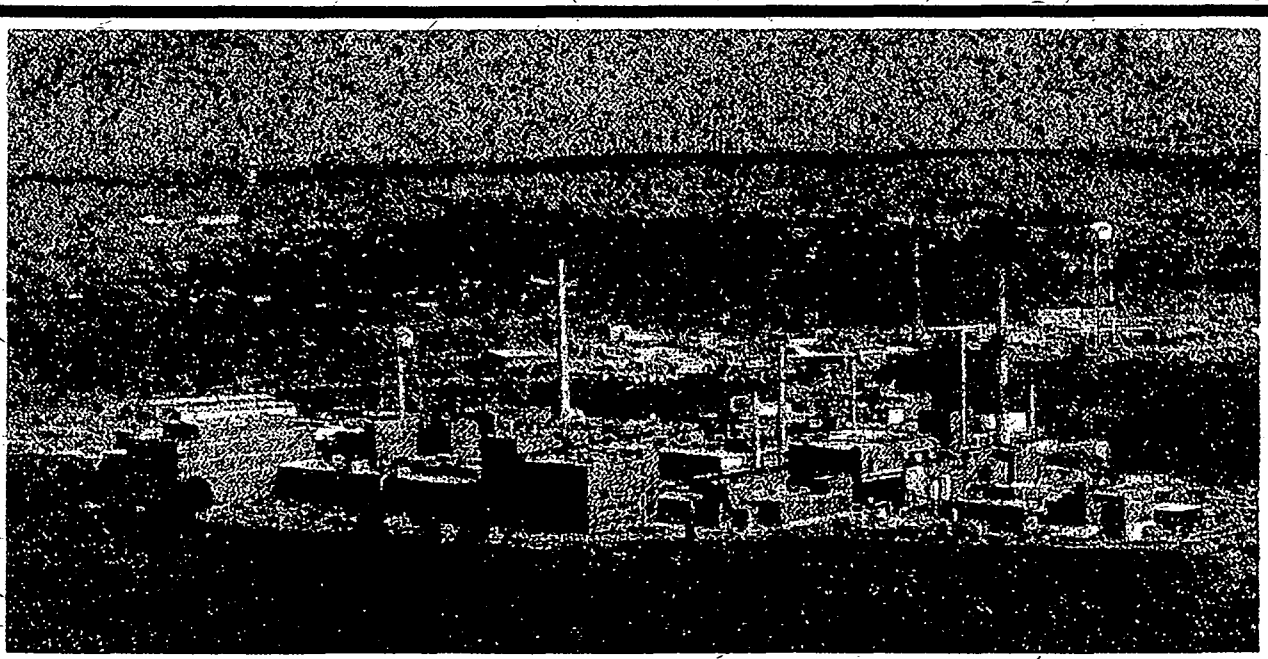
3001-0302180003

MOUND

Environmental
Restoration
Program

MOUND PLANT
Potential Release Site Package
PRS #123



PRS 123

REV	DESCRIPTION	DATE
WORKING DRAFT	Core Team binned as Removal Action (RA) on 9/18/00.	**Sept. 12, 2000**
DRAFT		**Oct. 10, 2000**
DRAFT PROPOSED FINAL	Distribution approval: 10/10/2000.	**Oct. 10, 2000**
DRAFT PROPOSED FINAL	OEPA comments addressed and narrative adjusted.	**Nov. 6, 2000**
PUBLIC REVIEW DRAFT	Public review period: 11/22/2000 – 12/22/2000	**Nov. 13, 2000**
FINAL	Public review complete. MMCIC comments and Core Team responses incorporated. Narrative unchanged.	**January 18, 2001**

MOUND

Environmental Restoration Program

MOUND PLANT POTENTIAL RELEASE SITE DATA PACKAGE

Notice of Public Review Period

The following Potential Release Site (PRS) Data Package is available for public review in the CERCLA Public Reading Room, 305 E. Central Ave., Miamisburg, Ohio. Public comment on this document will be accepted November 22, 2000 through December 22, 2000.

Potential Release Site 123: Area 5, Radioactive Waste Line Break

Questions can be referred to Paul Lucas at (937) 865-4578.

The Mound Core Team
P.O. Box 66
Miamisburg, Ohio 45343-0066

Mr. Daniel Bird, AICP
Planning Manager
Miamisburg Mound Community Improvement Corporation
720 Mound Road
COS Bldg. 4221
Miamisburg, Ohio 45342-6714

Dear Mr. Bird:

The Core Team, consisting of the U.S. Department of Energy Miamisburg Environmental Management Project (DOE-MEMP), U.S. Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (OEPA), appreciates your comments on the PRS 123 Data Package. Attached are our responses.

Should the responses to comments require additional detail, please contact Rob Rothman at (937) 865-3597 and we will gladly arrange a meeting or telephone conference.

Sincerely,

DOE/MEMP: Robert S. Rothman, Remedial Project Manager

USEPA Timothy J. Fischer, Remedial Project Manager

OEPA Brian K. Nickel, Project Manager

Response to MMCIC Comments on the PRS 123 Data Package Public Review Draft November 13, 2000

Substantive Comment

1. MMCIC agrees that a response action is warranted for PRS 123, and that proceeding directly to a response action without further assessment can be a cost- and time-effective approach to resolving the PRS 123 mixed radionuclide contamination. However, proceeding without further assessment may cause DOE to risk missing the extent of contamination as it remediates the PRS. We caution DOE and its site contractor to prepare a careful response action work plan that includes real-time field monitoring or other method that allows remediation workers to evaluate the extent and/or nature of contamination as the response action proceeds.

Response:

DOE/MEMP and BWXTO will prepare a careful response action work plan that includes real-time field monitoring or best practices that allow remediation workers to evaluate the extent and/or nature of contamination as the response action evolves. Additional characterization may be conducted as needed to insure the extent of contamination is identified.

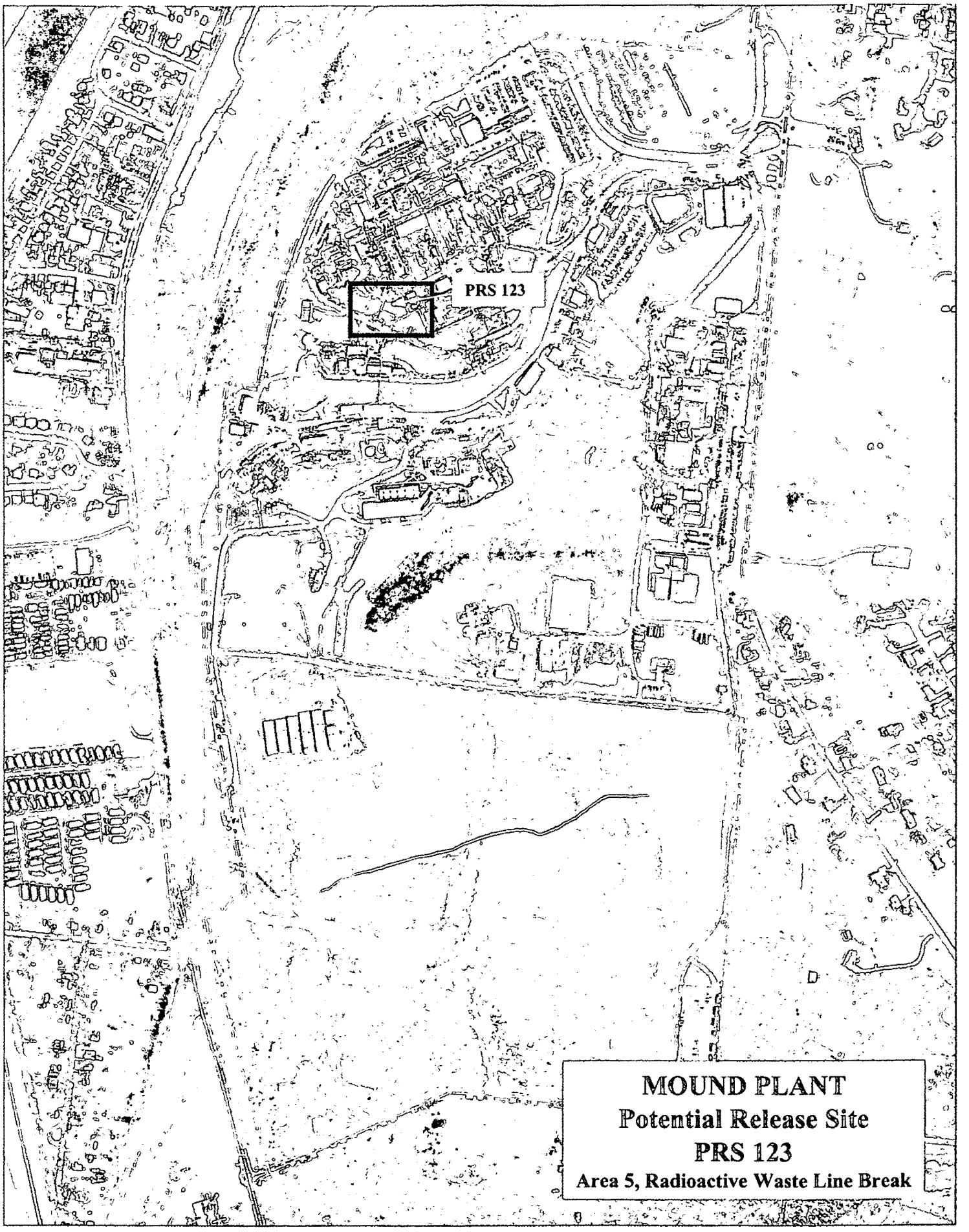
2. PRS 123 is located just above the Mound roadway that leads northwest up the Mound Hill from COS Building. MMCIC requests that DOE/BWXTO notify and work with the Parking and Circulation Committee to coordinate MATC tenant access to parking areas on the Main Hill during the PRS 123 removal action.

Response:

DOE/MEMP and BWXTO will notify and work with the organizations noted to coordinate the subject tenant parking area concerns.

Errata

1. No comments.

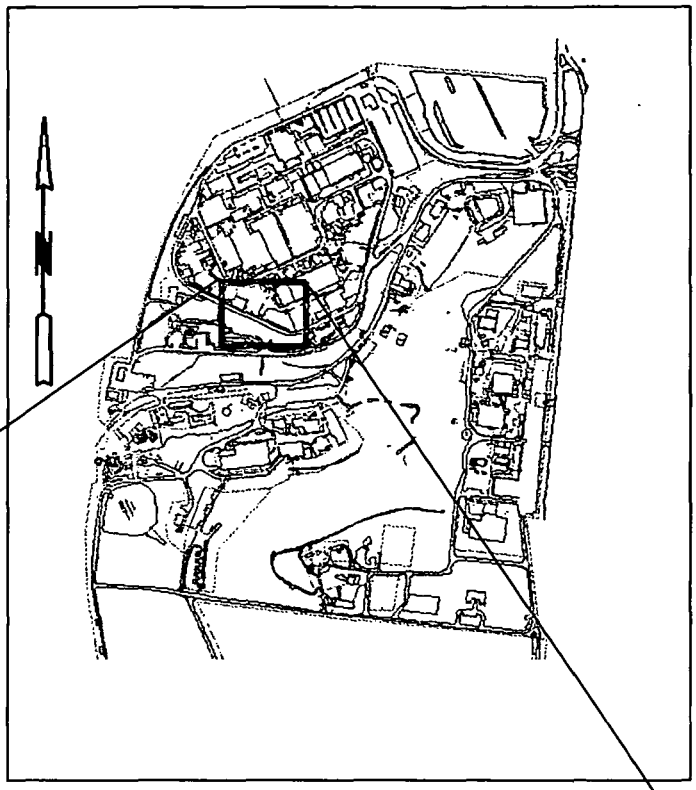

PRS 123
MOUND PLANT
Potential Release Site
PRS 123
Area 5, Radioactive Waste Line Break

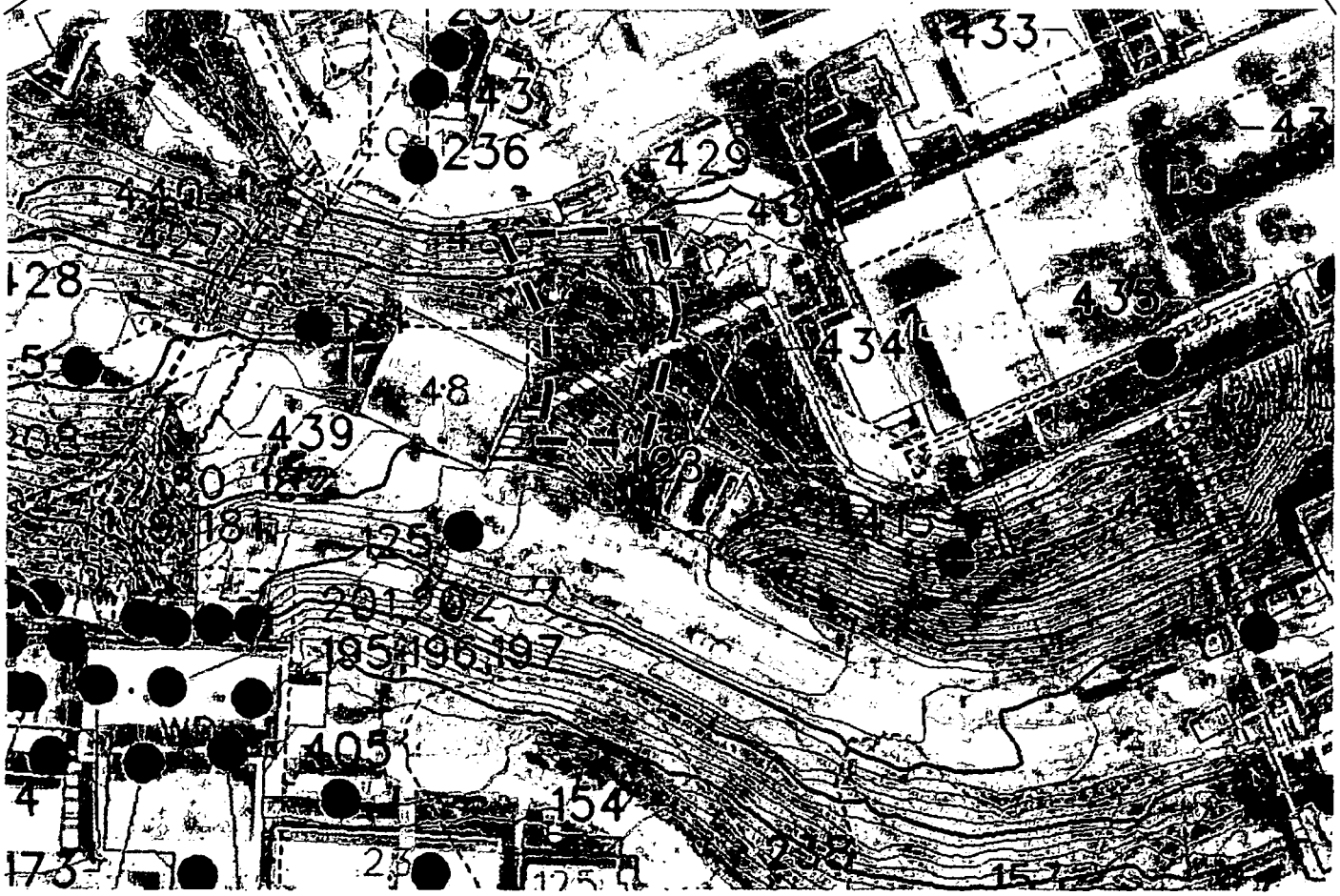
Mound Plant

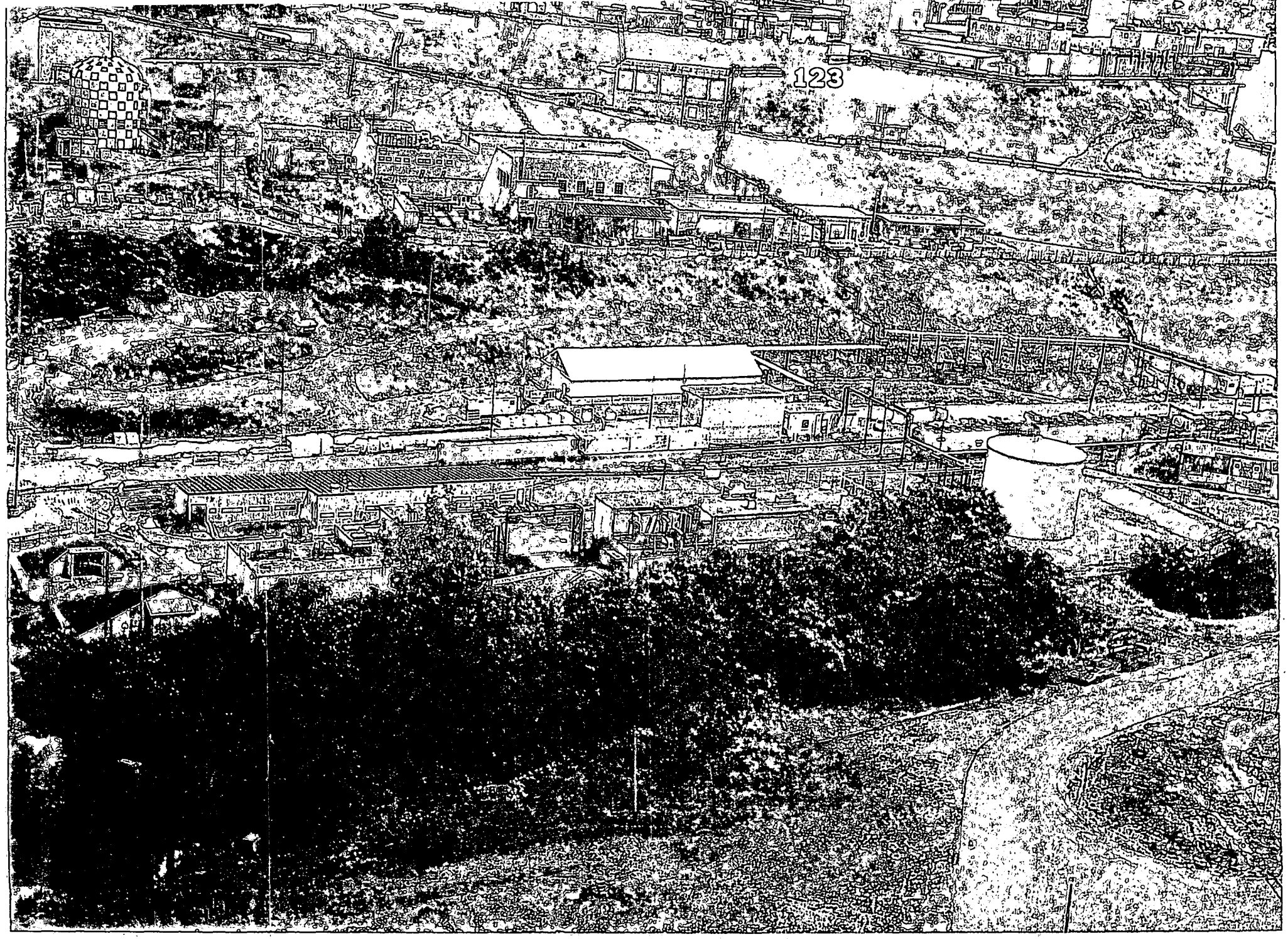
PRS 123

Area 5, Radioactive Waste Line Break

On the map below:
- PRS number and location shown in black
- Other PRS numbers and locations shown in blue
- Surrounding buildings shown in tan
- Fencing shown in red
- Elevation contours shown in brown







PRS 123

Area 5: Radioactive Waste Line Break

PRS HISTORY:

Potential Release Site (PRS) 123[1] is the result of a December 1970 waste-line break that released Polonium-210 waste liquids to the surrounding soils. A total of 39 30-gallon drums of soil, with an estimated polonium content of 20 µCi, were boxed and shipped off site. No cleanup levels were documented.[2] This area is located west of PRS 434 at the northeast corner of Building 48, and contains the UGLy segment PRS 429.

CONTAMINATION:

Current contaminants of concern for PRS 123 are Cobalt-60, Cesium-137, Thorium-232, and Plutonium-238. These contaminants are illuminated in Reference 3 and noted below in Table 1.

Table 1: PRS 123 GIS Sampling/Contamination Information[3]

Contaminant	Maximum Level (pCi/g)[3]	Guideline Value (pCi/g) (10^{-5})	Background (pCi/g)
Cobalt-60	250	0.10	NA
Thorium-232 + daughters	12.60	0.11	1.4
Cesium-137 + daughters	1.60	0.46	0.42
Plutonium-238	225	55[a]	0.13

a) 10^{-5} risk

READING ROOM REFERENCES:

1) OU-9 Site Scoping Report: Volume 12 - Site Summary Report, Final, 1994
2) OU-9 Site Scoping Report: Volume 3 - Radiological Site Survey, Final, 1993

OTHER REFERENCES:

3) GIS Sampling and Contamination Information

PREPARED BY:

Dennis Gault, BWXT Project Engineer

MOUND PLANT
PRS #123

RECOMMENDATION:

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

Therefore, a RESPONSE ACTION is recommended for PRS 123.

CONCURRENCE:

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

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

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

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 11/22/2000 to 12/22/2000

☐ No comments were received during the comment period.

☒ Comment responses can be found on page at beginning of this package.

R

REFERENCE MATERIAL

PRS 123

Reference 1

DUPLICATE
Classification Code: 29-01-01-07-12
Accession No. 9503280015

ENVIRONMENTAL RESTORATION PROGRAM

OPERABLE UNIT 9
SITE SCOPING REPORT:
VOLUME 12 - SITE SUMMARY REPORT

MOUND PLANT
MIAMISBURG, OHIO

December 1994

U.S. DEPARTMENT OF ENERGY
OHIO FIELD OFFICE

ENVIRONMENTAL RESTORATION PROGRAM
EG&G MOUND APPLIED TECHNOLOGIES

FINAL

Description of History and Nature of Waste Handling						Hazardous Conditions and Incidents			Environmental Data		
No.	Site Name	Location	Status	Potential Hazardous Substances	Ref	Releases	Media	Ref	Analytes[a]	Results	Ref
118	M Building Soils	E-7	Grounds	Copper cyanide, Silver cyanide Machine oils, Solvents	4	Oils, Copper cyanide, Silver cyanide	S	10	1 14	SGS[b] Table B.4 Locations 1050, 1051, 1062 Table B.9 RSS[c] Locations S0162, S0163, S0252 (Appendix E in Ref. 6)	12 6
119	Room M-38 Metal Plating Rinse Water Sump (Tank 225)	E-7	Surplus	Rinse waters from metal plating operations. Possible contaminants include nickel, cadmium, silver, gold, manganese, cyanide, and aluminum. Sodium hydroxide solution Potassium permanganate	3, 4	None Suspected			No Data		
120	Room M-108 Metal Plating Rinse Water Tank (Tank 119)	E-7	In service	Rinse waters from metal plating operations. copper, gold, silver, nickel, aluminum, and uranium	3, 4	Silver cyanide	SW	10	No Data		
121	Vapor Degreasers	E-7	In service	Perclene D (perchloroethylene)	4, 5, 18	None Suspected			No Data		
122	Underground Radioactive Waste Lines (Main Hill)	E-6 F-6	Inactive	Alpha wastes from SW Bldg., R Bldg., and H Bldg. Wastewater from B Building Plutonium-238, Cobalt-60	4, 18	Suspected	S	4, 10	No Data		
123	Area 5, Radioactive Waste Line Break	F-6 F-7	Grounds	Cobalt-60, Cesium-137, Plutonium-238	1, 5, 18	Cobalt-60	S	1, 18	2, 14, 16	Table B.1 (Table III.3 in Ref. 6)	6
124	Building 48 Hillside	F-6	Inactive	Plutonium-238		Plutonium-238	S	6	14	Table B.1	6
125	Underground Sanitary Sewer Line G24	F-6	In service	Organic solvents, Plating Solutions, Laboratory chemicals, Nitric acid, Hydrochloric acid, Methylene chloride, Strong acids and bases		Suspected	S	5, 18	3, 4, 5, 6, 14, 16	Tables B.6, B.7, and B.8	7
126	Building 28 Solvent Storage Area	E-8	Grounds	Organic solvents (including alcohol, methylene chloride, and acetone)	4, 5, 9, 18	Suspected	S	4	1	SGS[b] Table B.4 Location 1054	12

Reference 2

ENVIRONMENTAL RESTORATION PROGRAM

OPERABLE UNIT 9, SITE SCOPING REPORT: VOLUME 3 - RADIOLOGICAL SITE SURVEY

MOUND PLANT
MIAMISBURG, OHIO

June 1993

DEPARTMENT OF ENERGY
ALBUQUERQUE FIELD OFFICE

ENVIRONMENTAL RESTORATION PROGRAM
EG&G MOUND APPLIED TECHNOLOGIES

FINAL

available. The site history for this area suggests that significant subsurface radioactive contamination may be present; the releases that occurred here were either the result of surface water runoff from Area 5 described below, or the overflow of the influent tanks discussed above.

3.4. AREA 5

Area 5 is located on the southern side of the Main Hill at Mound Plant, adjacent to Building 48 (Plate 1). Area 5 is the result of a December 1970 waste-line break that released polonium-210 waste liquids to the surrounding soils. A total of 39 30-gallon drums of soil, with an estimated polonium content of 20 μCi, were boxed and shipped offsite (Davis 1972). No cleanup levels are documented. The boundaries of Area 5 (Plate 1) are based on an interpretation of the site survey data made in the preparation of this report. The area did not appear on the results reported from the aerial survey conducted in 1976 (EG&G 1978). Soil contamination identified near Area 5 on the Building 48 Hillside is described in subsection 4.1.9.

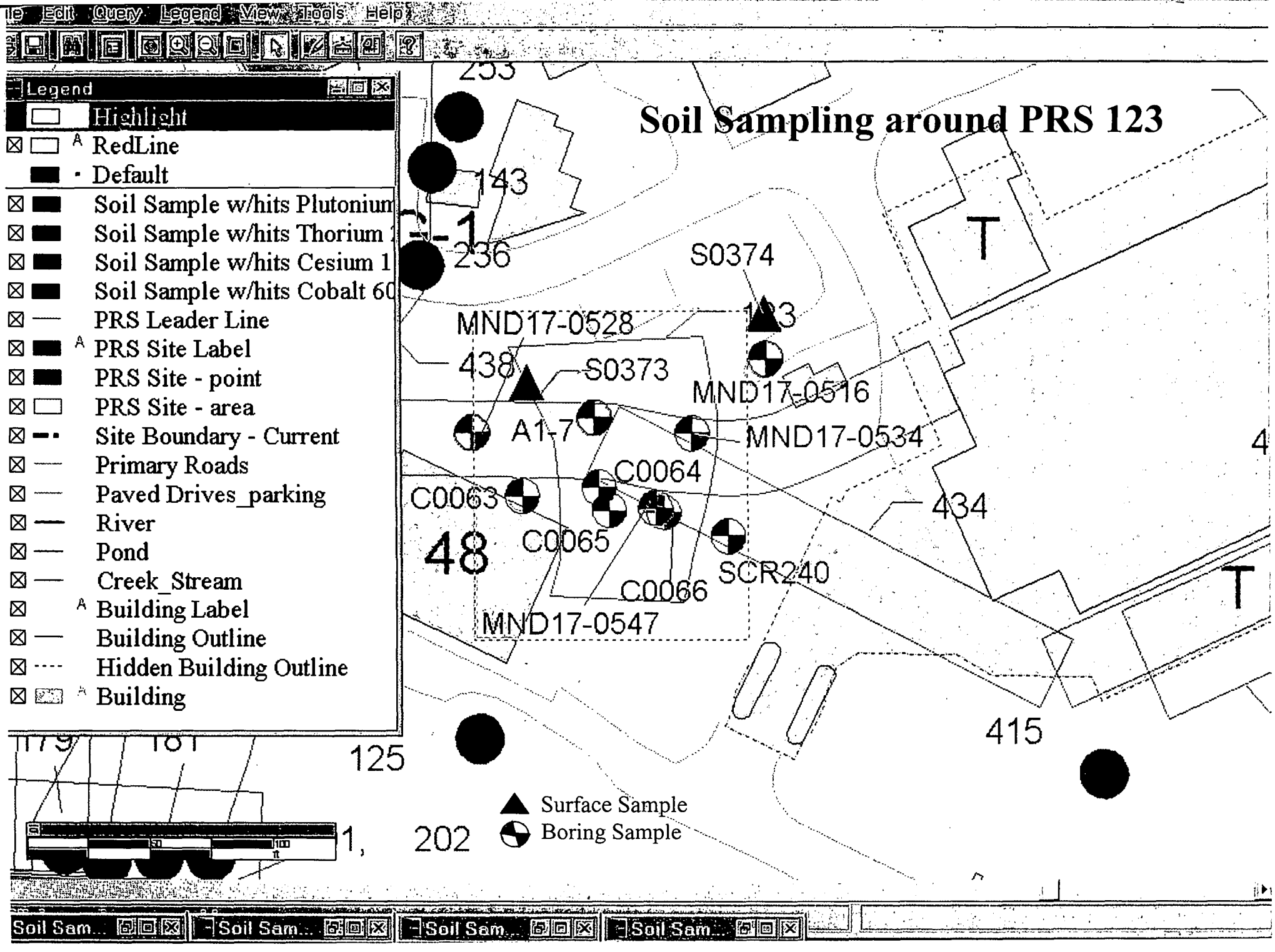
The evaluation of the Site Survey Project data for this report does not agree with the evaluation presented in the original report (Table III.3). The differences lie in the reporting of the cesium-137 concentrations detected by gamma spectroscopy. The laboratory results (gamma-spectroscopy printout in Appendix E) give the cesium-137 concentrations for the corresponding Area 5 samples as <LDL, which means that the results were less than the LDL of 0.5 pCi/g. The original report (Stought et al. 1988) indicated that these samples had between 0.1 and 0.99 pCi/g of cesium-137. Cesium-137 was detected nearby at 1.6 pCi/g in the sample collected from surface location 0373 (S0373 on Table III.3). The boundary of Area 5 (Plate 1) is drawn to include S0373.

The maximum cobalt-60 concentration found in Area 5, 250 pCi/g, was detected in the sample collected from core location 0064 at a depth of 108 inches (C0064 on Table III.3). All other detected concentrations were less than 40 pCi/g. Measurable concentrations of cobalt-60 were found as deep as 234 inches (Table III.3). Mound Plant drawing #FSE16472 (DOE 1992f) indicates the depth to bedrock in this area ranges from 16 to 22 ft. The boring logs are not available, so it is not known if the Area 5 core locations were sampled to bedrock.

3.5. AREA 6

Area 6 is the location of a trench used for the disposal of approximately three drums of polonium-210-contaminated sand. It is located in what is now a parking lot on the northeast side of the Main Hill, near Buildings 45 and 60 (Plate 1). The location and extent of Area 6, shown on Plate 1, are estimates. In 1964, at least three 55-gallon drums of polonium-contaminated sand were placed in this area. The sand was contaminated during cleaning (sand-blasting) of the metal framework of the WD Building sand filters. The sand was originally contained in drums that were placed in Area 6,

Reference 3


Soil Sampling around PRS 123
Legend
Highlight
RedLine
Default
Soil Sample w/hits Plutonium
Soil Sample w/hits Thorium
Soil Sample w/hits Cesium 1
Soil Sample w/hits Cobalt 60
PRS Leader Line
PRS Site Label
PRS Site - point
PRS Site - area
Site Boundary - Current
Primary Roads
Paved Drives_parking
River
Pond
Creek_Stream
Building Label
Building Outline
Hidden Building Outline
Building
S0374
MND17-0528
S0373
MND17-0516
A1-7
MND17-0534
C0064
C0063
C0065
C0066
SCR240
MND17-0547
143
236
438
434
415
125
202
48
T
Surface Sample
Boring Sample

Location_name	Sample_id	Location_t	Collection_	Media	Value_name	Measured_v	Value_u	Detection	Chem	Start	End	Dept	Cas_number	Lab	Project_cod	Data	Comment
A1-7	2007-0009	Borehole	19930825	Soil	Thorium-228	0.60	PCI/G	0.16	RAD	8	10	FT	14274-82-9		MND16		
A1-7	2007-0009	Borehole	19930825	Soil	Thorium-230	0.78	PCI/G	0.13	RAD	8	10	FT	14269-63-7		MND16		
A1-7	2007-0009	Borehole	19930825	Soil	Thorium-232	0.82	PCI/G	0.10	RAD	8	10	FT	7440-29-1		MND16		
C0063	10379	Borehole	19850901	Soil	Cobalt-60	1.10	PCI/G	0.50	RAD	11	11	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10384	Borehole	19850901	Soil	Cobalt-60	38.00	PCI/G	0.50	RAD	3	3	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10385	Borehole	19850901	Soil	Cobalt-60	22.00	PCI/G	0.50	RAD	5	5	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10386	Borehole	19850901	Soil	Cobalt-60	3.30	PCI/G	0.50	RAD	6	6	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10388	Borehole	19850901	Soil	Cobalt-60	250.00	PCI/G	0.50	RAD	9	9	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10389	Borehole	19850901	Soil	Cobalt-60	6.00	PCI/G	0.50	RAD	11	11	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10390	Borehole	19850901	Soil	Cobalt-60	2.00	PCI/G	0.50	RAD	12	12	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10391	Borehole	19850901	Soil	Cobalt-60	3.00	PCI/G	0.50	RAD	14	14	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0064	10392	Borehole	19850901	Soil	Cobalt-60	9.00	PCI/G	0.50	RAD	15	15	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10393	Borehole	19850901	Soil	Cobalt-60	15.00	PCI/G	0.50	RAD	2	2	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10394	Borehole	19850901	Soil	Cobalt-60	26.00	PCI/G	0.50	RAD	3	3	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10395	Borehole	19850901	Soil	Cobalt-60	15.00	PCI/G	0.50	RAD	5	5	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10396	Borehole	19850901	Soil	Cobalt-60	26.00	PCI/G	0.50	RAD	6	6	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10397	Borehole	19850901	Soil	Cobalt-60	23.00	PCI/G	0.50	RAD	8	8	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10398	Borehole	19850901	Soil	Cobalt-60	5.00	PCI/G	0.50	RAD	9	9	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10399	Borehole	19850901	Soil	Cobalt-60	6.00	PCI/G	0.50	RAD	11	11	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10401	Borehole	19850901	Soil	Cobalt-60	1.30	PCI/G	0.50	RAD	14	14	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10403	Borehole	19850901	Soil	Cobalt-60	1.10	PCI/G	0.50	RAD	17	17	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0065	10405	Borehole	19850901	Soil	Cobalt-60	1.30	PCI/G	0.50	RAD	20	20	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0066	10406	Borehole	19850901	Soil	Cobalt-60	0.60	PCI/G	0.50	RAD	2	2	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0066	10409	Borehole	19850901	Soil	Cobalt-60	5.00	PCI/G	0.50	RAD	6	6	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0066	10410	Borehole	19850901	Soil	Cobalt-60	10.00	PCI/G	0.50	RAD	8	8	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0066	10411	Borehole	19850901	Soil	Cobalt-60	14.00	PCI/G	0.50	RAD	9	9	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0066	10412	Borehole	19850901	Soil	Cobalt-60	4.00	PCI/G	0.50	RAD	11	11	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0066	10413	Borehole	19850901	Soil	Cobalt-60	13.00	PCI/G	0.50	RAD	12	12	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
C0066	10414	Borehole	19850901	Soil	Cobalt-60	4.00	PCI/G	0.50	RAD	14	14	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
MND17-0516	0516-0001	Borehole		Soil	Thorium-228	0.70	PCI/G	0.16	RAD	0	1	FT	14274-82-9		MND17		
MND17-0516	0516-0001	Borehole		Soil	Thorium-230	0.91	PCI/G	0.09	RAD	0	1	FT	14269-63-7		MND17		
MND17-0516	0516-0001	Borehole		Soil	Thorium-232	0.76	PCI/G	0.06	RAD	0	1	FT	7440-29-1		MND17		
MND17-0516	0516-0001	Borehole		Soil	Thorium-232	0.76	PCI/G		RAD	0	1	FT	7440-29-1		MND17		
MND17-0516	0516-5001	Borehole		Soil	Thorium-232	0.15	PCI/G		RAD	0	1	FT	7440-29-1		MND17		
MND17-0528	0528-0001	Borehole		Soil	Thorium-228	0.77	PCI/G	0.02	RAD	0	1	FT	14274-82-9		MND17		
MND17-0528	0528-0001	Borehole		Soil	Thorium-230	0.89	PCI/G	0.01	RAD	0	1	FT	14269-63-7		MND17		
MND17-0528	0528-0001	Borehole		Soil	Thorium-232	0.79	PCI/G	0.01	RAD	0	1	FT	7440-29-1		MND17		
MND17-0528	0528-0001	Borehole		Soil	Thorium-232	0.90	PCI/G		RAD	0	1	FT	7440-29-1		MND17		
MND17-0528	0528-5001	Borehole	19950413	Soil	Thorium-232	0.20	PCI/G		RAD	0	1	FT	7440-29-1		MND17		
MND17-0534	0534-5001	Borehole	19950419	Soil	Plutonium-238	25.00	PCI/G	25.00	RAD	0	1	FT	13981-16-3		MND17		1-Exceeds soil 10-6 GV. 2-Exceeds background value.
MND17-0547	0547-0001	Borehole		Soil	Cobalt-60	2.79	PCI/G		RAD	0	1	FT	10198-40-0		MND17		1-Exceeds soil 10-6 GV.
MND17-0547	0547-0001	Borehole		Soil	Thorium-228	0.86	PCI/G	0.04	RAD	0	1	FT	14274-82-9		MND17		1-Exceeds soil 10-6 GV.
MND17-0547	0547-0001	Borehole		Soil	Thorium-230	0.89	PCI/G	0.02	RAD	0	1	FT	14269-63-7		MND17		
MND17-0547	0547-0001	Borehole		Soil	Thorium-232	0.80	PCI/G	0.03	RAD	0	1	FT	7440-29-1		MND17		
MND17-0547	0547-0001	Borehole		Soil	Thorium-232	0.95	PCI/G		RAD	0	1	FT	7440-29-1		MND17		
MND17-0547	0547-5001	Borehole		Soil	Cobalt-60	1.71	PCI/G		RAD	0	1	FT	10198-40-0		MND17		1-Exceeds soil 10-6 GV.
MND17-0547	0547-5001	Borehole		Soil	Plutonium-238	108.20	PCI/G		RAD	0	1	FT	13981-16-3		MND17		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
MND17-0547	0547-5001	Borehole		Soil	Thorium-232	0.71	PCI/G		RAD	0	1	FT	7440-29-1		MND17		
S0373	9830	Surface lo	19850601	Soil	Cesium-137	1.60	PCI/G	0.50	RAD	0	0	FT	10045-97-3		RSS		1-Exceeds soil 10-6 GV. 2-Exceeds background value.
S0373	9830	Surface lo	19850601	Soil	Cobalt-60	1.00	PCI/G	0.50	RAD	0	0	FT	10198-40-0		RSS		1-Exceeds soil 10-6 GV.
S0374	6259	Surface lo	19840801	Soil	Plutonium-238	8.14	PCI/G	0.01	RAD	0	0	FT	13981-16-3		RSS		1-Exceeds soil 10-6 GV. 2-Exceeds background value.
SCR240	90103053	Borehole	19901030	Soil	Plutonium-238	59.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR240	90103053	Borehole	19901030	Soil	Thorium-232	4.10	PCI/G		RAD	0	0	FT	7440-29-1		SCRDATA		2-Exceeds background value.
SCR240	90103054	Borehole	19901030	Soil	Plutonium-238	54.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR240	90103054	Borehole	19901030	Soil	Thorium-232	3.10	PCI/G		RAD	0	0	FT	7440-29-1		SCRDATA		2-Exceeds background value.
SCR240	90103055	Borehole	19901030	Soil	Plutonium-238	118.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR240	90103055	Borehole	19901030	Soil	Thorium-232	5.40	PCI/G		RAD	0	0	FT	7440-29-1		SCRDATA		2-Exceeds background value. 3-Exceeds other criteria.
SCR240	90103056	Borehole	19901030	Soil	Plutonium-238	189.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR240	90103056	Borehole	19901030	Soil	Thorium-232	12.60	PCI/G		RAD	0	0	FT	7440-29-1		SCRDATA		2-Exceeds background value. 3-Exceeds other criteria.
SCR240	92100812	Borehole	19921008	Soil	Plutonium-238	38.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR240	92100812	Borehole	19921008	Soil	Thorium-232	2.00	PCI/G		RAD	0	0	FT	7440-29-1		SCRDATA		2-Exceeds background value.
SCR240	92100813	Borehole	19921008	Soil	Plutonium-238	28.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.

Location_nai	Sample_id	Location_t	Collection_d	Media	Value_name	Measured	Value_u	Detec	Chem_	Start	End_	Depth	Cas_number	Lab_	Project_code	Dat	Comment
SCR159	90072554	Borehole	19900725	Soil	Plutonium-238	27.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR159	90072555	Borehole	19900725	Soil	Plutonium-238	29.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR159	90072557	Borehole	19900725	Soil	Plutonium-238	225.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR159	90072559	Borehole	19900725	Soil	Plutonium-238	26.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR159	90072560	Borehole	19900725	Soil	Plutonium-238	30.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR159	90072561	Borehole	19900725	Soil	Plutonium-238	31.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.
SCR161	9312024-Q	Borehole	19931202	Soil	Plutonium-238	26.00	PCI/G		RAD	0	0	FT	13981-16-3		SCRDATA		1-Exceeds soil 10-6 GV. 2-Exceeds background value. 3-Exceeds other criteria.

comp_no	par_code	parameter name	comparison value	units
1	7440-41-7	Beryllium	7.00E-01	MG/KG
1	7440-43-9	Cadmium	5.00E-04	MG/KG
1	7440-47-3	Chromium	7.50E+03	MG/KG
1	121-82-4	RDX	2.70E+01	UG/KG
1	72-55-9	4,4'-DDE	9.00E+00	MG/KG
1	50-29-3	4,4'-DDT	9.00E+00	MG/KG
1	12672-29-6	Aroclor-1248	3.85E-01	MG/KG
1	11096-82-5	Aroclor-1260	3.85E-01	MG/KG
1	319-85-7	Beta-BHC	1.65E+00	MG/KG
1	60-57-1	Dieldrin	1.85E-01	MG/KG
1	56-55-3	Benzo(a)anthracene	4.10E+00	MG/KG
1	50-32-8	Benzo(a)pyrene	4.10E-01	MG/KG
1	205-99-2	Benzo(b)fluoranthene	4.10E+00	MG/KG
1	207-08-9	Benzo(k)fluoranthene	4.10E+01	MG/KG
1	117-81-7	Bis(2-ethylhexyl)phthalate	2.15E+02	MG/KG
1	218-01-9	Chrysene	4.10E+02	MG/KG
1	53-70-3	Dibenz(a,h)anthracene	4.10E-01	MG/KG
1	193-39-5	Indeno(1,2,3-cd)pyrene	4.10E+00	MG/KG
1	78-59-1	Isophorone	3.15E+03	MG/KG
1	86-30-6	N-Nitrosodiphenylamine	6.00E+02	MG/KG
1	87-86-5	Pentachlorophenol	2.50E+01	MG/KG
1	107-06-2	1,2-Dichloroethane	1.10E-01	MG/KG
1	71-43-2	Benzene	3.20E+01	MG/KG
1	75-27-4	Bromodichloromethane	4.80E+01	MG/KG
1	75-25-2	Bromoform	3.75E+02	MG/KG
1	56-23-5	Carbon Tetrachloride	1.20E-01	MG/KG
1	67-66-3	Chloroform	1.55E+01	MG/KG
1	124-48-1	Dibromochloromethane	3.55E+01	MG/KG
1	75-09-2	Dichloromethane	3.95E+02	MG/KG
1	79-01-6	Trichloroethene	1.25E+02	MG/KG
1	AC-227	Actinium-227	1.00E+00	PCI/G
1	14596-10-2	Americium-241	4.95E+00	PCI/G
1	13982-38-2	Bismuth-207	1.75E-01	PCI/G
1	BI-207	Bismuth-207	1.75E-01	PCI/G
1	10045-97-3	Cesium-137	4.60E-01	PCI/G
1	10198-40-0	Cobalt-60	1.00E-01	PCI/G
1	13981-16-3	Plutonium-238	5.50E+00	PCI/G
1	15117-48-3	Plutonium-239	5.50E+00	PCI/G
1	PU239/240	Plutonium-240	5.50E+00	PCI/G
1	13982-63-3	Radium-226	1.40E-01	PCI/G
1	10098-97-2	Strontium-90	3.00E+00	PCI/G
1	14274-82-9	Thorium-228	8.50E-01	PCI/G
1	14269-63-7	Thorium-230	4.40E+01	PCI/G
1	7440-29-1	Thorium-232	5.00E+01	PCI/G
1	10028-17-8	Tritium	2.35E+04	PCI/G
1	U-233	Uranium-233	3.70E+01	PCI/G
1	13966-29-5	Uranium-234	3.75E+01	PCI/G
1	15117-96-1	Uranium-235	3.35E+00	PCI/G
1	24678-82-8	Uranium-238	1.10E+01	PCI/G
2	7429-90-5	Aluminum	19000	MG/KG

comp_no	par_code	parameter name	comparison value	units
2	7440-38-2	Arsenic	8.6	MG/KG
2	7440-39-3	Barium	180	MG/KG
2	7440-69-9	Bismuth	ND	MG/KG
2	7440-41-7	Beryllium	1.3	MG/KG
2	7440-43-9	Cadmium	2.1	MG/KG
2	7440-70-2	Calcium	310000	MG/KG
2	7440-47-3	Chromium	20	MG/KG
2	7440-48-4	Cobalt	19	MG/KG
2	7440-50-8	Copper	26	MG/KG
2	57-12-5	Cyanide	ND	MG/KG
2	7439-89-6	Iron	35000	MG/KG
2	7439-92-1	Lead	48	MG/KG
2	7439-93-2	Lithium	26	MG/KG
2	7439-95-4	Magnesium	40000	MG/KG
2	7439-96-5	Manganese	1400	MG/KG
2	7439-97-6	Mercury	ND	MG/KG
2	7439-98-7	Molybdenum	27	MG/KG
2	7440-02-0	Nickel	32	MG/KG
2	7440-09-7	Potassium	1900	MG/KG
2	7440-22-4	Silver	1.7	MG/KG
2	7782-49-2	Selenium	ND	MG/KG
2	7440-23-5	Sodium	240	MG/KG
2	7440-28-0	Thallium	0.46	MG/KG
2	7440-31-5	Tin	20	MG/KG
2	7440-62-2	Vanadium	25	MG/KG
2	7440-66-6	Zinc	140	MG/KG
2	72-54-8	4,4'-DDD	1.4	MG/KG
2	72-55-9	4,4'-DDE	4.3	MG/KG
2	50-29-3	4,4'-DDT	13	MG/KG
2	309-00-2	Aldrin	ND	MG/KG
2	5103-71-9	Alpha Chlordane	ND	MG/KG
2	319-84-6	Alpha-BHC	ND	MG/KG
2	12672-29-6	Aroclor-1248	ND	MG/KG
2	11097-69-1	Aroclor-1254	58	MG/KG
2	11096-82-5	Aroclor-1260	ND	MG/KG
2	319-85-7	Beta-BHC	ND	MG/KG
2	60-57-1	Dieldrin	ND	MG/KG
2	959-98-8	Endosulfan I	ND	MG/KG
2	1031-07-8	Endosulfan Sulfate	ND	MG/KG
2	72-20-8	Endrin	ND	MG/KG
2	7421-93-4	Endrin Aldehyde	ND	MG/KG
2	53494-70-5	Endrin Ketone	ND	MG/KG
2	5103-74-2	Gamma-Chlordane	ND	MG/KG
2	58-89-9	Gamma-BHC (Lindane)	ND	MG/KG
2	76-44-8	Heptachlor	ND	MG/KG
2	1024-57-3	Heptachlor Epoxide	ND	MG/KG
2	72-43-5	Methoxychlor	30	MG/KG
2	77-47-4	Hexachlorocyclopentadiene	ND	MG/KG
2	14596-10-2	Americium-241	ND	MG/KG
2	13982-38-2	Bismuth-207	ND	MG/KG

comp_no	par_code	parameter name	comparison value	units
2	BI-207	Bismuth-207	ND	MG/KG
2	BI-210M	Bismuth-210m	ND	MG/KG
2	10045-97-3	Cesium-137	0.42	PCI/G
2	13981-16-3	Plutonium-238	0.13	PCI/G
2	13966-00-2	Potassium-40	37	PCI/G
2	13982-63-3	Radium-226	2	PCI/G
2	10098-97-2	Strontium-90	0.72	PCI/G
2	14274-82-9	Thorium-228	1.5	PCI/G
2	14269-63-7	Thorium-230	1.9	PCI/G
2	7440-29-1	Thorium-232	1.4	PCI/G
2	10028-17-8	Tritium	1.6	PCI/G
2	13966-29-5	Uranium-234	1.1	PCI/G
2	15117-96-1	Uranium-235	0.11	PCI/G
2	24678-82-8	Uranium-238	1.2	PCI/G
3	7439-92-1	Lead	400	MG/KG
3	13982-63-3	Radium-226	5	PCI/G
3	13981-16-3	Plutonium-238	25	PCI/G
3	7440-29-1	Thorium-232	5	PCI/G
5	7440-36-0	Antimony	0.0006	MG/L
5	7440-38-2	Arsenic	0.05	MG/L
5	7440-39-3	Barium	2	MG/L
5	7440-41-7	Beryllium	0.004	MG/L
5	7440-43-9	Cadmium	0.005	MG/L
5	7440-47-3	Chromium	0.1	MG/L
5	7440-50-8	Copper	1.3	MG/L
5	57-12-5	Cyanide	0.2	MG/L
5	7439-92-1	Lead	0.015	MG/L
5	7439-97-6	Mercury	0.002	MG/L
5	7440-02-0	Nickel	0.1	MG/L
5	7782-49-2	Selenium	0.05	MG/L
5	7440-28-0	Thallium	0.002	MG/L
5	16984-48-8	Flouride	4	MG/L
5	NO3	Nitrates	10	MG/L
5	NO2	Nitrite	1	MG/L
5	57-74-9	Chlordane	0.002	MG/L
5	72-20-8	Endrin	0.002	MG/L
5	76-44-8	Heptachlor	0.0004	MG/L
5	1024-57-3	Heptachlor Epoxide	0.0002	MG/L
5	72-43-5	Methoxychlor	0.04	MG/L
5	8001-35-2	Toxaphene	0.003	MG/L
5	120-82-1	1,2,4-Trichlorobenzene	0.07	MG/L
5	95-95-4	2,4,5-Trichlorophenol	0.05	MG/L
5	50-32-8	Benzo(a)pyrene	0.002	MG/L
5	118-74-1	Hexachlorobenzene	0.001	MG/L
5	77-47-4	Hexachlorocyclopentadiene	0.05	MG/L
5	87-86-5	Pentachlorophenol	0.001	MG/L
5	71-55-6	1,1,1-Trichloroethane	0.2	MG/L
5	79-00-5	1,1,2-Trichloroethane	0.005	MG/L
5	75-35-4	1,1-Dichloroethene	0.007	MG/L
5	156-59-2	1,2-cis-Dichloroethene	0.07	MG/L

comp_no	par_code	parameter name	comparison value	units
5	107-06-2	1,2-Dichloroethane	0.005	MG/L
5	78-87-5	1,2-Dichloropropane	0.005	MG/L
5	106-46-7	1,4-Dichlorobenzene	0.075	MG/L
5	108-90-7	Chlorobenzene	0.1	MG/L
5	96-12-8	Dibromochloropropane	0.0002	MG/L
5	106-93-4	1,2-Dibromoethane	0.00005	MG/L
5	95-50-1	1,2-Dichlorobenzene	0.6	MG/L
5	75-09-2	Dichloromethane (Methylene Chloride)	0.005	MG/L
5	88-85-7	Dinoseb	0.007	MG/L
5	1746-01-6	Dioxin	0.00000003	MG/L
5	94-75-7	2,4-D	0.07	MG/L
5	156-60-5	1,2-trans-Dichloroethene	0.01	MG/L
5	71-43-2	Benzene	0.005	MG/L
5	75-27-4	Bromodichloromethane	0.008	MG/L
5	75-25-2	Bromoform	0.008	MG/L
5	56-23-5	Carbon Tetrachloride	0.005	MG/L
5	67-66-3	Chloroform	0.008	MG/L
5	100-41-4	Ethylbenzene	0.07	MG/L
5	58-89-9	Gamma-BHC (Lindane)	0.0002	MG/L
5	117-81-7	bis(2-ethylhexyl)phthalate	0.006	MG/L
5	100-42-5	Styrene	0.1	MG/L
5	127-18-4	Tetrachloroethene	0.005	MG/L
5	108-88-3	Toluene	1	MG/L
5	79-01-6	Trichloroethene	0.005	MG/L
5	75-01-4	Vinyl Chloride	0.002	MG/L
5	1330-20-7	Xylenes, Total	10	MG/L
5	AC-227	Actinium-227	0.4	PCI/L
5	14596-10-2	Americium-241	12	PCI/L
5	13982-38-2	Bismuth-207	1200	PCI/L
5	10045-97-3	Cesium-137	120	PCI/L
5	10198-40-0	Cobalt-60	400	PCI/L
5	13981-16-3	Plutonium-238	16	PCI/L
5	13982-63-3	Radium-226	4	PCI/L
5	10098-97-2	Strontium-90	40	PCI/L
5	14274-82-9	Thorium-228	16	PCI/L
5	14269-63-7	Thorium-230	12	PCI/L
5	7440-29-1	Thorium-232	2	PCI/L
5	10028-17-8	Tritium	20000	PCI/L
5	U-233	Uranium-233	20	PCI/L
5	13966-29-5	Uranium-234	20	PCI/L
5	15117-96-1	Uranium-235	24	PCI/L
5	24678-82-8	Uranium-238	24	PCI/L
6	7440-47-3	Chromium	1.10E+03	MG/KG
6	7440-36-0	Antimony	8.50E+01	MG/KG
6	7440-38-2	Arsenic	6.40E+01	MG/KG
6	7440-39-3	Barium	1.50E+04	MG/KG
6	7440-41-7	Beryllium	1.10E+03	MG/KG
6	7440-43-9	Cadmium	2.10E+02	MG/KG
6	57-12-5	Cyanide	4.30E+03	MG/KG
6	7439-96-5	Manganese	2.70E+04	MG/KG

comp_no	par_code	parameter name	comparison value	units
6	7439-97-6	Mercury	6.40E+01	MG/KG
6	7440-02-0	Nickel	4.30E+03	MG/KG
6	7440-22-4	Silver	1.10E+03	MG/KG
6	7440-62-2	Vanadium	1.50E+03	MG/KG
6	7440-66-6	Zinc	6.40E+04	MG/KG
6	2691-41-0	HMX	1.10E+04	UG/KG
6	121-82-4	RDX	6.40E+04	UG/KG
6	50-29-3	4,4'-DDT	1.10E+02	MG/KG
6	11097-69-1	Aroclor-1254	4.30E+00	MG/KG
6	60-57-1	Dieldrin	1.10E+01	MG/KG
6	106-44-5	4-Methylphenol	1.10E+03	MG/KG
6	120-12-7	Anthracene	6.40E+04	MG/KG
6	65-85-0	Benzoic Acid	8.50E+05	MG/KG
6	117-81-7	Bis(2-ethylhexyl)phthalate	4.30E+03	MG/KG
6	85-68-7	Butyl Benzyl Phthalate	4.30E+04	MG/KG
6	84-74-2	Di-n-butyl Phthalate	2.10E+04	MG/KG
6	117-84-0	Di-n-octyl Phthalate	4.30E+03	MG/KG
6	206-44-0	Fluoranthene	8.50E+03	MG/KG
6	78-59-1	Isophorone	4.30E+04	MG/KG
6	87-86-5	Pentachlorophenol	6.40E+03	MG/KG
6	108-95-2	Phenol	1.30E+05	MG/KG
6	129-00-0	Pyrene	6.40E+03	MG/KG
6	75-34-3	1,1-Dichloroethane	7.80E+00	MG/KG
6	156-60-5	1,2-trans-Dichloroethene	4.30E+03	MG/KG
6	108-10-1	2-Methyl-4-pentanone	7.00E+02	MG/KG
6	67-64-1	Acetone	2.10E+04	MG/KG
6	75-27-4	Bromodichloromethane	4.30E+03	MG/KG
6	75-25-2	Bromoform	4.30E+03	MG/KG
6	75-15-0	Carbon Disulfide	2.80E+02	MG/KG
6	56-23-5	Carbon Tetrachloride	1.50E+02	MG/KG
6	75-00-3	Chloroethane	1.60E+02	MG/KG
6	67-66-3	Chloroform	2.10E+03	MG/KG
6	124-48-1	Dibromochloromethane	4.30E+03	MG/KG
6	75-09-2	Dichloromethane	1.00E+03	MG/KG
6	100-41-4	Ethylbenzene	4.80E-01	MG/KG
6	110-54-3	Hexane	9.10E+01	MG/KG
6	127-18-4	Tetrachloroethene	2.10E+03	MG/KG
6	108-88-3	Toluene	2.50E+02	MG/KG
6	75-69-4	Trichlorofluoromethane	7.30E+02	MG/KG
6	1330-20-7	Xylenes, Total	4.30E+05	MG/KG
6	78-93-3	2-Butanone	9.30E+03	MG/KG

1 Value is 10-6 Risk-Based Guide Value
2 Value is OU9 Soil Background Value
3 Value is other criteria, I.e. 5 pCi/g for certain radionuclides
25 pCi/g plutonium
5 Value is MCL
6 Value is the Guide Value based on the hazard index

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