3006-0605150003

CH2MHILL

NOV 16 2005

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

SMO-459/05
November 16, 2005

Mr. Don Pfister, Director
Miamisburg Closure Project
U. S. Department of Energy
175 Tri-County Parkway
Springdale, OH 45246

ATTENTION: Paul Lucas

SUBJECT: **Contract No. DE-AC24-03OH20152:** Deliverable #36 Building Data Package; Section C.2.1.1 Facility Demolition; Building 48 Closeout Report, Final

Dear Mr. Pfister:

Attached is the following Final document for your records:

- Building 48 Closeout Report, Final

If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact Dave Rakel at 937-865-4203.

Sincerely,

John Lehew
Site Manager

JL/jg

Enclosures

cc: T. Fischer, USEPA, (1) w/attachments
B. Nickel, OEPA, (1) w/attachments
R. Vandegrift, ODH, (1) w/attachments
J. Webb, ODH, (1) w/attachments
M. Wojciechowski, Tetra Tech, (1) w/attach
G. Gorsuch, DOE/MCP, (1) w/attachments
R. Tormey, DOE/OH, (1) w/attachments
G. Desai, DOE/HQ, (1) w/attachments
F. Bullock, MMCIC, (2) w/attachments
Public Reading Room, (1) w/attachments
S. Davis, CH2M Hill, (1) w/attachs
ER Records, CH2M Hill, (1) w/attachs
DCC (1) w/attachments
J. Lehew, CH2M Hill, w/o attachments
K. Armstrong, CH2M Hill, w/o attachments
D. Rakel, CH2M Hill, w/o attachments
D. Kramer, CH2M Hill, w/o attachments
A. Upshaw, CH2M Hill, w/o attachments
MOAT Coordinator, CH2M Hill, w/o attachs
W. Webb, CH2M Hill, w/o attachments
M. McDougal, CH2M Hill, w/o attachments
file, CH2M Hill, w/o attachments

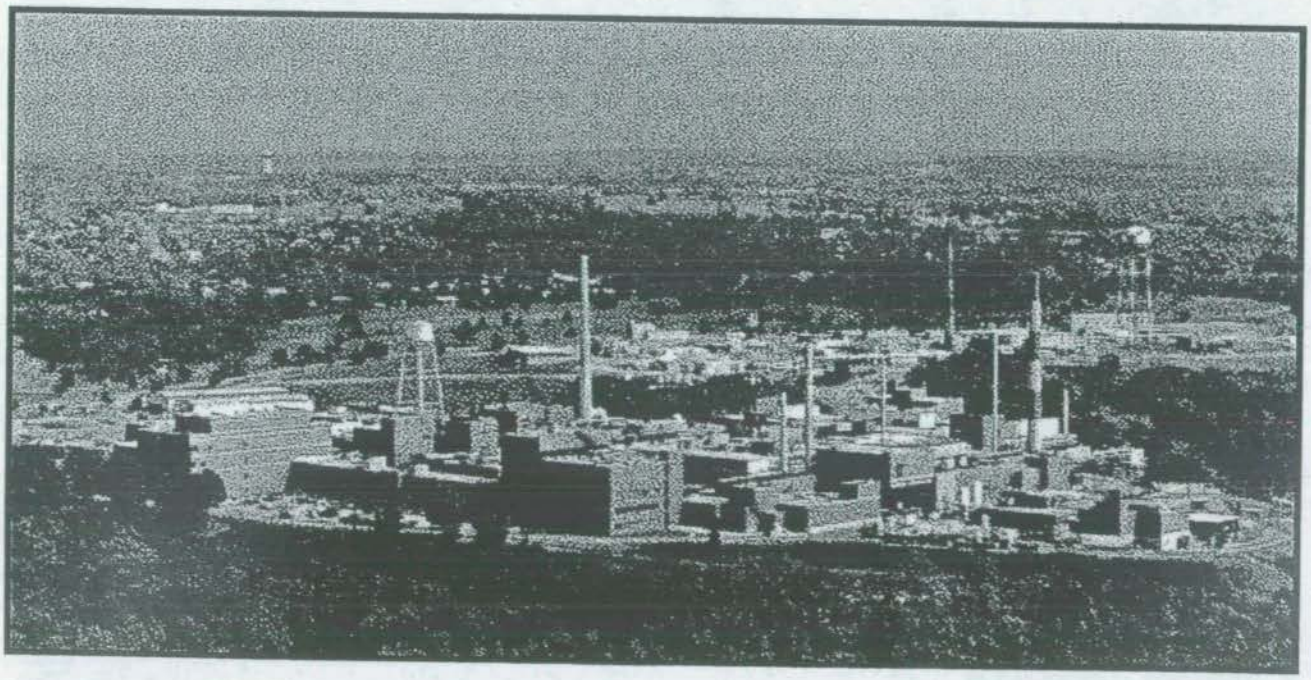
Environmental
Restoration
Program

Miamisburg Closure Project
CLOSEOUT REPORT

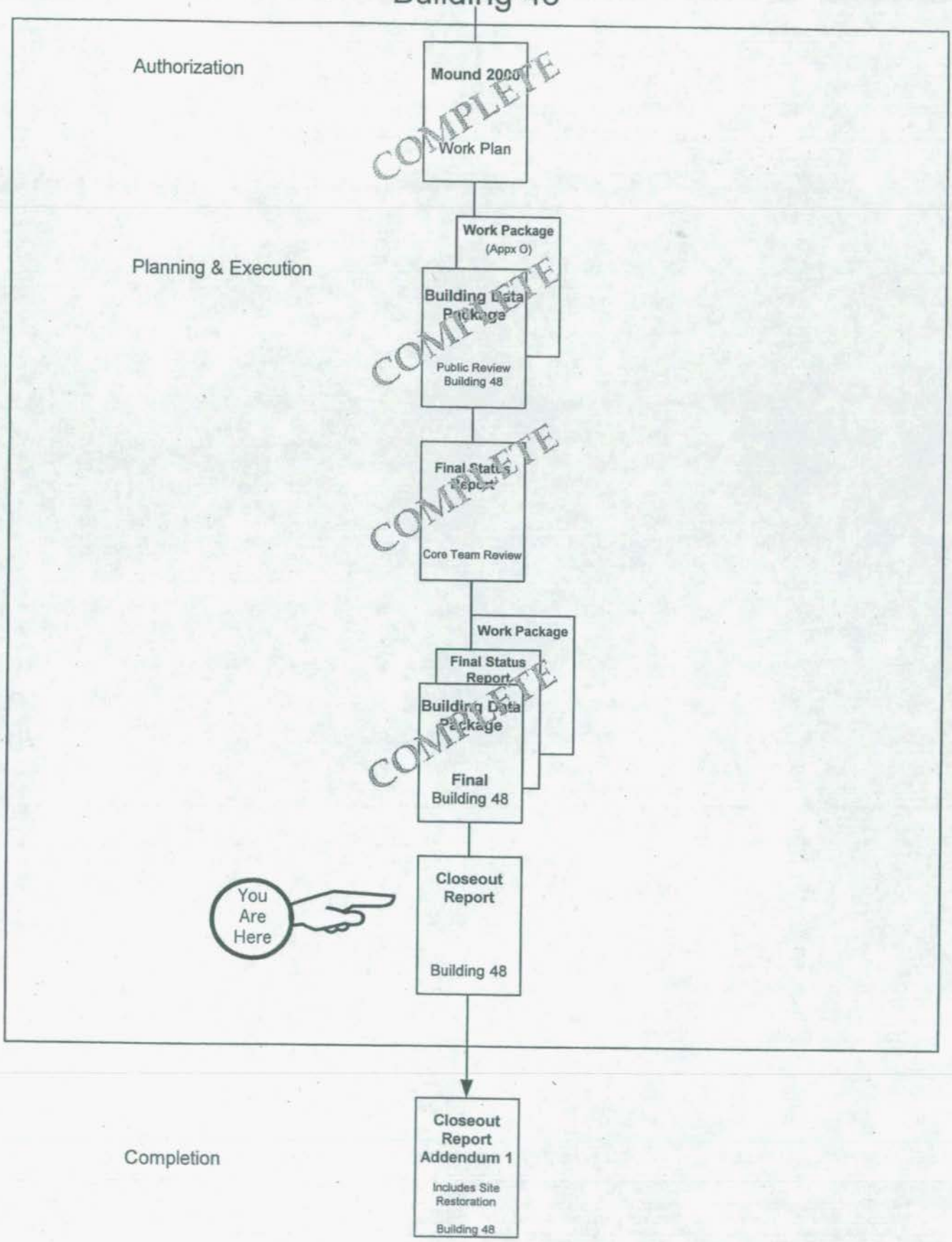
Building 48

(Demolition included Building 89 Turn-Around)

Final
November 2005



Building 48



7Nov05stp

TABLE OF CONTENTS

Section

Page

1.0 Purpose 1
2.0 Background 1
  2.1 Building 48 and Building 89 Turn-Around 1
  2.2 Potential Release Sites (PRSs) 3
3.0 Actions Taken 4
4.0 Problems Encountered 6
5.0 Resources Committed 7
  5.1 Personnel Organization 7
  5.2 Demolition Cost 8

Tables

Table 1: Programs and Processes Housed in Building 48 2
Table 2: PRSs in Proximity to Building 48 4
Table 3: Materials Disposition 6
Table 4: Personnel Organization for the Demolition 7
Table 5: Cluster 48 Total Cost 8

Appendices

Appendix A Figures
  Figure 1: Site Map
  Figure 2: Building 48 and Vicinity
  Figure 3: Building Photos
Appendix B Post-Final Status Survey Report Radiological Surveys
Appendix C PRS Recommendation Sheets

1.0 PURPOSE

This is the final report documenting completion of the demolition of Building 48 located at the Department of Energy (DOE) Miamisburg Closure Project (MCP) Site, as shown in the figures provided in Appendix A. The Building 48 demolition, including stanchions and stanchion lines, slab, and foundation/footers was accomplished per the Work Package for Building 48 Demolition (#BOSS-36791), a copy of which was included in Appendix O of the Building Data Package (BDP) for Building 48. The Building 48 Demolition Work Package was later revised to include the demolition of the Building 89 turn-around. The demolition of the turn-around walls/foundation walls to three feet below grade was also completed. The scope of work relating to Building 48 and the Building 89 turn-around is considered complete.

2.0 BACKGROUND

2.1 Building 48 and Building 89 Turn-Around

Building 48

Constructed in 1970, Building 48 was located on the west central portion of the site (Figure 1). The facility was a two-story, slab-on-grade structure constructed of poured concrete and concrete block with the exception of the corrugated, galvanized metal "blow-out panels" stretching across the south side of the second story. These non load-bearing wall panels (south wall of Rooms 203, 204, and 205) were designed to blow outward in the event of an explosion. The exterior walls of the building were constructed of one-foot thick poured concrete, and the interior walls were constructed of eight-inch thick concrete block except in areas designated for high explosives. The poured concrete floor between the first and second floors was thicker in the areas designated for high explosives. Being built into a hillside, the second floor of Building 48 was wider than the first floor. The north wall of the first floor of the building was completely below grade and the north wall of the second floor was partially below grade. Also, due to its hillside construction, Building 48 was set on caisson type footers that range in depth from about one foot to almost twelve feet. The footers had a stair step-like construction and were set below the shale line, anchoring the building to the hillside. Building 48 has not had any major modifications, other than reconfiguration of some of the interior rooms, and contained 7,950 square feet of floor space.

The building used central steam for heating and chilled water for cooling. Electric service was 480 volts. The building had potable and service water, a fire sprinkler system, sanitary services, and storm drains.

Building 48 was built as a Process Mechanization Facility, although it was also used for other purposes (Table 1). As the Process Mechanization Facility, the first floor of the building was used for administrative offices, records storage, and housing the building mechanical equipment; the second floor rooms were operated as an analytical laboratory, machine shop facilities, a packing and shipping room, a receiving area, and a high explosive storage cell. The building was constructed to handle energetic materials as indicated by design provisions such as blow-out panels, thickened concrete walls and

floors, and the grounding of areas where high explosives were to be used, including a copper bus through the walls and conductive floors.

Table 1 - Programs and Processes Housed in Building 48

Timeframe	Process or Function
1970 to 1986	Process Mechanization Facility (investigation of processes, materials, components, and instrumentation for the in-house production of pyrotechnic devices)
1982 to 1996	Explosive Surveillance (disassembly of the explosive components from weapons [primarily those that were old or faulty] for visual inspection and physical/chemical analysis)
1996 to 1998	Underwent safe shutdown for conversion to a "user agreement" facility
1998	Short-term RCRA Treatment of Reactive (Explosives) Waste.
1999 to 2003	Environmental Laboratory Facility (measure the concentrations of radiological elements in substances using laboratory analytical techniques)

Processes involved in the Explosive Surveillance function included visual inspection of components, electrical testing (resistance and static discharge) of components, mechanical testing of components, mechanical disassembly of components, Polaroid photography of whole components and component parts, removal of energetic materials from disassembled components, solvent cleaning of disassembled components to remove any remaining energetic materials, scanning electron microscope (SEM) analysis of components parts, preparation of components for test firing, and cleanup from these various operations.

In the late 1990s, Building 48, because of its past uses as an explosives surveillance facility, was used as a short-term RCRA treatment facility for reactive (explosive) wastes. In the first phase of this treatment process, the energetic components were demilitarized. Components containing energetic materials were processed in a mill press in Room 203. The mill was situated behind a wall and was remotely controlled by the operator on the other side of the wall. The projection wall between rooms 202 and 203 has an observation window constructed of bulletproof glass to allow the operator to monitor the operation. The wall on the opposite side of the mill is a "blast wall" (the second floor south wall) that was designed to blow away upon impact, focusing the released energy outward away from the operator and the building interior in the unlikely event of an explosion. In the second phase, powders, pellets, and other energetic materials were dissolved in appropriate solvents to stabilize the hazardous waste constituents. This process took place under an explosives management fume hood, using appropriate solvents.

In early 1999, Building 48 was remodeled to accommodate the Environmental Laboratory Facility, which was moved to Building 48 from E Building. The Environmental Laboratory functions included many operations involving radiological samples. The Environmental Laboratory function continued in Building 48 until October 2003 when the lab function was relocated to Trailer 24.

Building 89 Turn-Around

The Building 89 turn-around, located south of Building 89 and across an access road, remained after Building 89 was demolished in June 2003. Site restoration for the structural demolition of Building 89 was completed in July 2003. The turn-around was left for later removal due to use of the turn-around by the heavy-duty equipment that utilized the access road. The turn-around was a U-shaped structure with concrete walls and foundation. The turn-around is depicted in the north and south view photographs "Building 89 Turn-Around – Prior to Demolition" of Appendix A, Figure 3 - Building Photos.

2.2 Potential Release Sites (PRSs)

As a result of the investigations and documentation accomplished to comply with the CERCLA cleanup process via the Federal Facilities Agreement (FFA)/DOE Environmental Restoration (ER) Program, DOE and the site contractor tabulated all the PRSs identified under the various regulatory programs in effect at the site. Of these PRSs, thirteen are at or near Building 48, as identified in Table 2. The PRS locations are shown in Appendix A, Figure 2 and recommendation sheets are provided in Appendix C. There are no PRSs in the vicinity of the former Building 89 turn-around location.

Table 2 - PRSs in Proximity to Building 48

PRS	CERCLA or Bldg. Related	Binning Status	Comments
123	CERCLA	Removal Action (RA)	Area 5, Radioactive Waste Line Break
124	CERCLA	RA	Building 48 Hillside
125	CERCLA	No Further Assessment (NFA)	Underground Sanitary Sewer Line G24
236	CERCLA	NFA	Site Survey Project Potential Hot Spot Location S0166
426	CERCLA	RA	Under Ground Rad Waste Line–Segment 5
427	CERCLA	RA	Under Ground Rad Waste Line–Segment 6
428	CERCLA	RA	Under Ground Rad Waste Line–Segment 7
429	CERCLA	RA	Under Ground Rad Waste Line–Segment 9
430	CERCLA	RA	Under Ground Rad Waste Line–Segment 9a
434	CERCLA	RA	Under Ground Rad Waste Line–Segment 13a
438	CERCLA	RA	Under Ground Rad Waste Line–Segment 4
439	CERCLA	RA	Under Ground Rad Waste Line–Segment 4a
440	CERCLA	RA	Under Ground Rad Waste Line–Segment 8

3.0 ACTIONS TAKEN

Building 48

The Building 48 BDP was submitted for simultaneous Core Team and public review on 4 December 2003, and the 30-day public review period concluded on 4 January 2004.

A Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) study of Building 48 was performed prior to demolition. The study reports (provided in the Final BDP) provide details of the survey design and results and indicate that Building 48 met applicable surface release criteria.

The demolition of Building 48 was performed in several stages due to the proximity and timing of the Underground Lines and Soil Removal Project work activities. The demolition of the Building 48 above-grade superstructure commenced on 25 March 2004 and was terminated on 26 April 2004. No post-demolition radiological surveys were performed on the Building 48 superstructure debris. After demolition of the superstructure of Building 48, the dock access area (northwest side of the building) was used for access to the adjacent Underground Lines and Soil Removal Project work areas. The demolition the Building 48

slabs and foundation walls to the east of the Building 48 dock area resumed on 9 June 2005 and continued until 15 June 2005. Due to the staging of Underground Lines and Soil Removal Project equipment on the dock driveway area and access by Underground Lines and Soil Removal Project personnel, radiological screening was performed on the driveway concrete surfaces. Areas on the driveway concrete surfaces (west of the dock area) were found to be radiologically contaminated. Demolition of the remaining Building 48 foundations, footers, dock wall, and driveway resumed again 23 August 2005 and was completed on 19 September 2005. A portion of the lower level back wall/foundation was left in-place to stabilize the hillside to the northeast of the former Building 48 location. Following demolition of the dock driveway, slab and foundation/footers, Radiological Control performed surveys of the exposed concrete soil contact surfaces of the concrete debris. Elevated levels of radiological contamination were found on the exposed soil contact surfaces of the driveway and dock wall concrete debris. The contaminated concrete debris and soil were disposed as Low Level Waste (LLW). Further evaluation, soil sampling, and verification of this area will be performed as part of the PRS 124 Removal Action activities. A walkover survey was performed on the area of the footprint of Building 48. No elevated levels were detected during radiological screening of the Building 48 structure concrete surfaces in contact with soils or during the walkover survey. Photographs taken before, during, and after demolition are provided in Appendix A.

Radiologically contaminated debris was loaded into haulers and taken to the Rail Spur/Soil Staging area where it was size reduced and packaged to meet the Envirocare waste acceptance criteria. Uncontaminated concrete building debris was size-reduced, loaded into haulers, and taken to a local sanitary landfill. Non-concrete uncontaminated debris was recycled. Copies of the post-demolition radiological survey reports are provided in Appendix B.

This Closeout Report documents the completion of the demolition and removal of Building 48. All preparation and demolition activities for Building 48, except for final site restoration, were performed in accordance with the detailed Work Plan. The Building 48 area site restoration will take place prior to parcel transfer and will be documented in an addendum to this closeout report.

Building 89 Turn-Around

Demolition of the Building 89 turn-around commenced on 18 May 2005. Demolition of the Building 89 turn-around walls and foundation/footers and final site regrading were completed on 24 May 2005. Photographs taken before and after demolition are provided in Appendix A.

Prior to the demolition of the Building 89 turn-around, radiological screening was performed on exposed concrete surfaces. Following demolition of the Building 89 turn-around walls and foundation/footers, a debris-pile survey was performed on the concrete debris. No walkover survey of the exposed soil surface area of the Building 89 turn-around was performed because no contamination was found on the concrete surfaces prior to demolition and no elevated levels were detected during radiological screening of concrete surfaces in contact with soils. The results of radiological surveys, performed after the

Building 89 turn-around demolition activities, are provided in Appendix B. Concrete debris was size-reduced, loaded into haulers, and taken to a local sanitary landfill.

This Closeout Report documents the completion of the demolition and removal of the Building 89 turn-around. All preparation and demolition activities were performed in accordance with the detailed work plan (the Building 48 demolition work plan was revised to include the Building 89 turn-around).

Table 3 - Materials Disposition

Building 48 Material	Quantity	Disposal Method	Destination
Asbestos Abatement (Debris)	10 cubic yards	Landfill	Stoney Hollow, Dayton, OH
Construction Debris (concrete, brick, and rebar)	2,490 cubic yards	Landfill	Stoney Hollow, Dayton, OH
Construction Metal	210 cubic yards	Recycle	Metal Shredders, West Carrollton, Ohio
Construction Debris Slab	885 cubic yards	Landfill	Stoney Hollow, Dayton, OH
Construction Debris Ramp Slab	21 cubic yards	Rail/Truck	Envirocare, Salt Lake City, Utah
Light Ballast	2.8 cubic yards	Treatment	Clean Harbors, Cincinnati, Ohio
Glycol	4,405.6 liters	Treatment	Clean Harbors, Cincinnati, Ohio

Building 89 Turn-Around Material	Quantity	Disposal Method	Destination
Construction Debris Walls/Foundation	280 cubic yards	Landfill	Stoney Hollow, Dayton, OH

4.0 PROBLEMS ENCOUNTERED

The Building 48 above grade structure was successfully demolished per the Work Package. As stated in Section 3.0, after demolition of the Building 48 superstructure, the remaining demolition activities had to be performed in several stages due to the proximity and timing of the Underground Lines and Soil Removal Project work activities and the use of the Building 48 dock access area as a staging area for Underground Lines and Soil Removal Project equipment and personnel. As a result of the time required for completion

of the sampling and verification process in the remediation of adjacent PRSs, final site restoration of the former Building 48 location is postponed until the adjacent PRS areas are also released for site restoration.

Final site restoration will take place prior to parcel transfer and will be documented in an addendum to this closeout report.

5.0 RESOURCES COMMITTED

5.1 Personnel Organization

Table 4 lists the personnel organization for the demolition.

Table 4 - Personnel Organization for the Demolition

Agency or Party Involved	Contact	Description of Participation
US EPA (SR-6J) 77 W. Jackson Chicago, IL 60604 312-886-7058	Timothy Fischer	Federal agency responsible for MCP oversight.
Ohio EPA 410 E. Fifth Street Dayton, OH 45402-2911 937-285-6468	Brian Nickel	State agency responsible for MCP oversight.
DOE/ MCP 175 Tri-County Parkway Springdale, OH 45246 513-246-0071	Geoffrey Gorsuch	DOE/ MCP Project Manager responsible for project oversight and success.
CH2M Hill Mound, Inc. SMPP-TFV Project P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 937-673-2874	Allen Upshaw	Provided the DOE/ MCP Project Manager with technical assistance, administrative support, sampling, decontamination, photo and site documentation, site safety, and report preparation. Provided the equipment necessary for the demolition and performed the building demolition and site restoration.

5.2 Demolition Cost

Under the new site contract, CH2M Hill Mound, Inc. has elected to cluster financial data for multiple buildings together. Although Building 48 is the only building in Cluster 48, the demolition costs for the demolition of the Building 89 turn-around are included in the total cluster costs for Building 48 and cost data for the individual structure demolitions are not available. The total cluster costs for Building 48 are presented in Table 5.

Table 5 – Cluster 48 Total Costs

Activity	Cost
Work Planning	$26K
Facility Prep	$86K
Demolition	$68K
Total	$180K

APPENDIX A

Figures

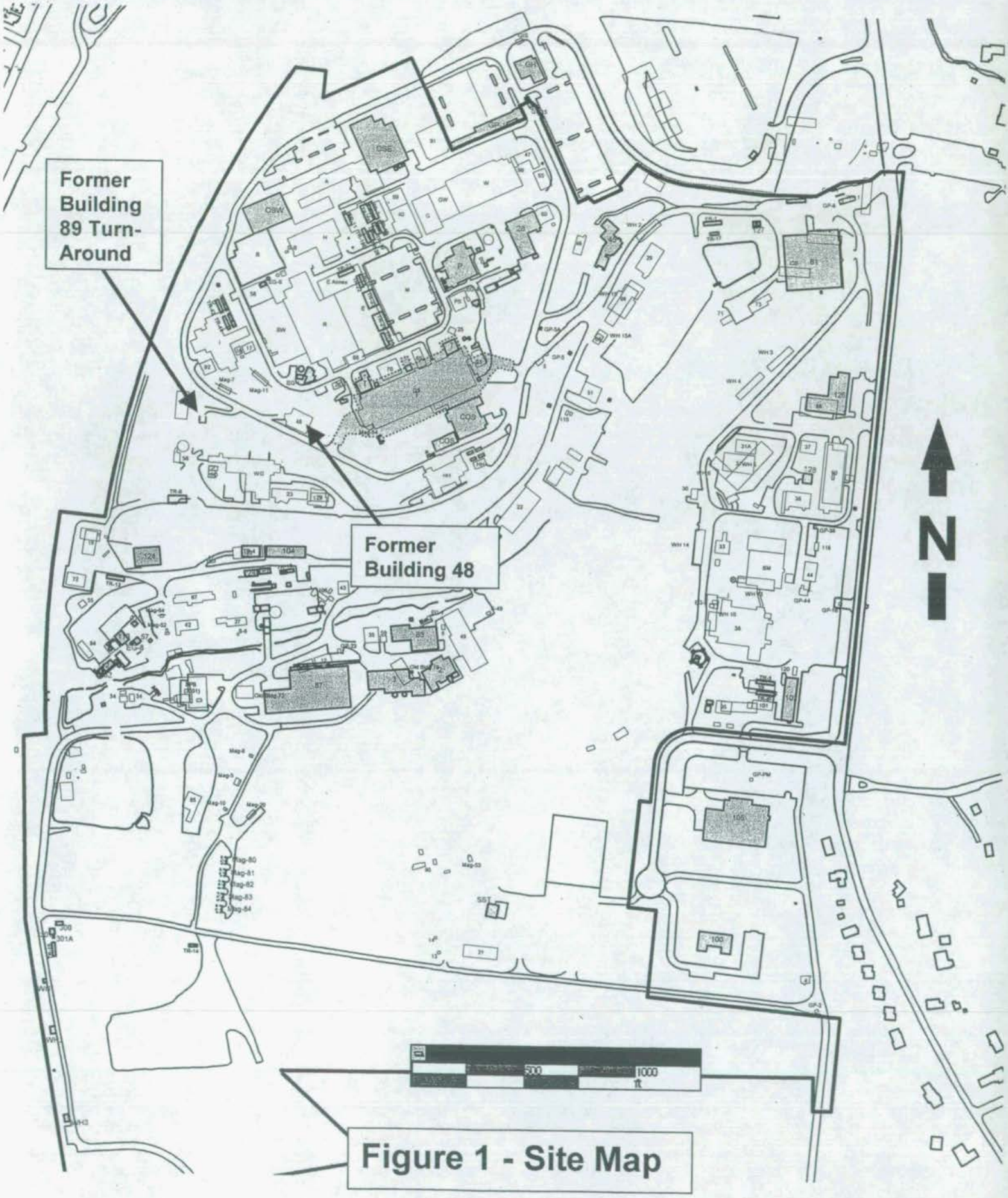
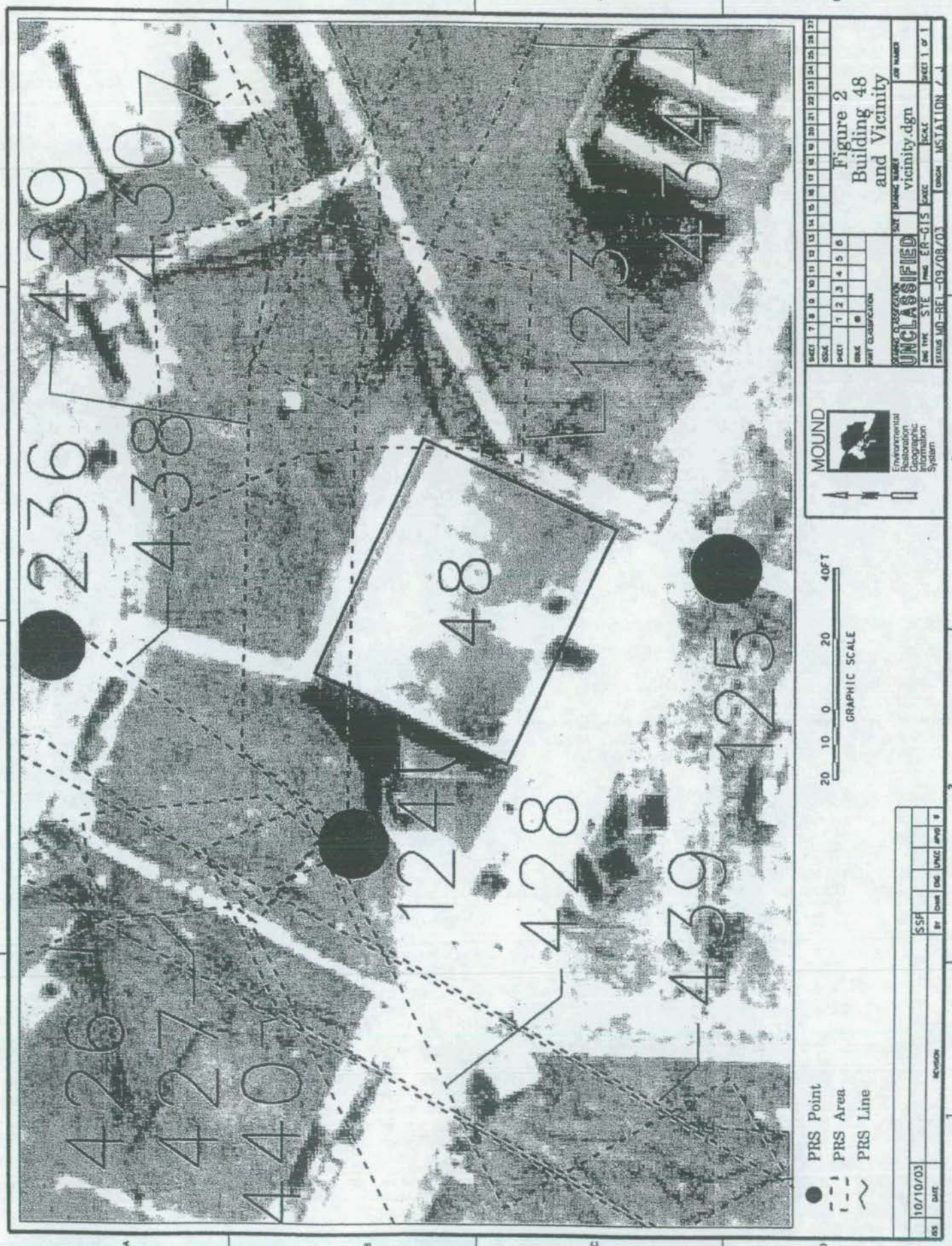


Figure 1 - Site Map

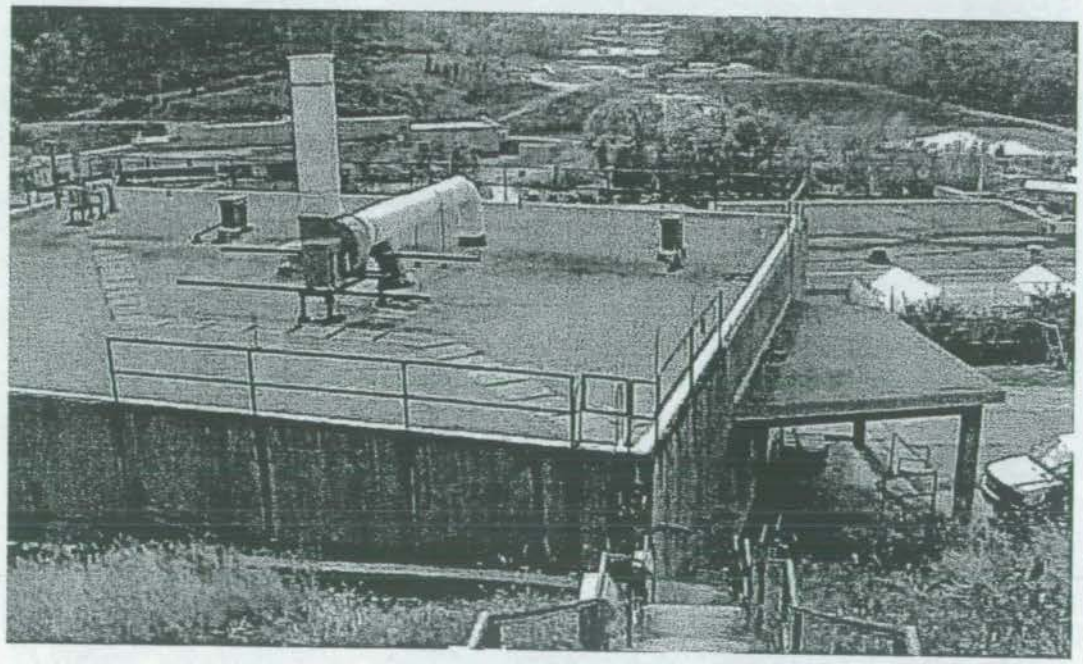
Figure 2: Building 48 and Vicinity



A 2 of 8

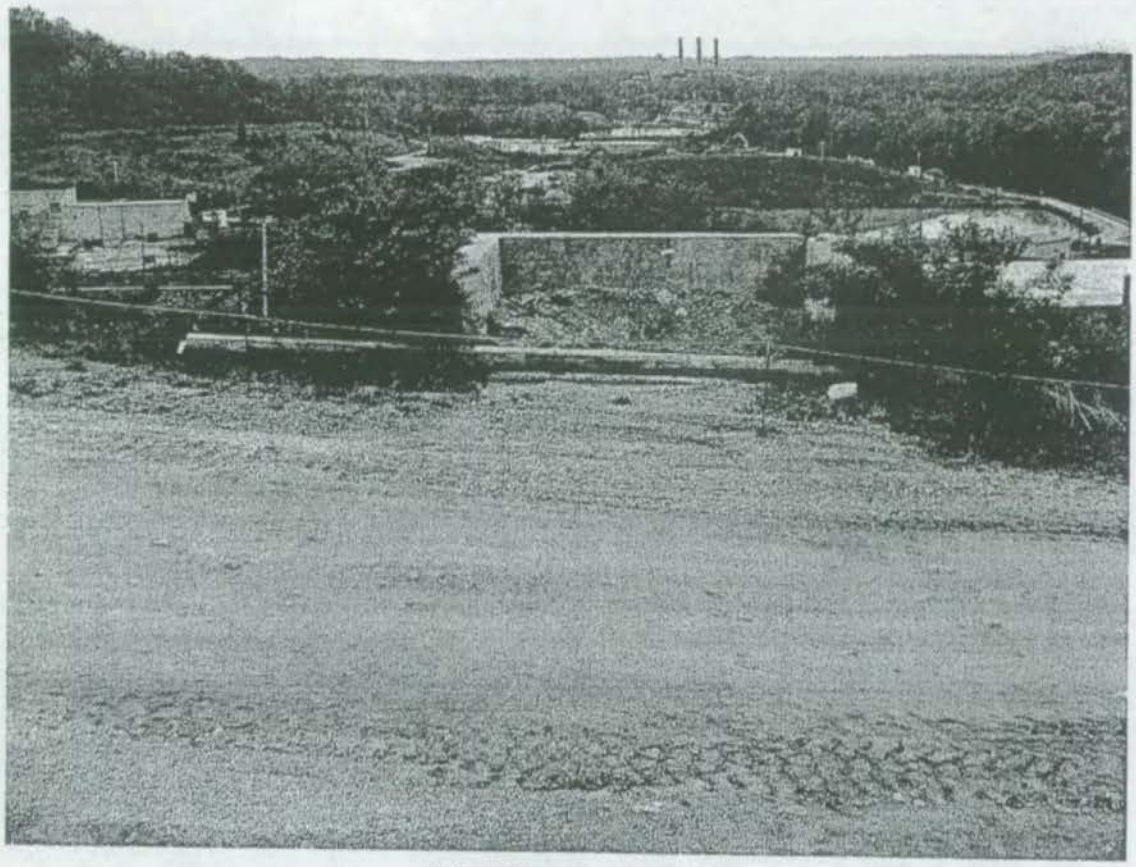
Figure 3 - Building Photos

View from the west



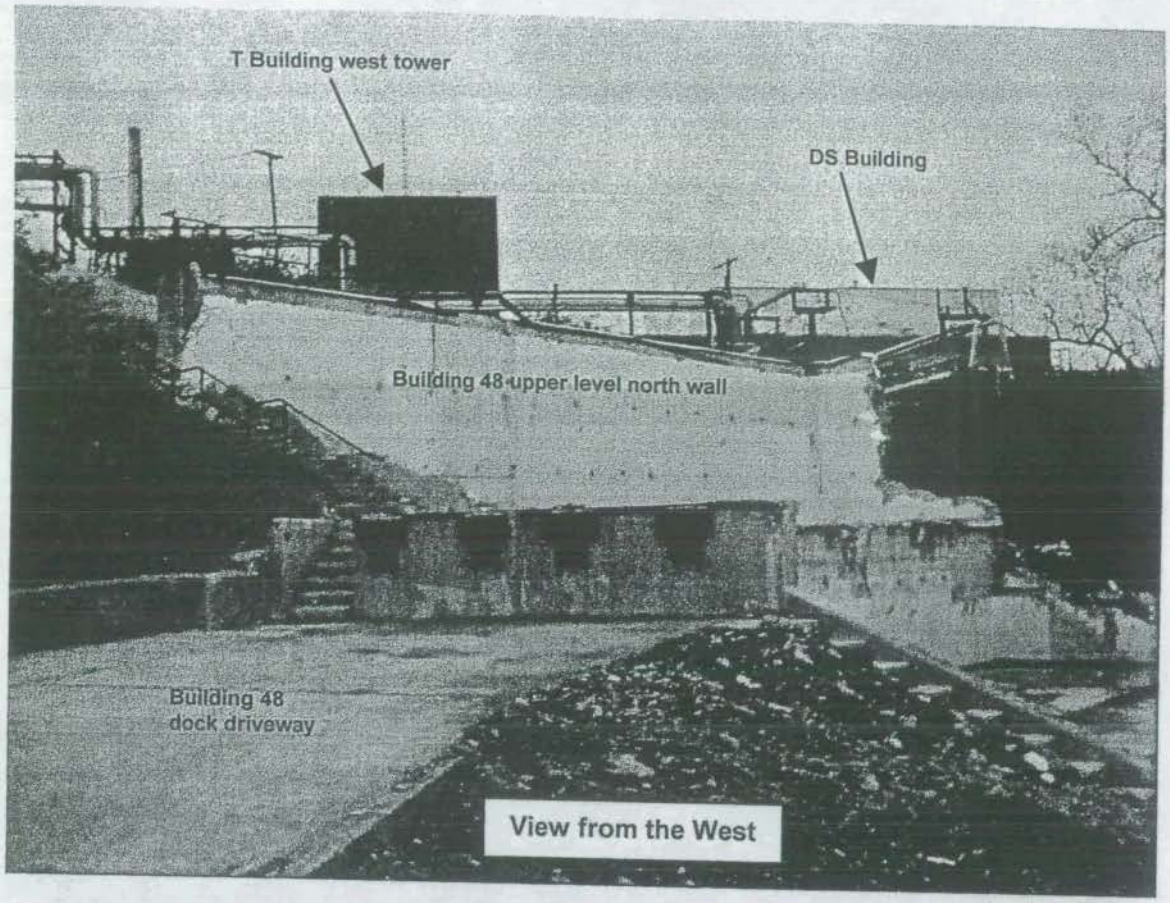
View from the north

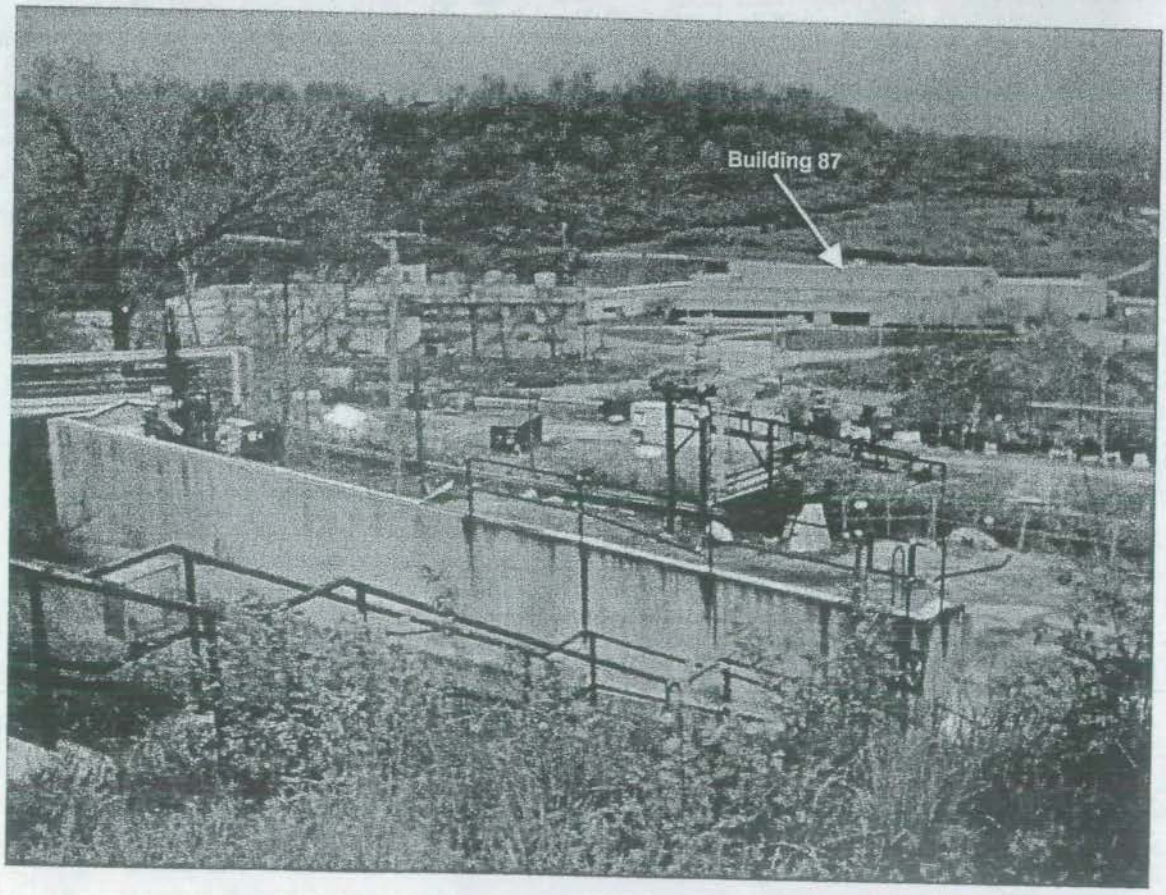
Building 48 – Prior to Demolition



View from the north

Building 89 Turn-Around – Prior to Demolition





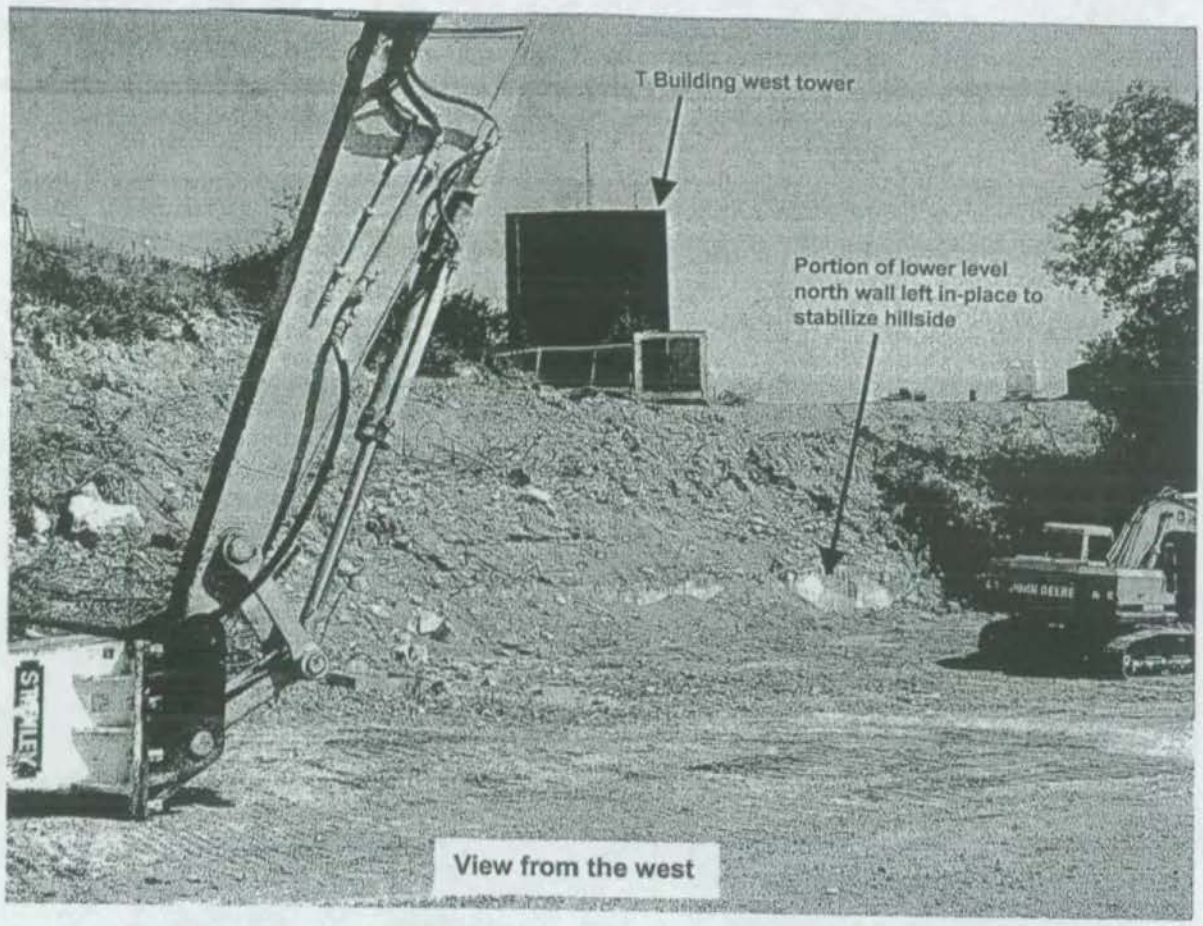
View from the north

Building 48 – During Demolition

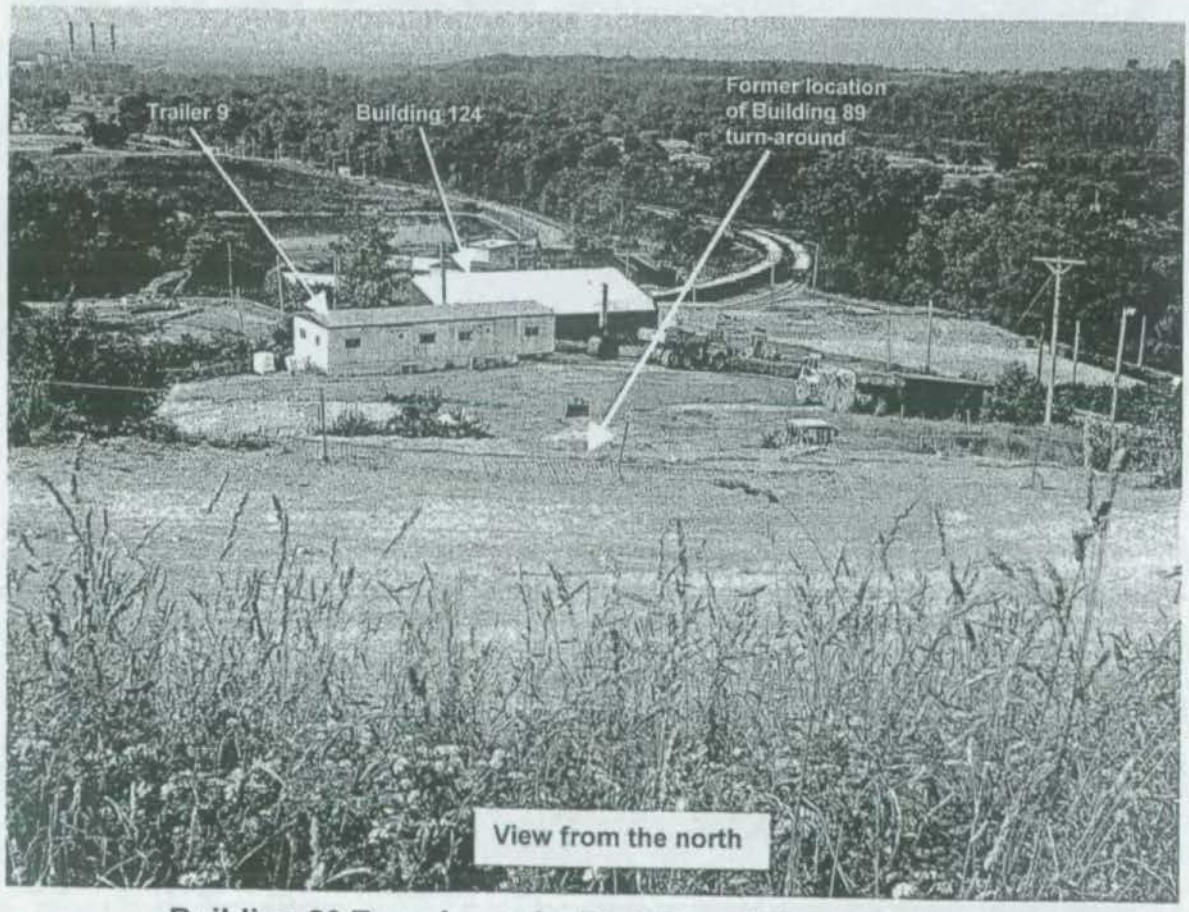
North wall of Building 48 – Group 9 work to the right in photo

View of Building 48 dock driveway (from the west)

Building 48 – During Demolition



Building 48 – Post-Demolition



Building 89 Turn-Around – Post-Demolition, Site Restored

View from the south

Building 89 Turn-Around – Post-Demolition, Site Restored

APPENDIX B

Post-Final Status Survey Report
Radiological Surveys

Building 48

05-GP9-0530 (2 Pages)
05-TF-0263 (3 Pages)
05-TF-0264 (6 Pages)
05-TF-0282 (5 Pages)
05-TF-0283 (3 Pages)
05-TF-0288 (3 Pages)
05-TF-0324 (1 Page)

Building 89 Turn-Around

05-TF-0214 (7 Pages)
05-TF-0232 (4 Pages)

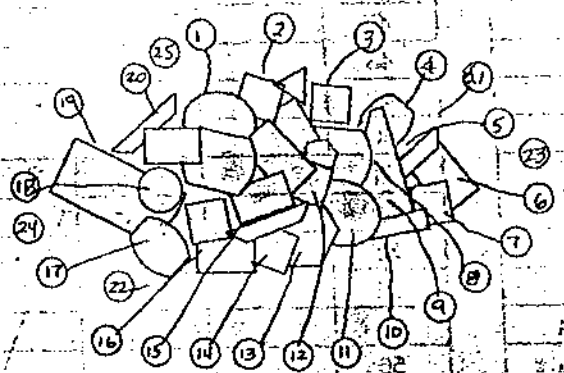
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) 48 Foot-print	SURVEY NO. 05-GP9-0530
PURPOSE: Debris Pile Survey of Slab/Rebar/Conduit	RWP NO. N/A
	DATE: 06-14-05
	TIME: 1415

MAP / DRAWING

L2360 Specific:
2.4 cpm α = BKG
2.2 ncpm α = DL
129 cpm β⁻ = BKG
20 ncpm β⁻ = DL

Direct Scan & Smear
Location(s): All
= DL α/β
unless otherwise noted



Note: Soil beneath slab appears to be of same composition as construction fill

COPY

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
L2360	5762-5783	1-13-6
L3030	5738	1-5-6
	A	
	N	

Completed by: (Signature) William G. Jones	HP [redacted]	Date 6-14-05
Completed by: (Printed Name) W.A. Jones		
Counted by: (Signature) William G. Jones	HP [redacted]	Date 6-14-05
Counted by: (Printed Name) W.A. Jones		
Reviewed/Approved by: (Signature) Patrick Becker	HP [redacted]	Date 6-14-05
Reviewed/Approved by: (Print Name) Patrick Becker		

ML-9620 (2-98)

Survey No. 05-GP9-0530

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	0	2	N/A	SLAB
2	0	0		
3	0	0		
4	21	0		
5	0	0		
6	0	0		
7	0	2		
8	0	0		
9	3	0		
10	21	0		
11	0	2		
12	0	2		
13	27	0		
14	20	0		
15	0	2		
16	15	0		
17	0	0		
18	0	0		
19	27	0		
20	11	0		SLAB
21	3	2		Conduit
22	0	5		Conduit
23	20	0		Rebar
24	0	2		Rebar
25	0	0	N/A	Rebar
26				
27				
28				
29				
30				
31		N	A	
32				
33				
34				
35				

Removable Contamination Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53		N	A	
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				

COMMENTS: No audible clicks discerned above background during direct scan of matl's. All < DL α/β.

NOTES:

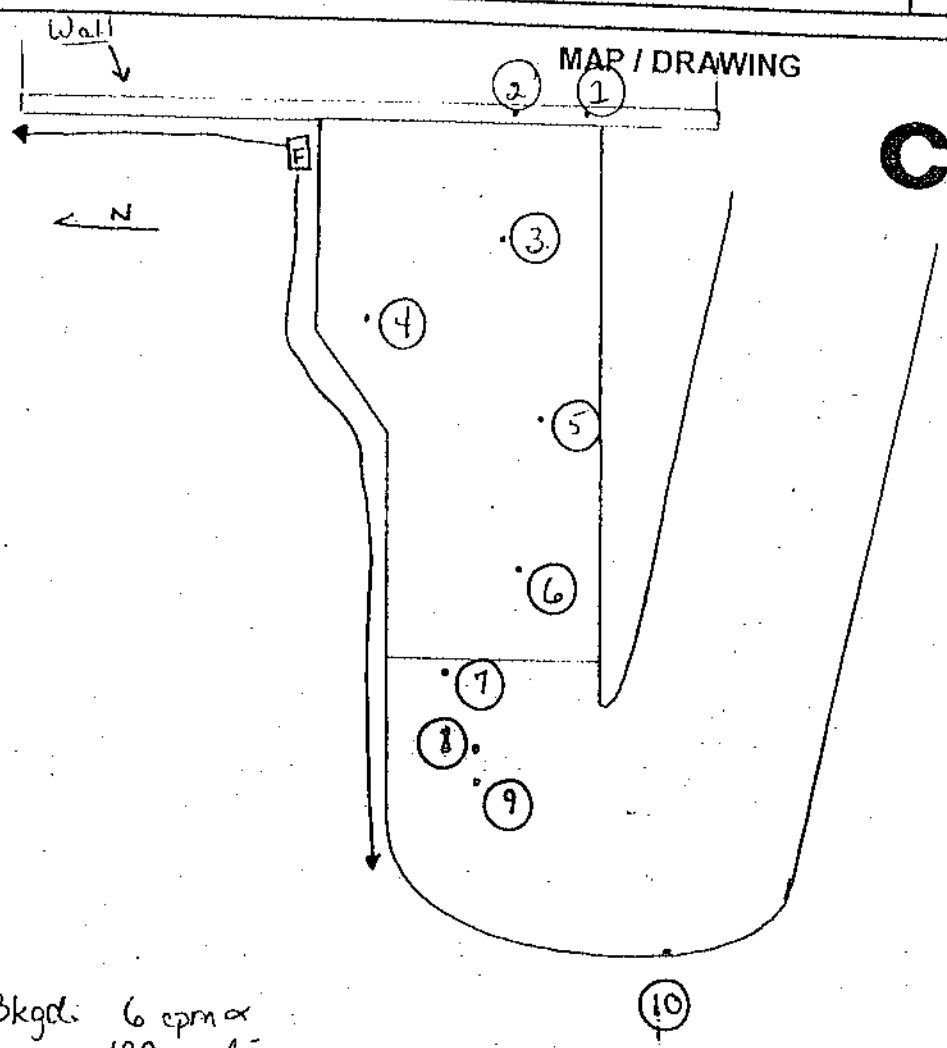
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type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

ML-9620A (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 47 slab	SURVEY NO. 05 - TF - 026
PURPOSE: Characterization survey (spot check) of dock and ramp.	RWP NO. N/A
	DATE: 8/2/05
	TIME: 1000

MAP / DRAWING



COPY

Bkgd: 6 cpm α
190 cpm β⁻
D.L. 3.4 cpm α
20 cpm β⁻

Smears taken at each location
See attached for results

Fidler bkgd = 10K cpm
no readings above background.

F → = Fidler readings path

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360 - 89	5767/5798	8-10-05
3030	5899	3-9-06
Bicron Fidler	3853/3965	6-1-06
	N A	

Completed by: (Signature) James N. Collins	HP# [redacted]	Date: 8/3/05
Completed by: (Print Name) Jamie N. Collins / L. Oeffner Jr.		
Counted by: (Signature)	HP# [redacted]	Date: 8/2/05
Counted by: (Print Name) L. Oeffner Jr.		
Reviewed/Approved by: (Signature) RM Cablentz	HP# [redacted]	Date: 8/8/05
Reviewed/Approved by: (Print Name) RM Cablentz		

ML-9620 (2-98) Computer Generated

Survey No.

05-TF-0263

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm)				
Sample #	β/γ	Alpha	Tritium	Comments
1	11	0	N/A	wall
2	0	0		
3	0	0		ground
4	0	0		
5	0	0		
6	0	0		
7	2	0		
8	2	0		
9	0	0		
10	0	0		
		A		
		N		

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

Comments: N/A

NOTES:

1. See MD-80036 10002 for calculations of WEB, 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)

RSDS#: 05-TF-0263 RCT: JYNC RCT: AO

43-89 ALPHA BKG:	6	Factor	8	PROBE AREA:	100	cm2	Surface Eff:	1	ALPHA
43-89 BETA BKG:	190	Factor	4	PROBE AREA:	100	cm2	Surface Eff:	1	BETA

LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
wall	5767	[redacted]	5798	ALPHA	1	8/2/05	10:00	69	120	228
wall	5767	[redacted]	5798	ALPHA	2	8/2/05	10:00	97	120	340
ground	5767	[redacted]	5798	ALPHA	3	8/2/05	10:00	191	120	716
ground	5767	[redacted]	5798	ALPHA	4	8/2/05	10:00	767	120	3020
ground	5767	[redacted]	5798	ALPHA	5	8/2/05	10:00	120	120	432
ground	5767	[redacted]	5798	ALPHA	6	8/2/05	10:00	43	120	124
ground	5767	[redacted]	5798	ALPHA	7	8/2/05	10:00	41	120	116
ground	5767	[redacted]	5798	ALPHA	8	8/2/05	10:00	43	120	124
ground	5767	[redacted]	5798	ALPHA	9	8/2/05	10:00	51	120	156
ground	5767	[redacted]	5798	ALPHA	10	8/2/05	10:00	51	120	156
wall	5767	[redacted]	5798	BETA	1	8/2/05	10:00	442	120	124
wall	5767	[redacted]	5798	BETA	2	8/2/05	10:00	609	120	458
ground	5767	[redacted]	5798	BETA	3	8/2/05	10:00	599	120	438
ground	5767	[redacted]	5798	BETA	4	8/2/05	10:00	586	120	412
ground	5767	[redacted]	5798	BETA	5	8/2/05	10:00	583	120	406
ground	5767	[redacted]	5798	BETA	6	8/2/05	10:00	539	120	318
ground	5767	[redacted]	5798	BETA	7	8/2/05	10:00	518	120	276
ground	5767	[redacted]	5798	BETA	8	8/2/05	10:00	535	120	310
ground	5767	[redacted]	5798	BETA	9	8/2/05	10:00	504	120	248
ground	5767	[redacted]	5798	BETA	10	8/2/05	10:00	518	120	276

* Note: Please see 05-TF-0264 RSDS for averaging results.

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Bldg. 48 ~~Slab~~ Dock & inclined driveway	SURVEY NO. 05-TF-0264
PURPOSE: Averaging of spot checks on slab	RWP NO. N/A
	DATE: 8/3/05
	TIME: 14:00

MAP / DRAWING

SEE ATTACHED SHEETS FOR LOCATIONS AND RESULTS

5767/5798 Bkgd.
6 cpm alpha
190 cpm beta

D.L.
3.4 cpm alpha
20 cpm beta

5704/5714 Bkgd.
1.8 cpm alpha
185 cpm beta

D.L.
1.8 cpm alpha
20 cpm beta

COPY

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

- mrem/hr neutron
- swipe number
- air sample number
#/α or /β - direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360-89	5767/5798	8/10/05
Lud 2360-89	5704/5714	10/21/05

Completed by: (Signature) Jamie M. Collins	H.P. [redacted]	8/24/05
completed by: L. Oeffner Jr./Jamie M.Collins		
Counted by: (Signature) see attached	HP#	Date:
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) R. Gilbertz	HP# [redacted]	Date: 9/9/05
Reviewed/Approved by: (Print Name) R. Gilbertz		

05-TF-0264

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM)	SURVEY NO.
PURPOSE: see page #1	SWP NO.
	DATE:
	TIME:

MAP / DRAWING

#1

A	B
1	C
D	E

#2

A	B
2	C
D	E

#5

A	B	C
D	5	E
F	G	H

#6

A	B	C
D	6	E
F	G	H

* Readings locations

#7

A	B	C
D	7	E
F	G	H

#9 #8

D	E	A	D	E
F	9	B	8	F
G	H	C	G	H

*10

E	10	A
D	C	B

COPY

NOTE: Location Numbers correlate to location numbers shown on RSDS 05-TF-0263

LEGEND:

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date

see page 2

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

ML-9620 (2-98)

COPY

RSDS#: 05-TF-0264 RCT: SMC RCT:

3-89 ALPHA BKG:	6	Factor	8	PROBE AREA:	100	cm2	Surface Eff:	1	ALPHA
3-89 BETA BKG:	190	Factor	4	PROBE AREA:	100	cm2	Surface Eff:	1	BETA

LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
1-A	5767	[redacted]	5798	ALPHA	1	8/3/05	8:00	46	120	136
1-B	5767	[redacted]	5798	ALPHA	2	8/3/05	8:00	24	120	48
1-C	5767	[redacted]	5798	ALPHA	3	8/3/05	8:00	18	120	24
1-D	5767	[redacted]	5798	ALPHA	4	8/3/05	8:00	34	120	88
1-E	5767	[redacted]	5798	ALPHA	5	8/3/05	8:00	29	120	68
2-A	5767	[redacted]	5798	ALPHA	6	8/3/05	8:00	34	120	88
2-B	5767	[redacted]	5798	ALPHA	7	8/3/05	8:00	46	120	136
2-C	5767	[redacted]	5798	ALPHA	8	8/3/05	8:00	32	120	80
2-D	5767	[redacted]	5798	ALPHA	9	8/3/05	8:00	64	120	208
2-E	5767	[redacted]	5798	ALPHA	10	8/3/05	8:00	36	120	96
5-A	5767	[redacted]	5798	ALPHA	11	8/3/05	8:00	184	120	688
5-B	5767	[redacted]	5798	ALPHA	12	8/3/05	8:00	91	120	316
5-C	5767	[redacted]	5798	ALPHA	13	8/3/05	8:00	135	120	492
5-D	5767	[redacted]	5798	ALPHA	14	8/3/05	8:00	102	120	360
5-E	5767	[redacted]	5798	ALPHA	15	8/3/05	8:00	122	120	440
5-F	5767	[redacted]	5798	ALPHA	16	8/3/05	8:00	104	120	368
5-G	5767	[redacted]	5798	ALPHA	17	8/3/05	8:00	169	120	628
5-H	5767	[redacted]	5798	ALPHA	18	8/3/05	8:00	115	120	412
6-A	5767	[redacted]	5798	ALPHA	19	8/3/05	8:00	27	120	60
6-B	5767	[redacted]	5798	ALPHA	20	8/3/05	8:00	26	120	56
6-C	5767	[redacted]	5798	ALPHA	21	8/3/05	8:00	24	120	48
6-D	5767	[redacted]	5798	ALPHA	22	8/3/05	8:00	15	120	12
6-E	5767	[redacted]	5798	ALPHA	23	8/3/05	8:00	28	120	64
6-F	5767	[redacted]	5798	ALPHA	24	8/3/05	8:00	20	120	32
6-G	5767	[redacted]	5798	ALPHA	25	8/3/05	8:00	37	120	100
6-H	5767	[redacted]	5798	ALPHA	26	8/3/05	8:00	24	120	48
7-A	5767	[redacted]	5798	ALPHA	27	8/3/05	8:00	30	120	72
7-B	5767	[redacted]	5798	ALPHA	28	8/3/05	8:00	39	120	108
7-C	5767	[redacted]	5798	ALPHA	29	8/3/05	8:00	40	120	112
7-D	5767	[redacted]	5798	ALPHA	30	8/3/05	8:00	38	120	104
7-E	5767	[redacted]	5798	ALPHA	31	8/3/05	8:00	35	120	92
7-F	5767	[redacted]	5798	ALPHA	32	8/3/05	8:00	22	120	40

COPY

LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
7-G	5767	[redacted]	5798	ALPHA	33	8/3/05	8:00	24	120	48
7-H	5767	[redacted]	5798	ALPHA	34	8/3/05	8:00	26	120	56
8-A	5767	[redacted]	5798	ALPHA	35	8/3/05	8:00	50	120	152
8-B	5767	[redacted]	5798	ALPHA	36	8/3/05	8:00	33	120	84
8-C	5767	[redacted]	5798	ALPHA	37	8/3/05	8:00	24	120	48
8-D	5767	[redacted]	5798	ALPHA	38	8/3/05	8:00	32	120	80
8-E	5767	[redacted]	5798	ALPHA	39	8/3/05	8:00	25	120	52
8-F	5767	[redacted]	5798	ALPHA	40	8/3/05	8:00	34	120	88
8-G	5767	[redacted]	5798	ALPHA	41	8/3/05	8:00	16	120	16
8-H	5767	[redacted]	5798	ALPHA	42	8/3/05	8:00	78	120	264
9-A	5767	[redacted]	5798	ALPHA	43	8/3/05	8:00	50	120	152
9-B	5767	[redacted]	5798	ALPHA	44	8/3/05	8:00	33	120	84
9-C	5767	[redacted]	5798	ALPHA	45	8/3/05	8:00	24	120	48
9-D	5767	[redacted]	5798	ALPHA	46	8/3/05	8:00	23	120	44
9-E	5767	[redacted]	5798	ALPHA	47	8/3/05	8:00	43	120	124
9-F	5767	[redacted]	5798	ALPHA	48	8/3/05	8:00	29	120	68
9-G	5767	[redacted]	5798	ALPHA	49	8/3/05	8:00	38	120	104
9-H	5767	[redacted]	5798	ALPHA	50	8/3/05	8:00	26	120	56
1-A	5767	[redacted]	5798	BETA	1	8/3/05	8:00	566	120	372
1-B	5767	[redacted]	5798	BETA	2	8/3/05	8:00	546	120	332
1-C	5767	[redacted]	5798	BETA	3	8/3/05	8:00	459	120	158
1-D	5767	[redacted]	5798	BETA	4	8/3/05	8:00	581	120	402
1-E	5767	[redacted]	5798	BETA	5	8/3/05	8:00	625	120	490
2-A	5767	[redacted]	5798	BETA	6	8/3/05	8:00	560	120	360
2-B	5767	[redacted]	5798	BETA	7	8/3/05	8:00	467	120	174
2-C	5767	[redacted]	5798	BETA	8	8/3/05	8:00	512	120	264
2-D	5767	[redacted]	5798	BETA	9	8/3/05	8:00	495	120	230
2-E	5767	[redacted]	5798	BETA	10	8/3/05	8:00	538	120	316
5-A	5767	[redacted]	5798	BETA	11	8/3/05	8:00	549	120	338
5-B	5767	[redacted]	5798	BETA	12	8/3/05	8:00	634	120	508
5-C	5767	[redacted]	5798	BETA	13	8/3/05	8:00	616	120	472
5-D	5767	[redacted]	5798	BETA	14	8/3/05	8:00	482	120	204
5-E	5767	[redacted]	5798	BETA	15	8/3/05	8:00	496	120	232
5-F	5767	[redacted]	5798	BETA	16	8/3/05	8:00	534	120	308
5-G	5767	[redacted]	5798	BETA	17	8/3/05	8:00	544	120	328
5-H	5767	[redacted]	5798	BETA	18	8/3/05	8:00	511	120	262
6-A	5767	[redacted]	5798	BETA	19	8/3/05	8:00	586	120	412
6-B	5767	[redacted]	5798	BETA	20	8/3/05	8:00	459	120	158
6-C	5767	[redacted]	5798	BETA	21	8/3/05	8:00	437	120	114

COPY

LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
6-D	5767	[redacted]	5798	BETA	22	8/3/05	8:00	531	120	302
6-E	5767	[redacted]	5798	BETA	23	8/3/05	8:00	466	120	172
6-F	5767	[redacted]	5798	BETA	24	8/3/05	8:00	451	120	142
6-G	5767	[redacted]	5798	BETA	25	8/3/05	8:00	413	120	66
6-H	5767	[redacted]	5798	BETA	26	8/3/05	8:00	427	120	94
7-A	5767	[redacted]	5798	BETA	27	8/3/05	8:00	507	120	254
7-B	5767	[redacted]	5798	BETA	28	8/3/05	8:00	468	120	176
7-C	5767	[redacted]	5798	BETA	29	8/3/05	8:00	477	120	194
7-D	5767	[redacted]	5798	BETA	30	8/3/05	8:00	469	120	178
7-E	5767	[redacted]	5798	BETA	31	8/3/05	8:00	495	120	230
7-F	5767	[redacted]	5798	BETA	32	8/3/05	8:00	449	120	138
7-G	5767	[redacted]	5798	BETA	33	8/3/05	8:00	423	120	86
7-H	5767	[redacted]	5798	BETA	34	8/3/05	8:00	442	120	124
8-A	5767	[redacted]	5798	BETA	35	8/3/05	8:00	559	120	358
8-B	5767	[redacted]	5798	BETA	36	8/3/05	8:00	483	120	206
8-C	5767	[redacted]	5798	BETA	37	8/3/05	8:00	472	120	184
8-D	5767	[redacted]	5798	BETA	38	8/3/05	8:00	734	120	708
8-E	5767	[redacted]	5798	BETA	39	8/3/05	8:00	780	120	800
8-F	5767	[redacted]	5798	BETA	40	8/3/05	8:00	702	120	644
8-G	5767	[redacted]	5798	BETA	41	8/3/05	8:00	562	120	364
8-H	5767	[redacted]	5798	BETA	42	8/3/05	8:00	610	120	460
9-A	5767	[redacted]	5798	BETA	43	8/3/05	8:00	559	120	358
9-B	5767	[redacted]	5798	BETA	44	8/3/05	8:00	483	120	206
9-C	5767	[redacted]	5798	BETA	45	8/3/05	8:00	472	120	184
9-D	5767	[redacted]	5798	BETA	46	8/3/05	8:00	546	120	332
9-E	5767	[redacted]	5798	BETA	47	8/3/05	8:00	559	120	358
9-F	5767	[redacted]	5798	BETA	48	8/3/05	8:00	555	120	350
9-G	5767	[redacted]	5798	BETA	49	8/3/05	8:00	517	120	274
9-H	5767	[redacted]	5798	BETA	50	8/3/05	8:00	511	120	262

Averages:

1 = 99 dpm alpha
2 = 158 dpm alpha
5 = 460 dpm alpha
6 = 60 dpm alpha
7 = 83 dpm alpha
8 = 101 dpm alpha
9 = 93 dpm alpha

(#3 & #4 were not averaged due to high intial count)

Averages include initial counts. Refer to 05-TF-0263

~~Anything greater than 300 dpm alpha was sent to rail spur.~~

All rubble to be sent to rail spur.

COPY

RSDS#: 05-TF-0264 RCT: JMC RCT: MO

43-89 ALPHA BKG:	1.8	Factor	8	PROBE AREA:	100	cm2	Surface Eff:	1	ALPHA
43-89 BETA BKG:	185	Factor	4	PROBE AREA:	100	cm2	Surface Eff:	1	BETA

LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
10-A	5704	[redacted]	5714	ALPHA	1	8/23/05	14:30	12	120	34
10-B	5704	[redacted]	5714	ALPHA	2	8/23/05	14:30	5	120	6
10-C	5704	[redacted]	5714	ALPHA	3	8/23/05	14:30	5	120	6
10-D	5704	[redacted]	5714	ALPHA	4	8/23/05	14:30	6	120	10
10-E	5704	[redacted]	5714	ALPHA	5	8/23/05	14:30	14	120	42
10-A	5704	[redacted]	5714	BETA	1	8/23/05	14:30	350	120	0
10-B	5704	[redacted]	5714	BETA	2	8/23/05	14:30	313	120	0
10-C	5704	[redacted]	5714	BETA	3	8/23/05	14:30	330	120	0
10-D	5704	[redacted]	5714	BETA	4	8/23/05	14:30	330	120	0
10-E	5704	[redacted]	5714	BETA	5	8/23/05	14:30	347	120	0

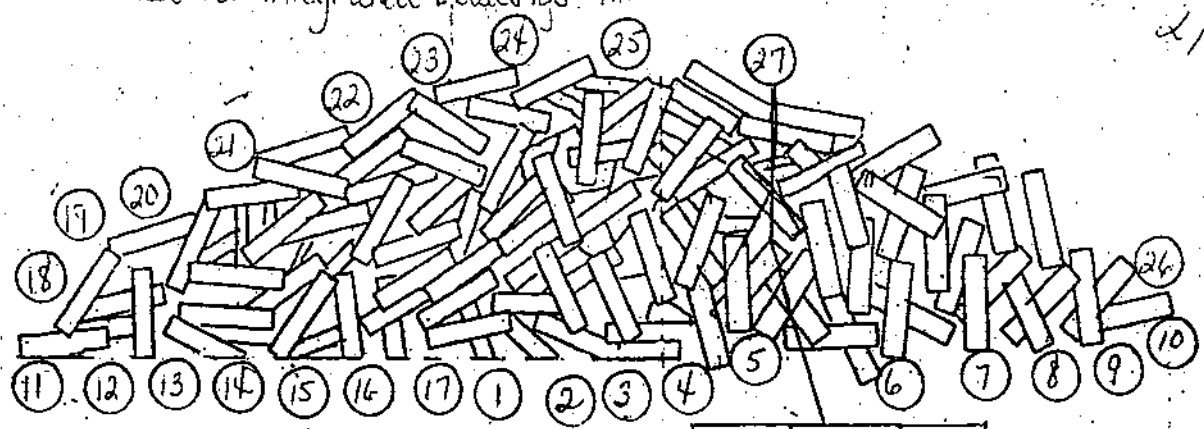
Average (including initial count)
#10 = 42 dpm alpha
***A full square meter was not accessible, integrates taken on edge of pavement.**

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) 48 Slab	SURVEY NO. 05-TF-0282
PURPOSE: Characterization of debris pile	RWP NO. N/A
	DATE: 8/29/05
	TIME: 0800

MAP / DRAWING

- Direct scan & pause survey conducted at each corner location and other various locations
- See attached for integrated readings. All other locations → No detectable contamination α/β



27-B	27-C	27-D
27-E	27-A	27-F
27-G	27-H	27-I

	5704/5714	5690/5729
Bkgd	3 cpm α 197 cpm β	3.4 cpm α 180 cpm β
D.L.	26 cpm α 20 cpm β	26 cpm α 20 cpm β

COPY

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360-89	5704/5714	10-21-05
Lud 2360-89	5690/5729	11-3-05
	A	
	N	

Completed by: (Signature) [signature]	HP# [redacted]	Date: 8-30-05
Completed by: (Print Name) L. Oettner R. Jamie M. Collins		
Counted by: (Signature) [signature]	HP#	Date:
Counted by: (Print Name) Attached		
Reviewed/Approved by: (Signature) [signature]	HP# [redacted]	Date: 9/9/05
Reviewed/Approved by: (Print Name) RnCoblentz		

Survey No.
05-TF-0282

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED RESULTS			debris
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
		A		
		N		

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

Comments: All smears field checked with 2360 prior to submiting to count lab.

COPY

NOTES:

1. See MD-80036 10002 for calculations of WEB, 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)

RSDS#: 05-TF-0282 RCT: MO RCT: Jyne

43-89 ALPHA BKG:	3	Factor	8	PROBE AREA:	100	cm2	Surface Eff:	1	ALPHA
43-89 BETA BKG:	197	Factor	4	PROBE AREA:	100	cm2	Surface Eff:	1	BETA

LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
27-A	5704	[redacted]	5714	ALPHA	1	8/29/05	8:00	31	120	100
27-B	5704	[redacted]	5714	ALPHA	2	8/29/05	8:00	20	120	56
27-C	5704	[redacted]	5714	ALPHA	3	8/29/05	8:00	29	120	92
27-D	5704	[redacted]	5714	ALPHA	4	8/29/05	8:00	27	120	84
27-E	5704	[redacted]	5714	ALPHA	5	8/29/05	8:00	21	120	60
27-F	5704	[redacted]	5714	ALPHA	6	8/29/05	8:00	14	120	32
27-G	5704	[redacted]	5714	ALPHA	7	8/29/05	8:00	24	120	72
27-H	5704	[redacted]	5714	ALPHA	8	8/29/05	8:00	14	120	32
27-I	5704	[redacted]	5714	ALPHA	9	8/29/05	8:00	16	120	40
27-A	5704	[redacted]	5714	BETA	1	8/29/05	8:00	458	120	128
27-B	5704	[redacted]	5714	BETA	2	8/29/05	8:00	478	120	168
27-C	5704	[redacted]	5714	BETA	3	8/29/05	8:00	465	120	142
27-D	5704	[redacted]	5714	BETA	4	8/29/05	8:00	485	120	182
27-E	5704	[redacted]	5714	BETA	5	8/29/05	8:00	462	120	136
27-F	5704	[redacted]	5714	BETA	6	8/29/05	8:00	436	120	84
27-G	5704	[redacted]	5714	BETA	7	8/29/05	8:00	454	120	120
27-H	5704	[redacted]	5714	BETA	8	8/29/05	8:00	406	120	24
27-I	5704	[redacted]	5714	BETA	9	8/29/05	8:00	416	120	44

Average (including initial count)
63 dpm alpha

COPY

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR117
Batch Ended: 8/29/05 10:50
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF-0282 OFFNER [27] GWD

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A1	1	1.74	2.23		2.12	2.62	
A2	2	0.00	2.00		0.00	1.18	
A3	3	0.00	2.27		0.00	1.27	
A4	4	0.00	2.10		0.00	1.22	
B1	5	0.00	1.90		0.54	1.69	
B2	6	0.00	1.89		1.02	1.94	
B3	7	0.00	2.18		0.00	1.34	
B4	8	0.00	1.97		0.00	1.21	
C1	9	0.00	2.05		0.00	1.23	
C2	10	0.00	1.92		0.47	1.59	
C3	11	0.00	2.07		0.27	1.72	
C4	12	0.00	1.95		0.00	1.13	
D1	13	0.00	2.05		0.00	1.25	
D2	14	0.00	2.17		0.39	1.68	
D3	15	1.72	2.09		0.00	1.24	
D4	16	0.00	2.05		0.20	1.66	
A1	17	0.00	2.20		0.00	1.86	
A2	18	1.56	2.05		2.58	2.33	
A3	19	0.00	2.27		0.00	1.27	
A4	20	1.71	2.12		0.16	1.71	
B1	21	2.61	2.65		0.12	1.69	
B2	22	0.00	1.87		0.00	1.59	
B3	23	1.93	2.20		0.09	1.88	
B4	24	0.00	1.99		0.37	1.70	
C1	25	3.72	2.92		2.41	2.46	
C2	26	0.00	1.91		0.00	1.12	
C3	27	0.00	2.06		0.00	1.22	

140 140

~~Page 1 of 1~~ 140
8/30/05

8/5 of 34

COPY

4 of 5

GWD

Time: 2.00
Data Mode: DPM Nuclide: SMGLS02 Quench Set: SMGLS02
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	9.06
Region B:	2.0	- 18.6	0	0.0	8.76
Region C:	40.0	- 2000	0	0.0	10.95

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0282 OFFNER [27] GWD
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT2.dat
Count Data Filename: C:\DATA\SDATA2.DAT
Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
-1	10.00	9.06	8.76	6	B	634.86		0.000	10.95
0	2.00	514.92	472.23	0		560.91	965.23	78.924	0.05
1	2.00	2.03	2.82	68		509.09	3.98	20.210	2.55
2	2.00	0.00	0.00	15		586.24	0.00	0.000	0.05
3	2.00	2.44	2.46	0		604.34	4.42	9.381	0.00
4	2.00	1.44	0.19	5		599.18	2.61	9.058	0.00
5	2.00	0.44	0.74	0		622.65	0.78	8.530	0.00
6	2.00	1.44	1.48	0		590.31	2.63	9.121	0.00
7	2.00	6.68	4.79	3		602.24	12.13	10.799	0.05
8	2.00	0.00	0.00	0		581.02	0.00	0.000	1.55
9	2.00	0.94	1.00	0		578.02	1.73	9.020	0.00
10	2.00	0.00	0.00	6		549.29	0.00	0.000	0.00
11	2.00	0.00	0.00	7		620.10	0.00	0.000	0.00
12	2.00	1.22	1.25	0		602.69	2.22	8.956	0.05
13	2.00	0.00	0.00	47		411.04	0.00	0.000	0.00
14	2.00	0.00	0.00	7		590.35	0.00	0.000	1.05
15	2.00	0.00	0.00	0		600.41	0.00	0.000	0.00
16	2.00	0.00	0.00	6		585.33	0.00	0.000	0.05
17	2.00	0.00	0.00	45		488.97	0.00	0.000	4.05
18	2.00	0.00	0.00	0		603.70	0.00	0.000	0.00
19	2.00	0.00	0.00	7		615.37	0.00	0.000	0.00
20	2.00	0.00	0.00	15		597.93	0.00	0.000	0.00
21	2.00	0.65	0.00	0		523.39	1.26	9.310	0.00
22	2.00	0.00	0.00	14		502.54	0.00	0.000	0.55
23	2.00	0.94	0.00	10		571.99	1.74	9.063	1.05
24	2.00	0.44	0.00	5		620.21	0.78	8.546	0.00
25	2.00	0.00	0.00	0		566.60	0.00	0.000	0.00
26	2.00	0.00	0.00	0		614.70	0.00	0.000	0.00
27	2.00	0.00	0.00	8		569.84	0.00	0.000	0.00

NO

B16 of 34

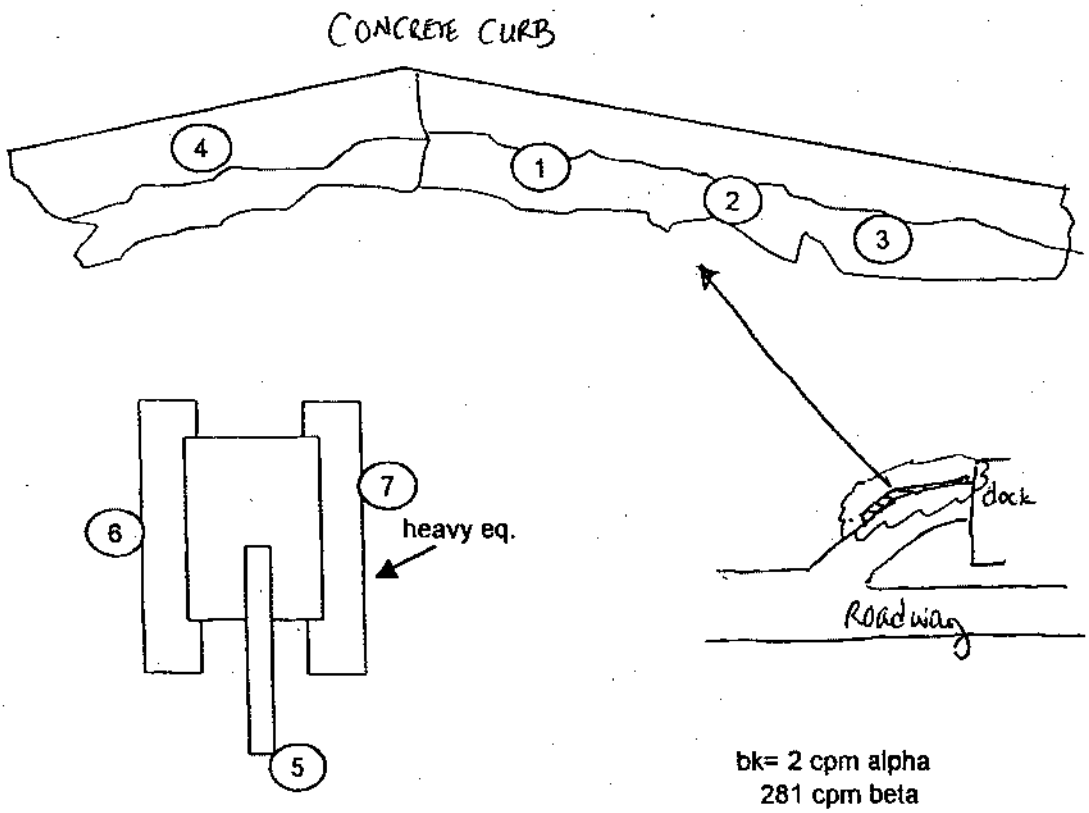
COPY

WWD

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 48 ~~Slab~~ DOCK & INCLINED driveway	SURVEY NO. 05-TF-0283
PURPOSE: Survey turned over concrete(previously found to have fixed alpha spots)	RWP NO. N/A
	DATE: 8/29/05
	TIME: 15:30

MAP / DRAWING



bk= 2 cpm alpha
281 cpm beta
DL= 1.8 cpm alpha
20 cpm beta

COPY

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360/4389	5704/5714	10/21/05
Lud 3030	5899	3/9/06
	NA	

Completed by: (Signature)	HP# [redacted]	Date 8-31-05
Completed by: (Printed) L. Oeffner Jr.		
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date 9-9-05
Reviewed/Approved by: (Print Name) RW Coblentz		

Survey No. 05-TF-0283

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm^2)				
Sample #	β/γ	Alpha	Tritium	Comments
1	0	5	N/A	concrete wall
2	0	0		concrete wall
3	52	10		concrete wall
4	3	5		concrete wall
5	0	2		hammer
6	0	0		track
7	46	2		track
			A	
		N		

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

COMMENTS: None

COPY

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)

Survey No.
05-TF-0283

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Ludlum 2360 Integrated Measurement Results

		Alpha			Beta		
		BKGD	2	cpm	BKGD	281	cpm
		DL	1.8	Net cpm	DL	20	Net cpm
No.	Item/Location Description	Gross (cpm)	CF	Results (dpm/100cm2 or Sample)	Gross (cpm)	CF	Results (dpm/100cm2 or Sample)
1	concrete	65	8	504	235	4	0
2	concrete	107	8	840	217	4	0
3	concrete	87	8	680	236	4	0
4	concrete	72	8	560	207	4	0

A

N

COPY

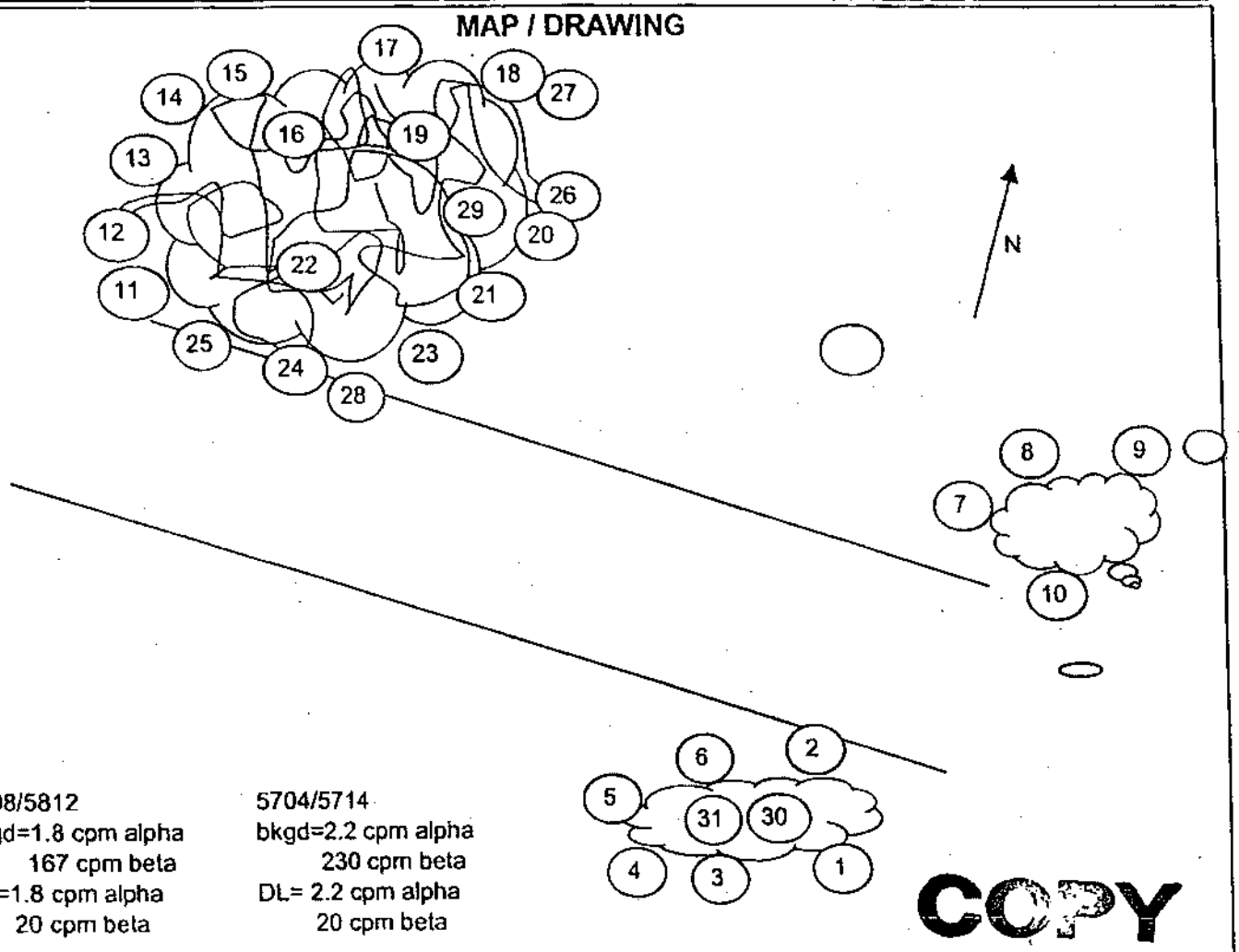
B19 of 34

ML-9620C

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 48 ~~Slab~~ Dock & Inclined Driveway	SURVEY NO. 05-TF-0288
PURPOSE: Survey concrete after downsizing	RWP NO. N/A
	DATE: 9/8/05
	TIME: 10:00

MAP / DRAWING



5698/5812
bkgd=1.8 cpm alpha
167 cpm beta
DL=1.8 cpm alpha
20 cpm beta

5704/5714
bkgd=2.2 cpm alpha
230 cpm beta
DL= 2.2 cpm alpha
20 cpm beta

COPY

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360/4389	5698/5812	5/25/06
Lud 2360/4389	5704/5714	10/21/05
	NA	

Lud 3030 5816 8-11-06

Completed by: (Signature)	HP# [redacted]	Date 9-8-05
Completed by: (Printed Name) J.M. Collins / L. Oeffner Jr.		
Counted by: (Signature) See attached	HP# [redacted]	Date 9/8/05
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date 9/13/05
Reviewed/Approved by: (Print Name) RM Coblentz		

B 20 of 34

Survey No.
05-TF-0288

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm)				
Sample #	β/γ	Alpha	Tritium	Comments
1	0	0	N/A	debris
2	0	5		
3	109	0		
4	17	2		
5	0	0		
6	0	0		
7	112	0		
8	19	0		
9	15	2		
10	115	0		
11	2	0		
12	0	0		
13	0	0		
14	138	0		
15	20	2		
16	16	2		
17	0	0		
18	122	0		
19	23	0		
20	19	0		
21	0	2		
22	109	2		
23	0	0		
24	0	0		
25	0	0		
26	112	0		
27	0	0		
28	0	8		
29	0	0		
30	122	2		
31	0	2		
		A		
		N		

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

Comments: N/A

COPY

NOTES:

1. See MD-80036 10002 for calculations of WEB, 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)

RSDS#: 05-TF-0288 RCT: JMC RCT:

43-89 ALPHA BKG:	2	Factor	8	PROBE AREA:	100	cm2	Surface Eff:	1	ALPHA
43-89 BETA BKG:	167	Factor	4	PROBE AREA:	100	cm2	Surface Eff:	1	BETA

LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
16	5698	[redacted]	5812	ALPHA	1	9/8/05	10:00	71	120	268
19	5698	[redacted]	5812	ALPHA	2	9/8/05	10:00	59	120	220
22	5698	[redacted]	5812	ALPHA	3	9/8/05	10:00	83	120	316
29	5698	[redacted]	5812	ALPHA	4	9/8/05	10:00	70	120	264
30	5698	[redacted]	5812	ALPHA	5	9/8/05	10:00	26	120	88
31	5698	[redacted]	5812	ALPHA	6	9/8/05	10:00	42	120	152
16	5698	[redacted]	5812	BETA	1	9/8/05	10:00	483	120	298
19	5698	[redacted]	5812	BETA	2	9/8/05	10:00	472	120	276
22	5698	[redacted]	5812	BETA	3	9/8/05	10:00	460	120	252
29	5698	[redacted]	5812	BETA	4	9/8/05	10:00	481	120	294
30	5698	[redacted]	5812	BETA	5	9/8/05	10:00	528	120	388
31	5698	[redacted]	5812	BETA	6	9/8/05	10:00	506	120	344

Debris with elevated readings sent to rail spur for disposal.

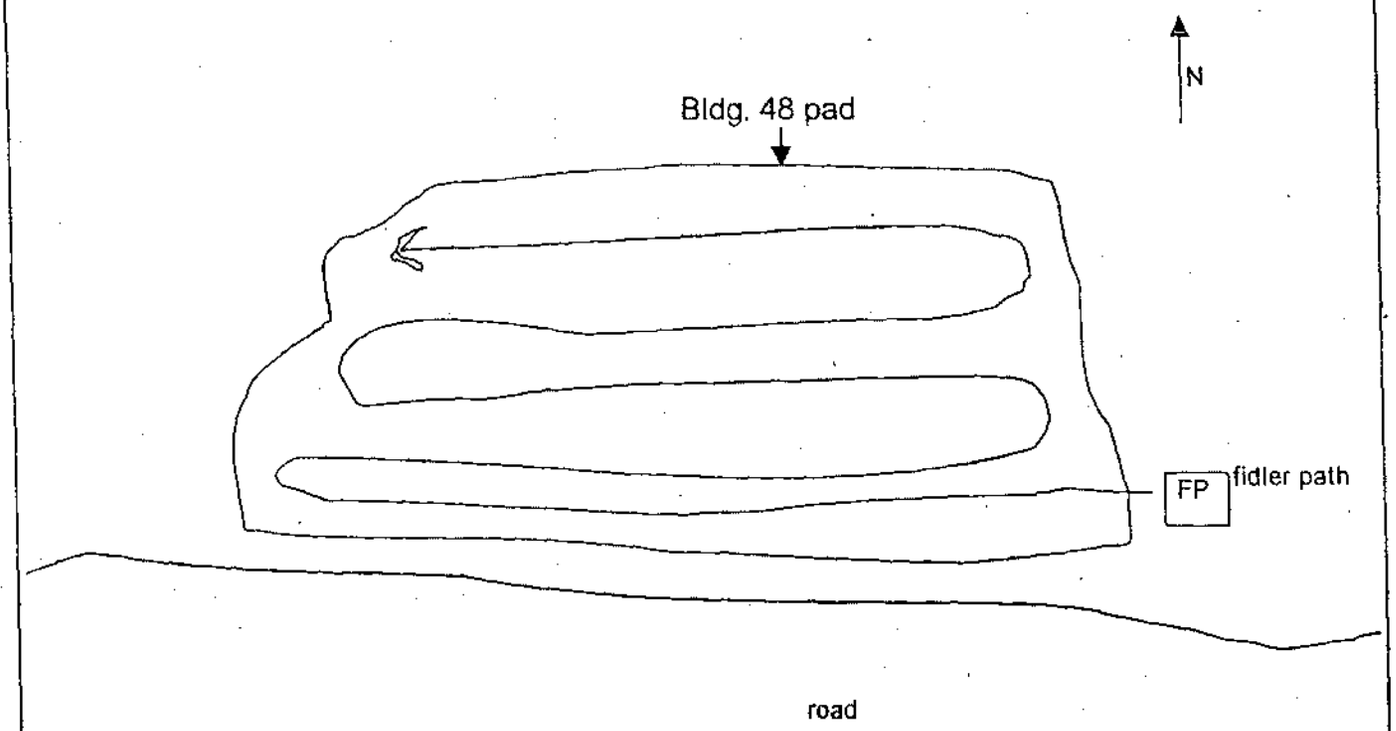
NOTE: ALL DOCK, INCLINED DRIVE, & curb debris disposed of via RAIL LSA.

COPY

RADIOLOGICAL SURVEY DATA SHEET

LOCATION (BLDG /AREA/ROOM): Bldg. 48 pad	SURVEY NO.: 05-TF-0324
PURPOSE: Fidler walkdown survey	RWP NO.: N/A
	DATE: 10/20/05
	10:30

MAP / DRAWING



fidler bk= 6000-8000 cpm OUT CHANNEL No readings above background
200-300 cpm IN CHANNEL No readings above background
* FIDLER READINGS USED AS INDICATOR ONLY

COPY

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

- mrem/hr neutron
- swipe number
- air sample number
#/α or /β - direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Bicron	3853/3965	6/1/06
	NA	

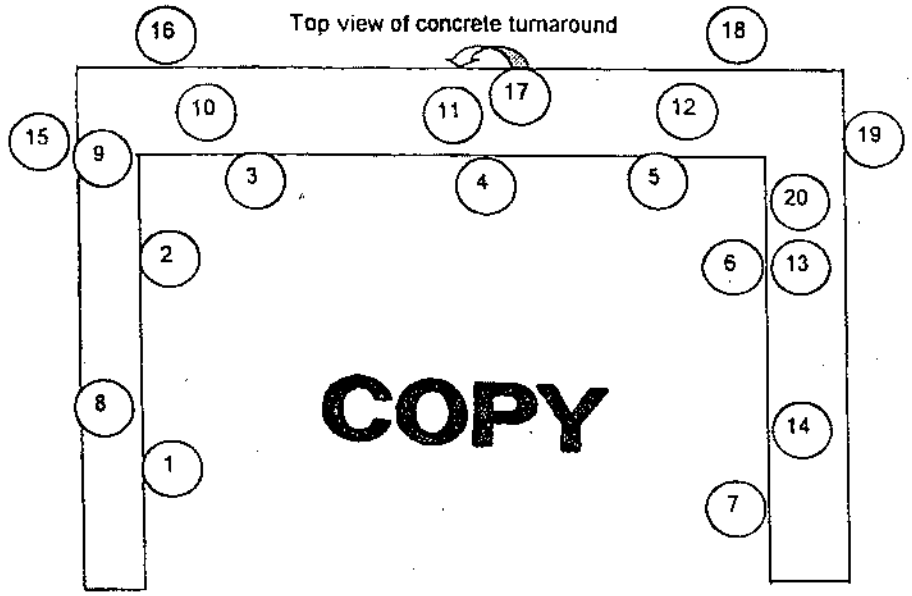
Completed by: (Signature) James M. Collins	HP# [redacted]	Date 10-20-05
Completed by: (Printed) L. Oeffner Jr. / J.M. Collins		
Counted by: (Signature) N/A	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) RM Coblentz	HP# [redacted]	Date 10/25/05
Reviewed/Approved by: (Print Name) RM Coblentz		

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Bldg 89 turnaround	SURVEY NO. 05-TF-0214
PURPOSE: Characterize concrete wall of turnaround	RWP NO. N/A
	DATE: 5/16/05
	TIME: 9:00

MAP / DRAWING

Top view of concrete turnaround



COPY

bkgd= 1 cpm alpha DL= 1.4 alpha
183 cpm beta 30 beta

Scan and pause survey performed.
No audible clicks, therefore no intergrates performed, except where noted
* See attached

<5K beta

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

- mrem/hr neutron
- swipe number
- air sample number
β/α or /β - direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360/4389	5794/5809	10/28/05
Lud 2360/439	5785/5802	3/1/06
	NA	

Completed by: (Signature)	HP# [redacted]	Date 5/19/05
Completed by: (Printed) L. Oeffner Jr. / Jamie Collins		
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature)	[redacted]	Date 5/25/05
Reviewed/Approved by: (Print Name) RMCoblentz		

Survey No. 05-TF-0214

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination						
Swipes (dpm/100cm^2)						
Sample #	β/γ		Alpha		Tritium	Comments
1	SEE ATTACHED SHEET					concrete wall
2						concrete wall
3						concrete wall
4						concrete wall
5						concrete wall
6						concrete wall
7						concrete wall
8						concrete wall
9						concrete wall
10						concrete wall
11						concrete wall
12						concrete wall
13						concrete wall
14						concrete wall
15						concrete wall
16						concrete wall
17						concrete wall
18						concrete wall
19						concrete wall
20						concrete wall
			N		A	

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

COMMENTS: None

NOTES:

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

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMBAR011
Batch Ended: 5/16/05 14:56
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF-0214 COLLINS [20] GWD

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A1	1	0.00	2.23		2.30	2.62	
A2	2	0.00	2.02		0.42	1.65	
A3	3	0.00	2.27		0.00	1.27	
A4	4	0.00	2.10		0.00	1.22	
B1	5	0.00	1.88		0.00	1.20	
B2	6	1.33	1.87		0.00	1.59	
B3	7	1.93	2.22		1.41	2.30	
B4	8	5.13	3.88		0.00	1.21	
C1	9	0.00	2.05		0.00	1.23	
C2	10	0.00	1.92		0.47	1.59	
C3	11	0.00	2.10		2.70	2.43	
C4	12	0.00	1.95		0.00	1.12	
D1	13	0.00	2.05		0.00	1.25	
D2	14	0.00	2.15		0.00	1.19	
D3	15	0.00	2.09		0.00	1.25	
D4	16	0.00	2.05		0.20	1.66	
A1	17	1.74	2.22		0.81	2.27	
A2	18	0.00	2.02		0.42	1.65	
A3	19	0.00	2.27		0.00	1.27	
A4	20	0.00	2.10		0.00	1.22	

g.c g.c

B26 of 34

3 of 7

GWD

g.c 5/17/05 ~~Page 1 of 1~~ Page 7 of 7

16 May 2005 16:28 ALPHA/BETA - 1.09 ~~Page #1~~
Protocol #: 6 PW H3 #403727 User : 2138

Time: 2.00
Data Mode: DPM Nuclide: SMGLS02 Quench Set: SMGLS02
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	8.01
Region B:	2.0	- 18.6	0	0.0	7.47
Region C:	40.0	- 2000	0	0.0	9.90

Quench Indicator: tSIE/AEC
~~Ext-Std~~ Terminator: Count
05-TF-0214 J.COLLINS (20) AG
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT6.dat
Count Data Filename: C:\DATA\SDATA6.DAT

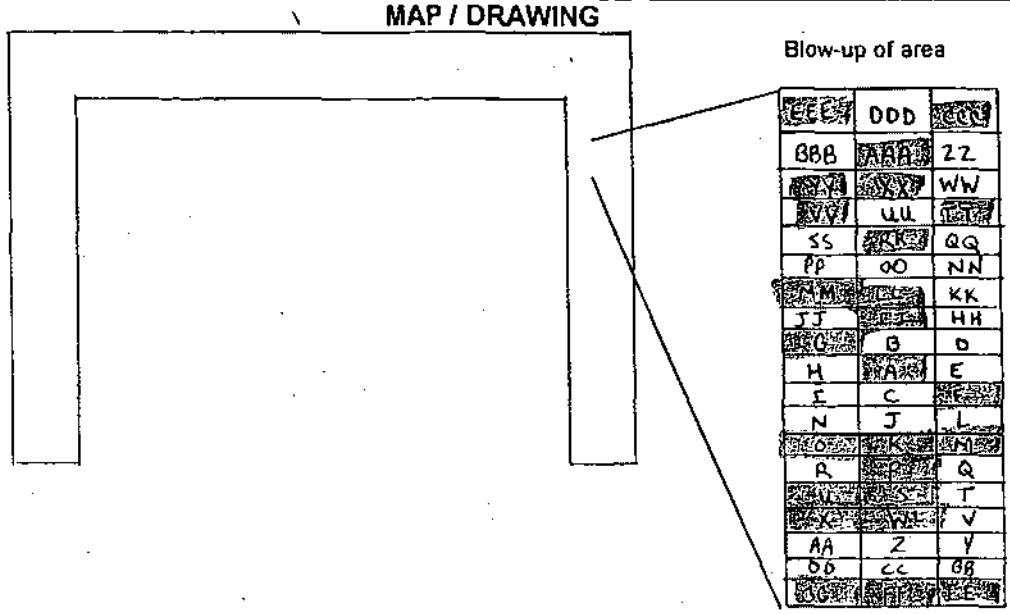
S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	8.01	7.47	9.90	684.02	1	B		0.00
0	2.00	566.29	547.71	3.10	611.40	1		1180.23	111.89
1	2.00	2.70	3.24	0.00	652.37	0		5.43	9.99
2	2.00	0.00	0.00	2.10	647.54	0		0.00	0.00
3	2.00	0.00	0.02	0.00	682.33	0		0.00	0.00
4	2.00	1.80	1.59	0.00	656.97	0		3.62	9.58
5	2.00	0.00	0.00	0.00	668.05	0		0.00	0.00
6	2.00	0.00	0.00	0.00	645.85	0		0.00	0.00
7	2.00	0.00	0.00	0.00	662.63	0		0.00	0.00
8	2.00	0.00	0.53	1.60	671.14	0		0.00	0.00
9	2.00	0.00	0.00	0.00	666.83	0		0.00	0.00
10	2.00	1.99	1.45	0.00	648.76	0		4.02	9.73
11	2.00	1.99	2.53	1.10	660.44	0		3.98	9.63
12	2.00	2.99	2.73	0.00	670.71	0		5.93	9.96
13	2.00	1.49	1.65	0.00	657.86	0		2.99	9.44
14	2.00	2.49	3.03	0.00	661.28	0		4.98	9.84
15	2.00	2.49	3.03	0.00	643.43	0		5.05	9.98
16	2.00	0.49	0.67	0.00	649.49	0		0.99	9.07
17	2.00	0.00	0.00	3.10	659.98	0		0.00	0.00
18	2.00	0.00	0.00	2.60	673.65	0		0.00	0.00
19	2.00	2.51	2.65	0.00	669.23	0		4.99	9.78
20	2.00	4.95	4.71	0.00	665.68	0		9.86	10.77

g.c

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) Bldg 89 concrete wall turnaround	SURVEY NO. 05-TF-0214
PURPOSE: intergrates map (cont. sheet)	RWP NO. N/A
	DATE: 5/16/05
	TIME: 9:00

MAP / DRAWING



* Intergrate readings taken in a one square meter surface area, surrounding original intergrate "A" for averaging. Final average of all intergrates is 98 dpm/100cm².

LEGEND:

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360/4389	5794/5809	10/28/05
	NA	

Completed by: (Signature)	HP# [redacted]	Date 5/17/05
Completed by: (Printed	L. Oeffner Jr. / Jamie Collins	
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature)	HP#	Date
Reviewed/Approved by: (Print Name)		

Survey No.
05-TF-0214

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Ludlum 2360 Integrated Measurement Results							
		Alpha			Beta		
		BKGD	1	cpm	BKGD	183	cpm
		DL	1.4	Net cpm	DL	30	Net cpm
No.	Item/Location Description	Gross (cpm)	CF	Results (dpm/100cm2 or Sample)	Gross (cpm)	CF	Results (dpm/100cm2 or Sample)
A	concrete wall	18	8	136	273	4	360
B	concrete wall	7	8	48	257	4	296
C	concrete wall	11	8	80	227	4	176
D	concrete wall	8	8	56	263	4	320
E	concrete wall	12	8	88	251	4	272
F	concrete wall	17	8	128	281	4	392
G	concrete wall	17	8	128	253	4	280
H	concrete wall	9	8	64	251	4	272
I	concrete wall	11	8	80	228	4	180
J	concrete wall	10	8	72	288	4	420
K	concrete wall	17	8	128	254	4	284
L	concrete wall	7	8	48	260	4	308
M	concrete wall	14	8	104	254	4	284
N	concrete wall	12	8	88	256	4	292
O	concrete wall	14	8	104	231	4	192
P	concrete wall	18	8	136	265	4	328
Q	concrete wall	12	8	88	246	4	252
R	concrete wall	12	8	88	253	4	280
S	concrete wall	17	8	128	271	4	352
T	concrete wall	13	8	96	248	4	260
U	concrete wall	17	8	128	239	4	224
V	concrete wall	9	8	64	253	4	280
W	concrete wall	17	8	128	261	4	312
X	concrete wall	18	8	136	242	4	236
Y	concrete wall	10	8	72	249	4	264
Z	concrete wall	12	8	88	240	4	228
				A			
				N			

ML-9620C

Survey No.
05-TF-0214

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Ludlum 2360 Integrated Measurement Results							
		Alpha			Beta		
		BKGD	3	cpm	BKGD	144	cpm
		DL	1.4	Net cpm	DL	30	Net cpm
No.	Item/Location Description	Gross (cpm)	CF	Results (dpm/100cm2 or Sample)	Gross (cpm)	CF	Results (dpm/100cm2 or Sample)
AA	concrete wall	14	8	88	255	4	76
BB	concrete wall	13	8	80	264	4	0
CC	concrete wall	16	8	104	263	4	476
DD	concrete wall	11	8	64	254	4	440
EE	concrete wall	17	8	112	251	4	428
FF	concrete wall	17	8	112	274	4	520
GG	concrete wall	19	8	128	243	4	396
HH	concrete wall	14	8	88	206	4	248
II	concrete wall	16	8	104	246	4	408
JJ	concrete wall	13	8	80	236	4	368
KK	concrete wall	14	8	88	230	4	344
LL	concrete wall	22	8	152	239	4	380
MM	concrete wall	20	8	136	201	4	228
NN	concrete wall	15	8	96	207	4	252
OO	concrete wall	15	8	96	208	4	256
PP	concrete wall	11	8	64	212	4	272
QQ	concrete wall	13	8	80	219	4	300
RR	concrete wall	16	8	104	225	4	324
SS	concrete wall	13	8	80	230	4	344
TT	concrete wall	17	8	112	223	4	316
UU	concrete wall	10	8	56	225	4	324
VV	concrete wall	19	8	128	205	4	244
WW	concrete wall	14	8	88	235	4	364
XX	concrete wall	17	8	112	230	4	344
YY	concrete wall	17	8	112	195	4	204
ZZ	concrete wall	15	8	96	215	4	284
AAA	concrete wall	18	8	120	224	4	320
BBB	concrete wall	13	8	80	205	4	244
CCC	concrete wall	16	8	104	208	4	256
DDD	concrete wall	14	8	88	230	4	344
EEE	concrete wall	18	8	120	224	4	320

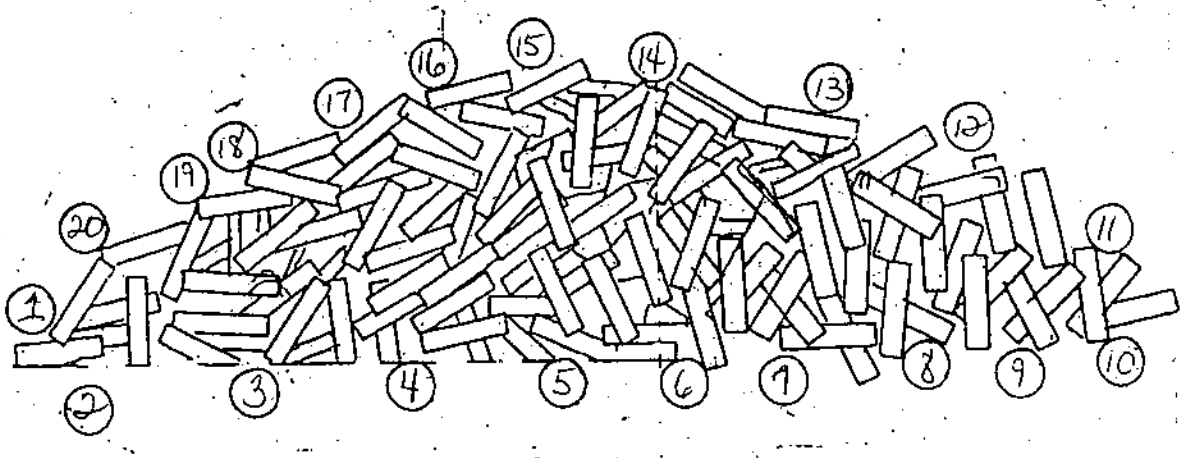
ML-9620C

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) Between OSE and Powerhouse	SURVEY NO. 05-TF-0232
PURPOSE: Characterization survey of concrete debris pile w/ rebar from 89 turnaround structure	RWP NO. N/A
	DATE: 5/25/05
	TIME: 1230

MAP / DRAWING

COPY



Bkgd 1.4 cpm α
199 cpm β⁻
D.L 1.8 cpm α
20 cpm β⁻

Scan & pause survey conducted at each smear location and other various locations
No audible clicks in required time
Integrated counts not required

<400 / α <5K / β⁻

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360-89	5751/5785	11-2-05
	N/A	

Completed by: (Signature) James M Collins / L Oeffner	HP# [redacted]	Date: 5-26-05
Completed by: (Print Name) James M Collins / L Oeffner Jr		
Counted by: (Signature) See	HP#	Date:
Counted by: (Print Name) Attached		
Reviewed/Approved by: (Signature) RM Coblentz	HP# [redacted]	Date: 5/31/05
Reviewed/Approved by: (Print Name) RM Coblentz		

Survey No. 0232
05-TF-~~0239~~ JS 10/5/05

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm^2)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See Attached			concrete
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				rebar
13				concrete
14				
15				
16				
17				
18				rebar
19				concrete
20				
		NFE		

Removable Contamination				
Swipes (dpm/100cm^2)				
Sample #	β/γ	Alpha	Tritium	Comments
		NFE		

COMMENTS: All smears field checked with 2360 prior to submitting to count lab.
NFE = No Further Entries

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:	Smear Unit 2 - 200505251445	**Count Date:**	5/25/2005
Group:	E	**Count Minutes:**	1.5
Serial Number:	78218-2	**Count Mode:**	Simultaneous
Batch ID:	05-TF-0232 OEFFNER (20) 05/25/05 TAS	**Operating Volts:**	1470
Selected Geometry:	Swipe/Smear	**Calibration Due Date:**	5/02/06

Efficiency (%)

Alpha:	34.57	±	0.16
Beta:	47.12	±	0.11

Sample ID	Carrier ID	Alpha (dpm)	σ	Beta (dpm)	σ
1	97	0.00	0.00	4.88	2.83
2	88	0.00	0.00	1.22	1.41
3	62	0.00	0.00	1.22	1.41
4	74	0.00	0.00	1.22	1.41
5	26	0.00	0.00	0.00	0.00
6	41	0.00	0.00	0.00	0.00
7	56	0.00	0.00	1.22	1.41
8	37	0.00	0.00	2.44	2.00
9	55	0.00	0.00	4.88	2.83
10	63	0.00	0.00	2.44	2.00
11	11	0.00	0.00	2.44	2.00
12	53	2.07	1.93	81.71	11.58
13	78	0.00	0.00	0.00	0.00
14	40	0.00	0.00	2.44	2.00
15	65	2.07	1.93	3.66	2.45
16	71	0.00	0.00	0.00	0.00
17	23	0.00	0.00	2.44	2.00
18	60	0.00	0.00	1.22	1.41
19	3	0.00	0.00	1.22	1.41
20	72	0.00	0.00	1.22	1.41
		JC		JC	

Batch ID: 05-TF-0232 OEFFNER (20) 05/25/05 TAS

JC 5/26/05 ~~Page 1 of 1~~

25 May 2005 16:08 ALPHA/BETA - 1.09
Protocol #: 4 Pw-H3 #403728

User : 5801

Time: 2.00
Data Mode: DPM
Background Subtract: 1st Vial

Nuclide: SMGL02

Quench Set: SMGL02

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	8.90
Region B:	2.0 -	18.6	0	0.0	8.52
Region C:	40.0 -	2000	0	0.0	11.10

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0232 OFFNER [20] GWD
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\proti.dat
Count Data Filename: c:\data\SDATA4.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	CPMC	LUM	tSIE	DPM1	2Sigma	FLAG
-1	10.00	8.90	8.52	11.10	2	697.87		0.00	B
0	2.00	591.15	558.27	0.00	0	617.09	1080.67	90.78	
1	2.00	0.60	0.98	0.00	0	633.96	1.08	8.56	
2	2.00	2.10	2.17	0.00	0	622.35	3.82	9.21	
3	2.00	92.60	52.77	1.90	0	622.00	168.60	28.06	
4	2.00	2.60	2.98	0.00	4	637.20	4.68	9.27	
5	2.00	0.00	0.00	0.00	0	658.07	0.00	0.00	
6	2.00	0.10	0.00	0.00	0	639.63	0.18	8.33	
7	2.00	0.00	0.00	0.00	0	630.50	0.00	0.00	
8	2.00	7.10	4.34	1.90	0	656.92	12.57	10.58	
9	2.00	2.10	1.09	0.00	0	666.74	3.69	8.88	
10	2.00	5.26	5.14	0.00	0	618.25	9.60	10.33	
11	2.00	0.00	0.00	0.00	0	663.68	0.00	0.00	
12	2.00	1.05	1.43	0.00	0	607.39	1.93	8.92	
13	2.00	4.10	4.48	0.00	0	643.94	7.33	9.73	
14	2.00	0.60	0.98	0.40	5	621.32	1.09	8.65	
15	2.00	1.10	0.48	0.78	0	631.28	1.99	8.77	
16	2.00	0.60	0.98	0.00	0	661.19	1.06	8.38	
17	2.00	0.00	0.38	0.00	0	661.80	0.00	0.00	
18	2.00	0.00	0.00	2.90	0	617.25	0.00	0.00	
19	2.00	8.42	9.41	5.40	53	604.94	15.55	18.57	
20	2.00	0.00	0.00	0.00	0	625.63	0.00	0.00	

JC

APPENDIX C

PRS Recommendation Sheets

MOUND PLANT
PRS #123

RECOMMENDATION:

PRS 123 was identified as a result of a December 1970 waste line break. Several radionuclides (including Cobalt-60) are present in the soils at PRS 123 at a greater than 1 in 10,000 (10^{-4}) risk level.

Therefore, a RESPONSE ACTION is recommended for PRS 123.

CONCURRENCE:

DOE/MEMP: _____ 9/18/00
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 9/18/00
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 9/18/00
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from _____ to _____

☐ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

R

MOUND PLANT
PRS 124

BUILDING 48 HILLSIDE

RECOMMENDATION:

Potential Release Site (PRS) 124 was identified due to a release on Nov. 9, 1967. 1,500 to 2,000 gallons of low-level radioactive wastewater were accidentally released during waste line repair. Several Main Hill radiological process waste lines join near this location and continue to the Waste Disposal (WD) Building. Soil Sampling accomplished in support of a construction project (Circa 1986) indicated Plutonium-238 concentrations as high as 32,000 pCi/g.

Therefore, a RESPONSE ACTION is recommended for PRS 124.

CONCURRENCE:

DOE/MEMP: _____ 6/19/01
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 6/19/01
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 6/19/01
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from Aug 14-02 to Sept 14-02

☐ No comments were received during the comment period.

☑ Comment responses can be found on first page _____ of this package.

RECOMMENDATION

PRS 31-36, 125, & 270 Package

Potential Release Sites (PRSs) 31-36, 125, and 270 were identified as PRSs as a result of breaks and/or separations in Mound's sanitary sewer lines, identified during a 1982 video survey of the lines. Radionuclides were not considered contaminants of concern. The concern was the potential release of non-radioactive contaminants into the environment from the identified breaks in the lines. A subsequent project repaired these lines by replacing them or by extruding a liner at the point of the breaks. Soil sampling was performed and results for all non-radioactive analytes were below 10^{-5} Risk-Based Guideline Values.

Therefore, the Core Team recommends <u>No Further Assessment</u> for PRSs 31-36, 125, and 270.

11-27-02

Rob Rothman, OSC
U.S. Department of Energy
Miamisburg, Ohio

11/26/02

Tim Fischer, RPM
USEPA
Chicago, Illinois

11/27/02

Brian Nickel
OEPA
Dayton, Ohio

MOUND PLANT
PRS 236
SOIL CONTAMINATION
SW BUILDING DOCK AREA

RECOMMENDATION:

Potential Release Site (PRS) 236 was identified after 34.5 pCi/g of plutonium-238 was detected in a surface sample, location S0166, collected from the dock area on the southwest corner of SW Building in 1983-84. Four (4) adjacent samples ranged from 0.22 pCi/g - 1.76 pCi/g. All are below the 10^{-5} Guideline Value of 55 pCi/g. Toluene was the only volatile organic compound (VOC) detected. The toluene concentration ranged from 0-106 parts per billion (ppb), which is below the calculated guideline value of 414,600 ppb.

In 1995, five surface samples were collected from the S0166 location.. These samples were field screened for radioactivity and VOCs to supplement the previous investigations. No radioactivity above background levels or soil gas VOCs were detected.

Since the detection of a slightly elevated level of plutonium-238 was limited to the one of five samples and additional sampling indicated no detections above background, NO FURTHER ASSESSMENT is recommended for PRS 236.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath, Remedial Project Manager — 5/8/96 (date)

USEPA: Timothy J. Fischer, Remedial Project Manager — 5/8/96 (date)

OHIO EPA: Brian K. Nickel, Project Manager — 5/8/96 (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 6/15/96 6/19/96 to 7/18/96 7/17/96

☒ No comments were received during the comment period.

☐ Comment responses can be found on page_____ of this package.

MOUND PLANT
PRS #423, 424, 425, 426, 427, 428
MAIN HILL UNDERGROUND LINES
H Building to WD Building

RECOMMENDATION:

PRS 423, 424, 425, 426, 427, and 428 were identified because the underground line segments carried radioactively contaminated effluent from H Building operations to the Waste Disposal building (WD).

Therefore, a RESPONSE ACTION is recommended for PRS 423, 424, 425, 426, 427, and 428.

CONCURRENCE:

DOE/MEMP: _____ 7/18/01
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 7/18/01
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 7/18/01
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from _____ to _____

☐ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

R

C5 of 9

MOUND PLANT
PRS #429, 430, 431, 432, 433

RECOMMENDATION:

PRSs 429, 430, 431, 432, & 433 were identified because the underground line segments carried radioactively contaminated effluent from T Building operations to the Waste Disposal building (WD). Several radionuclides (including Cobalt-60) are present in the waste lines at a greater than 1 in 10,000 (10^{-4}) risk level.

Therefore, a RESPONSE ACTION is recommended for PRSs 429, 430, 431, 432, & 433.

CONCURRENCE:

DOE/MEMP: _____ 9/18/00
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 9/18/00
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 9/18/00
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from _____ to _____

☐ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

R

MOUND PLANT
PRS #434, 435, 436

RECOMMENDATION:

PRSs 434, 435 and 436 were identified because the underground line segments carried radioactively contaminated effluent from T Building operations to the Waste Disposal building (WD). Several radionuclides (including Cobalt-60) are present in the waste lines at a greater than 1 in 10,000 (10^{-4}) risk level.

Therefore, a RESPONSE ACTION is recommended for PRSs 434, 435, & 436.

CONCURRENCE:

DOE/MEMP: _____ 9/18/00
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 9/18/00
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 9/18/00
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from _____ to _____

☐ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

R

MOUND PLANT
PRS #437, 438, 439
MAIN HILL UNDERGROUND LINES
Man Hole 20 to WD Building

RECOMMENDATION:

PRS 437, 438, and 439 were identified because the underground line segments carried radioactively contaminated effluent from R and SW Building operations to the Waste Disposal building (WD).

Therefore, a RESPONSE ACTION is recommended for PRS 437, 438, and 439.

CONCURRENCE:

DOE/MEMP: _____ 7/18/01
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 7/18/01
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 7/18/01
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from _____ to _____

☐ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

R

MOUND PLANT
PRS #440
MAIN HILL UNDERGROUND LINES
Building SW to Building WD

RECOMMENDATION:

PRS 440 was identified because the underground line segment carried radioactively contaminated effluent from SW Building operations to the Waste Disposal building (WD).

Therefore, a RESPONSE ACTION is recommended for PRS 440.

CONCURRENCE:

DOE/MEMP: _____ 7/18/01
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 7/18/01
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 7/18/01
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from _____ to _____

☐ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

R