDA	5.28	3.34	<AL
B4	46	3.58	2.87	<AL	1.21	2.43	<MDA
C1	47	9.26	4.40	<AL	4.36	3.28	<AL
C2	48	1.44	2.04	<MDA	3.49	2.83	<AL
C3	49	5.72	3.65	<AL	6.13	3.39	<AL
D1	50	1.40	2.00	<MDA	0.00	2.04	<MDA
D2	51	1.36	2.07	<MDA	7.04	3.63	<AL
D3	52	1.60	2.26	<MDA	1.27	2.44	<MDA
D4	53	1.57	2.25	<MDA	0.11	2.05	<MDA
A1	54	0.91	1.93	<MDA	0.00	2.03	<MDA
A2	55	3.38	2.85	<AL	2.65	2.74	<MDA
B1	56	3.61	3.02	<AL	1.24	2.58	<MDA
B2	57	3.42	2.88	<AL	0.00	2.03	<MDA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR085
Batch Ended: 10/27/98 8:31
Cal. Due Date: 4/13/99
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 98-TF-1101 RYAN

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B3	58	3.08	2.89	<AL	2.51	2.76	MDA
B4	59	0.00	2.08	<MDA	4.17	3.08	<AL
C1	60	0.00	2.00	<MDA	0.00	1.51	<MDA

Time: 2.00
Data Mode: DPM Nuclide: SM VIAL Quench Set: SM VIAL
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	18.6	0	0.0	7.01
Region B:	2.0	18.6	0	0.0	6.40
Region C:	40.0	2000	0	0.0	12.44

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
98-TF-1101 RYAN(30-11 1-60)
Luminescence Correction On
Coincidence Time(ns): 18
Delay before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA4.DAT
Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
-1	10.00	7.01	6.40	7	B	539.89		0.000	12.44
0	2.00	1302.69	1180.98	0		553.40	2778.20	181.101	0.00
1	2.00	4.67	2.83	12		530.21	10.25	12.086	1.06
2	2.00	2.29	1.47	5		567.43	4.84	9.789	2.06
3	2.00	0.00	0.10	0		530.35	0.00	0.000	0.00
4	2.00	4.49	2.59	4		588.25	9.32	10.575	0.00
5	2.00	0.57	0.68	6		447.86	1.36	10.066	0.56
6	2.00	3.18	2.64	5		575.33	6.67	10.125	0.00
7	2.00	0.49	0.93	7		542.89	1.06	9.146	0.00
8	2.00	1.61	0.83	6		556.55	3.43	9.555	0.00
9	2.00	3.99	3.99	9		515.48	8.90	11.144	0.06
10	2.00	1.14	1.05	0		558.18	2.42	9.315	0.00
11	2.00	3.49	3.16	5		570.09	7.34	10.301	0.00
12	2.00	3.42	2.84	5		575.30	7.18	10.230	0.00
13	2.00	3.99	2.20	0		572.67	8.38	10.494	0.00
14	2.00	5.26	4.23	0		565.24	11.10	11.085	0.00
15	2.00	3.29	2.57	5		537.39	7.16	10.557	2.56
16	2.00	3.49	3.75	5		544.02	7.53	10.559	0.00
17	2.00	3.49	3.02	10		489.93	8.01	11.237	0.56
18	2.00	1.99	2.25	0		542.95	4.30	9.884	0.06
19	2.00	0.00	0.00	8		571.83	0.00	0.000	0.00
20	2.00	0.18	0.10	0		582.34	0.37	8.670	0.00
21	2.00	0.99	1.35	0		584.59	2.06	9.052	0.00
22	2.00	6.20	4.89	4		561.68	13.13	11.496	6.46
23	2.00	7.91	4.61	3		574.67	16.60	12.035	0.00
24	2.00	2.62	3.03	5		557.04	5.57	10.019	1.56
25	2.00	3.27	3.21	0		572.73	6.87	10.185	0.00
26	2.00	1.99	1.88	0		568.58	4.19	9.641	0.00
27	2.00	0.00	0.00	0		509.12	0.00	0.000	0.00
28	2.00	0.58	1.10	0		494.86	1.32	9.712	0.00
29	2.00	0.00	0.00	0		508.90	0.00	0.000	0.00
30	2.00	1.50	2.11	6		520.22	3.33	9.910	1.56
31	2.00	0.00	0.19	0		560.15	0.00	0.000	0.00
32	2.00	0.00	0.10	0		512.72	0.00	0.000	0.00
33	2.00	2.91	2.99	0		455.62	6.86	11.244	0.00
34	2.00	1.69	1.10	0		557.78	3.59	9.583	4.56

S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2SIGMA	CPMC
35	2.00	2.49	2.70	0	558.07	5.29	9.952	0.00
36	2.00	1.49	0.90	0	557.33	3.17	9.491	0.56
37	2.00	0.00	0.00	0	569.29	0.00	0.000	0.00
38	2.00	0.00	0.00	0	545.43	0.00	0.000	1.06
39	2.00	1.18	1.64	6	530.89	2.59	9.634	0.00
40	2.00	0.00	0.00	0	566.26	0.00	0.000	0.00
41	2.00	1.18	1.10	0	581.83	2.46	9.162	0.00
42	2.00	2.49	3.10	0	491.86	5.70	10.730	0.00
43	2.00	2.49	1.91	0	549.93	5.33	10.030	0.00
44	2.00	3.86	1.30	0	541.44	8.35	10.756	0.00
45	2.00	2.21	2.33	0	443.80	5.25	10.971	0.00
46	2.00	323.22	262.29	1	547.66	694.08	66.322	16.47
47	2.00	1.99	2.60	0	549.84	4.26	9.799	0.00
48	2.00	5.30	4.74	0	537.75	11.52	11.426	0.00
49	2.00	3.25	3.21	5	475.78	7.57	11.273	0.00
50	2.00	5.96	5.32	4	518.65	13.25	11.960	0.00
51	2.00	1.43	2.04	0	545.89	3.08	9.580	0.00
52	2.00	0.00	0.10	0	568.86	0.00	0.000	0.00
53	2.00	0.00	0.00	0	421.45	0.00	0.000	0.00
54	2.00	0.00	0.00	0	490.07	0.00	0.000	0.00
55	2.00	2.49	2.42	0	547.29	5.35	10.063	0.00
56	2.00	3.51	3.44	0	550.71	7.52	10.481	1.86
57	2.00	6.87	6.25	4	571.76	14.43	11.665	0.00
58	2.00	1.17	1.13	0	530.27	2.57	9.635	0.00
59	2.00	2.49	3.04	0	480.83	5.77	10.864	0.00
60	2.00	0.49	0.94	7	534.90	1.07	9.239	0.00

✓

2 of 3

Survey No. 02-TF-0198

Page ___ of ___

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-7	SEE ATTACHED		N/A	CONCRETE
		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: 02-TF-0198 HARVI (7) BSB

Batch File: Smear Unit 1 - 2002(111522

Group: I

Device: Unit 1

Geometry: Swipe/Smear

Serial Number: 64937

Acquisition Date: 2/11/2002

Count Time (min): 1.5

Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	142	1.62	4.03	1.64	4.09
2	47	1.62	4.03	2.78	4.68
3	13	1.62	4.03	1.64	4.09
4	57	0.00	0.66	0.51	3.40
5	73	1.62	4.03	1.64	4.09
6	51	0.00	0.66	0.00	2.53
7	37	0.00	0.66	3.93	5.21

B Smith-Brown

REQUEST TO STAGE CLEAN HARD FILL DEBRIS AT CONSTRUCTION SPOILS AREA

Work Location/ Source of material Bldg 71 & 73 Pads Approximate Volume _____

Requestor Project Group SM/TFV Project Point of Contact STANLEY RICHARDS

Name/Phone Ext. STANLEY R RICHARDS Extension 3867

PWRE # _____ MSR # 27905 Charge # JD 1307

Process Knowledge (attach documentation, if more space needed): NO SOURCE FOUND IN SITE RADIOLOGICAL EVALUATION DEBRIS MEETS APPLICABLE RELEASE CRITERIA OF MD-80036, OP110 AND MD-80043, OP400

PRS # PRS Binning Status: NFA RA FA NFA Pending Stakeholder Review

Binning remarks FACILITIES WERE PREVIOUSLY D&Ded

Oil/Asbestos/Hazardous Waste Present: YES / NO If YES, explain /

Identify how point of origination /area is posted: (e.g. non-RMMA, URMA, SCA, CA, HCA, RMA, RMMA, FCA, etc.) Note: NON-RMMA

Radionuclides of Concern for verification sampling: ~~PUSRR~~ N/A

Radiological Surface Contamination Not Applicable never exposed to radionuclides circle if applicable

Survey Results: SEE ATTACHED <PP-1059F, Table 2-2 criteria _____ > PP-1059F, Table 2-2 criteria

In Process monitoring of excavating equipment: _____ <PP-1059F, Table 2-2 criteria _____ > PP-1059F, Table 2-2 criteria

Activation Concerns: No Yes If yes, explain

Material is released for recycle/reuse Yes No

Sending Rad POC Signature	Date
[signature]	11-14-01
Sending Project Manager Signature	**Date**
[signature]	12/10/01

Composite sample results (list highest values for all radionuclides of concern and associated MDA value in pCi/g): Copies of each verification sample results attached

Work Location/ Source of material _____

Final material use:

On-site Unrestricted Removed as LLW to disposal

Waste Management Rad POC Signature	Date
[signature]	12/11/01
Spoils Area Foreman Signature	**Date**

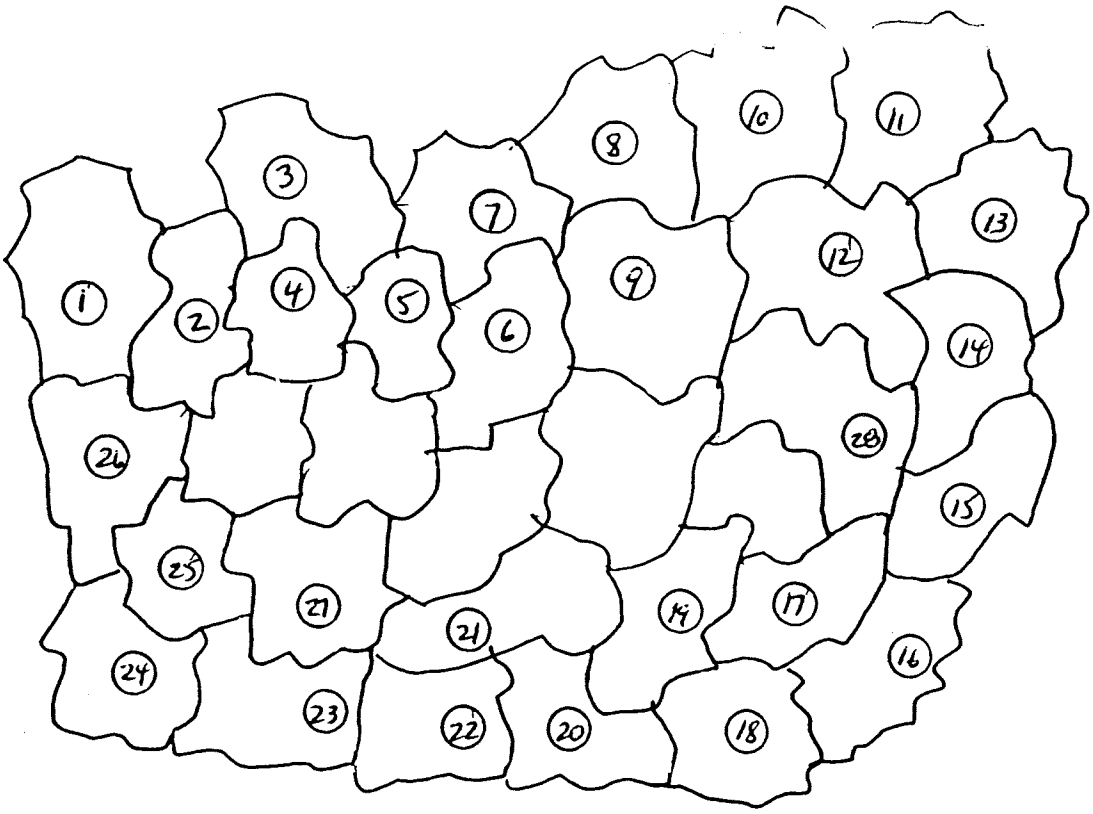
ML-9817 (8/00)

RADIOLOGICAL SURVEY DATA SHEET

1 of 4

LOCATION: (BLDG./AREA/ROOM) 71 + 73 PAD	SURVEY NO. 02-TF-0062
PURPOSE: CONCRETE RELEASE TO ROCK CRUSHER	RWP NO. N/A
	DATE: 1-9-02
	TIME: 1500

MAP/DRAWING



COPY

<100 / α

25K / β-

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	5439/5298	12-10-02
	N/A	

Completed by: (Signature)	[redacted]	Date: 1-9-02
Completed by: (Print Name) DANIEL J. HARVEY		
Counted by: (Signature)	[redacted]	Date: 1/9/02
Counted by: (Print Name)		
Reviewed/Approved by: (Signature)	[redacted]	Date: 01/09/02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

2 of 4

Survey No. 02-TF-0062

Page ___ of ___

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-28	SEE ATTACHED		N/A	CONCRETE

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 I.: Green
Data file nan: SMEAR081
Batch Ende: 1/9/02 14:49
Cal. Due Da: 4/25/03
Serial Numbe: 26966-3

Batch I: 02-TF-0062 HARVEY

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	1.89		1.40	2.06	
A2	2	1.42	1.84		3.58	2.52	
A3	3	0.00	2.04		0.00	1.25	
A4	4	1.38	1.88		0.00	1.17	
B1	5	0.00	2.10		10.23	3.94	
B3	6	0.00	2.06		6.41	3.35	
B4	7	0.00	1.96		5.98	3.08	
C1	8	0.00	2.07		0.51	1.75	
C2	9	0.00	1.82		0.52	1.63	
C3	10	0.00	2.05		0.66	1.75	
C4	11	0.00	1.95		1.80	2.83	
D1	12	1.44	2.06		3.91	2.77	
D2	13	0.00	2.11		4.08	2.76	
D3	14	0.00	2.13		1.64	2.22	
D4	15	0.00	2.06		0.36	1.72	
A1	16	0.00	1.87		0.21	1.68	
A2	17	0.00	1.78		0.39	1.59	
A3	18	3.62	2.88		0.11	1.76	
A4	19	0.00	1.89		0.35	1.65	
B1	20	0.00	2.00		0.00	1.25	
B3	21	1.51	2.04		3.72	2.83	
B4	22	1.37	1.94		3.51	2.60	
C1	23	0.00	2.09		2.98	2.48	
C2	24	0.00	1.83		1.68	2.00	
C3	25	1.61	2.07		2.99	2.48	
C4	26	0.00	1.91		0.00	1.64	
D1	27	3.42	2.86		3.74	2.77	

DJH 3 of 4 DJH

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR081
Batch Ended: 1/9/02 14:49
Cal. Due Date: 4/25/03
Serial Number: 26966-3

Batch ID: 02-TF-0062 HARVEY

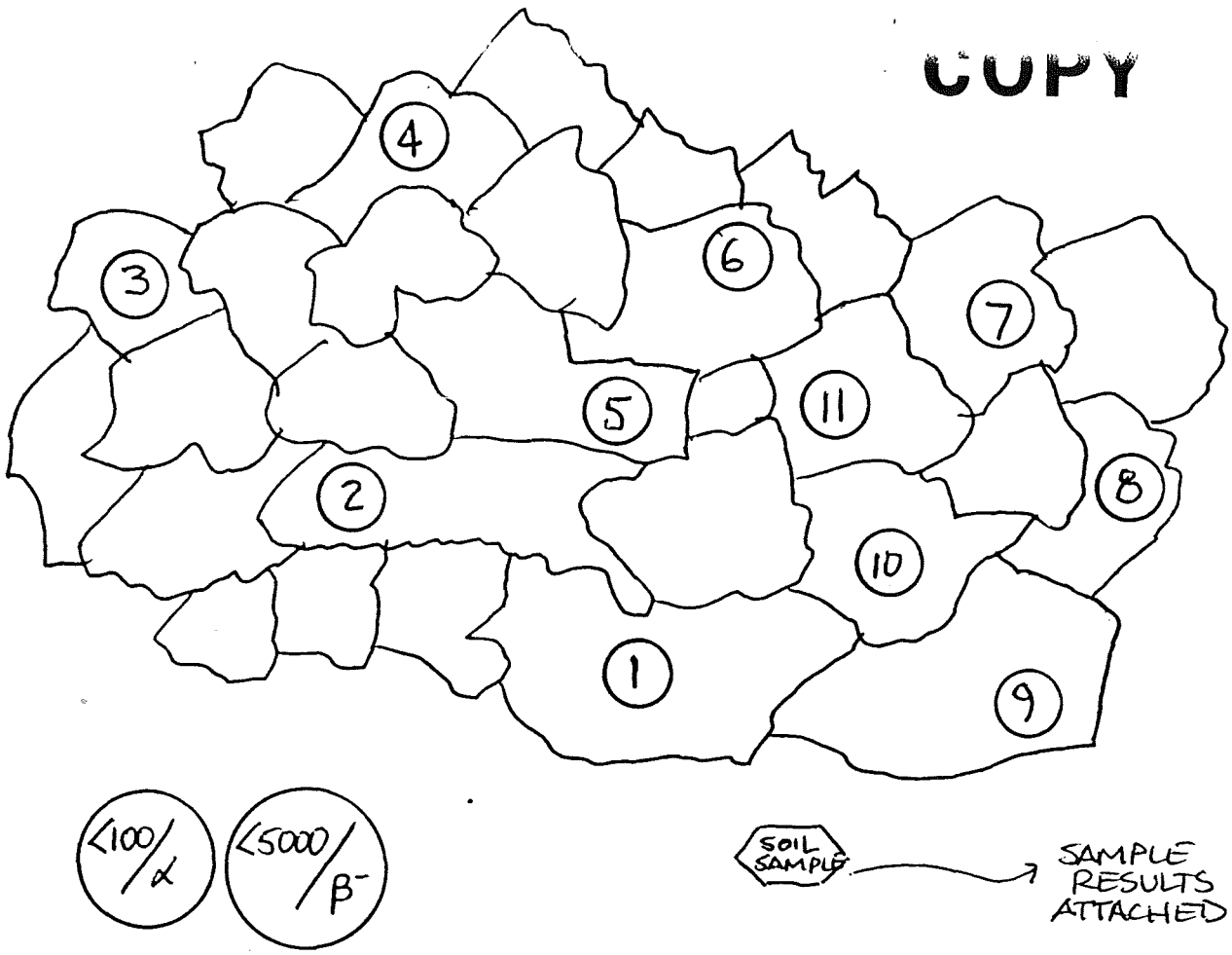
Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D2	28	0.00	2.05		0.00	1.24	

DJH DJH

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLD 71/73 PAD	SURVEY NO. 01-OSA-085
PURPOSE: SURVEY CONCRETE FOR RELEASE	RWP NO. NA
	DATE: 12 20 01
	TIME: 0745

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
ELECTRA	5370/5371	11/19/02
SAC 4	5247/5114	10/19/02
SAC 4	2294/5111	10/11/02
	N/A	

Completed by: (Signature)	[redacted]	Date: 12 20 01
Completed by: (Print Name) V. FILEPPI		
Counted by: (Signature) See Attached	HP #	Date:
Counted by: (Print Name)		
Reviewed/Approved by: (Signature) RNCoblentz	[redacted]	Date: 01/02/02
Reviewed/Approved by: (Print Name) RNCoblentz		

ML-9620 (2-98)

12/20/01

Survey No. ~~01 TT~~ 01-OSA-085

Page ____ of ____

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1-11	See Attached			CONCRETE

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

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-9620A (4-98)

1/2/02

~~2 of 4~~

5 of 5

Alpha/Beta Analysis

Batch ID: FILEPI 01-OSA-085 (11) AG

Batch File: Smear t it 3 - 200112201356

Group: A

Device: Unit 3

Geometry: Swipe/S ear

Serial Number: 15764-1

Acquisition Date: 12/20/01

Count Time (min): 1.5

Recalibration Date: 5/22/2003

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	34	0.00	0.00	4.33	5.00
2	40	0.00	0.00	0.00	0.00
3	72	0.00	0.00	2.89	4.08
4	51	0.00	0.00	0.00	0.00
5	1	0.00	0.00	1.44	2.89
6	21	0.00	0.00	2.89	4.08
7	44	0.00	0.00	2.89	4.08
8	125	0.00	0.00	0.00	0.00
9	130	0.00	0.00	0.00	0.00
10	3	0.00	0.00	1.44	2.89
11	116	0.00	0.00	4.33	5.00

Signed by [illegible]

1/2/02

Protocol #: 7 Name:Pw H3 #401393 20-Dec-2001 19:13
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
FILEPPI 01-DSA-085 (I1-I11) AG
Conventional DPM
Nuclide 1 = 800
Luminescence Correction On
Data/Application Drive & Path = c:\data

SAMP	TIME	LUM	FLAG	CPMA	CPMB	CPMC	tSIE	DPM1	A:2σ%
-1	10.00	38	B	10.31	10.63	4.78	663.		19.70
0	2.00	1		858.83	817.48	1.72	555.	2001.46	4.89
1	2.00	0		0.00	0.00	0.00	699.	0.00	0.00
2	2.00	14		0.00	0.00	0.22	688.	0.00	0.00
3	2.00	13		0.00	0.00	0.00	657.	0.00	0.00
4	2.00	10		0.00	0.00	3.22	641.	0.00	0.00
5	2.00	10		0.00	0.00	2.22	627.	0.00	0.00
6	2.00	8		0.00	0.00	0.00	656.	0.00	0.00
7	2.00	10		0.00	0.00	2.49	640.	0.00	0.00
8	2.00	0		0.00	0.00	0.00	639.	0.00	0.00
9	2.00	18		0.00	0.00	0.00	634.	0.00	0.00
10	2.00	12		0.00	0.00	0.00	625.	0.00	0.00
11	2.00	48		0.00	0.00	0.72	686.	0.00	0.00

Carol G. Robinson

~~4 of 4~~
1/2/02

~~4 of 5~~
1/7/02

4 of 5.

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML12409
File ID: MG101270.S0
Priority: Yes

Description\Location
SOIL FROM 71/73 PAD
Long Count

Collector: 7707
Date Received: 12/20/01
Date Collected: 12/20/01

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.02	0.06	45,000
Cs-137	*	0	0.06	45,000
Pb-210		0.66	0.55	45,000
Ra-226		1.74	0.73	800
Ac-227 (D)	*	0	0.26	40
Th-230	*	0.28	6.58	800
Th-232 (D)		0.81	0.21	130
Pu-238	*	4.87	13.54	500
Am-241	*	0.02	0.07	500

Other Nuclides

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

Σ_{DOT} 0.02 nCi/g $\Sigma_{Respirator}$ 0.05

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

Σ_{DOT} 2nCi/g limit, total activity.

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

* Indicates activity < MDA. MDA used in limits calculation

Instrument type: High Purity Germanium

Comments:

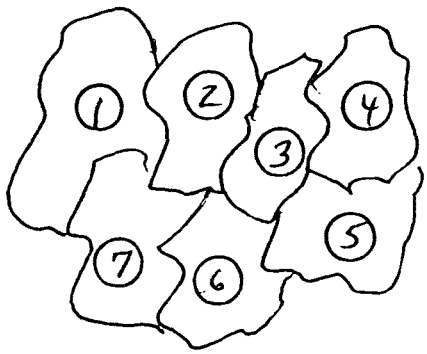
Date: 12/20/01 Counted By: 5801 Analyzed By: 5968 Initials

RADIOLOGICAL SURVEY DATA SHEET

1 of 3

LOCATION: (BLDG./AREA/ROOM) 71+73 PADS	SURVEY NO. 02-TF-0198
PURPOSE: CONCRETE SURVEY	RWP NO. N/A
	DATE: 2-11-02
	TIME: 1445

MAP/DRAWING



COPY

<100 / α

<5K / β-

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	5439/5298	12-10-02
	N/A	

Completed by: (Signature) [signature]	[redacted]	Date: 2-11-02
Completed by: (Print Name) DANIEL J. HARVEY		
Counted by: (Signature) SEE	HP #	Date:
Counted by: (Print Name) ATTACHED		
Reviewed/Approved by: (Signature) RMCoblentz	[redacted]	Date: 02/13/02
Reviewed/Approved by: (Print Name) RMCoblentz		

ML-9620 (2-98)

Gamma Spectroscopy Report

Requested By:

HP#: [redacted]

Description:
Concrete Chips, BD-73

Sample ID#: HPG02716

Project ID#:

Filename: GED00056.S0

Detector: Ge-D

Geometry: EPA Dish

Mass (g): 137

Count Time (sec.): 49791

Priority:

Isotope	*MDA*
K-40	
U-238 (D)	
Th-232 (D)	

Comments:
ID only. The isotopes detected are normal constituents of concrete.

Energy Calibration File ECAL_GED.S0	Efficiency Calibration File N/A
Resolution Calibration File D514994E.S0	Library File SOILSCRN.LIB

(D) denotes the isotope was identified by its daughter products

Sample Received: 8/12/98

Sample Counted: 8/12/98

Sample Analyzed: 8/13/98

Product Cycle Time: 1 Days

Analyst: [signature] HP #: [redacted] Date: 8/13/98

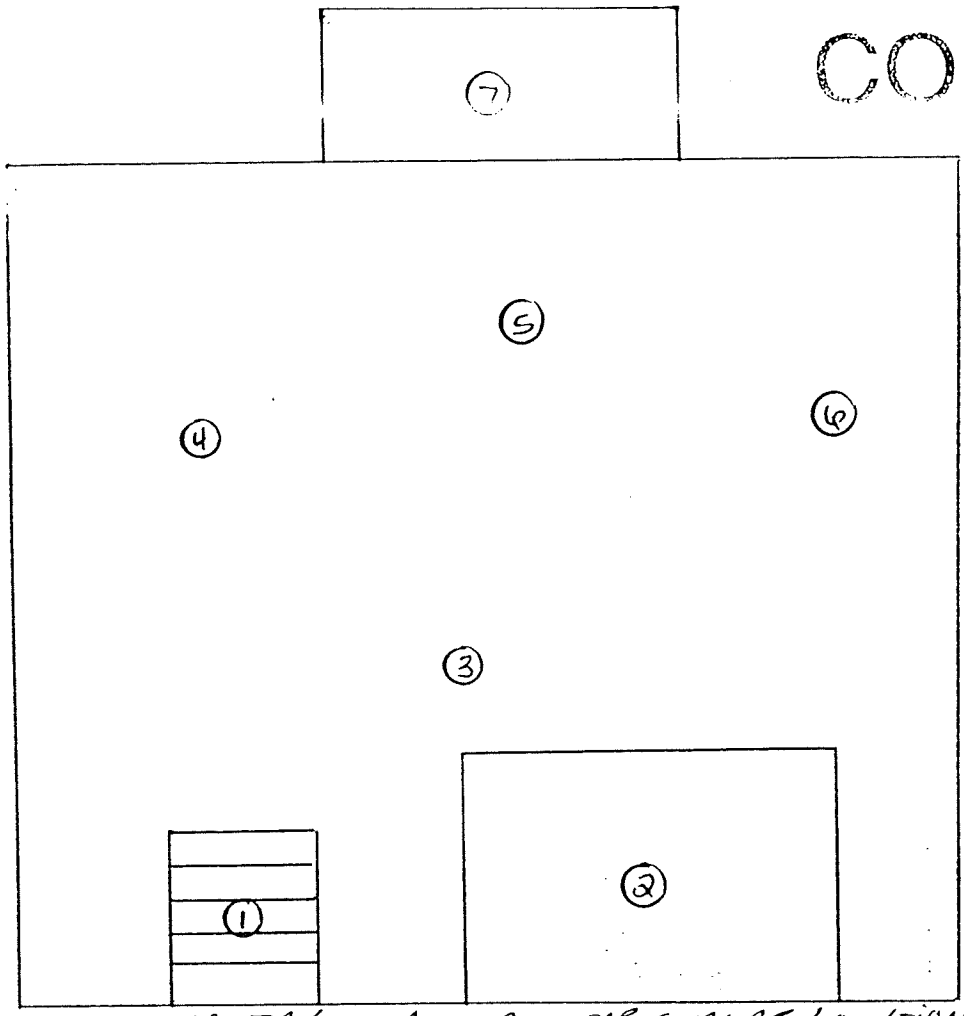
T.P. OF-TEC&US

D1-D7 30-21

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 71	SURVEY NO. 00-TF-204
PURPOSE: Building 71 PAD	RWP NO. N/A
	DATE: 8-28-00
	TIME: 1030

MAP/DRAWING



COPY

DIRECT MEASUREMENTS TAKEN AT OR NEAR SMEAR LOCATIONS
$\alpha < 100$ dpm/100 cm^2 $\beta^- < 5000$ dpm/100cm^2

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/100cm^2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE ELECTRA	5435	10-25-00

Completed by: (Signature)	HP# [redacted]	Date: 8-28-00
Completed by: (Print Name) MICHAEL J RUBADUE		
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 8-29-00
Counted by: (Print Name) CAROL Y. ROBINSON		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date: 9-28-00
Reviewed/Approved by: (Print Name) GALEN TOMLINSON		

ML-9620 (2-98)

Alpha/Beta Analysis

Batch ID: 00-TF-206 RUBADUE 71 (7) CYR

Batch File: Smear Unit 3 - 200008290758

Group: B

Device: Unit 3

Geometry: Swipe/Smear

Serial Number: 59123

Acquisition Date: 8/29/2[illegible]00

Count Time (min): 1.5

Recalibration Date: 5/17/2[illegible]01

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	30	7.01	8.12	10.15	7.20
2	78	4.68	6.63	2.53	3.60
3	29	14.04	11.48	7.58	6.25
4	52	7.02	8.12	6.33	5.70
5	140	9.35	9.37	8.87	6.74
6	133	7.00	8.12	13.97	8.44
7	114	2.33	4.69	7.63	6.23

MDC MDC

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL3 Quench Set: SMVIAI
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	7.60
Region B:	2.0	- 18.6	0	0.0	7.15
Region C:	40.0	- 2000	0	0.0	10.70

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
00-TF-286 RUBADUE 71 (30-21 D1-D7) CYR
Luminescence Correction On
Coincidence Time(ns): 16
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT4.DAT
Count Data Filename: C:\DATA\SDATA4.DAT
Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	7.60	7.15	10.70	682.80	0	B		0.00
0	2.00	903.93	861.49	4.80	568.17	0		2113.08	184.13
1	2.00	0.32	0.77	0.00	604.07	0		0.72	9.85
2	2.00	0.00	0.00	0.00	525.10	0		0.00	0.00
3	2.00	0.40	0.63	2.40	570.03	13		0.93	10.18
4	2.00	0.00	0.00	0.00	502.99	0		0.00	0.00
5	2.00	0.00	0.00	0.00	487.68	27		0.00	0.00
6	2.00	0.00	0.00	2.30	463.43	0		0.00	0.00
7	2.00	0.90	1.35	4.80	593.05	0		2.06	10.25

MRC