

3006-0611010002



**CH2MHILL**

CH2M HILL Mound, Inc.  
1075 Mound Road  
P.O. Box 750  
Miamisburg, OH 45343-0750

SMO-455/06  
July 26, 2006

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; Closeout Reports for various buildings (see below), Final, Revision 1

Dear Mr. Pfister:

Attached are the following Final documents for your records:

- Building 48 Closeout Report, Final, Revision 1 ✓
- Building 128 Closeout Report, Final, Revision 1
- Buildings DS and 25 Closeout Report, Final, Revision 1
- P Building Closeout Report, Final, Revision 1

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

Sincerely,

Michael D. Ebben  
Site Manager

ME/jg

Enclosures

- cc: T. Fischer, USEPA, (1) w/attachments
- B. Nickel, OEPA, (1) w/attachments
- S. Helmer, ODH, (1) w/attachments
- J. Crombie, 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
- Public Reading Room, (1) w/attachments
- ER Records, CH2M Hill, (1) w/attachs
- DCC (1) w/attachments

- M. Ebben, 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
- S. Barr, CH2M Hill, w/o attachments
- M. McDougal, CH2M Hill, w/o attachments
- file, CH2M Hill, w/o attachments

3006-0611010002



Environmental  
Restoration  
Program

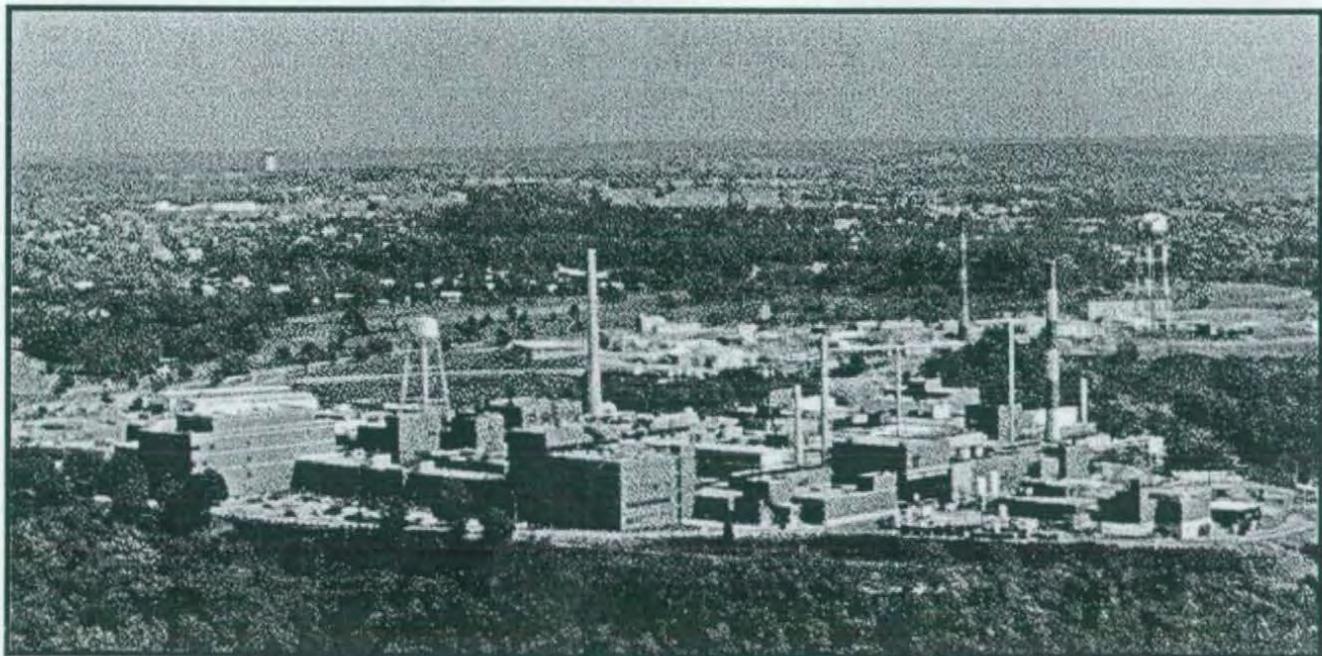


# Miamisburg Closure Project CLOSEOUT REPORT

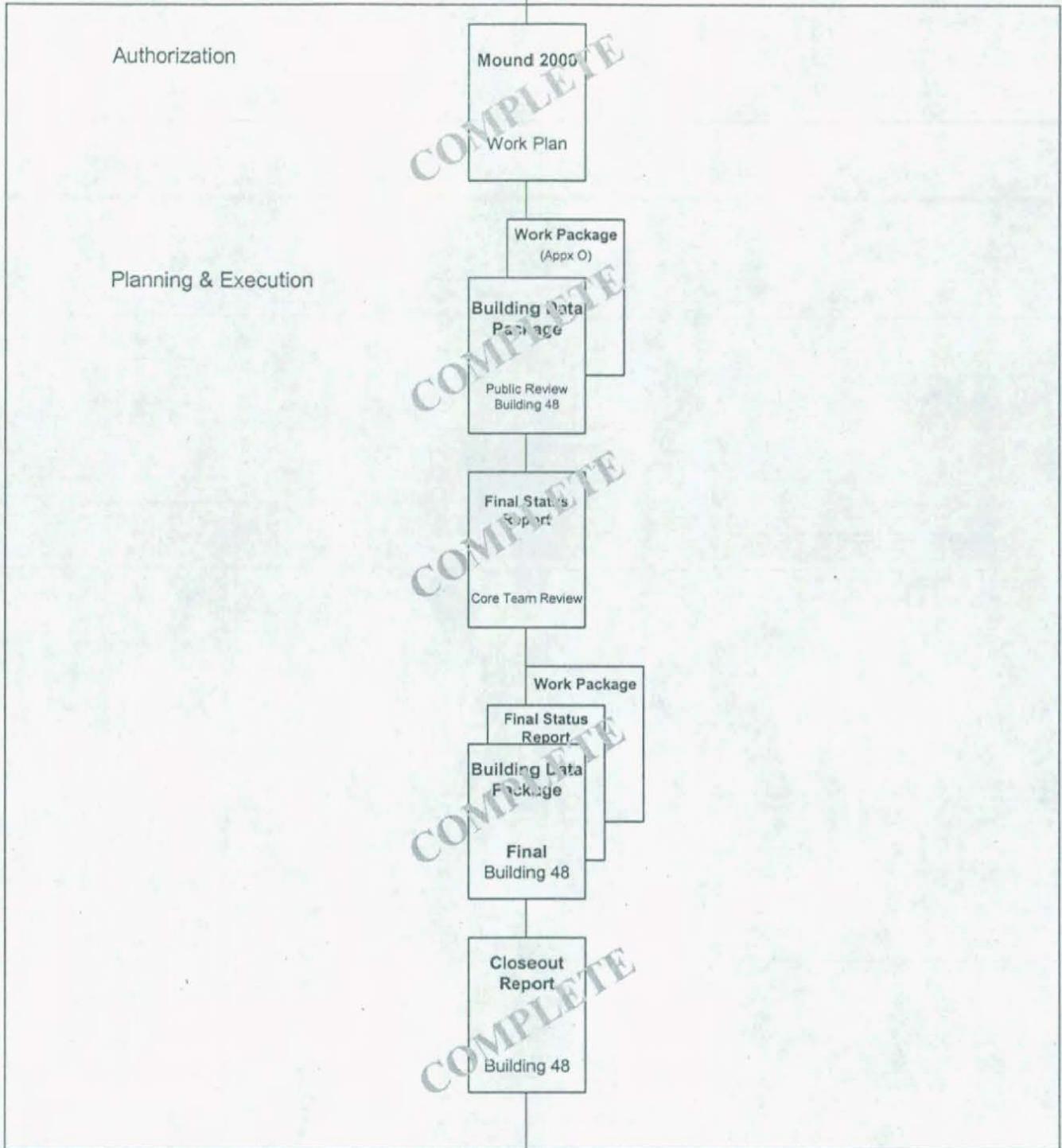
## Building 48

(Demolition included Building 89 Turn-Around)

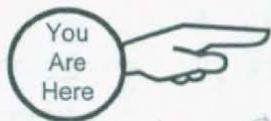
Final, Rev. 1  
July 2006



# Building 48



Completion



Closeout Report Rev. 1  
includes Addendum 1 Site Restoration Building 48

Revision 1 of this Closeout Report includes the Building 48 Closeout  
Report Addendum 1 in Appendix D

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## 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**

<b>Timeframe</b>	<b>Process or Function</b>
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**

<b>Building 48 Material</b>	<b>Quantity</b>	<b>Disposal Method</b>	<b>Destination</b>
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

<b>Building 89 Turn-Around Material</b>	<b>Quantity</b>	<b>Disposal Method</b>	<b>Destination</b>
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

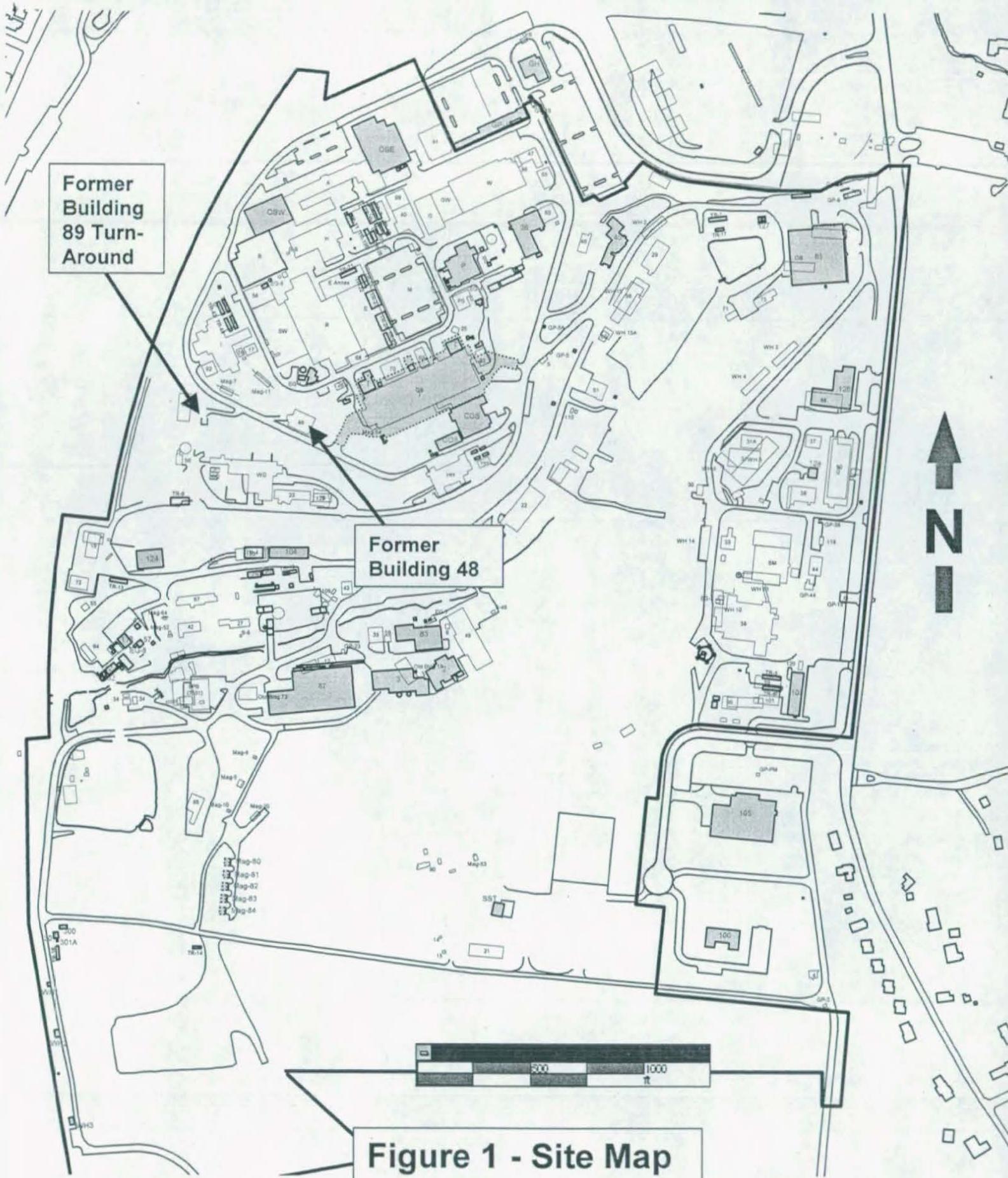
Under the new site contract, CH2M Hill Mound, Inc. has elected to cluster financial data for multiple buildings together. Although Building 48 is the only building in Cluster 48, the demolition costs for the demolition of the Building 89 turn-around are included in the total cluster costs for Building 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**

<b>Activity</b>	<b>Cost</b>
Work Planning	\$26K
Facility Prep	\$86K
Demolition	\$68K
<b>Total</b>	<b>\$180K</b>

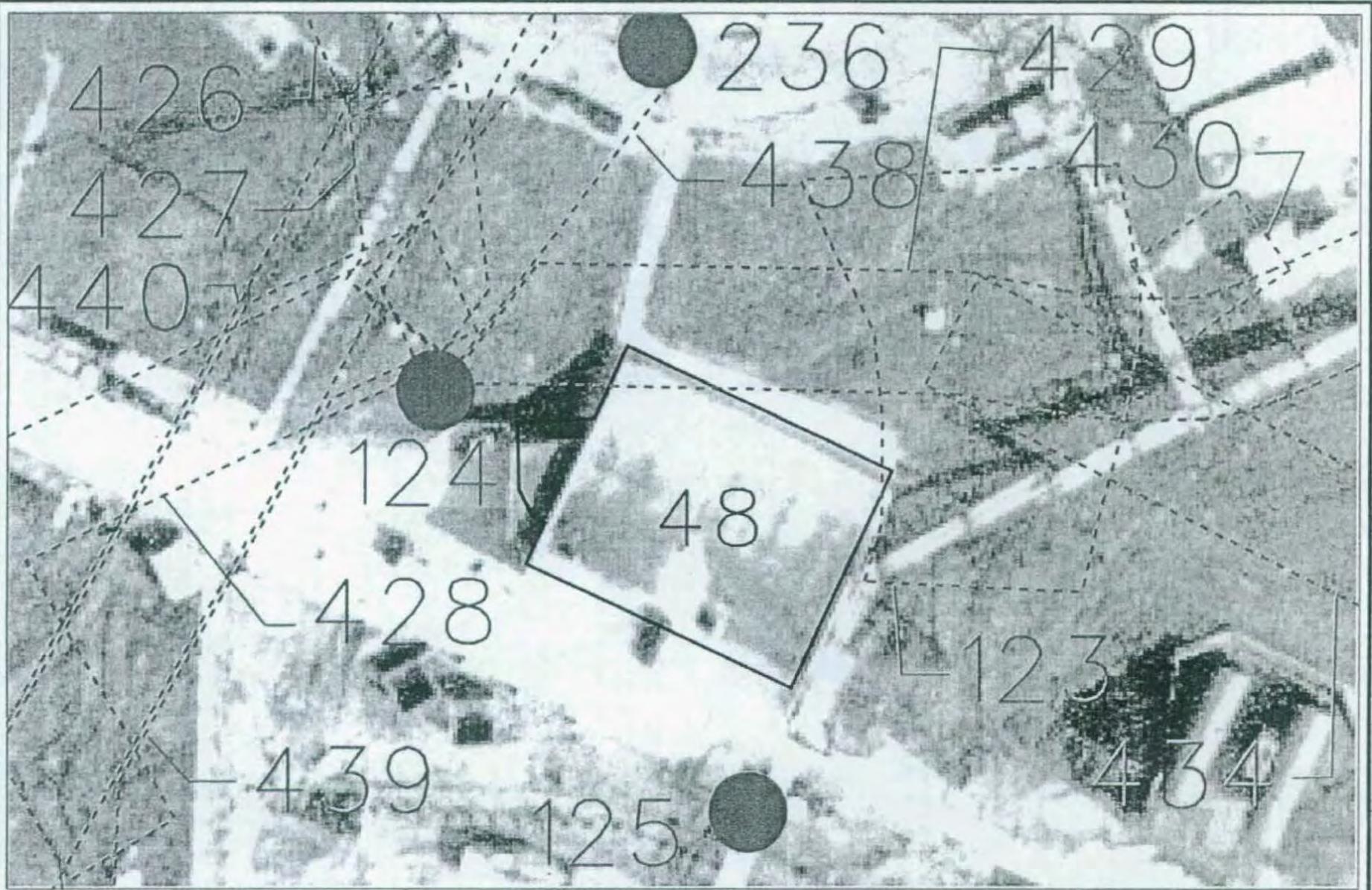
## APPENDIX A

### Figures



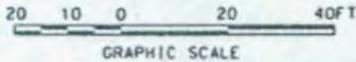
**Figure 1 - Site Map**

Figure 2: Building 48 and Vicinity



A2 of 8

- PRS Point
- - - PRS Area
- ~ PRS Line



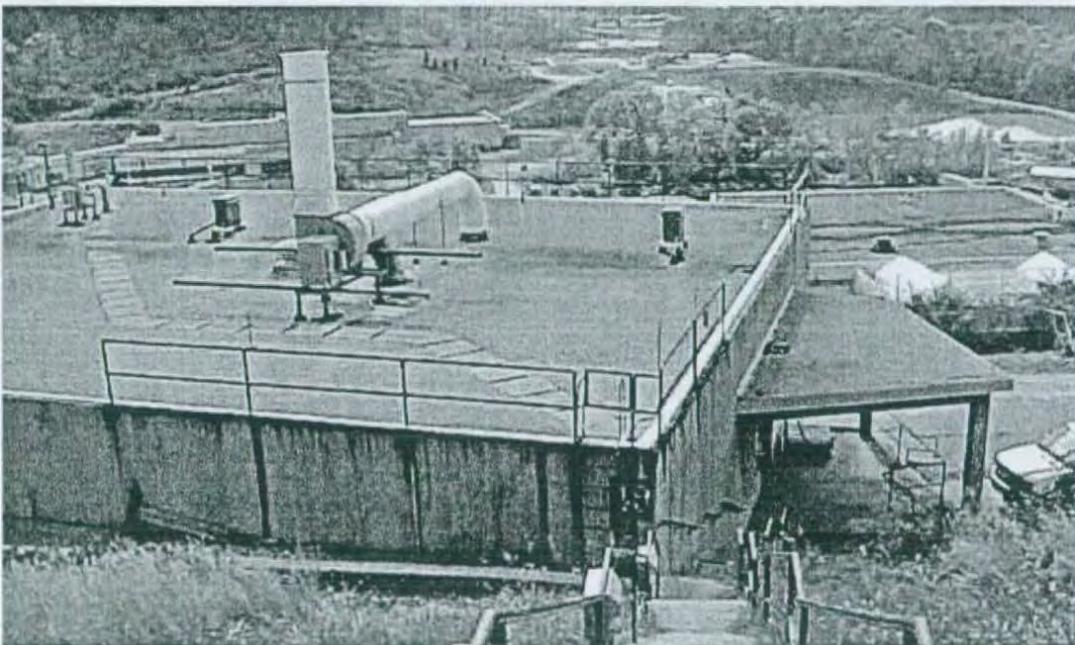
SHEET	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
ISSUE																						
SHEET	1	2	3	4	5	6																
ISSUE																						
PART CLASSIFICATION																						
DRAWING CLASSIFICATION							Figure 2 Building 48 and Vicinity															
UNCLASSIFIED							TITLE NUMBER vicinity.dgn							JOB NUMBER								
DATE	BY	CHKD	ENG	APVD	DATE	SCALE	SHEET 1 OF 1															
STATUS MD-REF-09/08/03							ORIGIN INSTATION / J															

10/10/03		SSP					
ISS	DATE	REVISION	BY	CHKD	ENG	APVD	#

**Figure 3 - Building Photos**



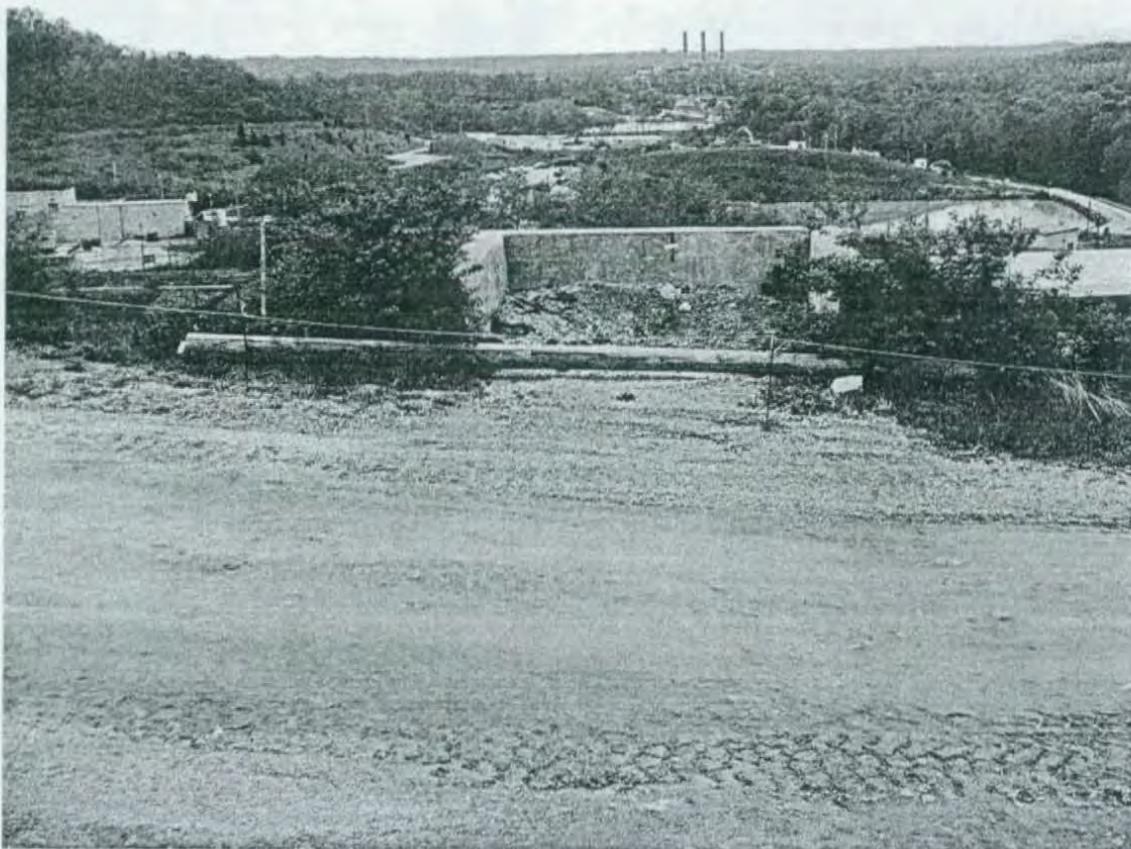
**View from the west**



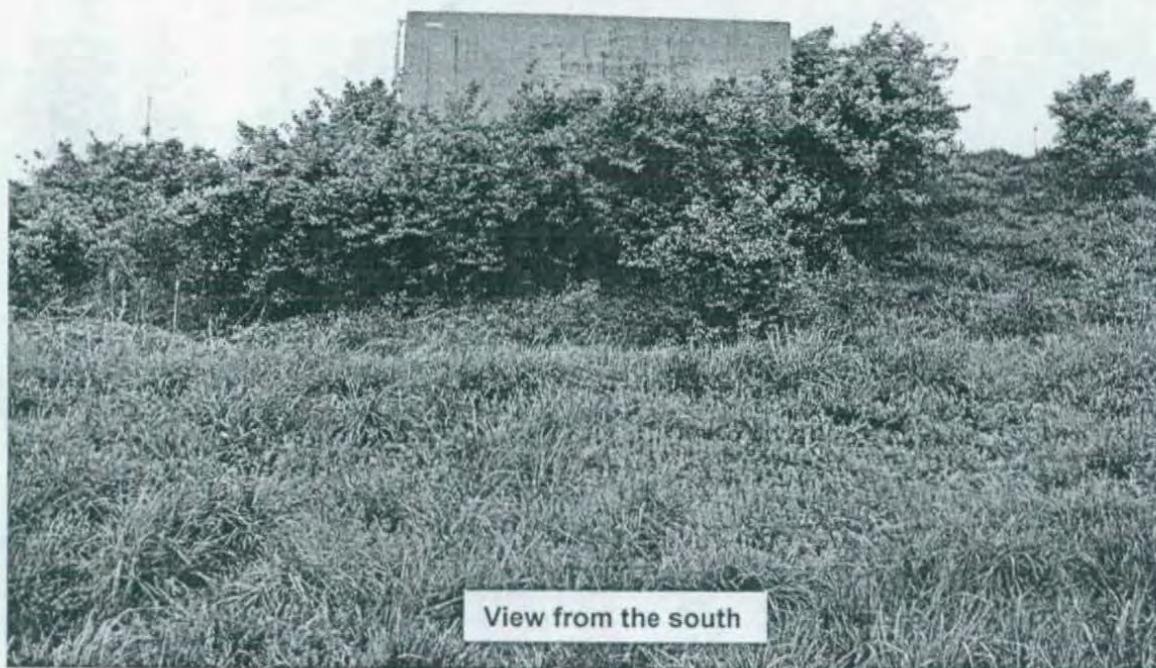
**View from the north**

**Building 48 – Prior to Demolition**

*A3 of 8*

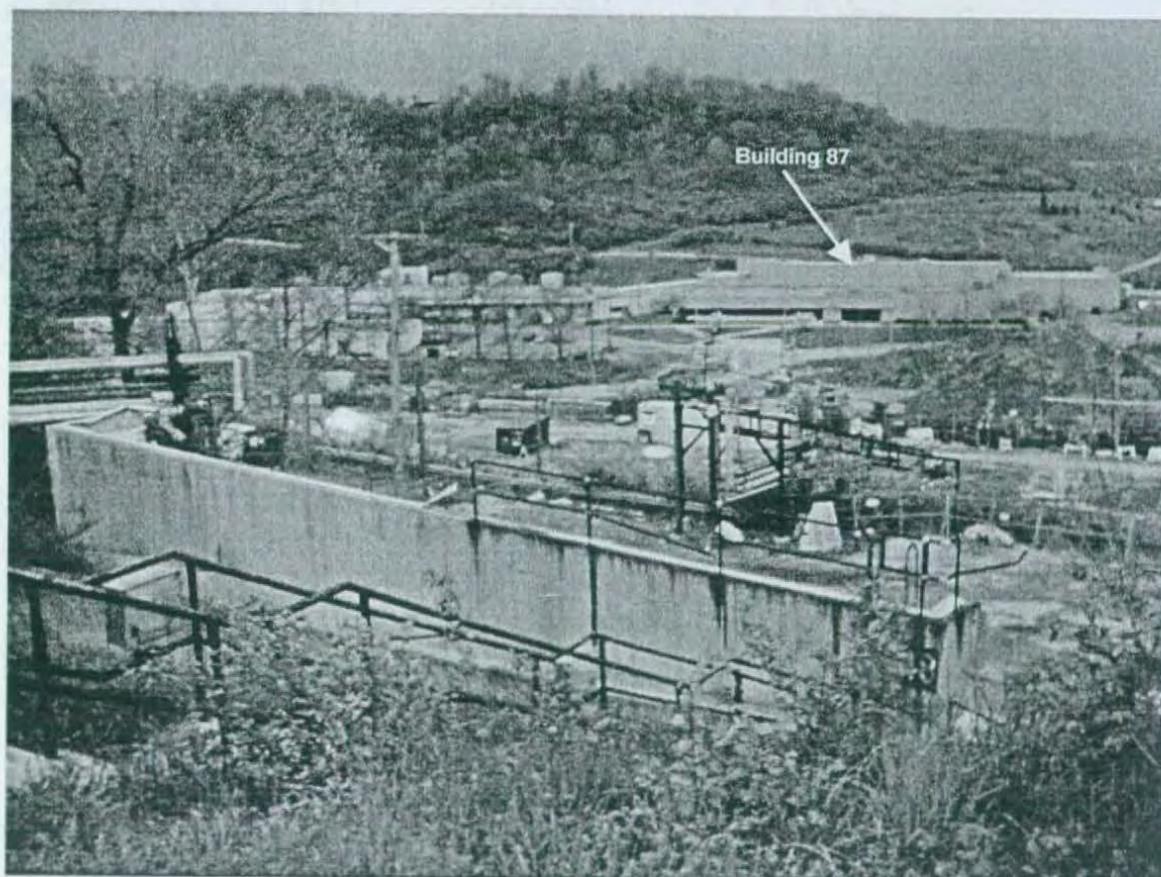
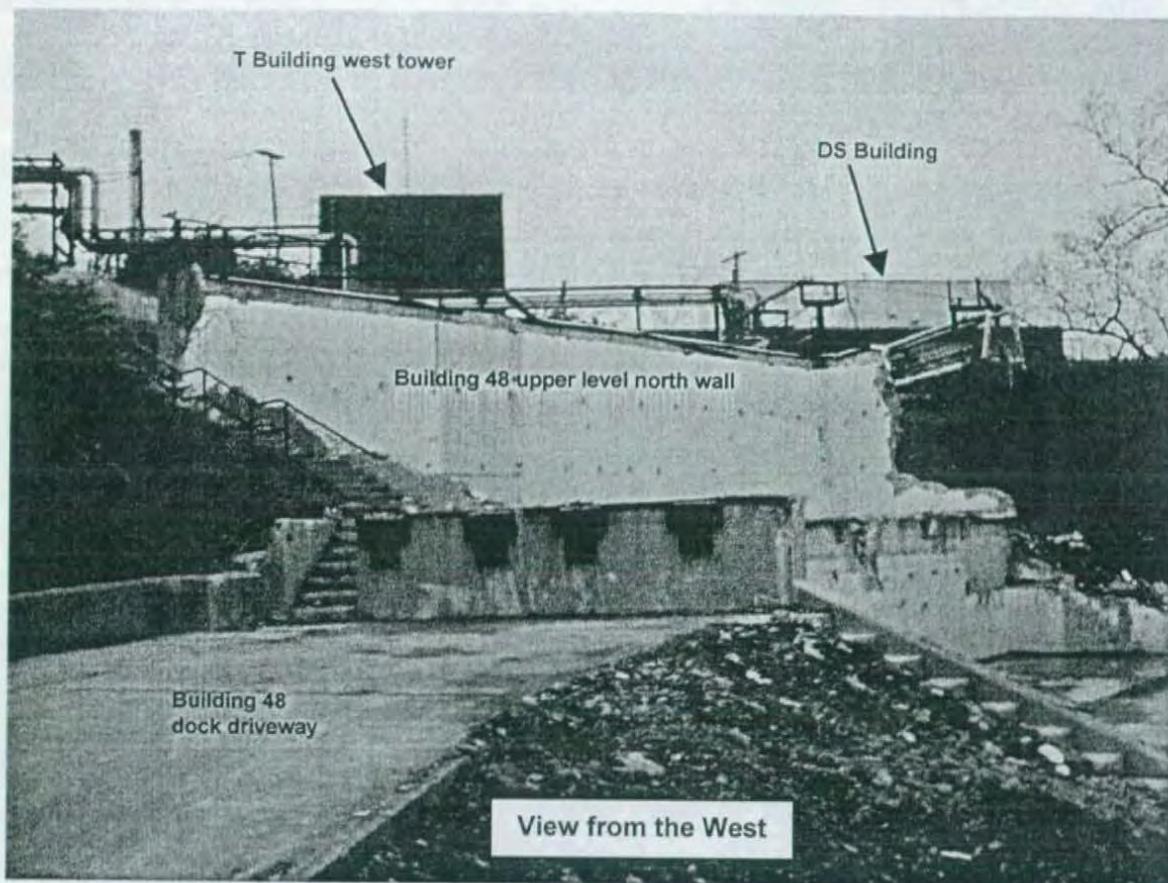


View from the north



View from the south

Building 89 Turn-Around – Prior to Demolition

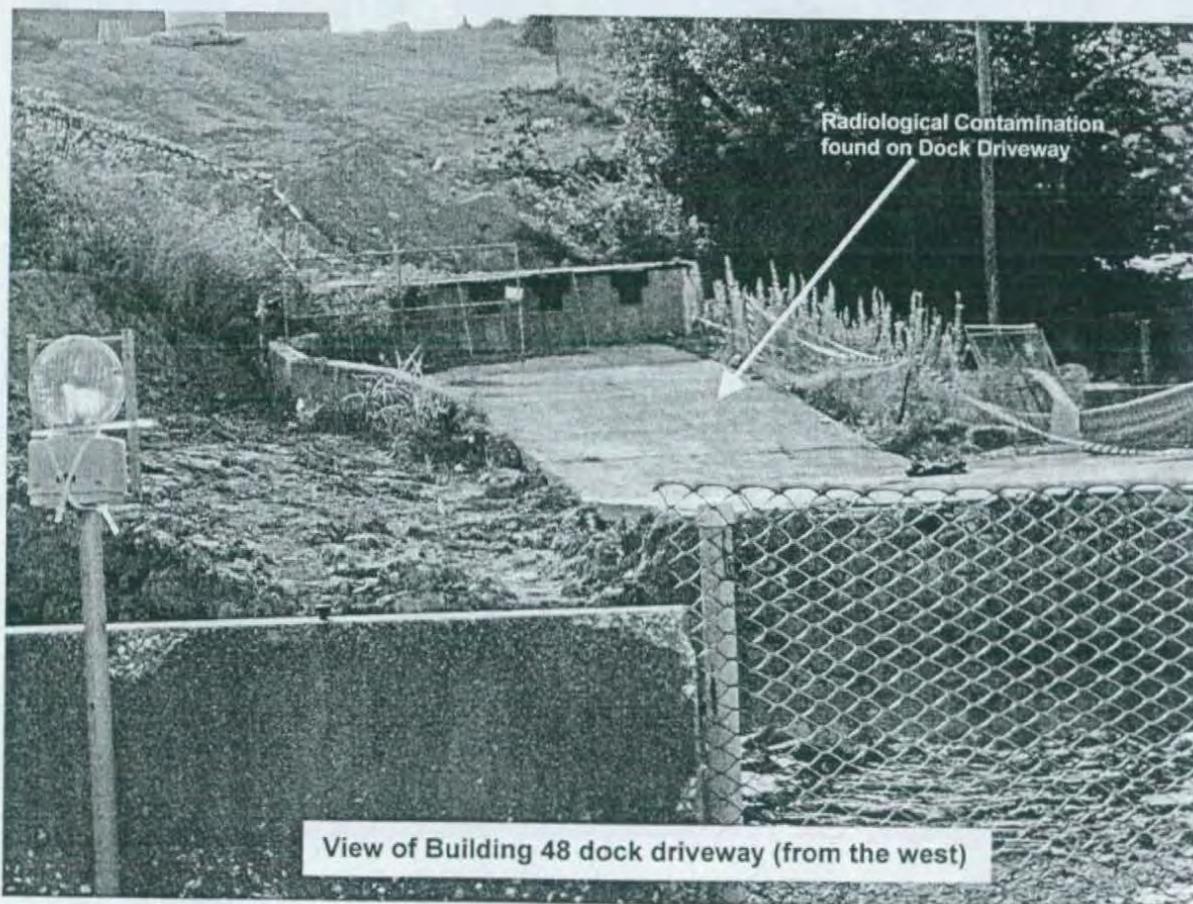


View from the north

Building 48 - During Demolition



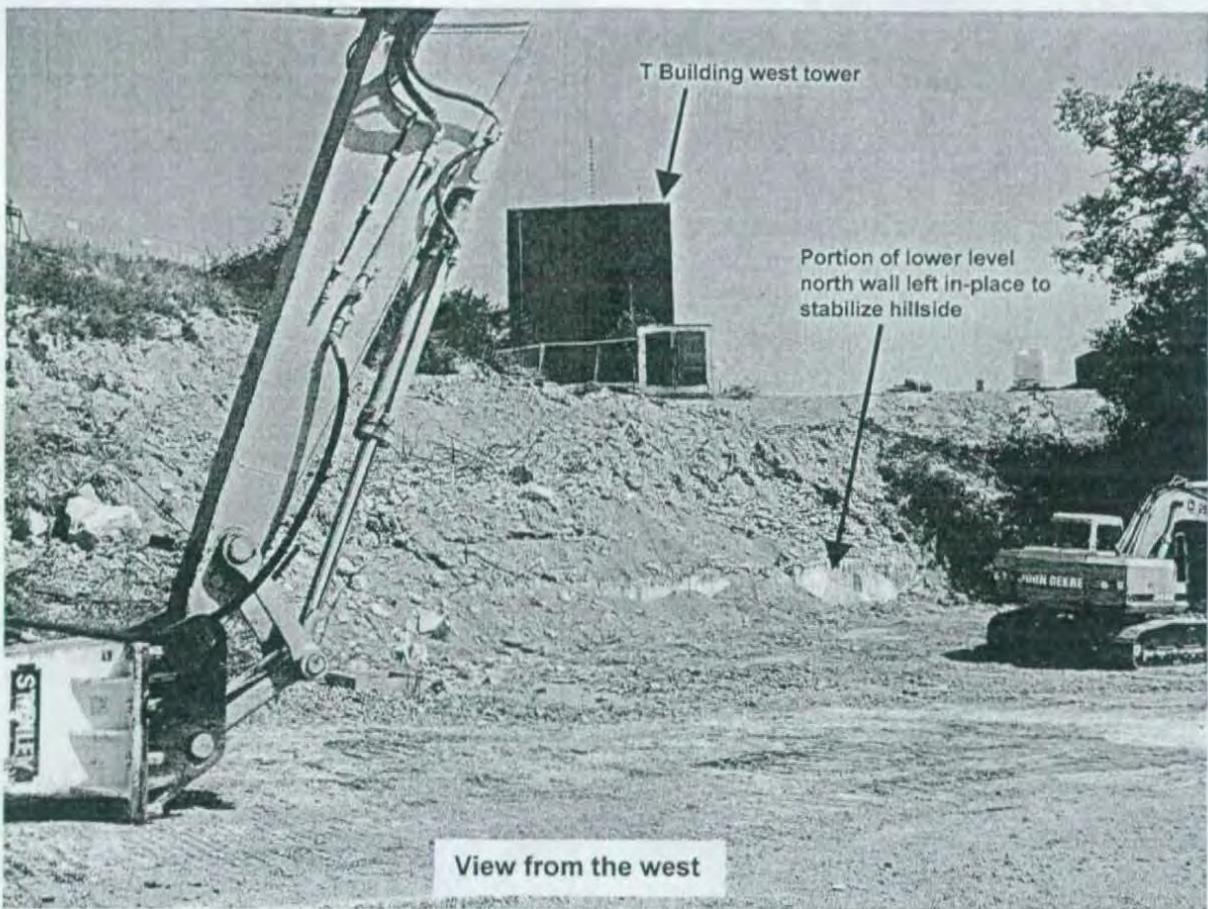
North wall of Building 48 - Group 9 work to the right in photo



Radiological Contamination  
found on Dock Driveway

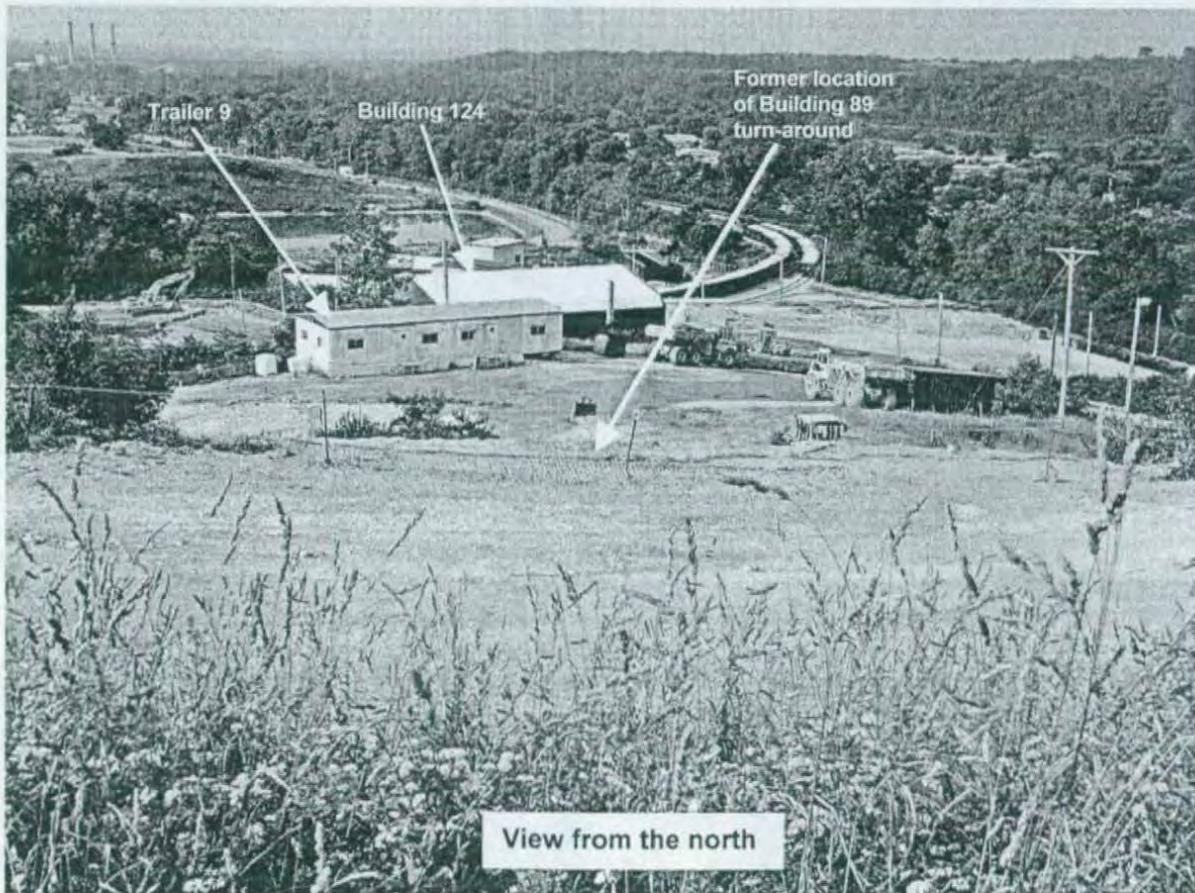
View of Building 48 dock driveway (from the west)

**Building 48 - During Demolition**



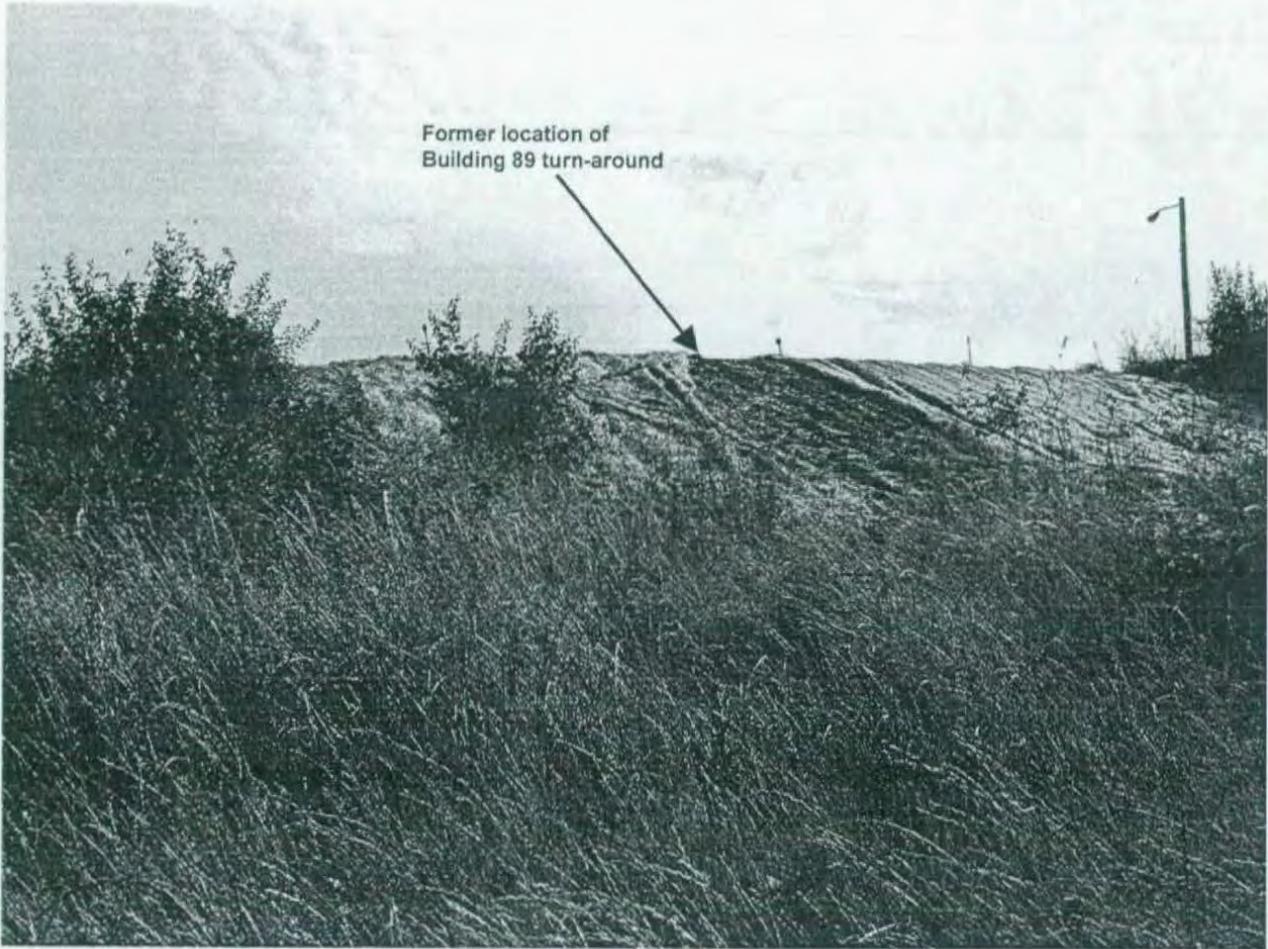
View from the west

**Building 48 – Post-Demolition**



View from the north

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



Former location of  
Building 89 turn-around

View from the south

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

*AS of 8*

## **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)

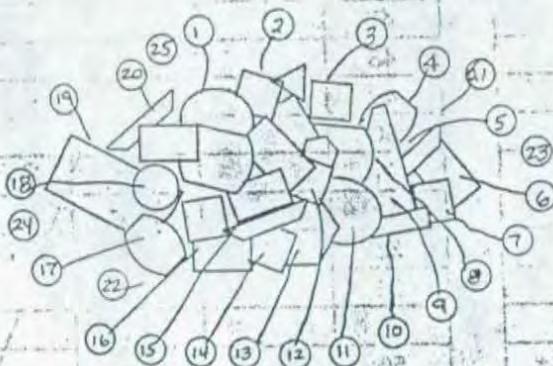
# RADIOLOGICAL SURVEY DATA SHEET

LOCATION (BLDG./AREA/ROOM) <i>48 Foot-print 520-840-20</i>	SURVEY NO. <b>05-GP9-0530</b>
PURPOSE <i>Debris Pile Survey of Slab/Rebar/Conduit</i>	RWP NO. <i>N/A</i>
	DATE <b>06-14-05</b>
	TIME <b>1415</b>

## MAP / DRAWING

*12360 Specific:*  
*2.4cpm α = BKG*  
*2.2ncpm α = DL*  
*129cpm β<sup>-</sup> = BKG*  
*20ncpm β<sup>-</sup> = DL*

*Direct Scan @ Sinter*  
*Location(s): All*  
*α DL α / β<sup>-</sup>*  
*unless otherwise noted.*



*Note: Soil beneath slab appears to be of sandy consistency similar to construction fill.*

**COPY**

LEGEND:

- # = mrem/hr (γ) whole body
- #E = mrem/hr (β+γ+γ) extremity on contact
- K = factor of 1000
- = radiological boundary
- # (triangle) = mrem/hr neutron
- # (circle) = swipe number
- # (square) = air sample number
- #/α or β = direct contamination measurement in dpm/100cm<sup>2</sup>

### INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
12360	5762-5783	1-13-06
13030	5738	1-5-06
	A	
	N	

Completed by (Signature) <i>William G. Jones</i>	HP	Date <b>6-14-05</b>
Completed by (Printed Name) <b>W.A. Jones</b>		
Counted by (Signature) <i>William G. Jones</i>	HP	Date <b>6-14-05</b>
Counted by (Printed Name) <b>W.A. Jones</b>		
Reviewed/Approved by (Signature) <i>Michael Beck</i>	HP	Date <b>6-14-05</b>
Reviewed/Approved by (Print Name) <b>Michael Beck</b>		

## RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm <sup>2</sup> )				
Sample #	$\beta/\gamma$	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/100cm <sup>2</sup> )				
Sample #	$\beta/\gamma$	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				
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65				
66				
67				
68				
69				
70				

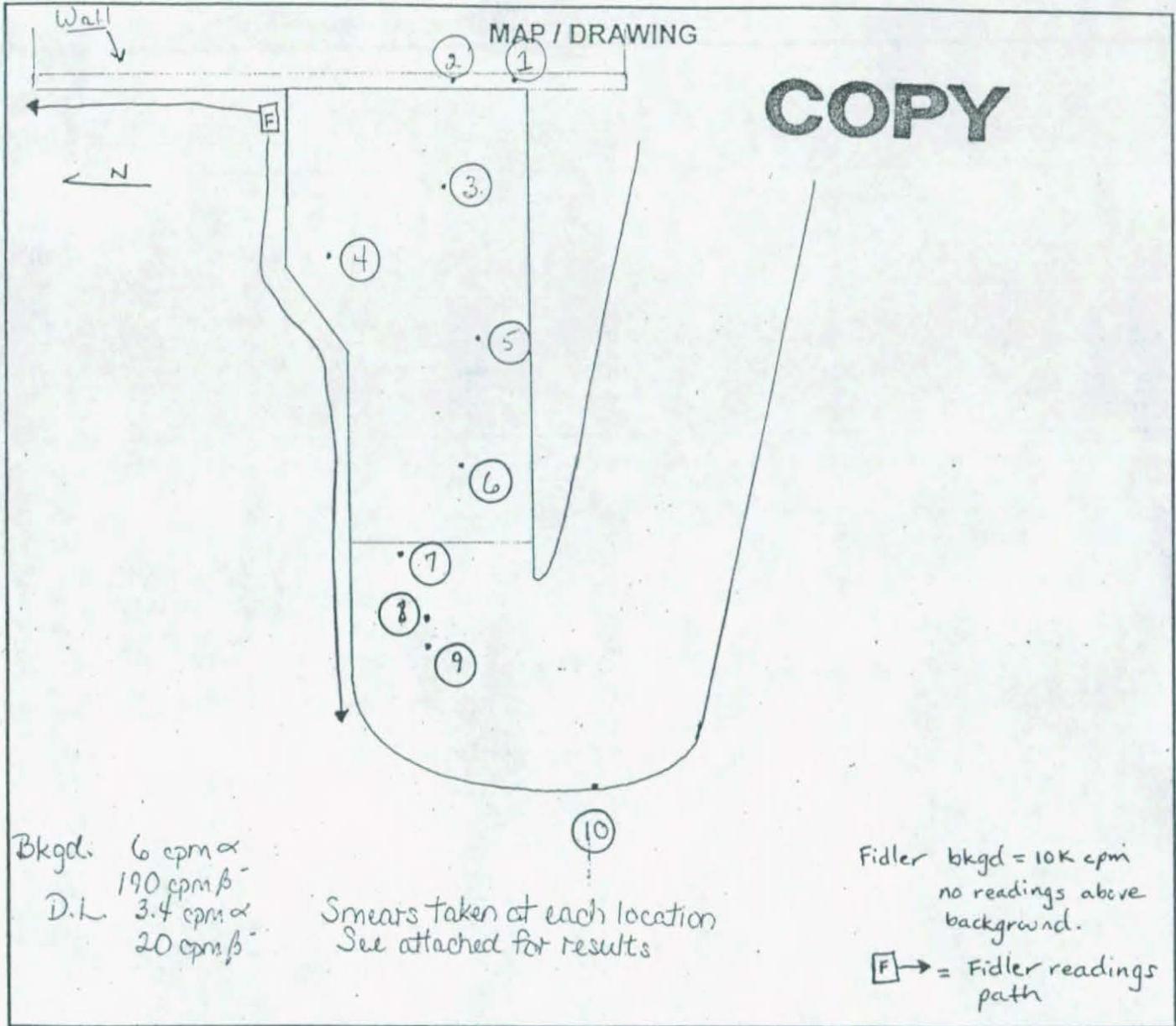
COMMENTS: No audible clicks discerned above background during direct scan of mats. All < DL  $\alpha/\beta$

## NOTES:

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

# RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM)	4th 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



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

$\Delta$  # = mrem/hr neutron  
# = air sample number

# = swipe number  
or  $\beta$  = direct contamination measurement in dpm/100 cm<sup>2</sup>  
#/  $\alpha$

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)	HP#	Date:
James M. Collins		8/3/05
Completed by: (Print Name)		
James M. Collins / L. Oeffner Jr.		
Counted by: (Signature)	HP#	Date:
		8/2/05
Counted by: (Print Name)		
L. Oeffner Jr.		
Reviewed/Approved by: (Signature)	HP#	Date:
Ron Cablentz		8/8/05
Reviewed/Approved by: (Print Name)		
Ron Cablentz		

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm <sup>2</sup> )				
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 <sup>2</sup> )				
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: JYMC

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		5798	ALPHA	1	8/2/05	10:00	69	120	228
wall	5767		5798	ALPHA	2	8/2/05	10:00	97	120	340
ground	5767		5798	ALPHA	3	8/2/05	10:00	191	120	716
ground	5767		5798	ALPHA	4	8/2/05	10:00	767	120	3020
ground	5767		5798	ALPHA	5	8/2/05	10:00	120	120	432
ground	5767		5798	ALPHA	6	8/2/05	10:00	43	120	124
ground	5767		5798	ALPHA	7	8/2/05	10:00	41	120	116
ground	5767		5798	ALPHA	8	8/2/05	10:00	43	120	124
ground	5767		5798	ALPHA	9	8/2/05	10:00	51	120	156
ground	5767		5798	ALPHA	10	8/2/05	10:00	51	120	156
wall	5767		5798	BETA	1	8/2/05	10:00	442	120	124
wall	5767		5798	BETA	2	8/2/05	10:00	609	120	458
ground	5767		5798	BETA	3	8/2/05	10:00	599	120	438
ground	5767		5798	BETA	4	8/2/05	10:00	586	120	412
ground	5767		5798	BETA	5	8/2/05	10:00	583	120	406
ground	5767		5798	BETA	6	8/2/05	10:00	539	120	318
ground	5767		5798	BETA	7	8/2/05	10:00	518	120	276
ground	5767		5798	BETA	8	8/2/05	10:00	535	120	310
ground	5767		5798	BETA	9	8/2/05	10:00	504	120	248
ground	5767		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 <sup>Apr 4-7-05</sup> <del>Slab</del> 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

5704/5714 Bkgd.  
1.8 cpm alpha  
185 cpm beta

D.L.  
3.4 cpm alpha  
20 cpm beta

D.L.  
1.8 cpm alpha  
20 cpm beta

**COPY  
COPY**

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

- mrem/hr neutron      - swipe number  
 - air sample number      or  $\beta$  - direct contamination measurement in dpm/100cm<sup>2</sup>

### 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) <i>[Signature]</i>	H.F. # [redacted]	Date: 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) <i>[Signature]</i>	HP# [redacted]	Date: 9/9/05
Reviewed/Approved by (Print Name) R. V. Coblenz		

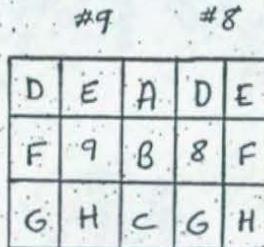
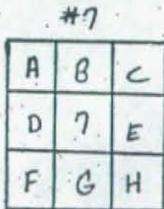
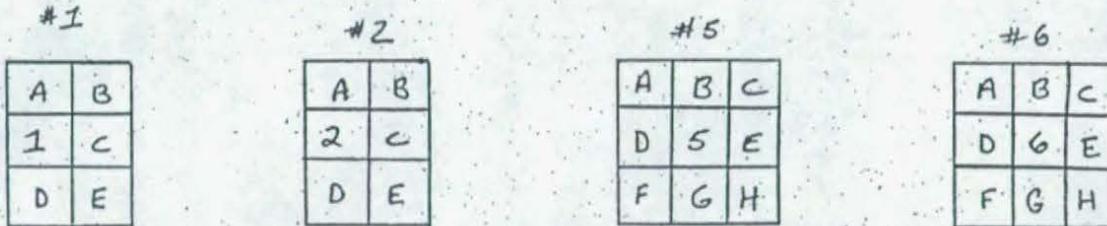
05-TF-0264

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# RADIOLOGICAL SURVEY DATA SHEET

LOCATION (BLDG/AREA/ROOM)	SURVEY NO.
PURPOSE	RWD NO.
<i>see page #1</i>	DATE:
	TIME:

## MAP / DRAWING



# COPY

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

### LEGEND:

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



# - mrem/hr neutron



# - air sample number



# - swipe number



#/alpha or #/beta - direct contamination measurement in dpm/100cm<sup>2</sup>

INSTRUMENTS USED			Completed by: (Signature)	HP#	Date:
Instrument	Serial Number	Cal. Due 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)		

*see page 1*

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# COPY

page 3 of 6

RSDS#: 05-TF-0264

RCT: SAC

RCT: \_\_\_\_\_

3-89 ALPHA BKG:	6	Factor	8	PROBE AREA:	100 cm <sup>2</sup>	Surface Eff:	1	ALPHA
3-89 BETA BKG:	190	Factor	4	PROBE AREA:	100 cm <sup>2</sup>	Surface Eff:	1	BETA

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

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**COPY**

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

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LOCATION	2360#	RCT ID	PROBE	RAD TYPE	ITEM	DATE	TIME	CNTS	CT TIME (sec)	dpm/100cm2
6-D	5767		5798	BETA	22	8/3/05	8:00	531	120	302
6-E	5767		5798	BETA	23	8/3/05	8:00	466	120	172
6-F	5767		5798	BETA	24	8/3/05	8:00	451	120	142
6-G	5767		5798	BETA	25	8/3/05	8:00	413	120	66
6-H	5767		5798	BETA	26	8/3/05	8:00	427	120	94
7-A	5767		5798	BETA	27	8/3/05	8:00	507	120	254
7-B	5767		5798	BETA	28	8/3/05	8:00	468	120	176
7-C	5767		5798	BETA	29	8/3/05	8:00	477	120	194
7-D	5767		5798	BETA	30	8/3/05	8:00	469	120	178
7-E	5767		5798	BETA	31	8/3/05	8:00	495	120	230
7-F	5767		5798	BETA	32	8/3/05	8:00	449	120	138
7-G	5767		5798	BETA	33	8/3/05	8:00	423	120	86
7-H	5767		5798	BETA	34	8/3/05	8:00	442	120	124
8-A	5767		5798	BETA	35	8/3/05	8:00	559	120	358
8-B	5767		5798	BETA	36	8/3/05	8:00	483	120	206
8-C	5767		5798	BETA	37	8/3/05	8:00	472	120	184
8-D	5767		5798	BETA	38	8/3/05	8:00	734	120	708
8-E	5767		5798	BETA	39	8/3/05	8:00	780	120	800
8-F	5767		5798	BETA	40	8/3/05	8:00	702	120	644
8-G	5767		5798	BETA	41	8/3/05	8:00	562	120	364
8-H	5767		5798	BETA	42	8/3/05	8:00	610	120	460
9-A	5767		5798	BETA	43	8/3/05	8:00	559	120	358
9-B	5767		5798	BETA	44	8/3/05	8:00	483	120	206
9-C	5767		5798	BETA	45	8/3/05	8:00	472	120	184
9-D	5767		5798	BETA	46	8/3/05	8:00	546	120	332
9-E	5767		5798	BETA	47	8/3/05	8:00	559	120	358
9-F	5767		5798	BETA	48	8/3/05	8:00	555	120	350
9-G	5767		5798	BETA	49	8/3/05	8:00	517	120	274
9-H	5767		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 initial 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. *B10 of 34*

# COPY

RSDS#: 05-TF-0264

RCT: JMC

RCT: NO

43-89 ALPHA BKG:	1.8	Factor	8	PROBE AREA:	100 cm <sup>2</sup>	Surface Eff:	1	ALPHA
43-89 BETA BKG:	185	Factor	4	PROBE AREA:	100 cm <sup>2</sup>	Surface Eff:	1	BETA

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

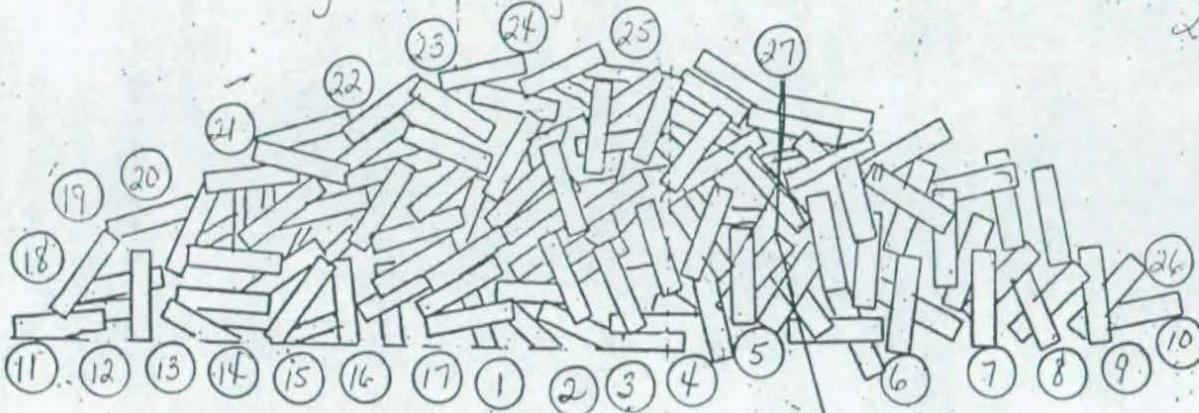
1 of 5 Page 1 of 5

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

## MAP / DRAWING

Direct scan & pause survey conducted at each smear location and other various locations

See attached for integrated readings. All other locations → No detectable contamination L/B



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

Bkgd. 5704/5714  
3 cpm  $\alpha$   
197 cpm  $\beta$

5690/5729  
3.4 cpm  $\alpha$   
180 cpm  $\beta$

D.L. 2.6 cpm  $\alpha$   
20 cpm  $\beta$

2.6 cpm  $\alpha$   
20 cpm  $\beta$

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

# COPY

$\triangle$  # = mrem/hr neutron      # = swipe number  
 $\square$  # = air sample number      #/a or /b = direct contamination measurement in dpm/100 cm<sup>2</sup>

### 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) <u>[Signature]</u>	HP# <u>[Redacted]</u>	Date: <u>8-30-05</u>
Completed by: (Print Name) <u>L. Dettner / L. Tamara M. Collins</u>		
Counted by: (Signature) <u>[Signature]</u>	HP#	Date:
Counted by: (Print Name) <u>Attached</u>		
Reviewed/Approved by: (Signature) <u>[Signature]</u>	HP# <u>[Redacted]</u>	Date: <u>9/9/05</u>
Reviewed/Approved by: (Print Name) <u>R. M. Coblenz</u>		



RSDS#: 05-TF-0282

RCT: MO

RCT: Junc

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		5714	ALPHA	1	8/29/05	8:00	31	120	100
27-B	5704		5714	ALPHA	2	8/29/05	8:00	20	120	56
27-C	5704		5714	ALPHA	3	8/29/05	8:00	29	120	92
27-D	5704		5714	ALPHA	4	8/29/05	8:00	27	120	84
27-E	5704		5714	ALPHA	5	8/29/05	8:00	21	120	60
27-F	5704		5714	ALPHA	6	8/29/05	8:00	14	120	32
27-G	5704		5714	ALPHA	7	8/29/05	8:00	24	120	72
27-H	5704		5714	ALPHA	8	8/29/05	8:00	14	120	32
27-I	5704		5714	ALPHA	9	8/29/05	8:00	16	120	40
27-A	5704		5714	BETA	1	8/29/05	8:00	458	120	128
27-B	5704		5714	BETA	2	8/29/05	8:00	478	120	168
27-C	5704		5714	BETA	3	8/29/05	8:00	465	120	142
27-D	5704		5714	BETA	4	8/29/05	8:00	485	120	182
27-E	5704		5714	BETA	5	8/29/05	8:00	462	120	136
27-F	5704		5714	BETA	6	8/29/05	8:00	436	120	84
27-G	5704		5714	BETA	7	8/29/05	8:00	454	120	120
27-H	5704		5714	BETA	8	8/29/05	8:00	406	120	24
27-I	5704		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

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**COPY**

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	$\sigma$	flags	DPM	$\sigma$	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	

MO

MO

4 of 5

cup

SofS  
4 of 108/3/05

29 Aug 2005 11:17

TRI-CARB - 1.09

Page #110 8/30/05

Protocol #: 2

PW H3 #407906

User : 5B01

Time: 2.00

Data Mode: DPM

Nuclide: SMGLS02

Quench Set: SMGLS02

Background Subtract: 1st Vial

	LL	UL	LCR	25%	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

AD

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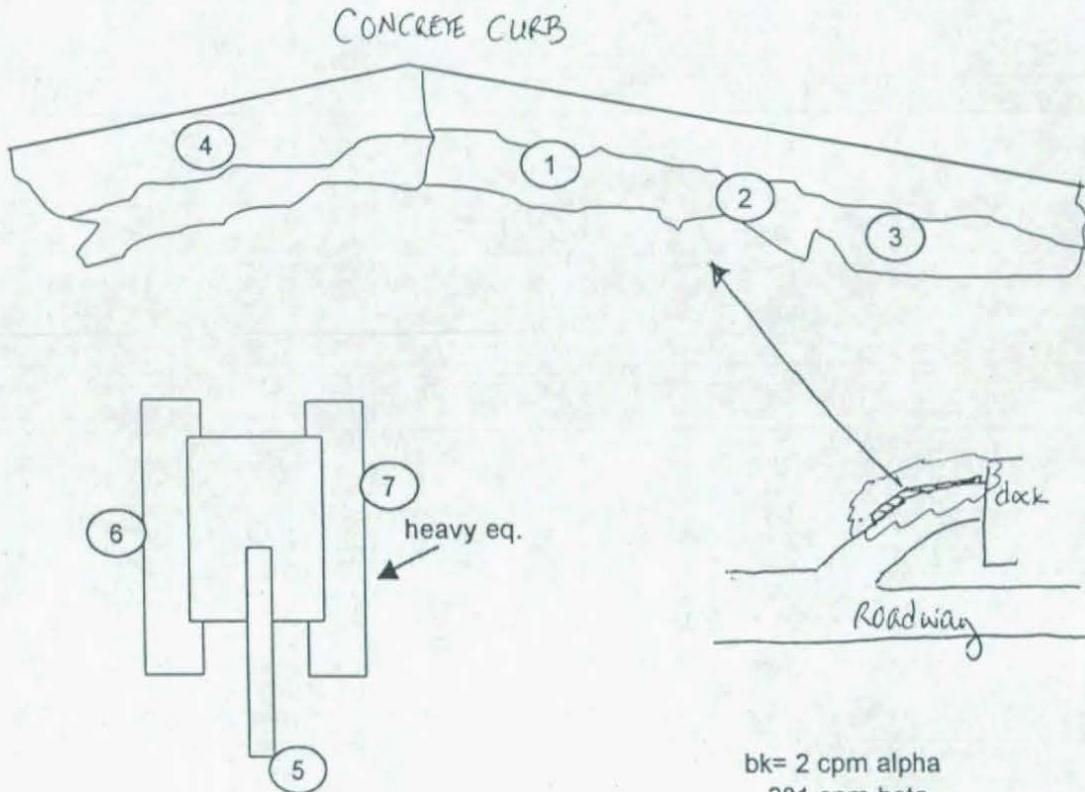
**COPY**

610

# RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) <i>48 Slab DOCK &amp; INCLINED driveway</i>	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 ( $\gamma$ ) whole body  
#E = mrem/hr ( $\beta + \eta + \gamma$ ) extremity on contact  
K = factor of 1000  
- - - - - = radiological boundary

# - mrem/hr neutron

# - swipe number

# - air sample number

#/α or /β - direct contamination measurement in dpm/100cm<sup>2</sup>

### 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) <i>[Signature]</i>	HP#	Date 8-31-05
Completed by: (Printed Name) L. Oeffner Jr.		
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) <i>[Signature]</i>	HP#	Date 9-9-05
Reviewed/Approved by: (Print Name) <i>Rui Coblenitz</i>		

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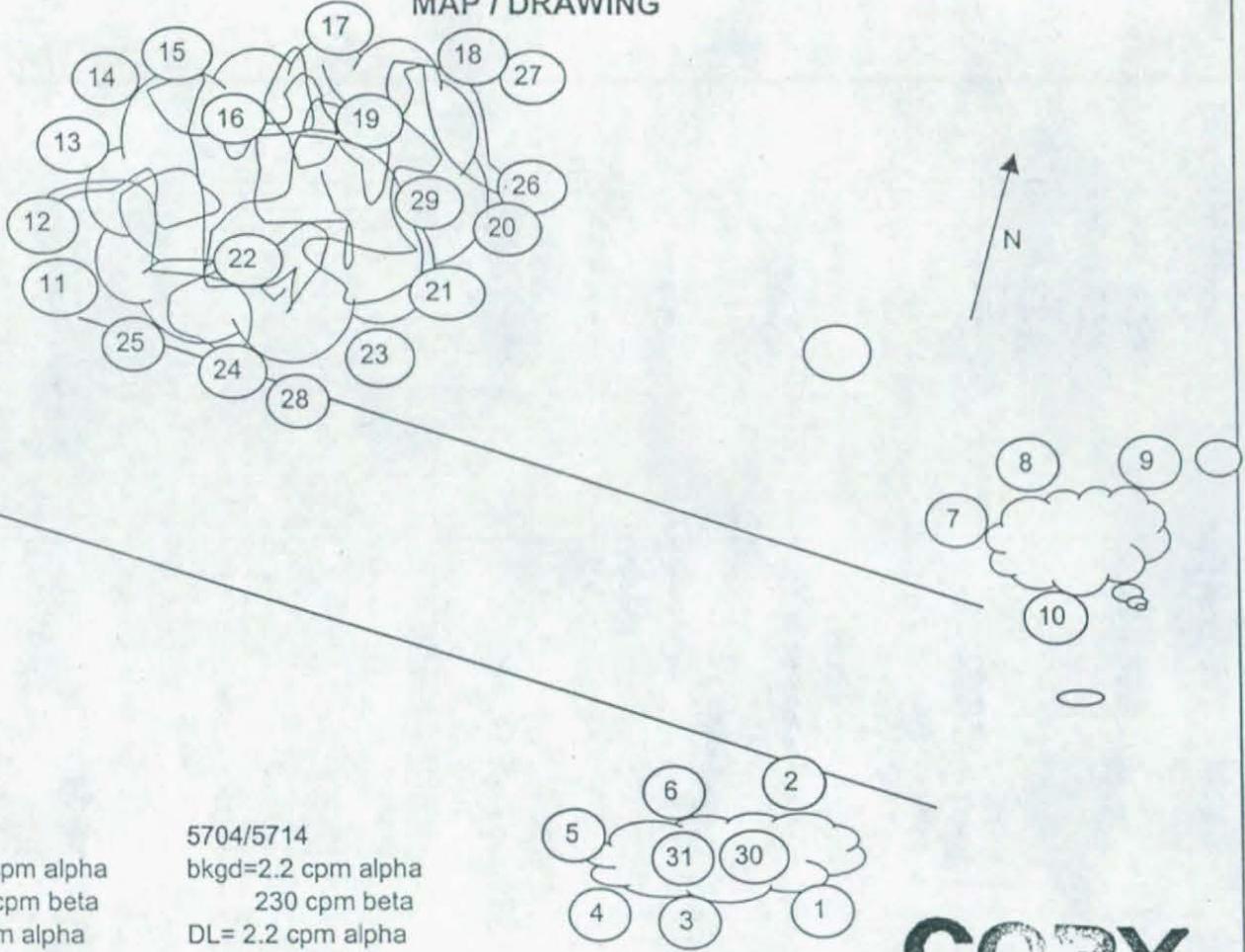




# RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM)	48 Slab <sup>Apr. 11-30-03</sup> 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



**COPY**

5698/5812	5704/5714
bkgd=1.8 cpm alpha	bkgd=2.2 cpm alpha
167 cpm beta	230 cpm beta
DL=1.8 cpm alpha	DL= 2.2 cpm alpha
20 cpm beta	20 cpm beta

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

# (triangle) - mrem/hr neutron      # (circle) - swipe number  
 # (square) - air sample number      #/a (circle) or  $\beta$  - direct contamination measurement in dpm/100cm<sup>2</sup>

### 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#	Date
<i>J.M. Collins / L. Oeffner Jr.</i>	[Redacted]	9-8-05
Completed by: (Print Name)		
J.M. Collins / L. Oeffner Jr.		
Counted by: (Signature)	HP#	Date
<i>See attached</i>	[Redacted]	9/8/05
Counted by: (Print Name)		
J.M. Collins		
Reviewed/Approved by: (Signature)	HP#	Date
<i>Rn Coblenz</i>	[Redacted]	9/13/05
Reviewed/Approved by: (Print Name)		
Rn Coblenz		

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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		5812	ALPHA	1	9/8/05	10:00	71	120	268
19	5698		5812	ALPHA	2	9/8/05	10:00	59	120	220
22	5698		5812	ALPHA	3	9/8/05	10:00	83	120	316
29	5698		5812	ALPHA	4	9/8/05	10:00	70	120	264
30	5698		5812	ALPHA	5	9/8/05	10:00	26	120	88
31	5698		5812	ALPHA	6	9/8/05	10:00	42	120	152
16	5698		5812	BETA	1	9/8/05	10:00	483	120	298
19	5698		5812	BETA	2	9/8/05	10:00	472	120	276
22	5698		5812	BETA	3	9/8/05	10:00	460	120	252
29	5698		5812	BETA	4	9/8/05	10:00	481	120	294
30	5698		5812	BETA	5	9/8/05	10:00	528	120	388
31	5698		5812	BETA	6	9/8/05	10:00	506	120	344
Debris with elevated readings sent to rail spur for disposal.										

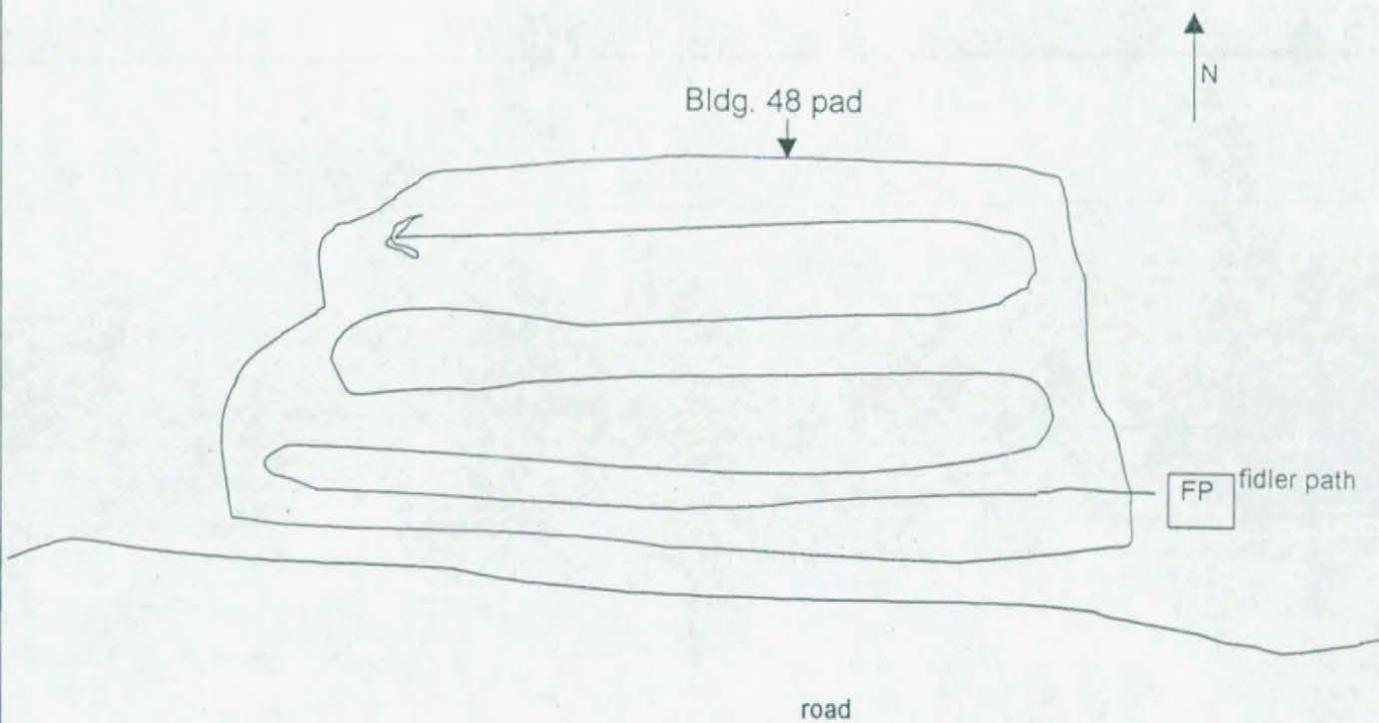
NOTE: ALL DOCK, INCLINED DRIVE, & CURB DEBRIS DISPOSED VIA RAIL LSA.

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

△ # - mrem/hr neutron      ○ # - swipe number  
 □ # - air sample number      ○ #/α or β - direct contamination measurement in dpm/100cm<sup>2</sup>

### INSTRUMENTS USED

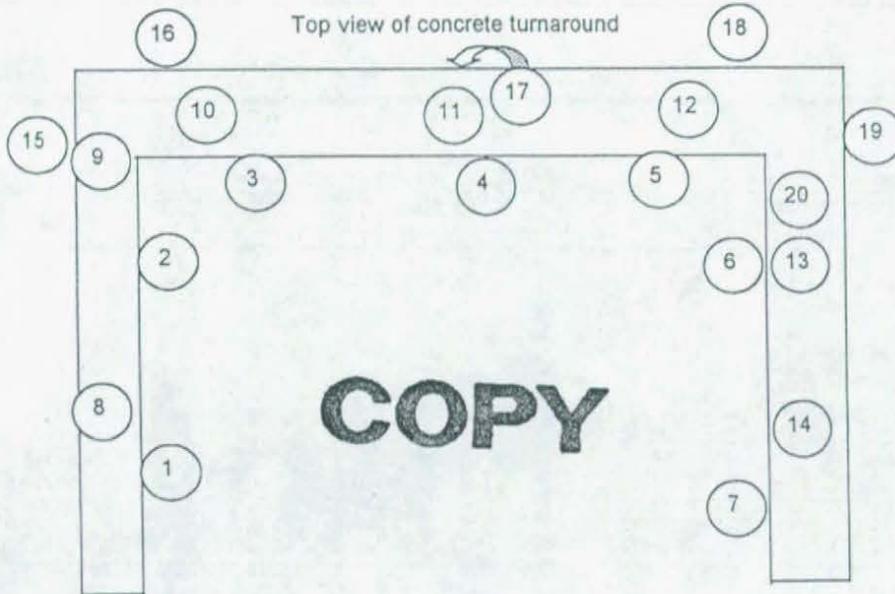
Instrument	Serial Number	Cal. Due Date
Bicron	3853/3965	6/1/06
<del>NA</del>		

Completed by: (Signature)	HP#	Date
<i>Jamie M. Collins</i>	[Redacted]	10-20-05
Completed by: (Printed Name)	L. Oeffner Jr. / J.M. Collins	
Counted by: (Signature)	HP#	Date
N/A		
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature)	HP#	Date
<i>RM Coberntz</i>	[Redacted]	10/25/05
Reviewed/Approved by: (Print Name)	RM Coberntz	

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



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

# - mrem/hr neutron      # - swipe number  
 # - air sample number      # $\alpha$  or # $\beta$  - direct contamination measurement in dpm/100cm<sup>2</sup>

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360/4389	5794/5809	10/28/05
Lud 2360/439	5765/5802	3/1/06
NA		

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



# Smear Analysis

Unit Type: LB4100/W  
 Counting Unit ID: Green  
 Data file name: SMEAR011  
 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

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Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	$\sigma$	flags	DPM	$\sigma$	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

6403  
 6403

16 May 2005 16:28

ALPHA/BETA - 1.09

Protocol #: 6

PW H3 #403727

Page #1  
User : 2138

Time: 2.00

Data Mode: DPM

Nuclide: SMGLS02

Quench Set: SMGLS02

Background Subtract: 1st Vial

	LL	UL	LCR	25%	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

J.C

ppp

# RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Blgd 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**

Blow-up of area

EEE	DDD	CCC
BBB	AAA	ZZ
YY	XX	WW
VV	UU	TT
SS	RR	QQ
PP	OO	NN
MM	LL	KK
JJ	II	HH
G	B	D
H	A	E
F	C	F
N	J	L
O	K	M
R	P	Q
U	S	T
X	W	V
AA	Z	Y
DD	CC	BB
GG	FF	EE

\* Intergrate readings taken in a one square meter surface area, surrounding original intergrate "A" for averaging. Final average of all intergrates is 98 dpm/100cm<sup>2</sup>.

**LEGEND:**

- # = mrem/hr (γ) whole body
- #E = mrem/hr (β+γ) extremity on contact
- K = factor of 1000
- = radiological boundary
- # (triangle) = mrem/hr neutron
- # (circle) = swipe number
- # (square) = air sample number
- #/α or β (circle) = direct contamination measurement in dpm/100cm<sup>2</sup>

**INSTRUMENTS USED**

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

Completed by: (Signature)	HP#	Date
		5/17/05
Completed by: (Printed)	L. Oeffner Jr. / Jamie Collins	
Counted by: (Signature)	HP#	Date
See attached		
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/100cm <sup>2</sup> or Sample)	Gross (cpm)	CF	Results (dpm/100cm <sup>2</sup> 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	58	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	6	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

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## 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/100cm <sup>2</sup> or Sample)	Gross (cpm)	CF	Results (dpm/100cm <sup>2</sup> 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

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# RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) *Between OSE and Powerhouse*

PURPOSE: *Characterization survey of concrete debris pile w/ rebar from 89 turnaround structure*

SURVEY NO. *05-TF-0232*

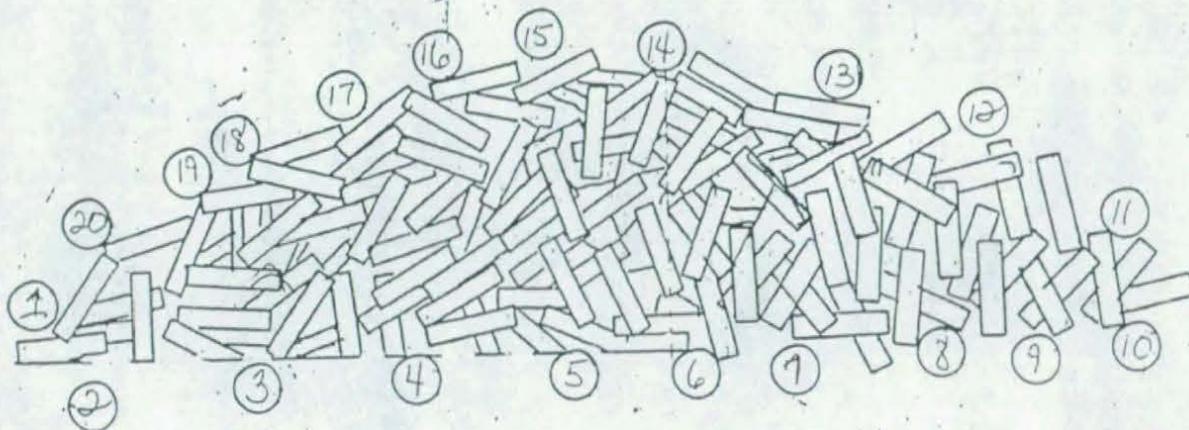
RWP NO. *N/A*

DATE: *5/25/05*

TIME: *1230*

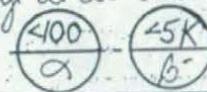
## MAP / DRAWING

# COPY



Bkgd.  $1.4 \text{ cpm } \alpha$   
 $199 \text{ cpm } \beta^-$   
 D.L.  $1.8 \text{ cpm } \alpha$   
 $20 \text{ cpm } \beta^-$

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



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

$\Delta$  = mrem/hr neutron # = swipe number  
 # = air sample number #/a or /b = direct contamination measurement in dnm/100 cm<sup>2</sup>

### INSTRUMENTS USED

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

Completed by: (Signature) *[Signature]* HP# *[Redacted]* Date: *5-26-05*

Completed by: (Print Name) *Janice M. Collins / L. Oeffner Jr*

Counted by: (Signature) *See* HP# *[Redacted]* Date: *[Redacted]*

Counted by: (Print Name) *Attached*

Reviewed/Approved by: (Signature) *[Signature]* HP# *[Redacted]* Date: *5/31/05*

Reviewed/Approved by: (Print Name) *Rm Coblentz*

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm <sup>2</sup> )				
Sample #	$\beta/\gamma$	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 <sup>2</sup> )				
Sample #	$\beta/\gamma$	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  $\beta/\gamma$ , 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.

Alpha/Beta Analysis

Batch ID: Smear Unit 2 - 200505251445  
 Group: E  
 Serial Number: 78218-2  
 Batch ID: 05-TF-0232 OEFFNER (20) 05/25/05 TAS  
 Selected Geometry: Swipe/Smear

Count Date: 5/25/2005  
 Count Minutes: 1.5  
 Count Mode: Simultaneous  
 Operating Volts: 1470  
 Calibration Due Date: 5/02/06

Efficiency (%)

Alpha: 34.57 ± 0.16  
 Beta: 47.12 ± 0.11

Sample ID	Carrier ID	Alpha (dpm)	$\sigma$	Beta (dpm)	$\sigma$
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

*je*

*J.C.*

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

*B33 of 34* *sp4* *Page 1 of 1*  
 Page 3 of 4

25 May 2005 16:08

ALPHA/BETA - 1.09

Protocol #: 4

Pw-H3 #403728

Page 4 of 4  
5/25/05 Page #1  
User: 5801

Time: 2.00

Data Mode: DPM

Nuclide: SMGL02

Quench Set: SMGL02

Background Subtract: 1st Vial

	LL	UL	LCR	25%	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 BFFNER [20] GWD

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	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

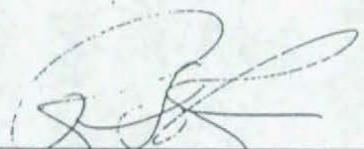
RECOMMENDATION:

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.

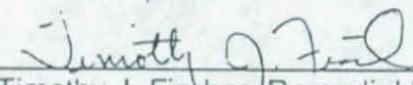
Therefore, a RESPONSE ACTION is recommended for PRS 123.

CONCURRENCE:

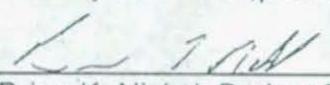
DOE/MEMP:

  
\_\_\_\_\_  
Robert S. Rothman, Remedial Project Manager (date) 9/18/00

USEPA:

  
\_\_\_\_\_  
Timothy J. Fischer, Remedial Project Manager (date) 9/18/00

OEPA:

  
\_\_\_\_\_  
Brian K. Nickel, Project Manager (date) 9/18/00

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.

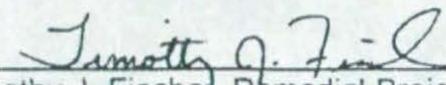
CONCURRENCE:

DOE/MEMP:

  
Robert S. Rothman, Remedial Project Manager

6/19/01  
(date)

USEPA:

  
Timothy J. Fischer, Remedial Project Manager

6/19/01  
(date)

OEPA:

  
Brian K. Nickel, Project Manager

6/19/01  
(date)

SUMMARY OF COMMENTS AND RESPONSES:

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

No comments were received during the comment period.

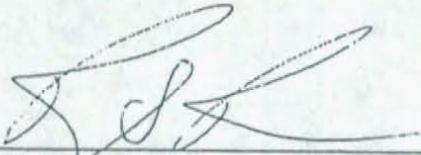
Comment responses can be found on <sup>first</sup> page 1 of this package.

## 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.

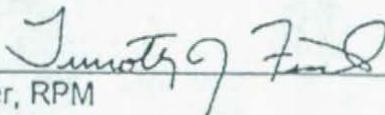
Therefore, the Core Team recommends No Further Assessment for PRSs 31-36, 125, and 270.



---

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

11-27-02



---

Tim Fischer, RPM  
USEPA  
Chicago, Illinois

11/26/02



---

Brian Nickel  
OEPA  
Dayton, Ohio

11/27/02

**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 5/8/96  
Arthur W. Kleinrath, Remedial Project Manager (date)

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

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

**SUMMARY OF COMMENTS AND RESPONSES:**

Comment period from 6/15/96 <sup>6/19/96</sup> to 7/18/96 <sup>7/17/96</sup>.

- 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**

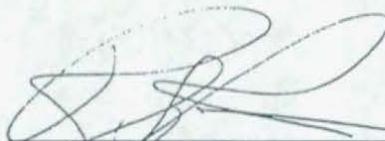
**RECOMMENDATION:**

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:**

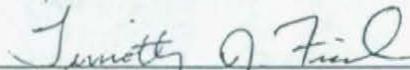
DOE/MEMP:



Robert S. Rothman, Remedial Project Manager

7/18/01  
(date)

USEPA:



Timothy J. Fischer, Remedial Project Manager

7/18/01  
(date)

OEPA:



Brian K. Nickel, Project Manager

7/18/01  
(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 #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.

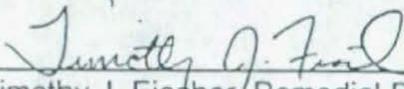
Therefore, a RESPONSE ACTION is recommended for PRSs 429, 430, 431, 432, & 433.

CONCURRENCE:

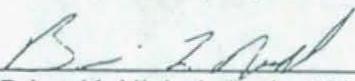
DOE/MEMP:

  
\_\_\_\_\_  
Robert S. Rothman, Remedial Project Manager 9/18/00  
(date)

USEPA:

  
\_\_\_\_\_  
Timothy J. Fischer, Remedial Project Manager 9/18/00  
(date)

OEPA:

  
\_\_\_\_\_  
Brian K. Nickel, Project Manager 9/18/00  
(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

C6 of 9

MOUND PLANT  
PRS #434, 435, 436

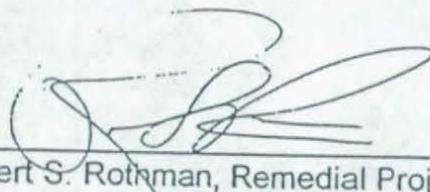
RECOMMENDATION:

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.

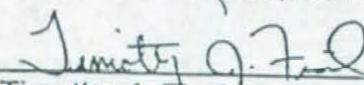
CONCURRENCE:

DOE/MEMP:

  
Robert S. Rothman, Remedial Project Manager

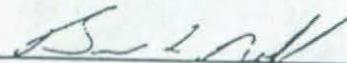
9/18/00  
(date)

USEPA:

  
Timothy J. Fischer, Remedial Project Manager

9/18/00  
(date)

OEPA:

  
Brian K. Nickel, Project Manager

9/18/00  
(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

C7 of 9

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).

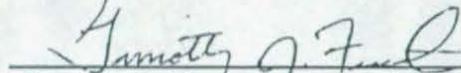
Therefore, a RESPONSE ACTION is recommended for PRS 437, 438, and 439.

CONCURRENCE:

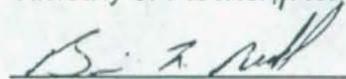
DOE/MEMP:

  
Robert S. Rothman, Remedial Project Manager 7/18/01  
(date)

USEPA:

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

OEPA:

  
Brian K. Nickel, Project Manager 7/18/01  
(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:**

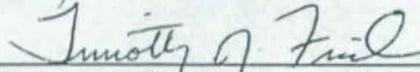
DOE/MEMP:



Robert S. Rothman, Remedial Project Manager

7/18/01  
(date)

USEPA:



Timothy J. Fischer, Remedial Project Manager

7/18/01  
(date)

OEPA:



Brian K. Nickel, Project Manager

7/18/01  
(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

**APPENDIX D**

**Building 48 Closeout Report Addendum 1**

Building 48

Closeout Report

Addendum 1

July 2006

## PURPOSE

The purpose of this addendum is to document the final site restoration associated with the demolition of Building 48.

## REFERENCES

Building 48 Closeout Report, Final, November 2005

## BACKGROUND

Section 3.0 of the Building 48 Closeout Report, Final, November 2005, states that all preparation and demolition activities associated with the demolition and removal of Building 48 were complete except for the final site restoration. However, 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 was postponed until the adjacent PRS areas were also released for site restoration.

## ACTION TAKEN

Soil from the site "spoils" area was applied over the demolition area and then graded and seeded. A photograph depicting the Building 48 area after final grading and site restoration is provided at the end of this addendum.

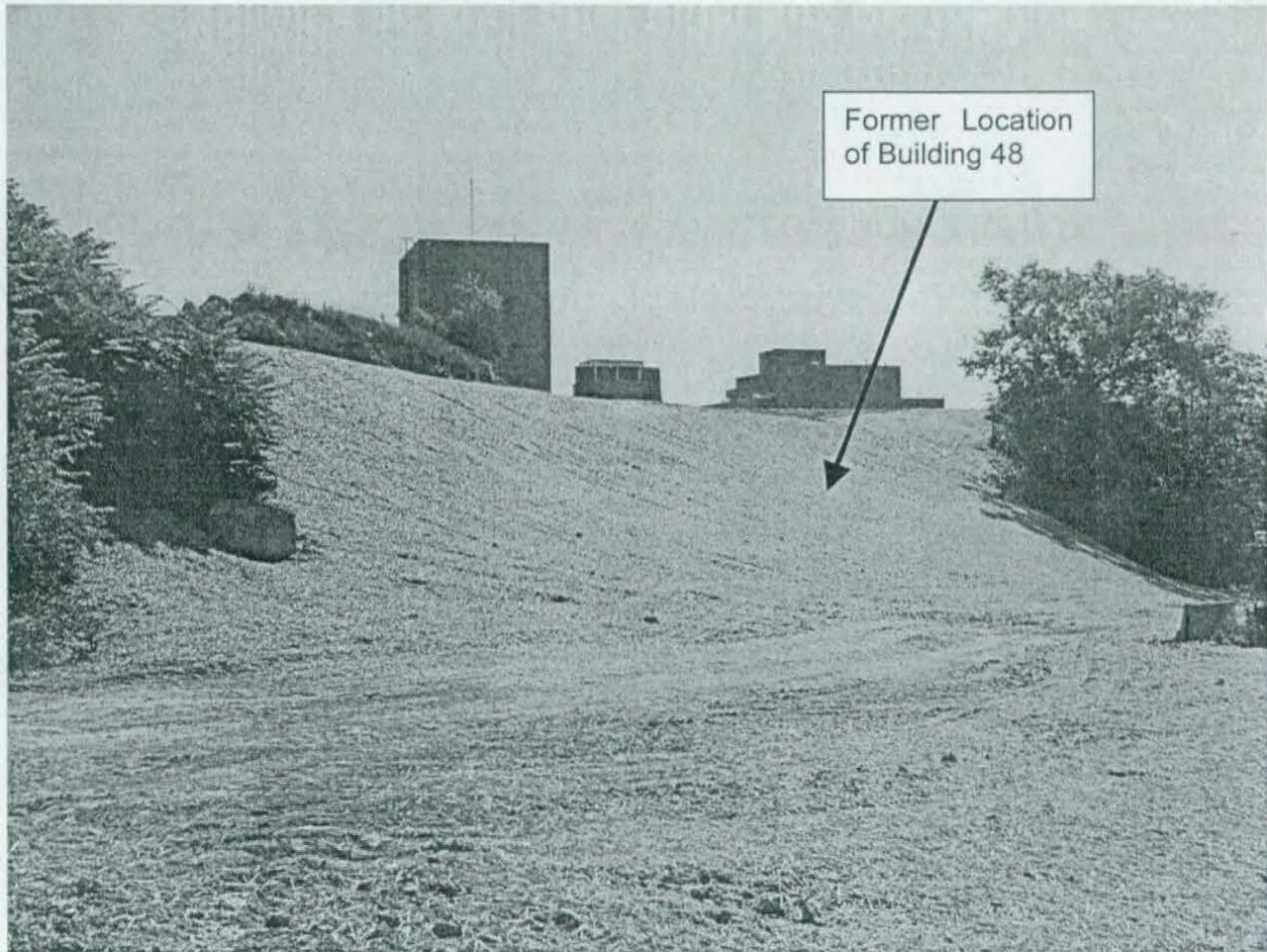
## DEMOLITION COST

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 1, below.

**Table 1 – Cluster 48 Total Costs**

<b>Activity</b>	<b>Cost</b>
Work Planning	\$26K
Facility Prep	\$86K
Demolition	\$98K
Total	\$210K

## Building 48 Area After Final Site Restoration



Former Location  
of Building 48

View From the Southwest of the Former Location of Building 48