3006-0611010004

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

CH2MHILL

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

3006-06110100004

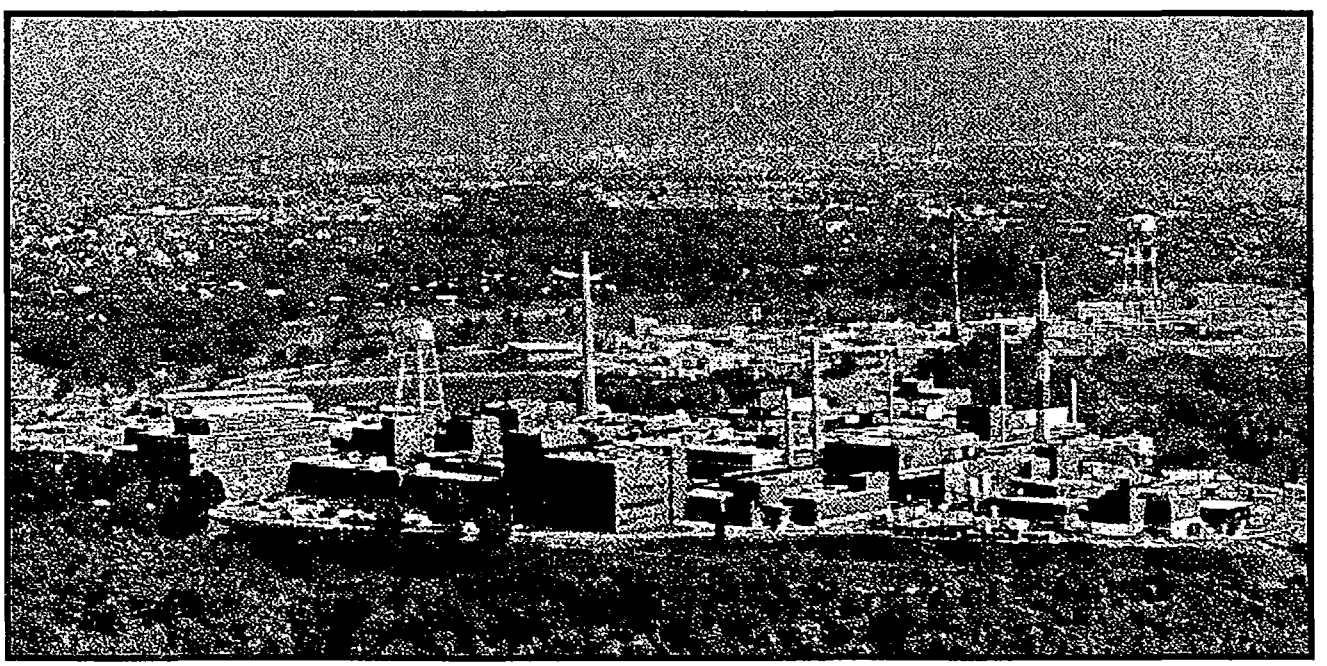
Environmental
Restoration
Program

Miamisburg Closure Project
CLOSEOUT REPORT

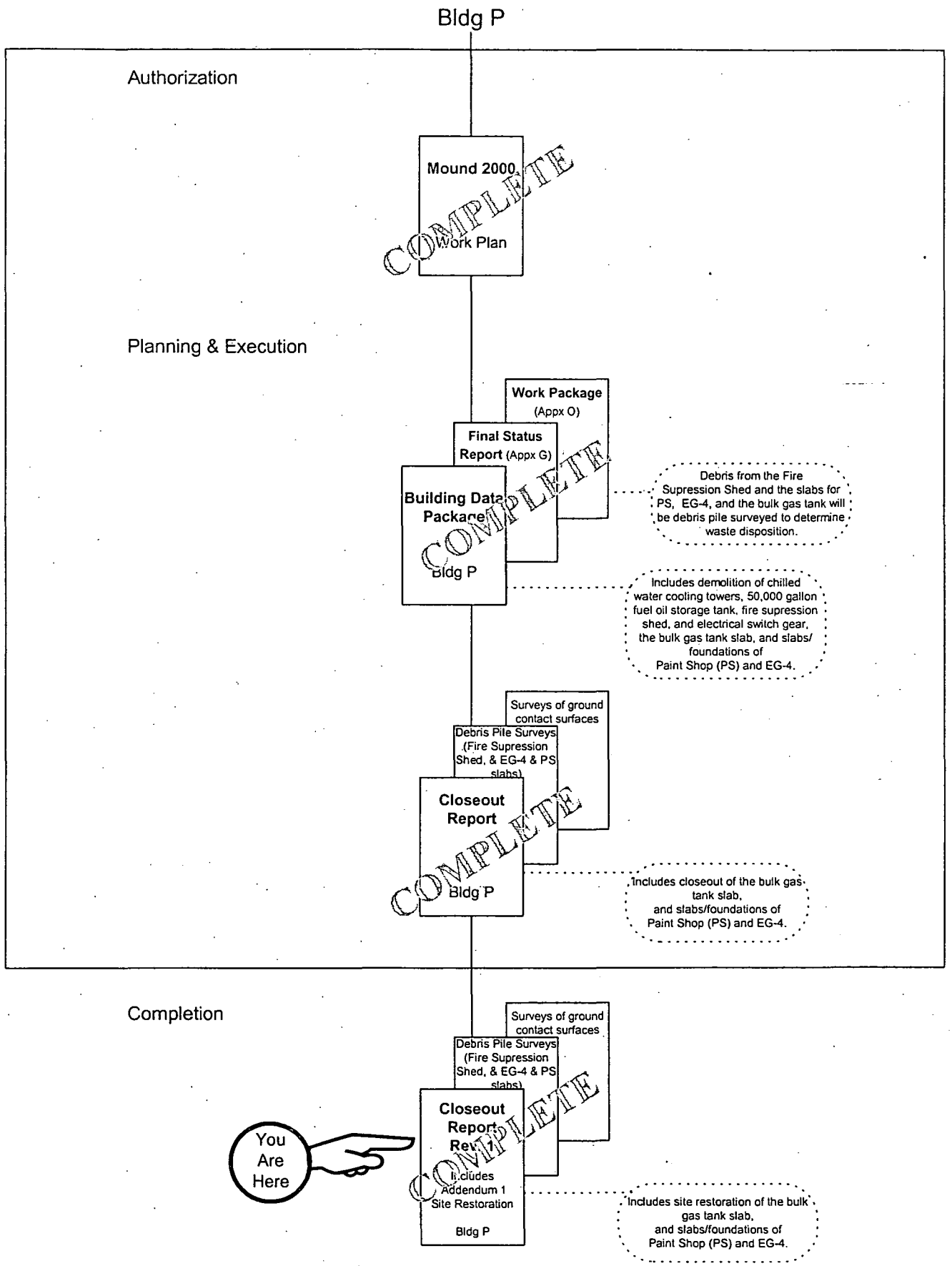
P Building

(Demolition included PS Building slab,
EG-4 slab, and Bulk Gas Tank Slab)

Final, Rev. 1
July 2006



Building P (Power House)



26Jul06dck

Revision 1 of this Closeout Report includes the P Building 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 P Building (Power House) located at the Department of Energy (DOE) Miamisburg Closure Project (MCP) Site, as shown in the figures provided in Appendix A. The building demolition; including the electrical sub station, cooling tower units, fuel storage tank, spill containment reservoir, fire protection equipment shed, brine-solution storage tank, PS Building (Paint Shop) slab, EG-4 (Emergency Generator-4) Building slab, bulk gas (Argon/Nitrogen) tank slab, and all associated foundation walls, and footers to three feet below grade, was accomplished per the Work Package for the Demolition of P Building and Ancillary Structures (BOSS-38201). The walls of P Building Pit 1 and Pit 2 were removed to three foot below grade and drainage holes were punched into the pit floors. A copy of the Work Package was included in Appendix O of the Building Data Package (BDP) for P Building. The scope of work relating to this building and adjacent slab structures, except for final site restoration, is considered complete. Final site restoration will be documented in an addendum to this closeout report.

2.0 BACKGROUND

2.1 P Building, Building PS Slab, EG-4 Slab, and Bulk Gas Tank Slab

P Building

Constructed in 1948 as one of Mound's original structures, P Building was located near the north central portion of the site (Figure 1). The building contained the facilities and equipment that supported utility systems at the Mound site: 1) central steam and condensate, 2) chilled water supply and return, 3) centralized process and breathing air, 4) treatment of raw water, and 5) site electrical power distribution. P Building was originally constructed as a single-story (high bay) steel frame structure with a second floor mezzanine containing 11,955 square feet of floor space. The walls were made of concrete block with brick masonry facing and contained steel sash windows. The roof was pre-cast cement tile with continuous metal ventilators. At the time of demolition, P Building was a 15,143 square-foot structure, having undergone three major structure-altering additions to accommodate the installation of new equipment. A listing of the P Building major construction projects is provided in Table 1.

The first floor of P Building contained two boilers, three chillers, potable water treatment equipment, a standby generator, the main plant control/utilities distribution and consumption monitoring console station, chemicals/chemical injection equipment, and plant controls. In addition to this equipment, the first floor also contained the utility supervisor's office, a lavatory, a change room, and a utility closet. The mezzanine contained pumps, compressors, and two chillers.

Table 1: P Building Major Construction Projects

Time-frame	Building Modification	Resulting Change
1948	The original single-story "high-bay" building built.	Original structure built.
1971	Addition of a room on the northern side of the building; a new boiler installed.	Part of the original northern exterior side of P Building was covered by a room addition.
1971	1000-ton chiller installed.	The addition of this chiller resulted in the addition of equipment that had not originally been included in P Building.
1972	Replacement of the original cooling tower located across the road from P Building.	A new cooling tower replaced the original cooling tower that had been constructed in the late 1940s.
1977	Energy Conservation Upgrades.	Installation of energy enhancing equipment on the existing boilers.
1980	Addition of a room to the northeastern corner of the building, and a project to recondition the boiler installed in 1971.	Part of the northern side of the original building was covered by the room addition.
1982	Water System Upgrades.	A portion of the original slab floor was removed in order to replace tanks installed during initial 1948 construction.
1983	Utilities restoration and room addition on the eastern side of P Building.	Original equipment boilers were removed, a new boiler was added, and a room addition was placed on the eastern side of the building.
1988	Central Plant Upgrades.	Original 1948 era piping was removed from the building and an asbestos abatement project was implemented.

The equipment in P Building performed five major functions:

- Boilers to supply steam for the turbines that drove the centrifugal refrigeration machines, for the plant steam supply system that provided space heating throughout the site, and, for use in plant-site laboratories;
- Centrifugal refrigeration machines to chill the brine that was circulated throughout the plant for use in the air conditioning units;
- Zeolite water softeners used to reduce the hardness of the plant's well water supply;
- Air compressors to pressurize the air that was piped throughout the plant for use with control instrumentation in laboratories; and
- Electrical switchgear that served as a primary distribution center for electric power to the plant site.

P Building had potable and service water, a fire sprinkler system, sanitary services and storm drains. Electrical service was 12,470 volts (from Dayton Power and Light Company), which was then distributed to transformers located at the site's various substations. All building ventilation was by natural flow except for the office, control room, lavatory, and dressing room. These rooms were serviced by small heating/ventilation units and window air conditioners. The building was also serviced by central steam for heating. A natural gas line (primary fuel) and a fuel oil #2 line (alternate fuel) provided fuel for the boilers.

Structures and equipment which were external to P Building included the power plant's chilled water cooling towers (including sumps and pumps) (south east of P Building); a 50,000-gallon above-ground fuel oil storage tank with a concrete retaining wall (secondary containment), a metal shed containing the fire suppression system for the fuel oil tank, and a portable storage shed (east of P Building); a portable boiler unit (south of P Building); and electrical switchgear in weatherproof cabinets (west of P Building). These structures (with the exception of the portable storage shed and boiler unit) and equipment, including their associated concrete slabs, pads, and foundations, were considered part of the Power House and were demolished with P Building.

PS Building Slab

The PS Building slab, located south of P Building, remained after the PS Building superstructure was demolished in 2000 as an industrial demolition project. The slab and foundation was left for later removal due to a high voltage line below the slab. That line has subsequently been deactivated. The slab was used to house a portable boiler unit, which provided steam to T (Technical) Building, and a portable shed, which was used to store chemicals for the treatment of condensate in the T Building steam system. The portable shed, which had been located on the east side of P Building, was moved to the PS Building slab in November 2004. PS Building was a 2,288 square-foot metal building that housed a paint shop with an Ohio Environmental Protection Agency (OEPA) permitted paint spray booth. It contained processes conventional to painting such as brush painting and spray painting, storage of supplies (latex and non-latex paints), sanding, priming, and drying. The building also housed a sign fabrication area that made computer-generated signs.

EG-4 Building Slab

The EG-4 Building slab, located south of P Building, remained after the EG-4 superstructure was demolished in 2000 as a routine maintenance event. The slab and foundation were left for later removal due to a high voltage line below the slab. That line has subsequently been deactivated. EG-4 Building was a 240 square-foot single-story metal structure with a metal roof on a concrete slab. The building housed a Caterpillar D348 diesel generator that supplied standby power to streetlights, Guard Post 1, and the plant siren.

Bulk Gas (Argon/Nitrogen) Tank Slab

The bulk gas (Argon/Nitrogen) tank slab (measuring approximately 30 feet by 36 feet), located between the Paint Shop Building and Building 25, was the support slab for bulk Argon and Nitrogen gas tanks that supplied gases for process gas systems in both DS Building and T Building. The last remaining bulk gas tank was removed from the slab in March, 2005, after processes utilizing bulk gas supplies in T Building were discontinued.

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, fourteen are at or near P Building, as identified in Table 2. The PRS locations are shown in Figure 2 and recommendation sheets are provided in Appendix C.

Table 2: PRSs in Proximity to P Building

PRS	CERCLA or Bldg. Related	Binning Status	Comments
101	Building	NFA	Cooling Tower Basins
102	Building	NFA	Cooling Tower Drum Storage Area
112	Building	NFA	Paint Shop Area
113	CERCLA	NFA	Powerhouse Soils
114	CERCLA	NFA	Powerhouse Fuel Oil Storage Tank (Tank 113)
115	CERCLA	NFA	Powerhouse Fuel Oil Storage Tank (Tank 114)
116	CERCLA	NFA	Powerhouse Fuel Oil Storage Tank (Tank 115)
117	CERCLA	NFA	Powerhouse Fuel Oil Storage Tank (Tank 116)
118	Building	NFA	M Building Soils
126	CERCLA	NFA	Building 28 Solvent Storage Area/Shed
243	CERCLA	NFA	VOC Potential Hot Spot Location 1064
254	Building	RA	T Building East Stack
368	Building	NFA	Soil Contamination – Paint Shop
411	CERCLA	Completed RA	Soil Contamination – Asphalt Roadway

- *PRSs 112 and 368 are currently binned No Further Assessment (NFA). The Core Team Recommendation Sheet will be available when the Core Team members sign the PRS 112 and 368 PRS Recommendation Sheets.*
- *PRS 254 is included in the Buildings R, SW, 58 and 68 Slab Removal Action and will be closed out in the Buildings R, SW, 58, and 68 Slab and Soil OSC Report.*

3.0 ACTIONS TAKEN

The P Building BDP was submitted for simultaneous Core Team and public review on 20 January 2005, and the 30-day public review period concluded on 20 February 2005.

A Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) study of P Building was performed prior to demolition. The study report (provided in Appendix G of the Final BDP) provides details of the survey design and results and indicates that P Building met applicable surface release criteria. Issued after the Public Review Draft BDP was released, Addendum 1 to the study report expands upon the acid etch sampling data obtained on the exterior surface of P Building and is also provided in Appendix G of the Final BDP.

The portable boiler unit (that provided steam to T [Technical] Building) was removed from the PS Building slab on 12 April 2005 (prior to the demolition of the slab) and was returned

to the vendor on 13 April 2005. The portable shed (that was used to store chemicals for the treatment of condensate in the steam system for T Building) was removed from the PS Building slab (prior to demolition of the slab) and moved to the R (Research) Building and SW (Semi-Works) Building slabs work area for use as a radiological technician work shed.

The demolition of P Building commenced on 15 February 2005 and was completed on 19 April 2005. The demolition of PS Building slab, EG-4 Building slab, and bulk gas tank slab commenced on 26 April 2005 and was completed on 20 May 2005.

Soil sample location M-80 (Radium-226 results above Cleanup Objective [BDP Table 3]) was not disturbed during the demolition as the sample location was under the asphalt roadway surface approximately 20 feet west of the PS Building slab. The roadway west of P Building, the PS Building slab, and the bulk gas tank slab remained intact during the demolition. This soil sample location will be included in the residual risk evaluation for this parcel.

Following demolition, the ground-contact surfaces of the slabs were surveyed. All results met surface release criteria. Building and slab/foundation debris was loaded into haulers and taken to a local sanitary landfill. Radiological Survey Data Sheets (RSDSs) for post-demolition surveys are provided in Appendix B.

This Closeout Report documents the completion of the demolition and removal of P Building, PS Building slab, EG-4 Building slab, and bulk gas tank slab. All preparation and demolition activities for the PS Building slab, EG-4 Building slab, and bulk gas tank slab, except for final site restoration, were performed in accordance with the detailed Work Plan. The P Building, PS Building slab, EG-4 Building slab, and bulk gas tank slab area final site restoration will take place prior to parcel transfer and will be documented in an addendum to this closeout report. Photographs taken before, during, and after demolition are provided in Appendix A.

Table 3: Materials Disposition

P Building Material	Quantity	Disposal Method	Destination
Asbestos Abatement (Debris)	140 cubic yards	Landfill	Stoney Hollow, Dayton, OH
Construction Debris (concrete, brick, and rebar)	3,690 cubic yards	Landfill	Stoney Hollow, Dayton, OH
Clean Hard Fill Debris (concrete)	3,000 cubic yards	Landfill	Stoney Hollow, Dayton, OH
Scrap Metal	3,875 cubic yards	Recycle	Metal Shredders, West Carrollton, Ohio
Diesel Fuel	4,732 liters	Treatment	Clean Harbors, Cincinnati, Ohio
Glycol	13,627 liters	Treatment	Clean Harbors, Cincinnati, Ohio

PS Building Slab Material	Quantity	Disposal Method	Destination
Clean Hard Fill Debris (concrete)	112 cubic yards	Landfill	Stoney Hollow, Dayton, OH

EG-4 Building Slab Material	Quantity	Disposal Method	Destination
Clean Hard Fill Debris (concrete)	13 cubic yards	Landfill	Stoney Hollow, Dayton, OH

Bulk Gas (Argon/Nitrogen) Tank Slab Material	Quantity	Disposal Method	Destination
Clean Hard Fill Debris (concrete)	58 cubic yards	Landfill	Stoney Hollow, Dayton, OH

4.0 PROBLEMS ENCOUNTERED

P Building was successfully demolished per the Work Package. No problems were encountered.

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.

5.2 Demolition Cost

Under the new site contract, CH2M Hill Mound, Inc. has elected to cluster financial data for multiple buildings together. Cluster P includes Buildings 24, 56, 57, 112, 113, 415, 432, EG-8, P, PH, and WH1-3. As a result, cost data for individual building demolitions are not available. When Cluster P is completed (after the demolition of the Mound Waste Water Treatment Plant (MWWTP) [Buildings 57, 112, 113, 415, 432, and EG-8], Buildings PH and 24, or the Wellhouses [WH1-3], whichever is completed last), the total cost for the cluster will be reported in the last respective On-Scene Coordinator Report or the Closeout Report for above listed structures.

APPENDIX A

Figures

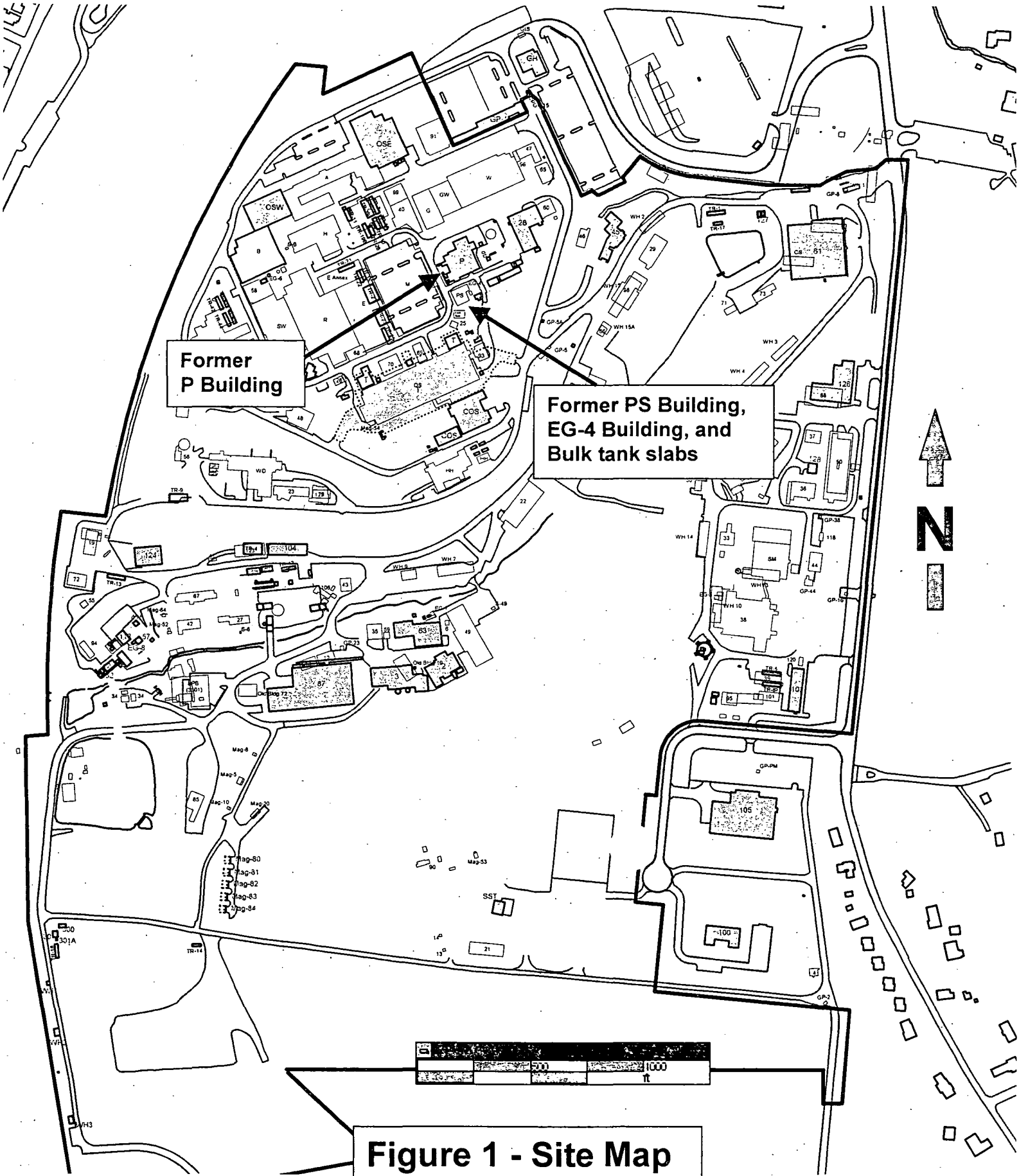
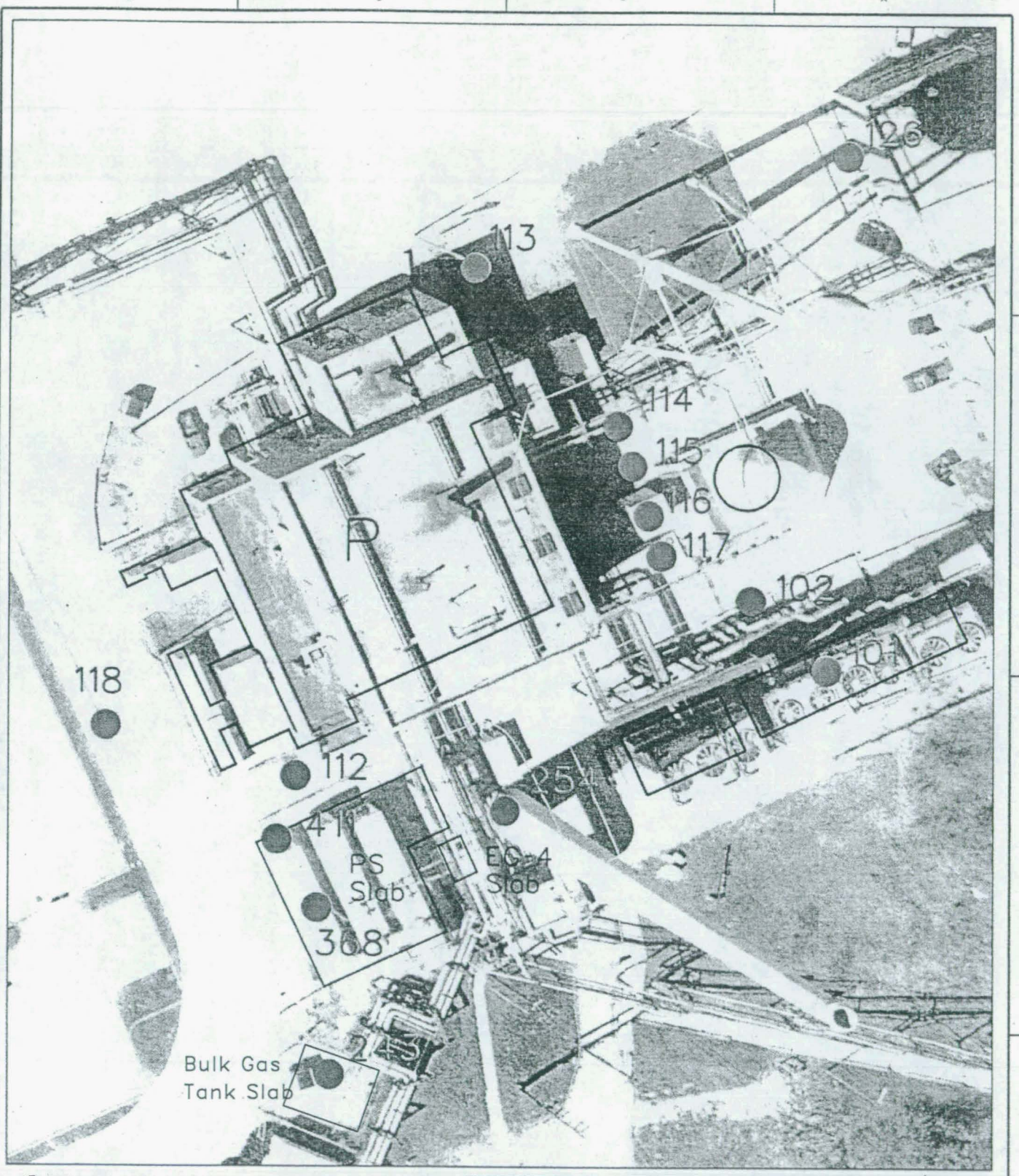


Figure 1 - Site Map

Figure 2: P Building and Vicinity



PRS Point

20 10 0 20 40FT
GRAPHIC SCALE

MOUND
Environmental Restoration Geographic Information System

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

PART CLASSIFICATION

Figure 2
P Building
and Vicinity

GRAPHIC CLASSIFICATION: UNCLASSIFIED
SIZE
DRAWING NUMBER: vicinity.dgn
JOB NUMBER
DWG TYPE: STE
MNG: ER-GIS
CADD
SCALE
SHEET 1 OF
STATUS: WD-REL-00/00/00
ORIGIN: MSTATION / J

ISS	DATE	REVISION	BY	CHKR	ENG	LPREC	APVD	W
	10/05/04		SSP					

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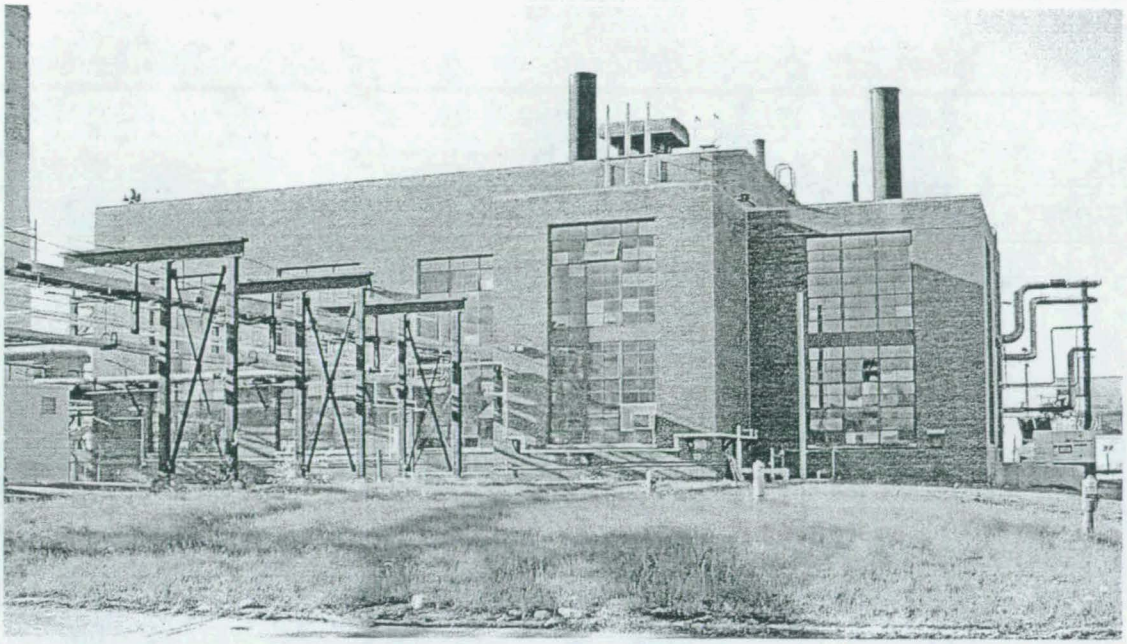
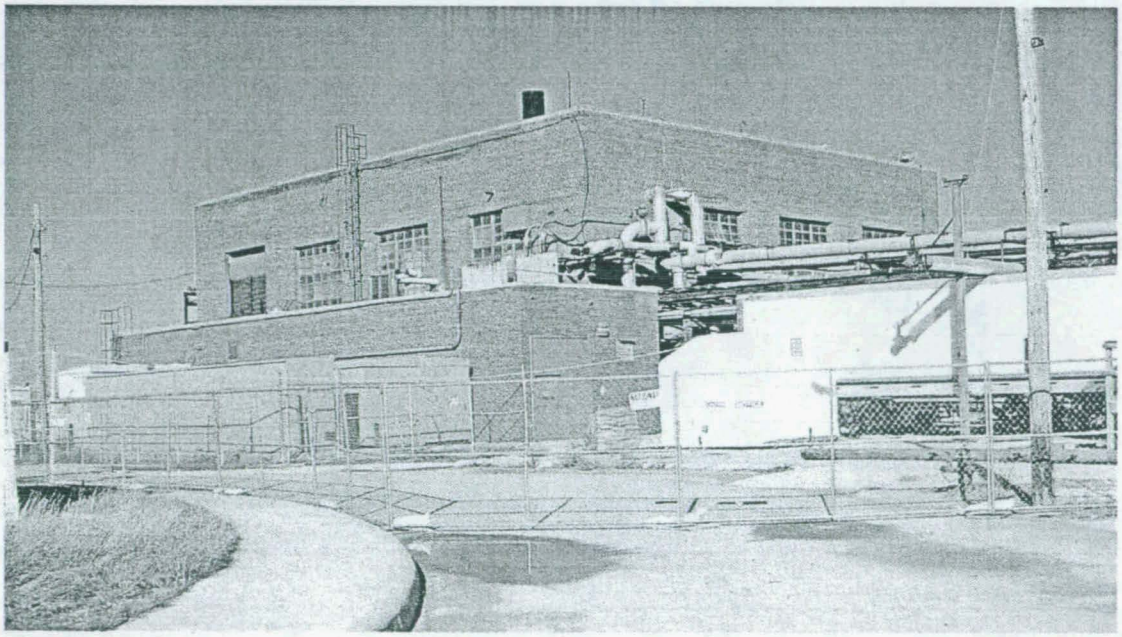
Figure 3 - Building Photos

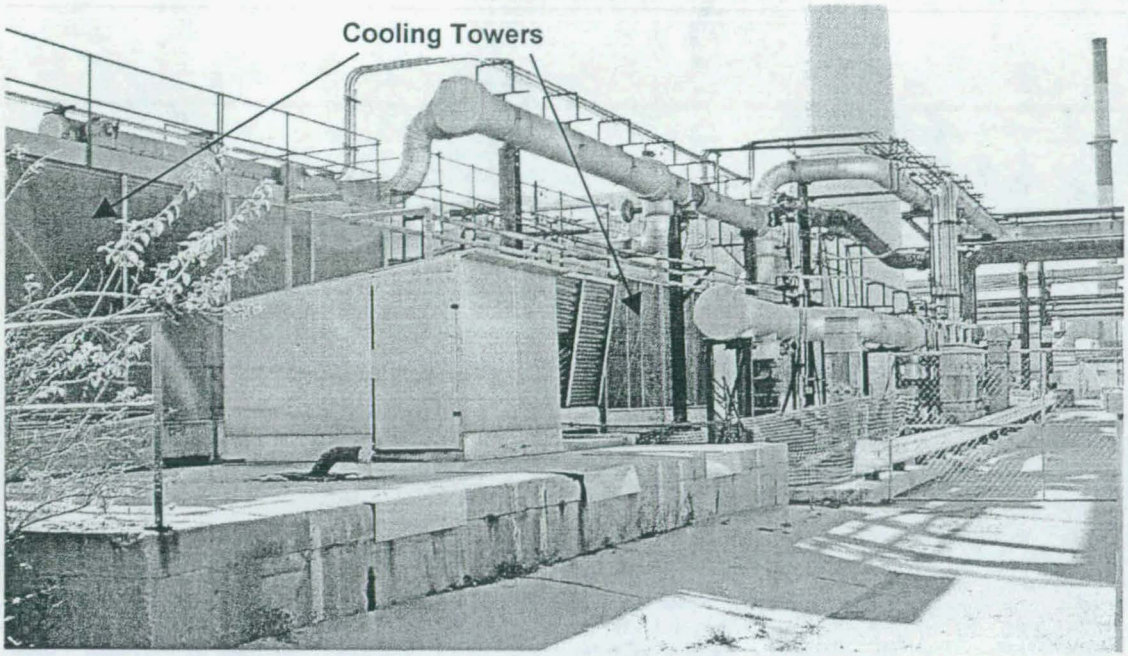


View from the east

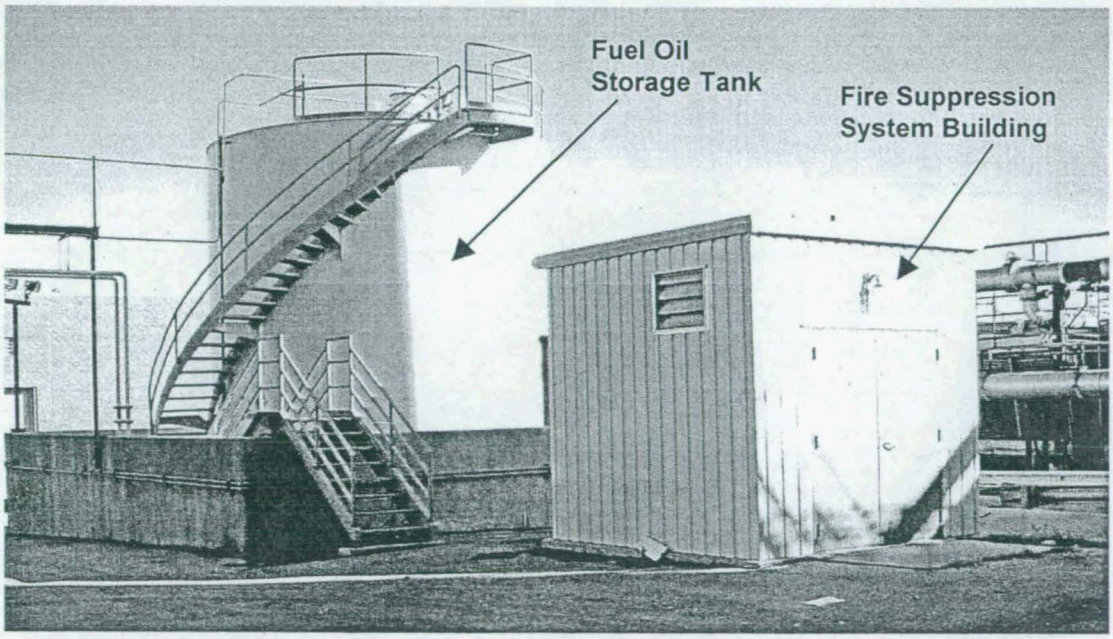


View from the southwest

P Building – Prior to Demolition

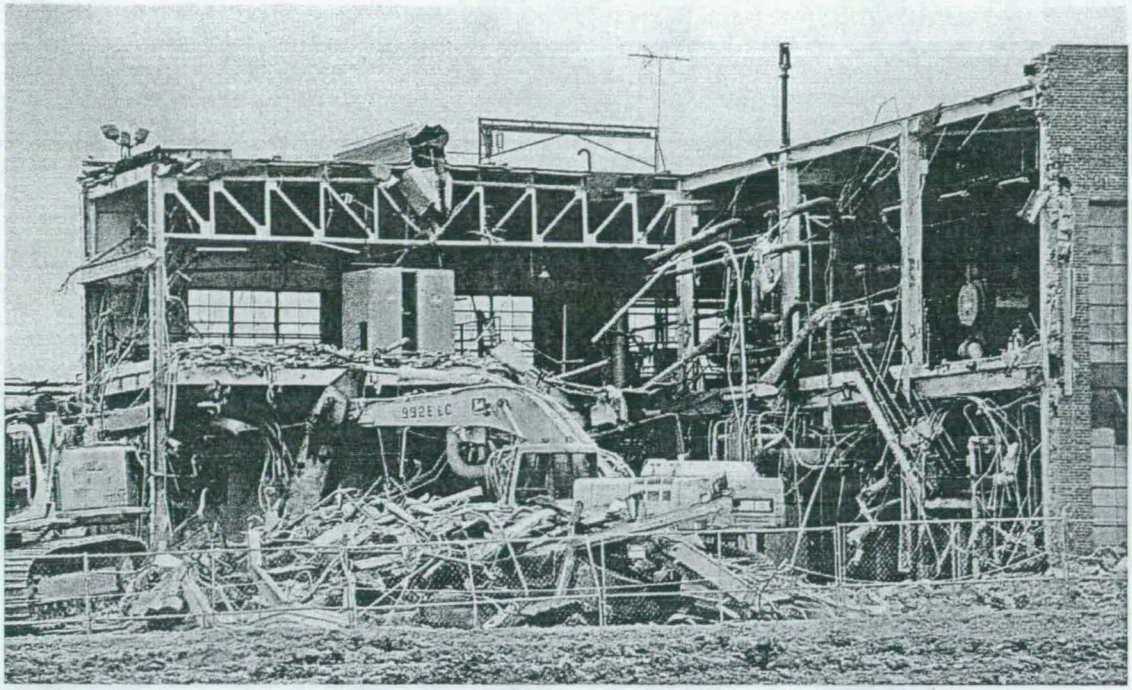


View from the northeast

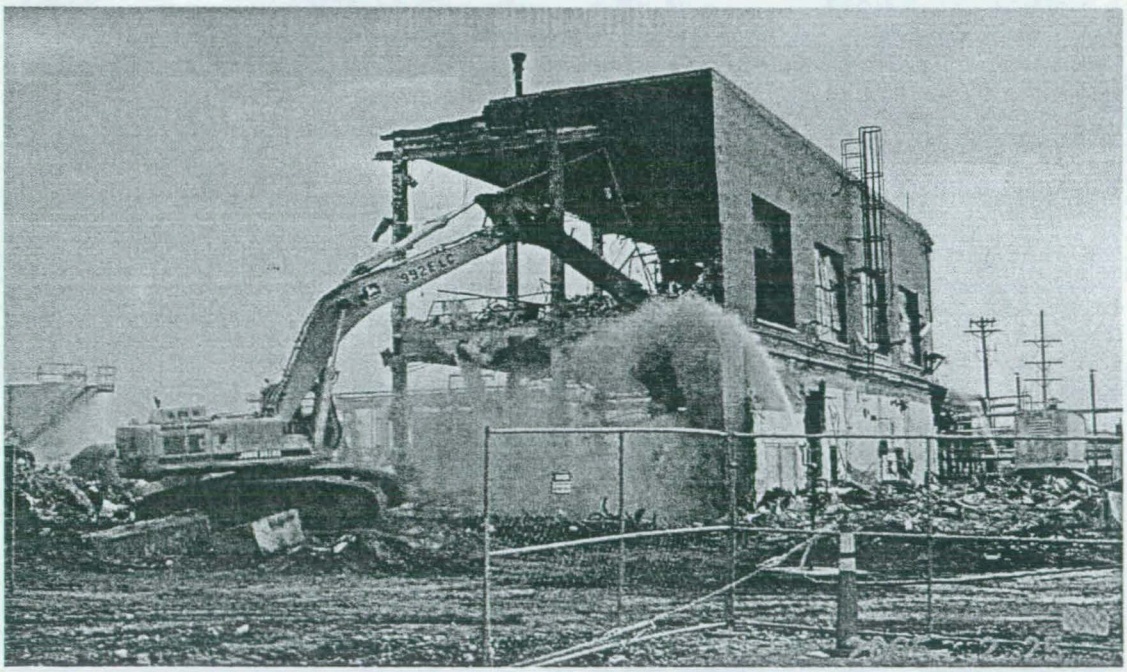


View from the northwest

P Building Ancillary Structures – Prior to Demolition



View from the northeast



View from the northwest

P Building – During Demolition

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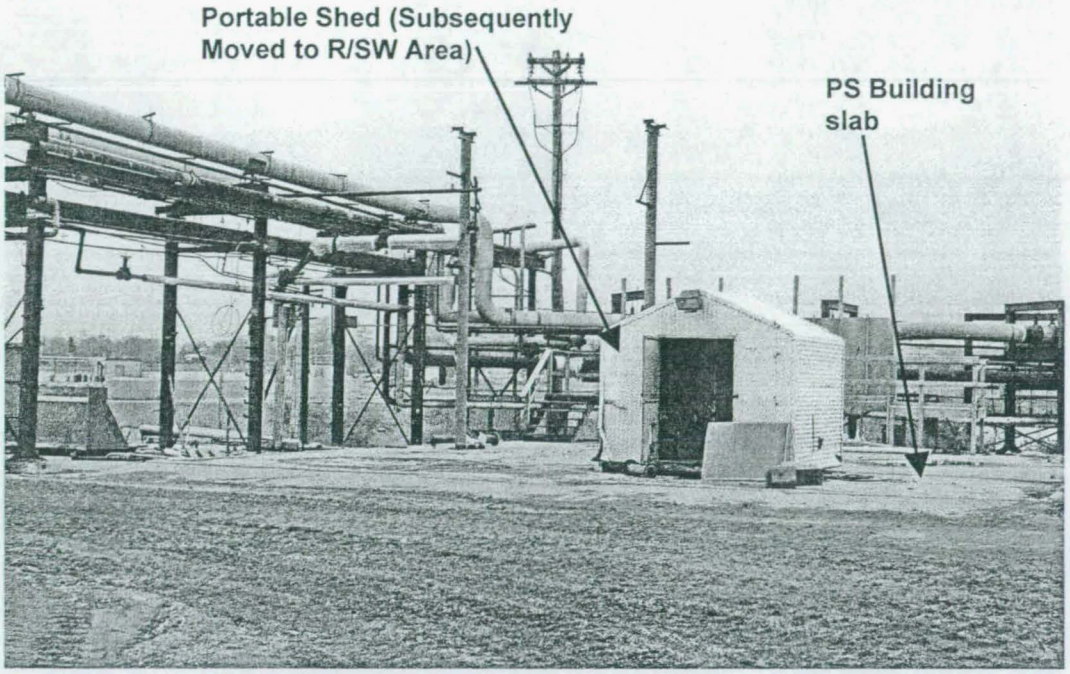
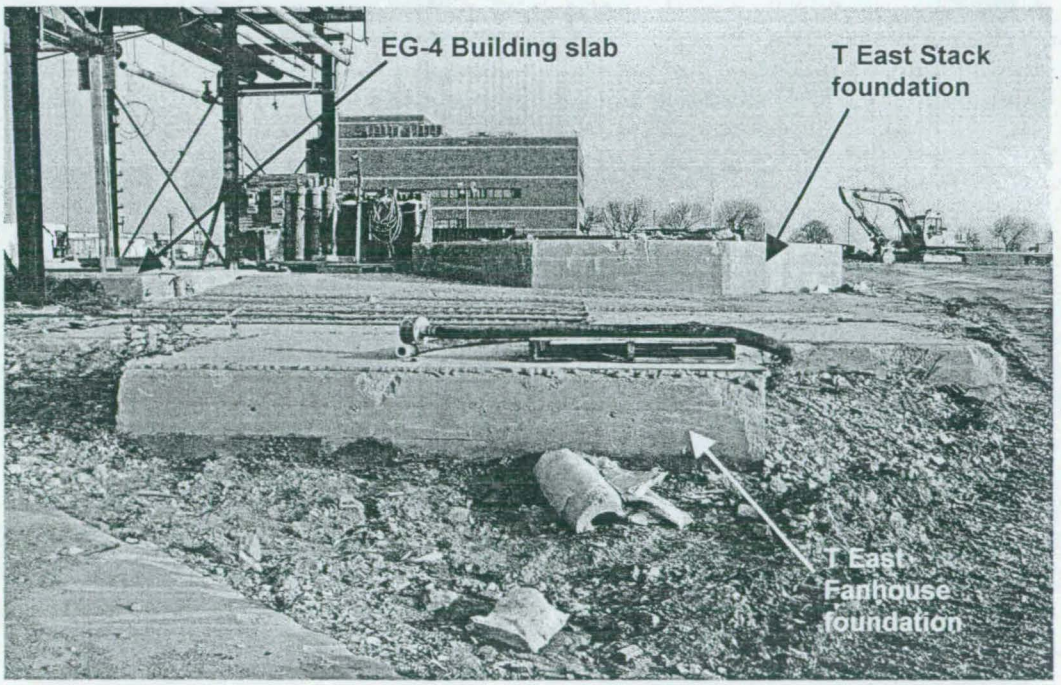
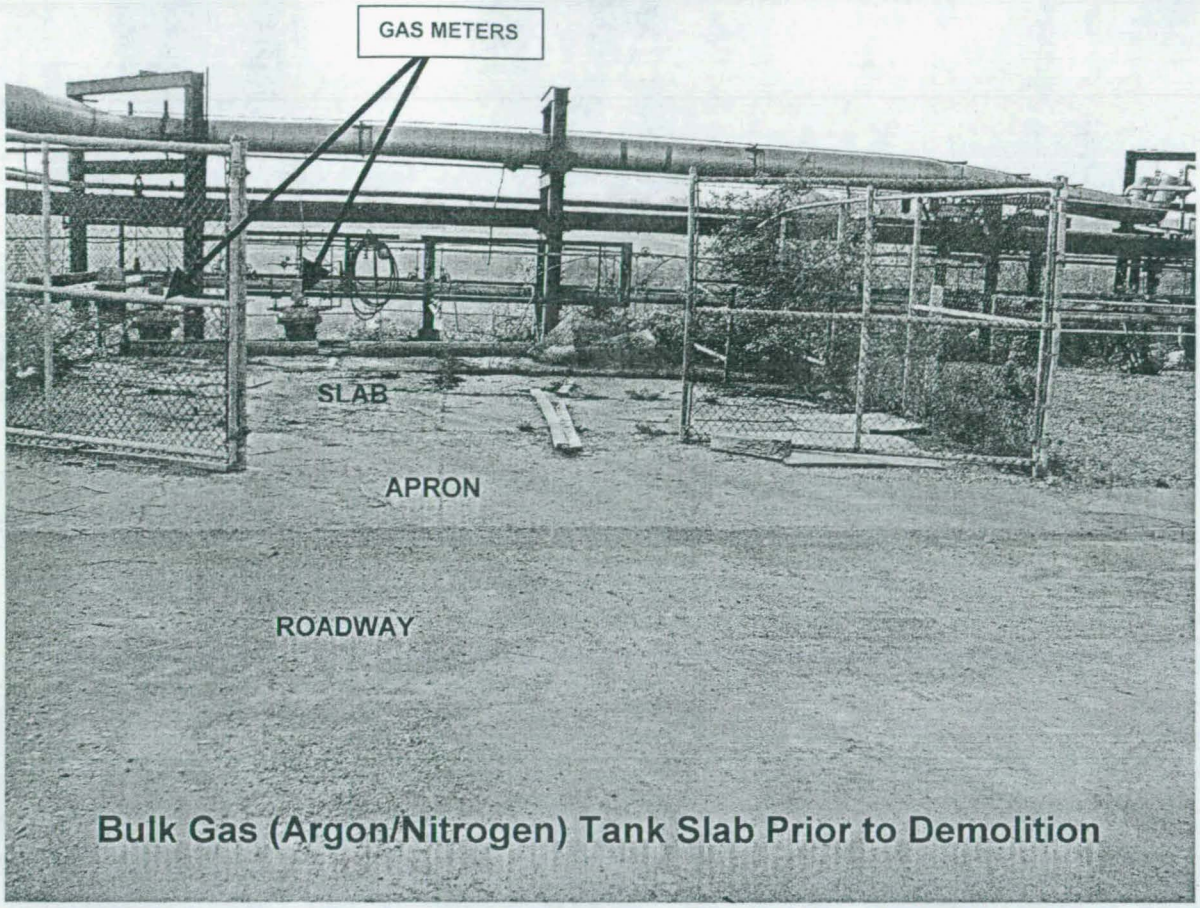


PS Building slab, view from the northwest



View from the south

PS Building and EG-4 Building slabs – Prior to Demolition



Bulk Gas (Argon/Nitrogen) Tank Slab Prior to Demolition

P Building, PS Building, EG-4 Building, and Bulk Gas Tank Slabs After Demolition

APPENDIX B

Post-Final Status Survey Report
Radiological Surveys

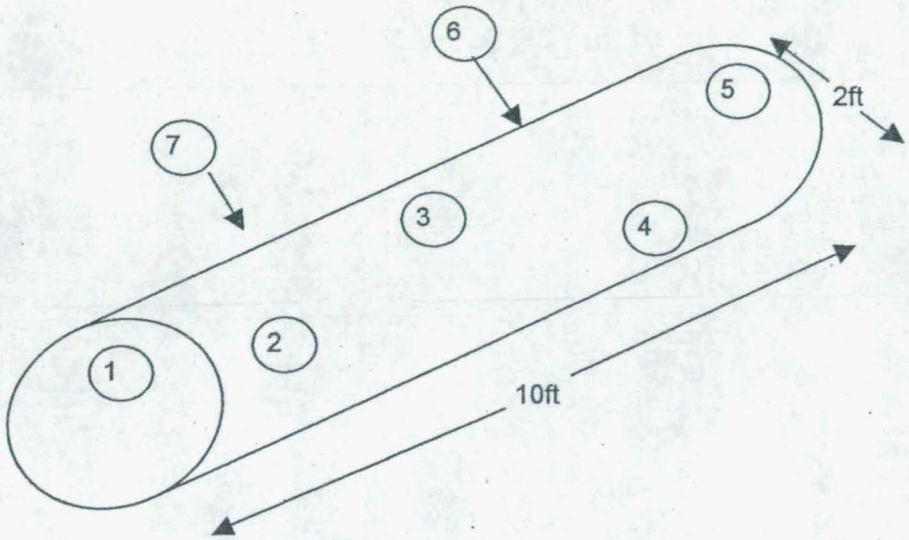
This appendix includes copies of the RSDSs from the post-demolition surveys of the ground-contact surfaces of the slab. All results met surface release criteria.

05-TF-0117 (4 Pages)
05-TF-0124 (4 Pages)
05-TF-0132 (4 Pages)
05-TF-0137 (4 Pages)
05-TF-0138 (4 Pages)
05-TF-0146 (4 Pages)
05-TF-0156 (4 Pages)
05-TF-0172 (4 Pages)
05-TF-0179 (4 Pages)
05-TF-0182 (3 Pages)
05-TF-0183 (4 Pages)
05-TF-0223 (6 Pages)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) P-Building	SURVEY NO. 05-TF-0117
PURPOSE: Survey concrete pylon	RWP NO. none
	DATE: 3/17/2005
	TIME: 9:00

MAP / DRAWING



<100/ alpha

<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

#/α or /β - direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
L2360/43-89	5774/5809	10/28/2005
	NA	

Completed by: (Signature) RNCoblentz	HP# [redacted]	Date: 3/21/05
Completed by: (Printed Name) RNCoblentz		
Counted by: (Signature) See Attached	HP#	Date:
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date: 3/21/05
Reviewed/Approved by: (Print Name) Collas		

Survey No.
05-TF-0117

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm^2)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED SHEET			pylon
2				pylon
3				pylon
4				pylon
5				pylon
6				pylon
7				pylon
		A		
	N			

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

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.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR041
Batch Ended: 3/17/05 12:58
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF-0117 COBLENTZ (7) 03/17/05 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C1	1	0.00	2.07		1.49	2.13	
C2	2	1.41	1.98		4.80	2.76	
C3	3	0.00	2.07		0.27	1.72	
C4	4	0.00	1.96		0.62	1.59	
D1	5	1.75	2.08		2.64	2.50	
D2	6	0.00	2.21		3.96	2.67	
D3	7	0.00	2.10		0.18	1.75	

RMC RMC

B3 of 49

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17 Mar 2005 15:04 ALPHA/BETA - 1.09 Page #1
Protocol #: 2 PW H3 #403728 User : 5379

Time: 2.00
Data Mode: DPM Nuclide: SMGL02 Quench Set: SMGL02
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	8.40
Region B:	2.0 -	18.6	0	0.0	7.82
Region C:	40.0 -	2000	0	0.0	8.90

Quench Indicator: tSIE/AEC
~~Ext Std~~ Terminator: Count
05-TF-0117 COBLENTZ (7) 03/17/05 TAS
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\prot1.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	8.40	7.82	9	B	623.06		0.00	8.90
0	2.00	588.83	553.24	0		619.73	1074.04	90.21	5.60
1	2.00	0.00	0.00	13		403.59	0.00	0.00	0.73
2	2.00	0.00	0.00	40		280.29	0.00	0.00	1.60
3	2.00	0.10	0.00	18		471.41	0.22	9.51	2.26
4	2.00	0.00	0.00	14		418.62	0.00	0.00	0.10
5	2.00	0.00	0.00	29		334.63	0.00	0.00	1.24
6	2.00	0.00	0.00	18		500.47	0.00	0.00	2.31
7	2.00	2.12	2.70	18		313.48	6.00	13.97	0.00

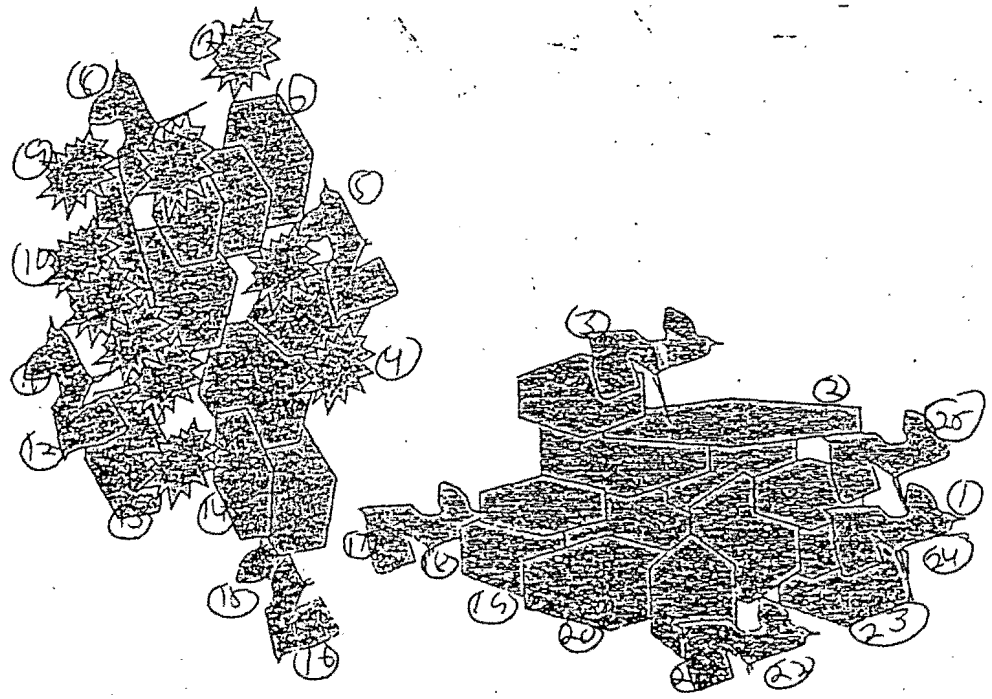
Rmc

Rlt

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) Power House	SURVEY NO. 05-TF-0124
PURPOSE: Characterization of concrete debris pile from Power House demolition	RWP NO. N/A
	DATE: 3-21-05
	TIME: 0900

MAP/DRAWING



Scan and Rouse survey conducted
No audible chirps

Bkg 2360
2 L
145 B

d.L
α - 1.8
β - 20

Integrated count taken IF audible detected. NO audible detected.
ALL direct readings <100dpm/100cm2 Alpha and <5000dpm/100cm2 Beta

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360	5774/5805	10-28-05

Completed by: (Signature) [signature]	HP# [redacted]	Date: 3-22-05
Completed by: (Print) Joe Hardy		
Counted by: (Signature) See scaled Sheets	HP#	Date:
Counted by: (Print)		
Reviewed/Approved by (Signature) RM Coblentz	HP# [redacted]	Date: 3/23/05
Reviewed/Approved by: (Print) RMCoblentz		

ML-9620

RADIOLOGICAL SURVEY DATA SHEET

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See attached Sheets			Power-house concrete debris pile
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

N/A

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

N/A

COMMENTS: Characterization of power house concrete debris pile. Paused scan 2360 no audible clicks, all s... field check prior to sending any ...

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 needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR001
Batch Ended: 3/21/05 9:57
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF--0124 WORLEY [25] 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	2.18		0.00	1.33	
A2	2	0.00	2.02		0.42	1.65	
A3	3	1.77	2.27		0.00	1.27	
A4	4	0.00	2.15		2.73	2.42	
B1	5	0.00	1.88		0.00	1.20	
B2	6	0.00	1.85		0.00	1.13	
B3	7	1.93	2.20		0.09	1.88	
B4	8	0.00	1.99		0.37	1.70	
C1	9	0.00	2.09		2.71	2.46	
C2	10	0.00	1.93		1.59	1.95	
C3	11	0.00	2.06		0.00	1.22	
C4	12	0.00	1.95		0.00	1.13	
D1	13	0.00	2.07		1.54	2.16	
D2	14	1.74	2.18		1.43	2.06	
D3	15	0.00	2.09		0.00	1.24	
D4	16	0.00	2.06		1.37	2.03	
A1	17	0.00	2.18		0.00	1.33	
A2	18	0.00	2.00		0.00	1.18	
A3	19	0.00	2.28		0.72	1.78	
A4	20	0.00	2.10		0.00	1.22	
B1	21	0.77	1.90		0.33	1.69	
B2	22	0.00	1.92		2.13	2.24	
B3	23	0.00	2.18		0.00	1.34	
B4	24	0.00	1.96		0.00	1.21	
C1	25	0.00	2.05		0.00	1.23	

QW 3-22-05

QW 3-22-05

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GWD

21 Mar 2005 11:23 ALPHA/BETA - 1.09 Page #IGW 3-22-0
Protocol #: 1 PW H3 #405835 User : 5801

Time: 2.00
Data Mode: DPM Nuclide: SMGL02 Quench Set: SMGL02
Background Subtract: 1st Vial

	LL	UL	LCR	2SZ	BKG
Region A:	0.5 -	18.6	0	0.0	11.96
Region B:	2.0 -	18.6	0	0.0	10.85
Region C:	40.0 -	2000	0	0.0	12.12

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0124 WORLEY [25] GWD
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	11.96	10.85	12	B	605.97		0.00	12.12
0	2.00	598.86	563.84	1		611.87	1094.26	103.54	0.00
1	2.00	0.00	0.00	35		586.07	0.00	0.00	0.00
2	2.00	0.00	0.00	24		568.55	0.00	0.00	0.00
3	2.00	0.00	0.00	8		520.52	0.00	0.00	0.00
4	2.00	0.00	0.00	0		621.81	0.00	0.00	0.00
5	2.00	1.04	0.51	8		566.71	1.98	10.64	0.00
6	2.00	0.00	0.00	0		570.34	0.00	0.00	0.00
7	2.00	0.00	0.00	10		584.63	0.00	0.00	0.00
8	2.00	0.00	0.00	0		609.09	0.00	0.00	0.00
9	2.00	0.00	0.00	7		587.54	0.00	0.00	0.38
10	2.00	0.00	0.00	18		541.54	0.00	0.00	0.00
11	2.00	0.00	0.00	8		586.31	0.00	0.00	0.00
12	2.00	0.00	0.00	28		521.30	0.00	0.00	0.00
13	2.00	0.00	0.00	25		505.65	0.00	0.00	0.00
14	2.00	0.00	0.00	17		555.19	0.00	0.00	0.00
15	2.00	0.00	0.00	21		514.01	0.00	0.00	0.00
16	2.00	0.00	1.50	12		558.34	0.00	0.00	0.00
17	2.00	0.00	0.00	48		384.60	0.00	0.00	0.00
18	2.00	0.00	0.00	7		641.95	0.00	0.00	0.00
19	2.00	0.00	0.00	5		551.02	0.00	0.00	0.00
20	2.00	0.00	0.00	12		500.01	0.00	0.00	0.38
21	2.00	0.00	0.00	9		403.77	0.00	0.00	0.00
22	2.00	0.00	0.00	13		634.03	0.00	0.00	0.00
23	2.00	0.00	0.00	11		537.24	0.00	0.00	0.00
24	2.00	0.00	0.00	6		534.28	0.00	0.00	0.00
25	2.00	0.00	0.00	10		525.44	0.00	0.00	0.00

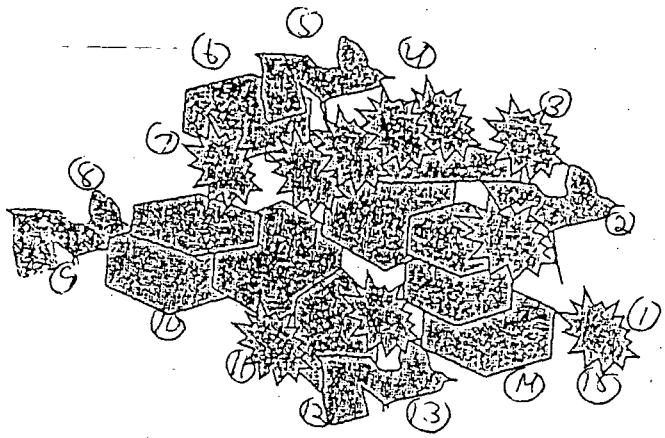
GW
3-22-05

GWD

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Powerhouse	SURVEY NO. 05-TF-0132
PURPOSE: Characterization of concrete pile from power house demolition.	RWP NO M2
	DATE: 3-22-05
	TIME: 1330

MAP / DRAWING



Pause and scan w/2360
No audible clicks
Intermittent count not resolved

2360 BKG
α 2
β 130

α-L
1-8 α
20 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
- # - air sample number
- # - swipe number
- #α or /β - direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360	5735/5723	1-31-06
2		
	2	

Completed by: (Signature) Joe Lang	[redacted]	Date: 3-23-05
Completed by: (Printed Name) Joe Lang		
Counted by: (Signature) Sean Michael Shealy	HP#:	Date:
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) RM Coblentz	HP# [redacted]	Date: 3-23-05
Reviewed/Approved by: (Print Name) RM Coblentz		

ML-9620 (2-98)

Survey No.
05-TF-0132

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See attached sheets			Powerhouse Concrete demolition
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
	N			
			N	

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

COMMENTS: Smears field check w/ 2360 prior to sending counting lab

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 needed, mark N/A.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR016
Batch Ended: 3/22/05 14:21
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF-0132 WORLEY (15) 03/22/05 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	1.74	2.19		0.00	1.33	
A2	2	0.00	2.00		0.00	1.18	
A3	3	0.00	2.27		0.00	1.27	
A4	4	0.00	2.12		0.32	1.71	
B1	5	0.00	1.92		1.73	2.07	
B2	6	0.00	1.89		1.02	1.94	
B3	7	1.92	2.24		2.74	2.66	
B4	8	0.00	2.01		1.56	2.08	
C1	9	0.00	2.05		0.00	1.23	
C2	10	0.00	1.93		1.59	1.95	
C3	11	0.00	2.06		0.00	1.22	
C4	12	0.00	1.98		1.74	1.95	
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	1.24	

QW 3-23-05 QW 3-23-05

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	8.10
Region B:	2.0	- 18.6	0	0.0	8.24
Region C:	40.0	- 2000	0	0.0	12.51

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0132 (15) WORLEY 03/22/05 TAS
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

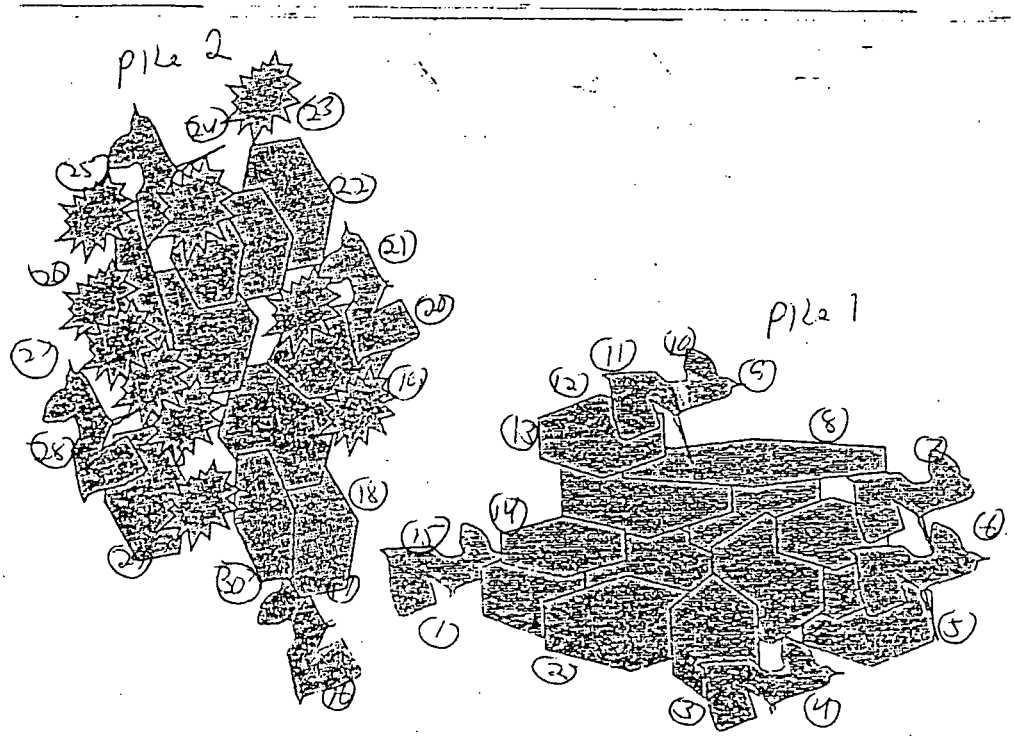
S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	8.10	8.24	12.51	626.44	9	B		0.00
0	2.00	544.23	520.46	2.99	616.73	0		1129.05	107.82
1	2.00	0.00	0.00	0.00	564.19	7		0.00	0.00
2	2.00	0.00	0.00	0.00	539.75	48		0.00	0.00
3	2.00	0.00	0.00	0.49	574.59	28		0.00	0.00
4	2.00	0.00	0.00	0.00	624.51	8		0.00	0.00
5	2.00	2.40	2.09	0.00	542.76	5		5.32	10.97
6	2.00	0.00	0.00	0.99	551.32	50		0.00	0.00
7	2.00	0.00	0.00	0.00	402.18	15		0.00	0.00
8	2.00	0.00	0.00	0.00	604.98	13		0.00	0.00
9	2.00	0.00	0.00	0.00	580.44	11		0.00	0.00
10	2.00	0.00	0.00	0.00	573.15	7		0.00	0.00
11	2.00	0.87	0.45	0.00	607.30	6		1.82	9.68
12	2.00	0.00	0.00	0.00	582.77	7		0.00	0.00
13	2.00	0.47	0.34	0.00	613.37	6		0.99	9.45
14	2.00	0.00	0.00	0.00	589.51	6		0.00	0.00
15	2.00	0.40	0.03	0.00	577.92	0		0.86	9.71

PW
3-23-05

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Power House	SURVEY NO. 05-TF-0137
PURPOSE: Characterization of (2) small concrete debris piles from power house demolition	RWP NO. N/A
	DATE: 3-24-05
	TIME: 1300

MAP/DRAWING



Scan d	Bkg 2360	d. L
Pause with 2360	α 2	α 1.8
No audible clicks	β 140	β 20
Integrated count no required		

Integrated count taken IF audible detected. NO audible detected.

ALL direct readings <100dpm/100cm2 Alpha and <5000dpm/100cm2 Beta

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Ludlum 360	5641/5811	8-4-05

Completed by: (Signature) [signature]	HP# [redacted]	Date: 3-28-05
Completed by: (Print) Joe Hurley		
Counted by: (Signature) See attached sheets	HP#	Date:
Counted by: (Print)		
Reviewed/Approved by (Signature) AM Coblentz	HP# [redacted]	Date: 3/28/05
Reviewed/Approved by: (Print) AM Coblentz		

ML-9620

Survey No.
05-TF-0137

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See	attached	Sheets	Powerhouse Condenser Pile
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
	N/A			

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

COMMENTS: Smears field check with 2360 prior to sending to Counting Lab.

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 needed, mark N/A.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR056
Batch Ended: 3/24/05 13:35

Crosstalk correction performed.

Recalibration Date: 11/03/05
Serial Number: 26966-1

Batch ID: 05-TF-0137 WORLEY (30) 03/24/05 TAS

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	2.17		0.00	1.83	
A2	2	0.00	2.24		3.04	2.54	
A3	3	0.00	2.16		0.00	1.27	
A4	4	0.00	2.04		0.00	1.78	
B1	5	0.00	1.97		0.97	2.28	
B2	6	0.00	2.09		1.11	2.39	
B3	7	0.00	1.95		0.10	2.17	
B4	8	1.47	1.93		2.52	2.56	
C1	9	0.00	2.32		0.00	1.46	
C2	10	0.95	2.15		0.00	1.44	
C3	11	0.00	2.12		1.52	2.65	
C4	12	0.00	2.09		1.24	2.57	
D1	13	0.00	2.20		0.00	2.08	
D2	14	0.00	2.17		0.00	1.30	
D3	15	0.00	1.97		4.19	3.19	
D4	16	0.57	2.15		0.00	1.44	
A1	17	0.00	2.17		0.00	1.83	
A2	18	0.00	2.23		1.79	2.20	
A3	19	0.00	2.16		0.00	1.27	
A4	20	0.00	2.07		2.38	2.49	
B1	21	1.69	1.90		0.00	1.21	
B2	22	0.00	2.02		0.00	1.26	
B3	23	0.00	1.93		0.00	1.80	
B4	24	0.00	1.89		0.00	1.65	
C1	25	0.00	2.32		0.00	1.46	
C2	26	0.00	2.16		0.00	1.96	
C3	27	0.00	2.11		0.22	2.31	
C4	28	0.00	2.09		1.24	2.57	
D1	29	0.95	2.21		0.14	2.52	
D2	30	0.00	2.17		0.00	1.31	

3-28-05 3-28-05

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

	LL	UL	LCR	2SZ	BKG
Region A:	0.5 -	18.6	0	0.0	7.79
Region B:	2.0 -	18.6	0	0.0	7.35
Region C:	40.0 -	2000	0	0.0	10.83

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0137 WORLEY (30) 03/24/05 TAS
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT3.DAT
Count Data Filename: c:\data\SDATA3.DAT
Spectrum Data Drive & Path: c:\data

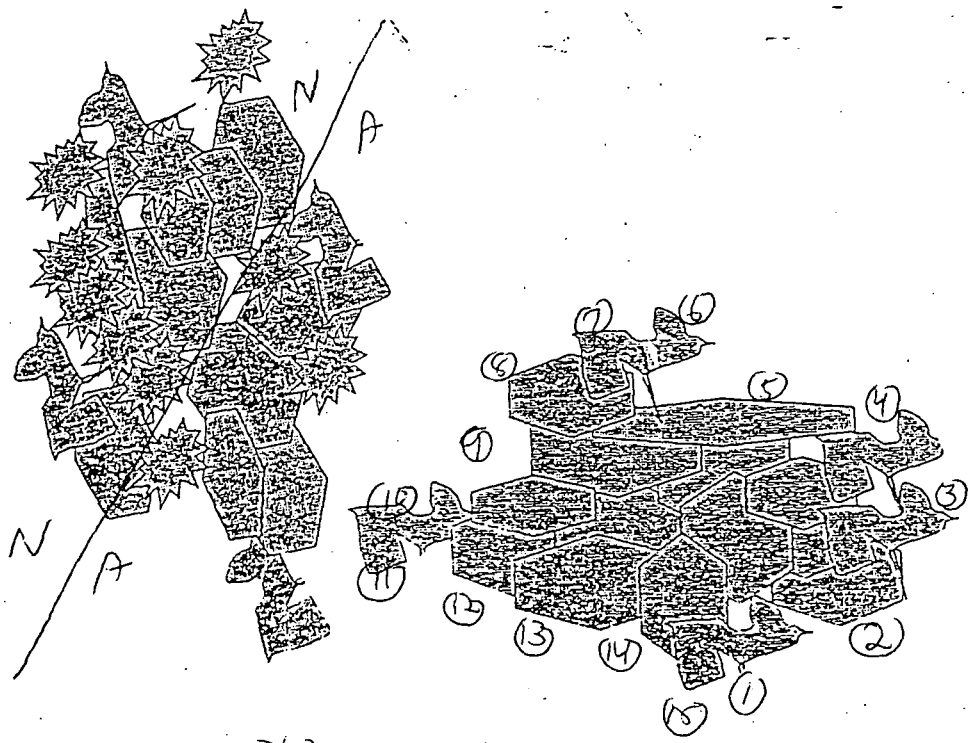
S#	TIME	CPMA	CPMB	CPMC	LUM	tSIE	DPM1	2Sigma	FLAG
-1	10.00	7.79	7.35	10.83	3	608.42		0.00	B
0	2.00	551.12	510.73	0.00	0	575.15	1080.30	105.11	
1	2.00	1.71	1.75	0.00	14	615.00	3.23	9.69	
2	2.00	0.71	0.00	0.00	21	600.98	1.35	9.42	
3	2.00	0.00	0.00	0.17	24	533.77	0.00	0.00	
4	2.00	1.71	1.62	0.00	14	545.72	3.43	10.28	
5	2.00	2.99	2.79	0.00	5	625.65	5.61	9.34	
6	2.00	7.39	7.39	0.00	6	593.84	14.26	11.22	
7	2.00	2.21	1.60	0.00	10	601.96	4.23	9.22	
8	2.00	0.71	0.63	0.00	12	594.17	1.36	8.65	
9	2.00	0.00	0.00	0.00	11	620.88	0.00	0.00	
10	2.00	0.00	0.00	0.00	7	585.46	0.00	0.00	
11	2.00	0.00	0.00	0.17	15	576.23	0.00	0.00	
12	2.00	0.00	0.00	0.00	20	548.22	0.00	0.00	
13	2.00	2.71	1.88	0.00	5	602.01	5.18	9.42	
14	2.00	0.00	0.00	0.00	8	510.67	0.00	0.00	
15	2.00	0.00	0.00	0.15	9	579.99	0.00	0.00	
16	2.00	0.00	0.00	0.67	7	632.44	0.00	0.00	
17	2.00	0.71	0.00	0.00	6	644.54	1.31	8.30	
18	2.00	0.00	0.00	0.00	36	638.91	0.00	0.00	
19	2.00	0.21	0.65	0.00	0	616.72	0.39	8.28	
20	2.00	4.21	2.39	0.00	12	623.38	7.92	10.52	
21	2.00	0.71	0.33	0.00	6	627.64	1.32	8.41	
22	2.00	0.00	0.00	1.17	31	631.43	0.00	0.00	
23	2.00	1.17	0.93	1.17	0	636.22	2.17	8.55	
24	2.00	0.00	0.00	0.00	17	608.24	0.00	0.00	
25	2.00	1.71	1.53	0.00	5	619.42	3.22	8.89	
26	2.00	1.19	0.45	0.00	0	637.45	2.21	8.55	
27	2.00	0.00	0.00	0.00	0	595.85	0.00	0.00	
28	2.00	0.00	0.00	0.17	8	624.88	0.00	0.00	
29	2.00	0.00	0.00	1.67	7	634.57	0.00	0.00	
30	2.00	0.00	0.00	0.00	10	602.53	0.00	0.00	

3-24-05

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Powerhouse	SURVEY NO. 05-JF-0138
PURPOSE: Characterization of small concrete debris pile from powerhouse demolition	RWP NO. N/A
	DATE: 3-24-05
	TIME: 1330

MAP/DRAWING



Scan house with 2360
No audible clicks
Integral ~~count~~ count not required

Integrated count taken IF audible detected. NO audible detected.

ALL direct readings <100dpm/100cm2 Alpha and <5000dpm/100cm2 Beta

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Ludlum 2360	5691 / 5811	8-4-05

Completed by: (Signature)	H [redacted]	Date: 3-28-05
Completed by: (Print) Joe Hosler		
Counted by: (Signature) See postal sheets	HP#	Date:
Counted by: (Print)		
Reviewed/Approved by (Signature) RM Coblentz	HP# [redacted]	Date: 3/28/05
Reviewed/Approved by: (Print) RM Coblentz		

ML-9620

Survey No.
05-TF-0138

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See attached sheets			Concrete doors
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

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

COMMENTS: Smears field check with 2360 Ratemeter to setup counting lab.

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 needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR024
Batch Ended: 3/24/05 13:41
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF-0138 WORLEY (15) 03/24/05 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.25		3.60	2.93	
A2	2	0.00	2.05		2.75	2.33	
A3	3	0.00	2.28		0.72	1.78	
A4	4	0.00	2.12		0.32	1.71	
B1	5	0.00	1.90		0.54	1.69	
B2	6	0.00	1.85		0.00	1.14	
B3	7	0.00	2.18		0.00	1.34	
B4	8	0.00	1.96		0.00	1.21	
C1	9	0.00	2.05		0.00	1.23	
C2	10	0.00	1.91		0.00	1.12	
C3	11	0.00	2.11		3.92	2.73	
C4	12	0.00	1.96		0.62	1.59	
D1	13	0.00	2.06		0.29	1.77	
D2	14	0.00	2.15		0.00	1.19	
D3	15	0.00	2.09		0.00	1.24	

3-28-05 3-28-05

B19 of 49

4 of 4
3-28-05

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	7.18
Region B:	2.0 -	18.6	0	0.0	6.76
Region C:	40.0 -	2000	0	0.0	11.80

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0138 WORLEY (15) 03/24/05 TAS
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT4.DAT
Count Data Filename: c:\data\SDATA4.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.18	6.76	3	B	604.04		0.00	11.80
0	2.00	649.67	608.79	0		599.84	1247.12	117.62	0.00
1	2.00	0.32	0.52	7		571.62	0.62	8.31	0.00
2	2.00	0.00	0.00	13		605.06	0.00	0.00	0.00
3	2.00	0.00	0.00	0		599.13	0.00	0.00	0.00
4	2.00	3.47	1.59	9		618.15	6.56	9.31	0.00
5	2.00	0.52	0.69	0		591.45	1.01	8.27	0.00
6	2.00	0.00	0.00	8		607.17	0.00	0.00	0.00
7	2.00	0.00	0.00	0		648.24	0.00	0.00	0.00
8	2.00	0.00	0.00	10		606.50	0.00	0.00	0.00
9	2.00	2.82	2.91	14		539.20	5.70	10.49	0.00
10	2.00	0.82	0.00	17		594.58	1.57	9.22	0.00
11	2.00	0.32	0.16	7		608.15	0.60	8.06	0.00
12	2.00	0.00	0.00	20		583.78	0.00	0.00	0.00
13	2.00	0.00	0.00	18		542.01	0.00	0.00	0.00
14	2.00	1.32	2.02	16		604.06	2.52	9.35	0.00
15	2.00	0.00	0.00	8		572.60	0.00	0.00	0.00

PW
3-28-05

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Powerhouse	SURVEY NO. 05-TF-0146
PURPOSE: Characterization survey of (1) small concrete debris pile from powerhouse demolition.	RWP NO. N/A
	DATE: 3-29-05
	TIME: 1630

MAP/DRAWING

Scan & pause survey with 2360. NO audible clicks

2360 BKG
3 α
145 β

d.L
2.2 α
20 β

Integrated count taken IF audible detected. NO audible detected.
ALL direct readings <100dpm/100cm2 Alpha and <5000dpm/100cm2 Beta

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Ludlum 2360	5755/5723	1-31-06

Completed by: (Signature) [signature]	HP# [redacted]	Date: 3-30-05
Completed by: (Print) Joe Hanley		
Counted by: (Signature) See attached sheets	HP#	Date:
Counted by: (Print)		
Reviewed/Approved by (Signature) RM Coblentz	HP# [redacted]	Date: 4-4-05
Reviewed/Approved by: (Print) RM Coblentz		

ML-9620

Survey No.
05-TF-0146

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See	Attached	Sheets	Powerhouse Concrete deck
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
	N			
		N		

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

COMMENTS: Smears Field check with 2360 Prior to sending Counting Lab

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 needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR078
Batch Ended: 3/29/05 16:31

Crosstalk correction performed.

Recalibration Date: 11/03/05
Serial Number: 26966-1

Batch ID: 05-TF-0146 J. WORLEY (15) AG

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	2.21		2.23	2.56	
A2	2	0.00	2.24		3.04	2.54	
A3	3	0.00	2.18		0.48	1.76	
A4	4	1.40	2.04		0.00	1.78	
B1	5	1.69	1.95		0.00	1.98	
B2	6	0.00	2.02		0.00	1.26	
B3	7	3.41	2.70		0.00	1.32	
B4	8	0.00	1.89		0.00	1.65	
C1	9	0.00	2.41		3.17	3.32	
C2	10	0.00	2.16		0.00	1.96	
C3	11	0.00	2.11		0.22	2.31	
C4	12	0.00	2.07		0.00	2.23	
D1	13	0.00	2.22		1.72	2.90	
D2	14	0.00	2.23		1.26	2.19	
D3	15	0.00	1.94		0.00	1.48	
~~D4~~	~~16~~	~~0.00~~	~~2.15~~		~~0.00~~	~~1.44~~	

3-30-05 3-30-05

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 3-30-05

Time: 2.00
Data Mode: DPM Nuclide: SMGL02 Quench Set: SMGL02
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	8.55
Region B:	2.0	- 18.6	0	0.0	8.55
Region C:	40.0	- 2000	0	0.0	12.20

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0146 WORLEY [15] 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\SDATA1.DAT
Spectrum Data Drive & Path: c:\data

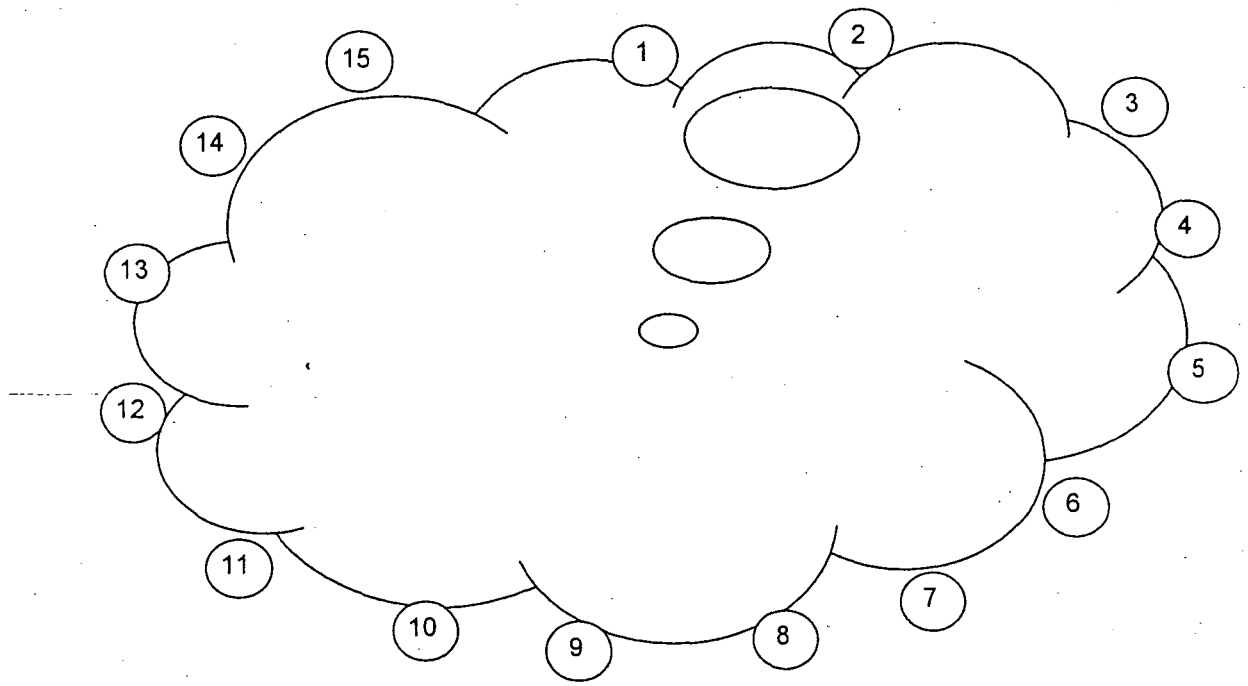
S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	8.55	8.55	7	B	623.62		0.00	12.20
0	2.00	672.90	645.43	0		621.53	1225.64	99.77	0.00
1	2.00	0.45	0.95	15		605.74	0.83	9.33	0.00
2	2.00	0.45	0.45	11		636.09	0.81	8.36	0.00
3	2.00	6.95	5.37	3		647.96	12.39	10.51	0.00
4	2.00	0.00	0.00	8		656.02	0.00	0.00	0.00
5	2.00	0.00	0.00	0		634.10	0.00	0.00	0.00
6	2.00	0.00	0.00	8		626.93	0.00	0.00	0.80
7	2.00	0.00	0.00	12		522.06	0.00	0.00	0.00
8	2.00	1.63	0.56	10		612.08	2.99	8.98	0.80
9	2.00	5.38	3.66	4		606.81	9.92	10.35	0.00
10	2.00	2.45	2.10	9		513.62	4.90	10.11	0.00
11	2.00	0.00	0.00	7		591.56	0.00	0.00	0.00
12	2.00	0.00	0.00	9		594.82	0.00	0.00	0.00
13	2.00	0.00	0.00	7		499.74	0.00	0.00	0.00
14	2.00	0.00	0.00	6		625.11	0.00	0.00	0.00
15	2.00	0.00	0.00	7		620.42	0.00	0.00	0.00

gw
3-30-05

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Powerhouse	SURVEY NO. 05-TF-0156
PURPOSE: Characterization survey of concrete debris pile drom Powerhouse demolitic ~~Debris moved from DS area~~ RMC 4-13-05	RWP NO. n/a
	DATE: 4/4/2005
	TIME: 17:15

MAP / DRAWING



PAUSE AND SCAN WITH 2360.
NO AUDIBLE CLICKS. INTERGRATED
COUNT NOT REQUIRED

<100/ alpha

<5K/ beta

2360 BKG d.L
145 BETA 2.2 ALPHA
2. ALPHA 20 BETA

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

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360/4389	5691/5811	8/4/2005
	NA	

Completed by: (Signature) Joe Worley [redacted]		Date: 4-11-05
Joe Worley JOSEPH WORLEY		
Counted by: (Signature) See attached sheets See attached	HP#	Date:
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) RMCoblentz	HP# [redacted]	Date: 4-11-05
Reviewed/Approved by: (Print Name) RMCoblentz		

Survey No. 05-TF-0156

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED SHEET			Powerhouse concrete debris pile
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

N/A

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

N/A

Smears field check with 2360/4389 prior to sending counting lab

NOTES:

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

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR123
Batch Ended: 4/5/05 10:41

Crosstalk correction performed.

Recalibration Date: 11/03/05
Serial Number: 26966-1

Batch ID: 05-TF-0156 J. WORLEY (15) AG

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	2.19		0.96	2.23	
A2	2	0.00	2.20		0.00	1.30	
A3	3	0.00	2.16		0.00	1.27	
A4	4	0.00	2.03		0.00	1.29	
B1	5	0.00	1.97		0.97	2.28	
B2	6	0.00	2.02		0.00	1.26	
B3	7	0.00	1.93		0.00	1.80	
B4	8	0.00	1.92		1.56	2.30	
C1	9	0.00	2.32		0.00	1.46	
C2	10	0.00	2.18		0.00	2.37	
C3	11	0.00	2.08		0.00	1.40	
C4	12	0.00	2.05		0.00	1.35	
D1	13	0.00	2.20		0.00	2.08	
D2	14	0.00	2.34		4.98	3.07	
D3	15	0.00	1.97		4.19	3.19	

QW 4-11-05

QW 4-11-05

QW 4-11-05

TAP 4/8

05 Apr 2005 15:28 ALPHA/BETA - 1.09 Page #1

Protocol #: 2 PW H3 405828 User : 213E

Time: 2.00
Data Mode: DPM Nuclide: SM6LS02 Quench Set: SM6LS02
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	7.04
Region B:	2.0 -	18.6	0	0.0	6.63
Region C:	40.0 -	2000	0	0.0	11.50

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
~~05-TF-0213 (11) AG~~ 05-TF-0156 J. WORLEY (15)
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	7.04	6.63	1	B	600.10		0.00	11.50
0	2.00	568.96	533.99	0		603.27	1089.05	105.27	0.00
1	2.00	0.46	0.62	0		516.17	0.95	8.71	2.00
2	2.00	8.90	9.31	0		664.67	16.21	10.80	0.00
3	2.00	6.34	5.74	0		635.02	11.83	10.18	0.00
4	2.00	6.87	6.37	0		425.55	15.98	12.93	0.00
5	2.00	0.96	0.37	17		517.33	1.98	9.85	0.00
6	2.00	1.31	1.82	20		558.40	2.61	9.65	0.00
7	2.00	2.46	2.35	0		593.22	4.75	9.02	0.00
8	2.00	0.02	0.19	7		582.85	0.04	8.01	0.00
9	2.00	0.46	0.87	0		596.81	0.89	8.12	0.00
10	2.00	4.09	2.49	9		586.68	7.93	9.74	2.00
11	2.00	1.99	2.40	5		535.37	4.04	9.28	0.00
12	2.00	0.00	0.00	0		595.76	0.00	0.00	0.00
13	2.00	0.96	0.71	0		631.75	1.79	8.11	0.00
14	2.00	2.96	3.07	0		614.57	5.61	9.07	0.00
15	2.00	1.46	1.14	6		575.79	2.86	8.72	1.00

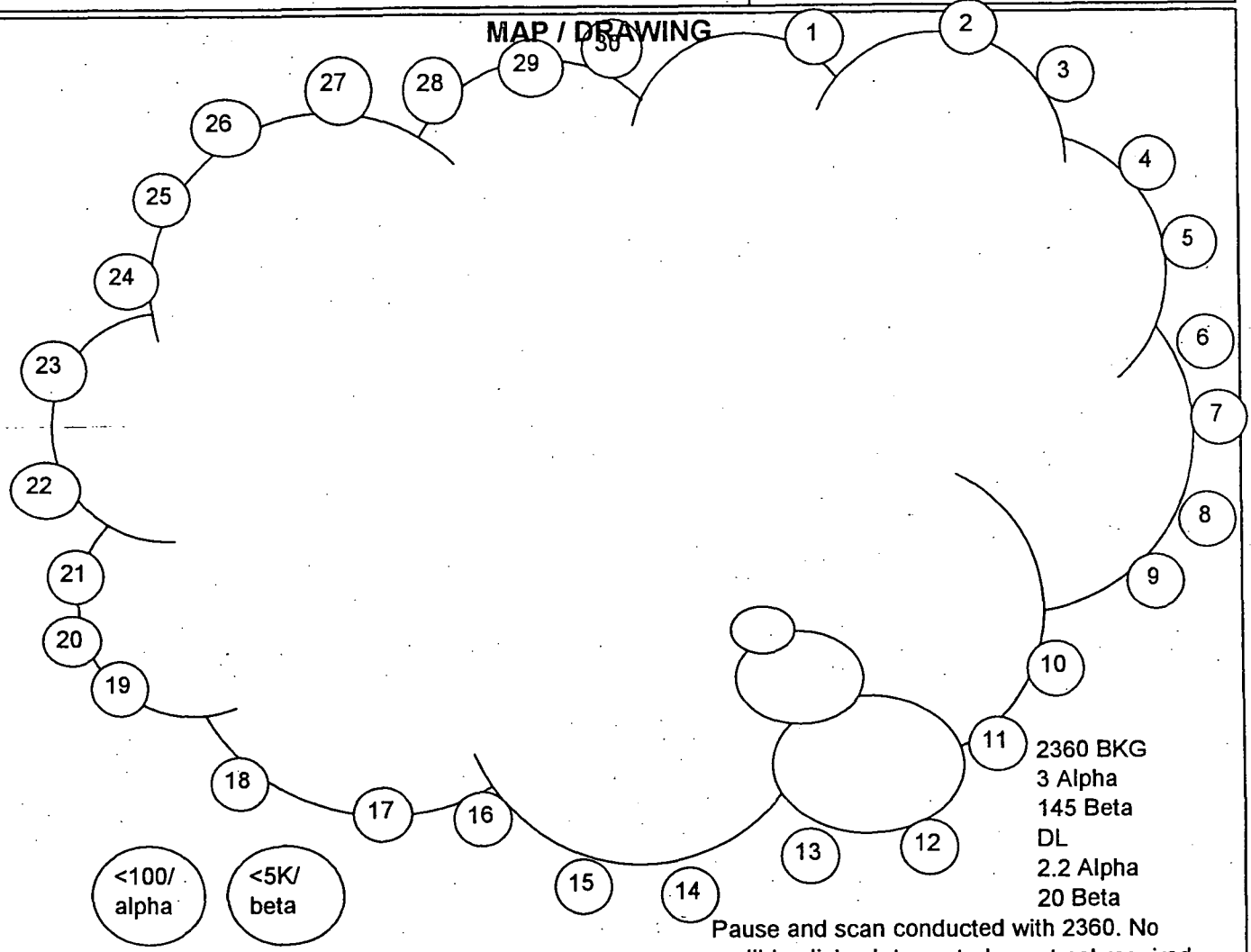
AW 4-12-05

TP AP

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Powerhouse	SURVEY NO. 05-TF-0172
PURPOSE: Characterization survey of concrete debris pile from Powerhouse cooling tower and brine pit	RWP NO. N/A
	DATE: 4/25/2005
	TIME: 9:20

MAP / DRAWING



Pause and scan conducted with 2360. No audible clicks. Intergrated count not required.

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
2360/4389	5765/5802	3/1/2006
	NA	

Completed by: (Signature)	HP# [redacted]	Date 4/26/2005
Completed by: (Printed Name) Joe Worley/Larry Oeffner Jr.		
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date 5-3-05
Reviewed/Approved by: (Print Name) RMCoblentz		

Survey No. 05-TF-0172

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm^2)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED SHEET			Concrete debris pile
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
	N	A		

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

Comments: Smears field check wth 2360 pror to sending counting lab

NOTES:

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

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR098
Batch Ended: 4/25/05 10:31

Crosstalk correction performed.

Recalibration Date: 11/03/05
Serial Number: 26966-1

Batch ID: 05-TF-0172 WORLEY (30) 04/25/05 TAS

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	2.22		3.49	2.86	
A2	2	0.00	2.20		0.00	1.30	
A3	3	0.00	2.26		5.36	3.02	
A4	4	0.00	2.03		0.00	1.29	
B1	5	0.00	1.94		0.00	1.98	
B2	6	0.00	2.07		0.00	2.08	
B3	7	0.00	1.93		0.00	1.80	
B4	8	0.00	1.89		0.00	1.65	
C1	9	1.83	2.37		0.32	2.73	
C2	10	0.00	2.23		3.64	3.31	
C3	11	1.75	2.08		0.00	1.39	
C4	12	0.00	2.09		1.24	2.57	
D1	13	0.00	2.22		1.72	2.90	
D2	14	0.00	2.20		0.01	1.80	
D3	15	0.00	1.95		0.00	2.04	
D4	16	0.00	2.15		0.00	1.44	
A1	17	0.00	2.17		0.00	1.83	
A2	18	0.00	2.21		0.54	1.81	
A3	19	0.00	2.16		0.00	1.27	
A4	20	0.00	2.04		0.00	1.78	
B1	21	0.00	1.97		0.97	2.28	
B2	22	1.49	2.11		2.07	2.66	
B3	23	0.00	1.95		0.10	2.17	
B4	24	0.00	1.89		0.00	1.65	
C1	25	1.83	2.37		0.32	2.73	
C2	26	0.00	2.23		3.64	3.31	
C3	27	1.75	2.08		0.00	1.39	
C4	28	0.00	2.09		1.24	2.57	
D1	29	0.00	2.21		0.30	2.52	
D2	30	0.00	2.23		1.26	2.19	

QL 4-26-05

QL 4-26-05

 QL 4-26-05

TAS

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25 Apr 2005 11:43 ALPHA/BETA - 1.09 Page #1
Protocol #: 2 PW H3 405828 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	7.15
Region B:	2.0	- 18.6	0	0.0	6.59
Region C:	40.0	- 2000	0	0.0	11.15

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0172 JOE WORLEY (30) AG
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

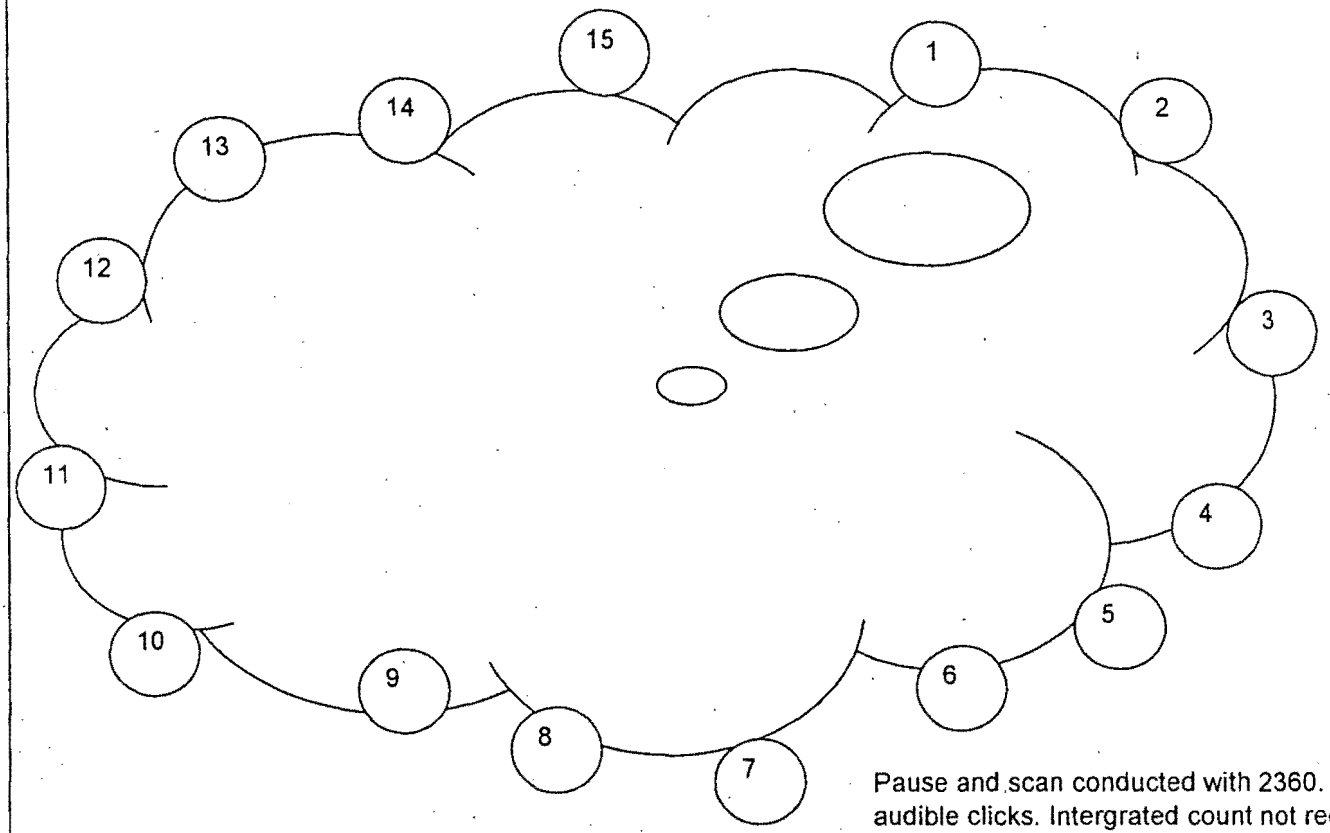
S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.15	6.59	3	B	593.14		0.00	11.15
0	2.00	575.93	543.70	0		600.79	1104.63	106.53	0.35
1	2.00	0.00	0.00	0		643.03	0.00	0.00	0.00
2	2.00	2.50	2.86	35		557.90	4.97	9.37	0.00
3	2.00	15.68	10.97	92		414.29	37.09	16.71	0.35
4	2.00	0.85	0.63	6		526.87	1.74	8.88	0.00
5	2.00	1.78	0.84	5		508.01	3.70	9.47	0.00
6	2.00	2.35	1.62	0		612.73	4.47	8.88	0.00
7	2.00	0.00	0.00	0		635.89	0.00	0.00	0.00
8	2.00	2.51	1.79	0		654.72	4.61	8.65	0.00
9	2.00	0.00	0.00	0		640.80	0.00	0.00	0.00
10	2.00	6.35	5.91	0		666.71	11.55	9.97	0.00
11	2.00	0.85	1.08	0		633.73	1.59	8.11	0.00
12	2.00	1.85	1.91	6		601.48	3.55	8.76	0.00
13	2.00	1.34	1.06	6		637.89	2.50	8.29	0.00
14	2.00	2.29	2.35	11		634.91	4.27	8.70	0.00
15	2.00	4.35	4.08	4		631.40	8.14	9.53	0.00
16	2.00	12.35	6.09	51		604.90	23.61	12.50	0.00
17	2.00	1.70	2.26	0		629.23	3.18	8.49	0.00
18	2.00	1.67	0.91	0		627.63	3.13	8.49	0.00
19	2.00	0.35	0.91	0		639.93	0.66	7.85	0.00
20	2.00	0.00	0.00	0		603.09	0.00	0.00	0.35
21	2.00	0.35	0.91	0		558.65	0.70	8.40	0.00
22	2.00	0.35	0.91	7		595.35	0.68	8.14	1.35
23	2.00	1.15	1.21	0		573.18	2.26	8.66	0.00
24	2.00	0.00	0.00	0		622.56	0.00	0.00	0.00
25	2.00	0.00	0.00	0		635.94	0.00	0.00	0.00
26	2.00	0.00	0.00	8		602.40	0.00	0.00	0.00
27	2.00	2.85	2.42	10		584.48	5.55	9.31	0.00
28	2.00	9.13	7.49	73		385.31	22.67	14.87	0.85
29	2.00	2.85	2.44	15		579.57	5.57	9.35	0.00
30	2.00	9.88	6.83	54		415.73	23.32	14.45	0.00

4-26-05

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Across from Powehouse	SURVEY NO. 05-tf-0179
PURPOSE: Characterization survey of concrete debris from paint shop pad	RWP NO. N/A
	DATE: 4/25/2005
	TIME: 14:00

MAP / DRAWING



Pause and scan conducted with 2360. No audible clicks. Intergrated count not required

<100/ alpha

<5K/ beta

2360 Bkg. 3 Alpha
145 Beta
DL 2.λ Alpha
20 Beta

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

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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360/4389	5765/5802	3/1/2006
	NA	

Completed by: (Signature) Joe Worley / Larry Oeffner	HP# [redacted]	Date 4/26/2005
Completed by: (Printed Name) Joe Worley/ Larry Oeffner Jr.		
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) RM Coblentz	HP# [redacted]	Date 5-3-05
Reviewed/Approved by: (Print Name) RM Coblentz		

Survey No. 05-TF-0179

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm^2)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED SHEET			Paint shop pad pad concrete debris pile
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		A		
	N			

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

Comments: Smears field check with 2360 prior to sending counting lab

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: SMEAR070
Batch Ended: 4/25/05 14:19
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF-0179 WORLEY (15) 04/25/05 TAS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	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	2.32		3.23	2.52	
A4	4	0.00	2.10		0.00	1.22	
B1	5	0.00	1.92		1.73	2.07	
B2	6	0.00	1.87		0.00	1.59	
B3	7	0.00	2.24		2.95	2.66	
B4	8	0.00	1.96		0.00	1.21	
C1	9	0.00	2.05		0.00	1.23	
C2	10	0.00	1.91		0.00	1.13	
C3	11	1.73	2.06		0.00	1.22	
C4	12	0.00	1.95		0.00	1.12	
D1	13	0.00	2.08		2.79	2.50	
D2	14	0.00	2.15		0.00	1.19	
D3	15	1.72	2.10		0.02	1.75	

gW 4-26-05

gW 4-26-05

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4-26-05

AC

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	7.24
Region B:	2.0	- 18.6	0	0.0	7.19
Region C:	40.0	- 2000	0	0.0	11.50

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0179 WORLEY (15) 04/25/05 TAS
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT3.DAT
Count Data Filename: c:\data\SDATA3.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	CPMC	LUM	tSIE	DPM1	2Sigma	FLAG
-1	10.00	7.24	7.19	11.50	5	600.69		0.00	B
0	2.00	516.36	482.78	0.00	0	570.43	1016.28	100.17	
1	2.00	3.76	3.00	0.00	5	617.67	7.10	9.47	
2	2.00	0.00	0.00	0.00	0	635.73	0.00	0.00	
3	2.00	0.26	0.00	0.00	0	602.99	0.49	8.12	
4	2.00	3.76	3.10	0.00	5	562.49	7.44	9.92	
5	2.00	2.19	1.96	0.00	0	605.15	4.19	8.94	
6	2.00	0.00	0.00	1.00	6	580.83	0.00	0.00	
7	2.00	0.00	0.00	0.00	0	565.73	0.00	0.00	
8	2.00	2.76	2.61	0.00	0	560.48	5.47	9.52	
9	2.00	2.05	1.67	0.00	0	566.79	4.04	9.17	
10	2.00	0.00	0.00	0.00	0	570.07	0.00	0.00	
11	2.00	0.00	0.00	0.00	0	587.51	0.00	0.00	
12	2.00	0.76	0.10	0.00	0	565.61	1.49	8.61	
13	2.00	3.26	3.04	0.00	0	599.93	6.25	9.41	
14	2.00	1.26	1.17	0.00	6	526.52	2.57	9.14	
15	2.00	1.26	1.53	0.00	29	500.56	2.63	11.08	

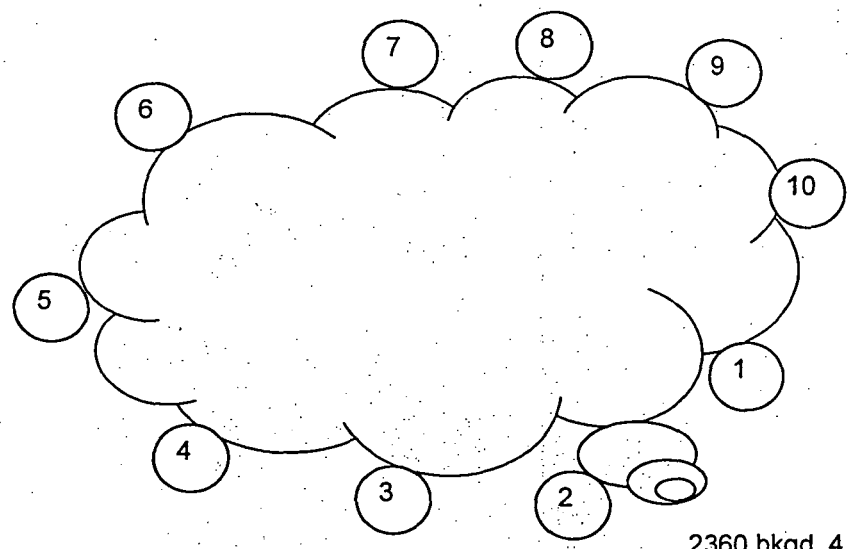
QW 4-26-05

PM

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Across from Powerhouse	SURVEY NO. 05-TF-0182
PURPOSE: Debris pile survey of Emergency Generator #4 concrete pad	RWP NO. N/A
	DATE: 4/27/05
	TIME: 13:30

MAP / DRAWING



2360 bkgd. 4 cpm alpha DL 2.6 alpha
16 beta 20 beta

* Scan and pause survey performed no audible clicks detected, therefore no intergrates performed

<100 / α

<5K / β-

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

- mrem/hr neutron

- swipe number

- air sample number

#/α or /β - direct contamination measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Lud 2360/4389	5765/5802	3/1/05
	NA	

Completed by: (Signature) Joe Worley	HP# [redacted]	Date 4-28-05
Completed by: (Printed) Joe Worley / L. Oeffner Jr.		
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) RM Coblentz	HP# [redacted]	Date 5-3-05
Reviewed/Approved by: (Print Name) RM Coblentz		

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR005
Batch Ended: 4/27/05 13:52

Crosstalk correction performed.

Recalibration Date: 11/03/05
Serial Number: 26966-1

Batch ID: 05-TF-0182 J.WORLEY (10) AG

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.24		4.75	3.13	
A2	2	0.00	2.24		3.04	2.54	
A3	3	0.00	2.20		1.70	2.15	
A4	4	0.00	2.04		0.00	1.78	
B1	5	0.00	1.97		0.97	2.28	
B2	6	1.49	2.07		0.00	2.08	
B3	7	0.00	1.96		1.32	2.50	
B4	8	0.00	1.93		2.69	2.56	
C1	9	0.00	2.34		0.00	1.97	
C2	10	0.00	2.20		0.97	2.72	

NO NO

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2 of 3

~~Page 1 of 1~~ NO
4-28-05

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	7.37
Region B:	2.0	- 18.6	0	0.0	6.79
Region C:	40.0	- 2000	0	0.0	11.81

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
05-TF-0182 J. WORLEY (10) AG
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT4.DAT
Count Data Filename: c:\data\SDATA4.DAT
Spectrum Data Drive & Path: c:\data

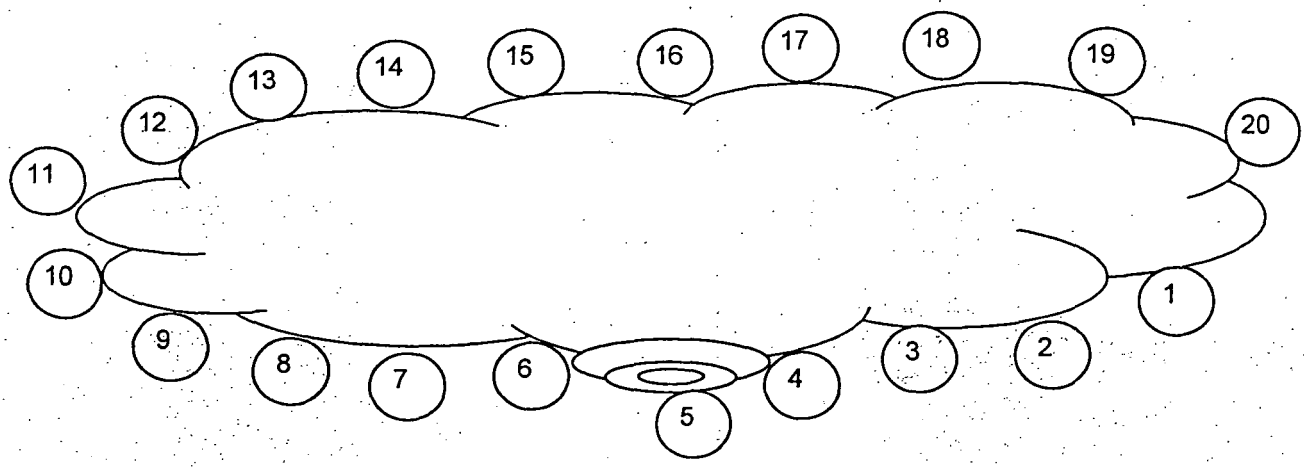
S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.37	6.79	3	B	598.94		0.00	11.81
0	2.00	602.47	563.73	0		596.05	1160.21	110.95	0.00
1	2.00	3.60	3.99	5		547.21	7.23	10.03	0.00
2	2.00	3.48	2.61	0		570.08	6.85	9.79	0.19
3	2.00	0.00	0.00	0		503.87	0.00	0.00	0.00
4	2.00	1.13	1.45	0		589.50	2.20	8.65	0.00
5	2.00	0.00	0.00	0		545.74	0.00	0.00	0.00
6	2.00	1.74	1.82	0		585.49	3.38	8.94	0.00
7	2.00	1.13	0.94	0		594.60	2.19	8.61	1.69
8	2.00	2.63	2.93	0		601.04	5.05	9.19	0.00
9	2.00	2.13	2.71	0		604.37	4.08	8.96	0.00
10	2.00	2.17	2.75	0		640.92	4.04	8.71	0.00

NO

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Across from Powerhouse	SURVEY NO. 05-TF-0183
PURPOSE: Debris pile survey of Powerhouse remnants	RWP NO. N/A
	DATE: 4/27/05
	TIME: 13:00

MAP / DRAWING



2360 bkgd. 4 cpm alpha
16 beta

D.L. 2.6dpm α
20 dpm β⁻

<100/α <5K/β⁻

* Scan and pause survey performed no audible clicks detected, therefore no intergrates, unless otherwise noted see attached

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	5765/5802	3/1/05
	NA	

Completed by: (Signature) Jamie N. Collins	HP# [redacted]	Date 4/28/05
Completed by: (Printed) L. Oeffner Jr. / Jamie Collins		
Counted by: (Signature) See attached	HP#	Date
Counted by: (Printed Name)		
Reviewed/Approved by: (Signature) RM Coblentz	HP# [redacted]	Date 5-3-05
Reviewed/Approved by: (Print Name) RM Coblentz		

Survey No.
05-TF-0183

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

COMMENTS: all smears field checked with 2360 prior to submitting to count lab

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.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Aqua
Data file name: SMEAR004
Batch Ended: 4/27/05 13:43

Crosstalk correction performed.

Recalibration Date: 11/03/05
Serial Number: 26966-1

Batch ID: 05-TF-0183 J. COLLINS (20) AG

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	2.21		2.23	2.56	
A2	2	0.00	2.27		5.55	3.10	
A3	3	0.00	2.18		0.48	1.76	
A4	4	0.00	2.03		0.00	1.29	
B1	5	0.00	2.03		4.32	2.99	
B2	6	0.00	2.09		1.11	2.39	
B3	7	0.00	1.95		0.10	2.17	
B4	8	0.00	1.87		0.00	1.20	
C1	9	0.00	2.39		1.84	3.04	
C2	10	0.00	2.18		0.00	2.37	
C3	11	0.00	2.11		0.22	2.31	
C4	12	0.00	2.09		1.24	2.57	
D1	13	0.00	2.24		4.57	3.53	
D2	14	0.00	2.17		0.00	1.30	
D3	15	0.00	1.94		0.00	1.48	
D4	16	0.00	2.16		0.00	1.98	
A1	17	0.00	2.17		0.00	1.83	
A2	18	0.00	2.21		0.54	1.81	
A3	19	0.00	2.18		0.48	1.76	
A4	20	0.00	2.03		0.00	1.29	

JC JC

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JC 4/28/05 ~~Page 1 of 1~~ page 3 of 4

49

27 Apr 2005 15:49 ALPHA/BETA - 1.09 JC 4/28/05 ~~Page #1~~
Protocol #: 1 PW H3 405828 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	7.33
Region B:	2.0	- 18.6	0	0.0	6.99
Region C:	40.0	- 2000	0	0.0	12.20

Quench Indicator: tSIE/AEC
~~Ext Std~~ Terminator: Count
05-TF-0183 (20) AG
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT1.DAT
Count Data Filename: c:\data\SDATA1.DAT
Spectrum Data Drive & Path: c:\data

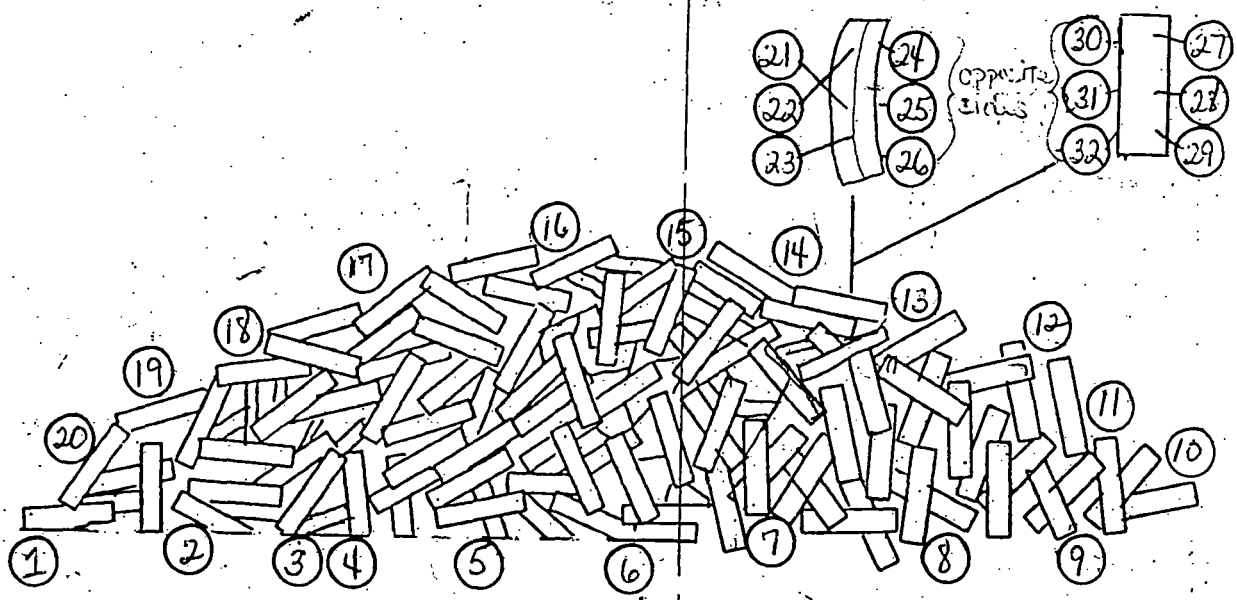
S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	7.33	6.99	3	B	593.19		0.00	12.20
0	2.00	648.83	608.94	0		595.82	1249.73	117.90	0.00
1	2.00	4.17	3.75	4		594.11	8.04	9.84	0.00
2	2.00	0.00	0.01	0		616.75	0.00	0.00	0.00
3	2.00	0.00	0.00	0		625.72	0.00	0.00	0.00
4	2.00	0.17	0.01	0		580.53	0.33	8.26	0.00
5	2.00	0.00	0.00	7		568.55	0.00	0.00	0.00
6	2.00	1.17	0.23	6		602.35	2.24	8.55	0.00
7	2.00	3.55	3.72	5		542.28	7.16	10.04	2.80
8	2.00	0.06	0.90	18		513.11	0.13	9.65	0.00
9	2.00	2.67	1.23	5		526.56	5.46	9.80	0.00
10	2.00	0.00	0.00	33		534.46	0.00	0.00	0.00
11	2.00	0.00	0.00	33		548.84	0.00	0.00	0.00
12	2.00	0.00	0.00	10		580.01	0.00	0.00	0.00
13	2.00	0.00	0.00	19		559.37	0.00	0.00	2.80
14	2.00	4.27	4.04	0		552.26	8.53	10.24	0.00
15	2.00	2.17	2.02	0		583.50	4.22	9.12	0.00
16	2.00	0.00	0.00	0		591.21	0.00	0.00	0.00
17	2.00	0.00	0.00	0		604.38	0.00	0.00	0.00
18	2.00	0.00	0.00	8		568.88	0.00	0.00	0.00
19	2.00	0.00	0.00	0		587.53	0.00	0.00	0.00
20	2.00	0.17	0.51	0		600.09	0.33	8.13	0.00

JC

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) DS - Substation	SURVEY NO. 05-TF-0223
PURPOSE: Characterization survey of concrete debris pile from slab, nitrogen slab and P bldg. remnants	RWP NO. N/A
	DATE: 5/19/05
	TIME: 0800

MAP / DRAWING



	5/19/05	5/23/05
Bkgd.	1.6 cpm α	2.2 cpm α
	160 cpm β⁻	174 cpm β⁻
D.L	1.8 cpm α	2.2 cpm α
	20 cpm β⁻	20 cpm β⁻

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

See attached for integrated counts

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	5765/5802	3-1-06
3030	5816	7-12-05
	A	
	N	

Completed by: (Signature) Jamie Y. Collins / L Oeffner	HP# [redacted]	Date: 5-24-05
Completed by: (Print Name) Jamie 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: 7-5-05
Reviewed/Approved by: (Print Name) RM Coblentz		

Survey No. 05-TF-0223

RADIOLOGICAL SURVEY DATA SHEET

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See Attached			debris
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				Disposal metal
22	Ø	Ø	N/A	metal
23	Ø	Ø		
24	Ø	2		
25	2	Ø		
26	2	2		
27	Ø	2		
28	Ø	Ø		
29	Ø	Ø		
30	Ø	Ø		
31	2	Ø		
32	26	Ø		
		NFE		

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

COMMENTS: NFE ⇒ No Further Entries; Smears #1 - #21 field checked with 2360 prior to submitting to count lab; Smears #22 - #32 counted on 3030

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 needed, mark N/A.

ML-9620A (4-98)

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Green
Data file name: SMEAR020
Batch Ended: 5/19/05 10:42
Cal. Due Date: 11/17/05
Serial Number: 26966-3

Batch ID: 05-TF-0223 COLLINS (21) 05/19/05 TAS

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	2.20		0.00	1.86	
A2	2	0.00	2.00		0.00	1.18	
A3	3	1.77	2.30		1.80	2.18	
A4	4	0.00	2.10		0.00	1.22	
B1	5	0.00	1.88		0.00	1.21	
B2	6	0.00	1.92		2.13	2.24	
B3	7	0.00	2.18		0.00	1.34	
B4	8	0.00	2.01		1.56	2.08	
C1	9	0.00	2.05		0.00	1.23	
C2	10	0.00	1.91		0.00	1.12	
C3	11	0.00	2.06		0.00	1.22	
C4	12	0.00	1.98		1.74	1.95	
D1	13	0.00	2.09		4.04	2.80	
D2	14	0.00	2.15		0.00	1.19	
D3	15	0.00	2.09		0.00	1.24	
D4	16	0.00	2.05		0.20	1.66	
A1	17	0.00	2.18		0.00	1.33	
A2	18	0.00	2.00		0.00	1.18	
A3	19	0.00	2.27		0.00	1.27	
A4	20	0.00	2.10		0.00	1.22	
B1	21	0.76	1.92		1.51	2.07	

gc

gc

3 of 6

19 May 2005 14:21 ALPHA/BETA - 1.09 ~~Page #1~~
Protocol #: 1 PW H3 403727 User : 5379

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	6.89
Region B:	2.0	- 18.6	0	0.0	6.89
Region C:	40.0	- 2000	0	0.0	9.92

Quench Indicator: tSIE/AEC
~~Ext Std~~ Terminator: Count
05-TF-0223 COLLINS (21) 05/19/05 TAS
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA1.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.89	6.89	9.92	694.36	1	B		0.00
0	2.00	499.69	479.13	2.08	603.95	0		1048.17	101.90
1	2.00	0.27	0.01	0.00	588.59	7		0.57	8.78
2	2.00	0.00	0.00	0.00	586.50	0		0.00	0.00
3	2.00	3.24	2.35	0.00	557.30	0		7.09	10.50
4	2.00	3.86	3.54	3.08	623.52	0		7.96	10.17
5	2.00	0.61	0.26	0.08	642.71	7		1.24	8.55
6	2.00	2.17	1.24	2.83	662.43	0		4.33	9.12
7	2.00	0.00	0.00	0.08	653.22	15		0.00	0.00
8	2.00	6.14	5.10	0.00	639.96	4		12.48	10.95
9	2.00	1.61	1.61	0.00	526.37	6		3.62	10.00
10	2.00	3.61	2.81	0.00	615.06	0		7.50	10.14
11	2.00	0.00	0.00	0.00	610.27	0		0.00	0.00
12	2.00	0.00	0.00	0.00	507.57	8		0.00	0.00
13	2.00	3.61	3.31	0.08	532.76	5		8.08	10.92
14	2.00	5.11	4.11	0.00	630.27	4		10.48	10.63
15	2.00	2.22	1.51	1.08	645.09	0		4.50	9.28
16	2.00	3.11	2.27	0.00	638.24	5		6.34	9.73
17	2.00	4.61	4.11	0.08	617.69	4		9.56	10.54
18	2.00	4.11	3.61	0.00	586.61	0		8.76	10.62
19	2.00	0.51	0.00	0.00	632.76	7		1.05	8.58
20	2.00	1.61	1.61	0.08	614.50	0		3.35	9.24
21	2.00	0.00	0.00	2.52	422.55	9		0.00	0.00

Concrete debris pile (sub-station, nitrogen slabs and P remnants)

RSDS#: 05-TF-0223 RCT: YMC RCT: MO

43-89 ALPHA BKG:	1.6	Factor	8	PROBE AREA:	100	cm2	Surface Eff:	1	ALPHA
43-89 BETA BKG:	160	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
#21 debris	5765	[redacted]	5802	ALPHA	1	5/19/05	8:00	31	120	111
#21 debris	5765	[redacted]	5802	BETA	1	5/19/05	8:00	278	120	0

Concrete debris pile (sub-station, nitrogen slabs and P remnants)

RSDS#: 05-TF-0223 RCT: JMC RCT: MO

43-89 ALPHA BKG:	2.2	Factor	8	PROBE AREA:	100	cm2	Surface Eff:	1	ALPHA
43-89 BETA BKG:	174	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	
#21	5765	[redacted]	5802	ALPHA	1	5/23/05	8:00	36	120	126	*
#22	5765	[redacted]	5802	ALPHA	2	5/23/05	8:00	46	120	166	
#23	5765	[redacted]	5802	ALPHA	3	5/23/05	8:00	38	120	134	
#24	5765	[redacted]	5802	ALPHA	4	5/23/05	8:00	9	120	18	
#25	5765	[redacted]	5802	ALPHA	5	5/23/05	8:00	10	120	22	
#26	5765	[redacted]	5802	ALPHA	6	5/23/05	8:00	21	120	66	*
#27	5765	[redacted]	5802	ALPHA	7	5/23/05	8:00	8	120	14	
#28	5765	[redacted]	5802	ALPHA	8	5/23/05	8:00	3	120	0	
#29	5765	[redacted]	5802	ALPHA	9	5/23/05	8:00	9	120	18	
#30	5765	[redacted]	5802	ALPHA	10	5/23/05	8:00	11	120	26	
#31	5765	[redacted]	5802	ALPHA	11	5/23/05	8:00	5	120	2	
#32	5765	[redacted]	5802	ALPHA	12	5/23/05	8:00	15	120	42	
#21	5765	[redacted]	5802	BETA	1	5/23/05	8:00	345	120	0	
#22	5765	[redacted]	5802	BETA	2	5/23/05	8:00	383	120	70	
#23	5765	[redacted]	5802	BETA	3	5/23/05	8:00	396	120	96	
#24	5765	[redacted]	5802	BETA	4	5/23/05	8:00	329	120	0	
#25	5765	[redacted]	5802	BETA	5	5/23/05	8:00	307	120	0	
#26	5765	[redacted]	5802	BETA	6	5/23/05	8:00	302	120	0	
#27	5765	[redacted]	5802	BETA	7	5/23/05	8:00	360	120	24	
#28	5765	[redacted]	5802	BETA	8	5/23/05	8:00	298	120	0	
#29	5765	[redacted]	5802	BETA	9	5/23/05	8:00	314	120	0	
#30	5765	[redacted]	5802	BETA	10	5/23/05	8:00	315	120	0	
#31	5765	[redacted]	5802	BETA	11	5/23/05	8:00	288	120	0	
#32	5765	[redacted]	5802	BETA	12	5/23/05	8:00	332	120	0	

* Item #1-*6 have an average of 89 dpm α.

APPENDIX C

PRS Recommendation Sheets

Recommendation pages are not generated for PRSs that require Further Assessment (FA) or that are unbinned. Recommendation pages for PRSs 112 and 368 (binned No Further Assessment 11 October 2005) are not included because the recommendation pages were not available at the time of printing of this document.

MIAMISBURG CLOSURE PROJECT
PRS 101/102

RECOMMENDATION:

PRSs 101/102 are areas where solid waste management units (SWMU) associated with P Building had been located. The designation of PRS 101 as an SWMU is based on the discharge of cooling tower blowdown water into the storm water drain to Outfall 002. The designation of PRS 102 as a SWMU is based on its use as a storage area for chemical constituents used in processes to support both the powerhouse and cooling towers. There have been no reported spills or unauthorized release of chemicals in the PRS 101/102 areas. The cooling tower basins, drum storage area, and P Building were never used for research, development, or production activities directly involving the use of radioactive materials. The P Building Final Status Report (which included a radiological evaluation of the PRS 101 and 102 structures) concludes that all surfaces met the release criteria established by DOE Order 5400.5 and Work Plan for Environmental Restoration of the DOE Mound Site, The Mound 2000 Approach, February 1999, Final, and that no activity above environmental background levels was found in sediment smear samples, sediment samples, and drain and sump water samples. The results of historic soil sampling conducted around PRS 101/102 indicate all results are below the 10^{-6} risk-based Soil Screening Level. The PRS 101 and 102 structures were removed as part of the P Building demolition activities in April 2005; no evidence of any cracks or leaks, or soil staining or odors was observed during or after demolition activities.

The Core Team recommends No Further Assessment.

CONCURRENCE:

DOE/MCP: Paul Lucas — 8/31/05
Paul Lucas, On-Scene Coordinator (date)

USEPA: Timothy J. Fischer — 9/1/05
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel — 9/1/05
Brian K. Nickel, Project Manager (date)

MOUND PLANT
PRS 113/114/115/116/117
FORMER TANK SITE - POWERHOUSE FUEL OIL STORAGE TANKS AND SOIL CONTAMINATION

RECOMMENDATION:

Potential Release Sites (PRSs) 113, 114, 115, 116, and 117 were identified to address fuel oil and toluene contamination in the soil located on the east side of the powerhouse.

PRSs 114-117 are the four underground fuel oil tanks that were removed. Removal of the tanks and contaminated soils was initiated in 1995 and completed in 1996. The treatment of the soils is ongoing in accordance with the Action Memorandum for the Fuel Oil Storage Removal Action (FOSRA). The On-Scene Coordinator (OSC) Report for the FOSRA will document residual levels and the requirements for this removal per the Ohio Bureau of Underground Tank Regulations (BUSTR).

PRS 113 refers to a single toluene soil gas detection prior to the removal activities. Toluene was identified at a concentration of 447 parts per billion (ppb), which is below the 414,800 ppb calculated acceptable soil gas concentration.

Therefore, since these PRSs are part of an active removal action, NO FURTHER ASSESSMENT is recommended.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath 3/18/97
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 3/18/97
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 3/18/97
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 5/8/97 to 6/16/97

☐ No comments were received during the comment period.

☒ Comment responses can be found on page 1, 2 of this package.

C2 of 8

MOUND PLANT

PRS #118, 119, 120, 121

RECOMMENDATION:

Potential Release Sites (PRSs) 118, 119, 120 and 121 are specified as associated with M Building. PRS 118 is identified as M Building related soils, and PRSs 119 and 120 are identified as building sumps resident in, and potentially impacting these soils. PRS 121 is identified as vapor degreasers resident within the building. The demolition of M Building included the removal of the degreasers and the sumps, and soil characterization activities designed to determine the potential presence and levels of residual PRS contamination.

The Core Team has determined that PRSs 118, 119, 120, and 121 have been adequately addressed through the M Building demolition process. In addition, after reviewing the post-demolition characterization results, the Core Team has determined that the soil in the M Building area is protective of human health and the environment for industrial use.

Therefore, PRSs 118, 119, 120, and 121require NO FURTHER ASSESSMENT.

Concurrence:

DOE/MEMP: _____ Feb. 20th 2001
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 2/27/01
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 2/20/2001
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.

MOUND PLANT
PRS 126/127
SOLVENT STORAGE SITE - OUTSIDE AREA NEXT TO BUILDING 28

RECOMMENDATION:

Potential Release Sites (PRSs) 126 and 127 refer to the temporary storage locations for waste solvents generated by the Building 28/60 operations. The solvents were used in cleaning operations during the manufacture of weapon components. There are no historical records of any spill or leak of solvents from either of the waste solvent storage areas.

Volatile organic compounds (VOCs) were detected in the surrounding soil gas samples collected in 1993. All the VOC concentrations were below the calculated acceptable soil gas criteria. Samples analyzed for plutonium and thorium were below their respective radiological guideline criteria, 25 pCi/g for plutonium-238 (Mound ALARA) and 15 pCi/g for subsurface thorium (40 CFR 192.41). Therefore, PRSs 126/127 requires NO FURTHER ASSESSMENT.

CONCURRENCE:

DOE/MB: Arthur Kleinrath 10/3/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 10/3/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 10/3/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 10/15/96 to 11/15/96

☒ No comments were received during the comment period.

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

MOUND PLANT
PRS 243
SOIL CONTAMINATION - PAINT SHOP BUILDING

RECOMMENDATION:

This soils location was identified as a Potential Release Site (PRS) because of the detection of toluene during the Mound Reconnaissance Sampling soil gas survey.

Calculations were performed converting the toluene 10^{-6} Risk Based Guideline Value (given in mg contaminant per kg soil) to a corresponding 10^{-6} Risk Based Guideline Values for soil gas concentrations (parts contaminant per parts soil gas). The results of the calculation showed that the toluene detection was approximately 20,000 times less than the toluene guideline criteria. Additionally, one surface sample taken in the vicinity of PRS 243 showed that plutonium-238 and thorium-232 concentrations were below their respective guideline criteria of 25 pCi/g and 5 pCi/g.

Therefore, since the Volatile Organic Compound (VOC) soil gas detections establishing this soils location as a PRS have been shown not to be evidence of contamination above guideline criteria and since there is no additional lab data or history of evidence of contamination, PRS 243 requires NO FURTHER ASSESSMENT.

CONCURRENCE:

DOE/MB: Arthur K. Kleinrath 8/20/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 8/20/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel 8/20/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from ~~9/15/96~~ 9/16/96 to 10/15/96

☒ No comments were received during the comment period.

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

RECOMMENDATION

This decision document represents concurrence to incorporate PRSs 253 (T West Stack) and 254 (T East Stack) into the Buildings R, SW, 58 and 68 Slab Removal Action. Presentation of the information in this addendum models the approved Buildings R, SW, 58 and 68 Slab Action Memorandum that was prepared in accordance with CERCLA as amended by SARA, and not inconsistent with the NCP. This decision is based on the administrative record for the site.

Information provided in this Addendum 1 is consistent with the actions already proposed for Buildings R, SW, 58 and 68 Slab Removal Action. No additional contaminants of concern were identified. The contaminants of concern associated with the addition of these two PRSs are already included. We recommend that they be initiated as described herein.

Paul Lucas 8/2/04

Paul Lucas, OSC
U.S. Department of Energy
Miamisburg, Ohio

David P. Seely 7/15/04

David Seely, RPM
USEPA
Chicago, Illinois

Brian Nickel 8/2/04

Brian Nickel
OEPA
Dayton, Ohio

MOUND PLANT
PRS 411
Soil Contamination – Asphalt Roadway (Radiological)

RECOMMENDATION:

Potential Release Site 411 was identified as a potential release site due to elevated FIDLER readings that were discovered during a Health Physics survey. FIDLER readings indicated two small areas of contamination in excess of 500,000 pCi of Plutonium-238. Fixed Plutonium-238 readings of 1,000,000 disintegrations per minute (dpm) per 100 square centimeters exceed the regulatory standard (10 CFR 835) of 500 dpm per 100 square centimeters.

Therefore, a RESPONSE ACTION is recommended for PRS 411.

CONCURRENCE:

DOE/MEMP: Arthur W. Kleinrath, Remedial Project Manager — 8/6/97 (date)

USEPA: Timothy J. Fischer, Remedial Project Manager — 8/6/97 (date)

OEPA: Brian K. Nickel, Project Manager — 8/6/97 (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 9/15/97 to 10/15/97

☐ No comments were received during the comment period.

☒ Comment responses can be found on page 1-2a of this package.

RECOMMENDATION

Potential Release Site (PRS) 411, also known as the Paint Shop Hot Spot, comprised two isolated asphalt locations with fixed Pu-238 contamination. Per the associated Action Memorandum (PRS 411 Removal Action, Final, Revision 0, June 1999), both locations of contaminated asphalt were removed, one of which required the removal of soil with Pu-238 above the cleanup objective of 55 pCi/g.

The RA was successfully completed and resulted in the excavation and disposal of less than one cubic yard of material (asphalt and soil). The material was shipped via railcar to Envirocare disposal facility. The contaminant of concern (COC) for PRS 411 was Pu-238 with a cleanup objective (CO) of 55 pCi/g (soil). Fixed surface contamination on asphalt was removed to be below the surface release criteria established by the Mound 2000 Work Plan, and no further radiological surveys are required. All verification surface and soil results for PRS 411 were below the CO.

After a thorough review of the PRS 411 On-Scene Coordinator (OSC) Report, the Core Team agrees that the PRS 411 Removal Action is complete, and that all previously existing environmental issues associated with PRS 411 have been resolved.

Paul Lucas 3/24/05

Paul Lucas, OSC
U.S. Department of Energy
Miamisburg, Ohio

3/23/05

Timothy J. Fischer, Remedial Project Manager
USEPA
Chicago, Illinois

3/23/05

Brian K. Nickel, Project Manager
OEPA
Dayton, Ohio

Appendix D

P Building Closeout Report, Addendum 1

P Building

Closeout Report

Addendum 1

July 2006

PURPOSE

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

REFERENCES

P Building Closeout Report, Final, November 2005

BACKGROUND

Section 3.0 of the P Building Closeout Report, Final, November 2005, states that all preparation and demolition activities associated with the demolition and removal of P Building, PS Building slab, EG-4 Building slab, and bulk gas tank slab, except for final site restoration, were performed in accordance with the detailed Work Plan.

After the building and slabs were demolished, the P Building site was used to stage clean demolition rubble from various structures. In addition, final site restoration of the area was postponed until adjacent PRS areas (T East Stack/Fan House, EG-4, and Paint Shop) were also released for site restoration.

ACTION TAKEN

Soil from the site "spoils" area was applied over the demolition areas and then graded and seeded. A photograph depicting P Building, PS Building slab, EG-4 Building slab, and bulk gas tank slab demolition areas after final grading and site restoration is provided at the end of this addendum.

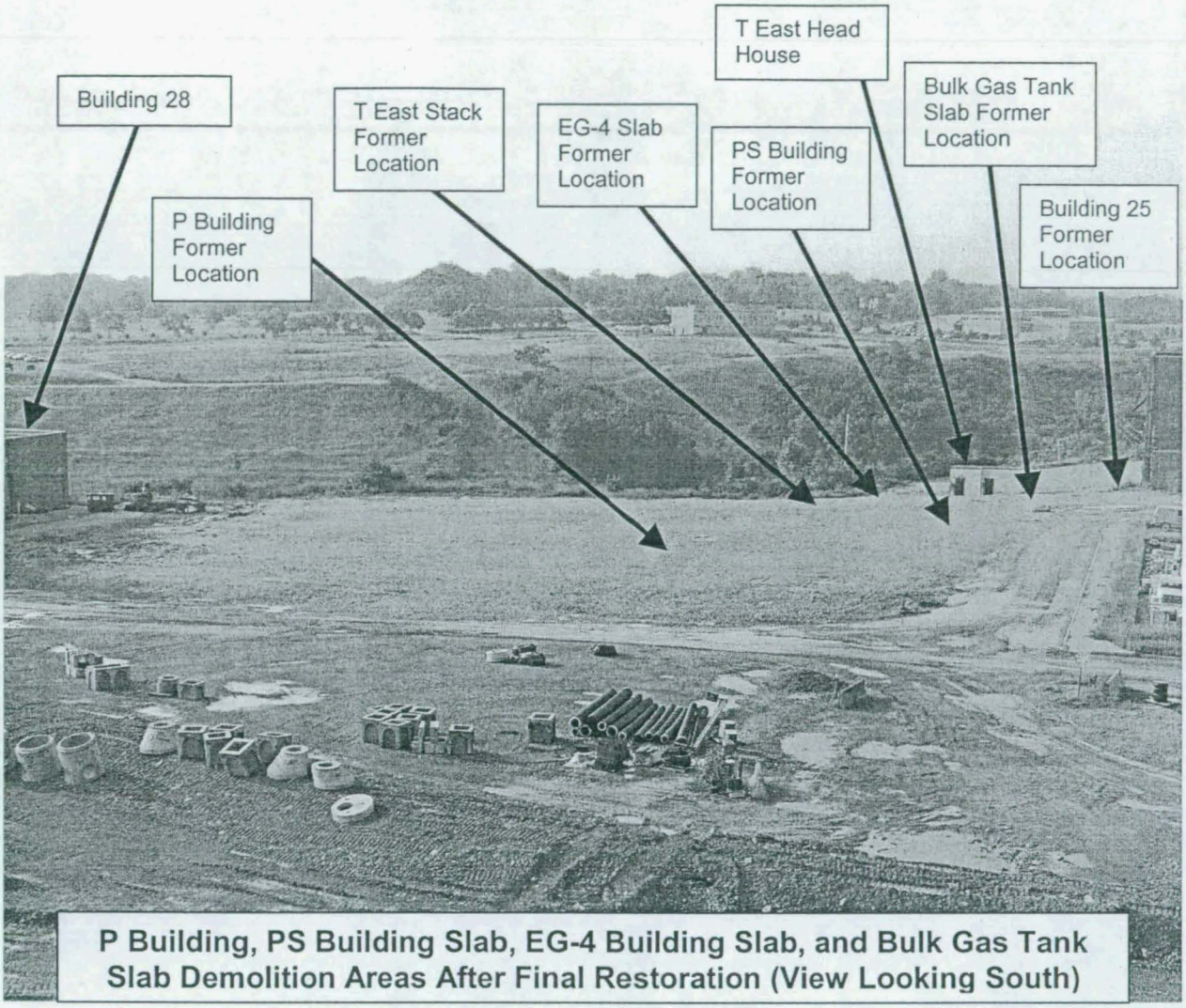
DEMOLITION COST

Under the new site contract, CH2M Hill Mound, Inc. has elected to cluster financial data for multiple buildings together. Cluster P includes Buildings 24, 56, 57, 112, 113, 415, 432, EG-8, P, PH, and Well Houses 1-3. As a result, cost data for individual building demolitions are not available. Cluster P is considered completed with the final site restoration of the P Building demolition area. The total cluster costs are presented in Table 1, below.

Table 1: Cluster P Total Costs

Activity	Cost
Work Planning	$173K
Facility Prep	$568K
Demolition	$1,028K
Total	$1,769K

P Building Area After Final Site Restoration



P Building, PS Building Slab, EG-4 Building Slab, and Bulk Gas Tank Slab Demolition Areas After Final Restoration (View Looking South)