MOUND PLANT

Release Block D

PRS 312

August 14, 1995

PRS 312

REV	DESCRIPTION	DATE
PUBLIC RELEASE 0	Available for comments.	**Oct. 18, 1995**
FINAL 1	Comment period expired. No comments. Recommendation page annotated.	**Oct. 10, 1996**
FINAL 2	Signature page changed to show correct review period.	**Nov. 19, 1996**

312
95 8 3

MOUND PLANT
PRS 312
AUGUST 3, 1995

PRS HISTORY:	This location was identified as a potential release site as a result of data collected during the Mound Site Survey Project (Stought et. al., 1988).
PROCESS DESCRIPTION:	No radioactive or hazardous waste generating processes are known to have occurred at the location of PRS 312. Based on historical activities in nearby buildings, only isolated activity from thorium and/or plutonium may be expected.
CONTAMINATION:	Isolated thorium hot spot identified during the Site Survey Project (location S0971). Contamination levels are 5.02 pCi/g Th and 0.15 pCi/g Pu-238 in a surface sample. Nearby Site Survey locations (60 to 90 feet from S0971) had Th concentrations of less than 2 pCi/g and Pu concentrations of 0.52 (S0970), 0.07 (S0974), and 0.01 (C0196) pCi/g. S0970 and S0964 were surface samples. C0196 was a core sample and the reading was found at a depth of 90 inches. These samples were taken in 1983 and 1984. PRS was revisited summer of 1995 (D&D). Field results (Fidler, alpha-beta meter, OVA and OVM) found no significant radioactivity or VOC readings.
REFERENCES:	OU-9 Scoping Report, Vol. 3, Radiological Site Survey Report OU-5 Operational Area Phase I Investigation, Non-AOC Field Report (Draft), March 1995 Other Soils Characterization Field Data, May 1995
PREPARED BY:	Neff/Geneczko/Liebson

MOUND PLANT
PRS 312
AUGUST 3, 1995

RECOMMENDATION: No further action. The only contamination present at a level warranting removal consideration is thorium and it is only slightly above the regulatory cleanup value (5.02 vs. 5). Levels in areas adjacent to PRS 312 do not approach regulatory limits. Since this is a point source and any exposure pathway would further reduce this concentration, PRS 312 is recommended for no further action.

CONCURRENCE:

DOE: Arthur Klesnrath 10/18/95

USEPA: Timothy J. Fisher 10/18/95

OEPA: [illegible] 10/18/95

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from ~~10/15/95~~ 11/6/95 to ~~11/15/95~~ 12/19/95.

☒ No comments were received during the comment period.

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

REFERENCE MATERIAL

FOR

PRS312

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

GAMMA SPECTROSCOPY

Map Location[a]	Coordinates South	Coordinates West	MRC ID No.	Mo-Yr	Depth (inch)	Pu-238 (pCi/g)	Thorium[b] (pCi/g)	Tritium (pCi/mL)	Co-60 (pCi/g)	Cs-137 (pCi/g)	Ra-226 (pCi/g)	Am-241 (pCi/g)
S0969	4025	3125	5959	07-84	0	0.12	b					
S0970	4050	3075	2941	10-83	0	0.52	b					
S0971	4075	3025	5958	07-84	0	0.15	5.02					
C0198	4135	2620	8512	12-84	30	0.19	b					
S0972	4225	2730	2623	09-83	0	0.02	b					
S0973	4225	2855	2622	09-83	0	0.02	b					
S0974	4250	2830	5969	07-84	0	0.59	b					
S0975	4275	2580	5964	07-84	0	0.75	b		LDL	LDL	1.1	LDL
S0976	4275	2780	5968	07-84	0	0.30	b					
S0977	4325	2630	5966	07-84	0	0.77	b					
S0978	4325	2635	5967	07-84	0	0.43	b					
S0979	4350	2580	2620	09-83	0	0.40	b					
S0980	4350	2680	5965	07-84	0	1.02	b					
S0981	4375	2630	2621	09-83	0	0.44[c]	b					
C0199	3600	3000	8268	10-84	72	0.16	b					
			8269	10-84	108	0.02	b					
S0982	3625	3025	5944	07-84	0	0.43	14.94					
S0983	3625	3325	4517	01-84	0	0.28	b	0.28				
S0984	3650	3275	5939	07-84	0	2.95	b					

GAMMA SPECTROSCOPY

Map Location[a]	Coordinates South	Coordinates West	MRC ID No.	Mo-Yr	Depth (inch)	Pu-238 (pCi/g)	Thorium[b] (pCi/g)	Tritium (pCi/mL)	Co-60 (pCi/g)	Cs-137 (pCi/g)	Ra-226 (pCi/g)	Am-241 (pCi/g)
S0953	3925	3945	5950	07-84	0	0.07	b					
S0954	3975	2645	5954	07-84	0	0.45	b					
S0955	3975	2945	5949	07-84	0	1.73	b		LDL	LDL	1	LDL
S0956	4000	2645	2949	10-83	0	0.76[c]	b		LDL	1.7	1	LDL
S0957	4000	2745	2950	10-83	0	0.39[c]	b	0.15				
S0958	4000	2770	5952	07-84	0	0.01	b					
S0959	4000	2945	5947	07-84	0	0.08	b					
S0960	4100	2720	5955	07-84	0	0.49	b					
S0961	4125	2645	2948	10-83	0	1.78[c]	b					
S0962	4125	2770	5956	07-84	0	0.41	b					
S0963	4125	2845	5957	07-84	0	0.14	b					
S0964	4125	2945	5948	07-84	0	0.07	b					
C0196	4135	3000	8515	12-84	90	0.01	b					
C0197	3900	3000	8513	12-84	30	0.43	b					
			8514	12-84	60	0.02	b					
S0965	3925	3325	5963	07-84	0	0.77	b					
S0966	3950	3125	2942	10-83	0	0.57	b					
S0967	3950	3275	5962	07-84	0	0.51	b					
S0968	3975	3225	5961	07-84	0	0.10	b					

Environmental Restoration Program

OPERABLE UNIT 5
OPERATIONAL AREA PHASE I INVESTIGATION
NON-AOC FIELD REPORT

MOUND PLANT
MIAMISBURG, OHIO

VOLUME II - APPENDICES A-G

March 1995

Draft

U.S. Department of Energy
Ohio Field Office

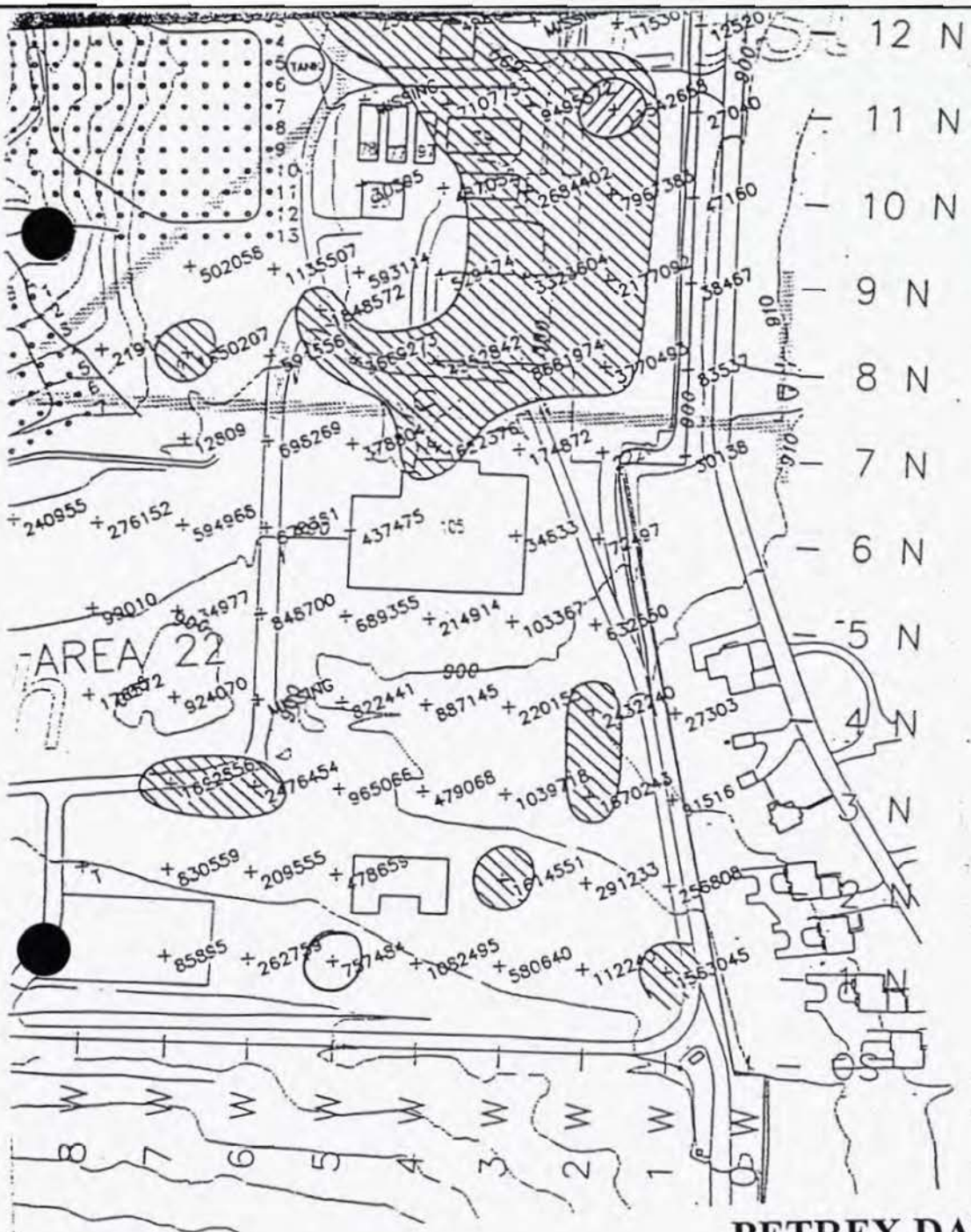
EG&G Mound Applied Technologies

MOUND SOIL SCREEN DATA

APPENDIX D

RADIOLOGICAL DATA (FIDLER SURVEY MOUND SOIL SCREENING FACILITY DATA) FOR NON-AOC POINTS

	FIDLER SURVEY DATA					MOUND SOIL SCREENING FACILITY DATA			
SMPID	Contamination Criteria CH1	FIDLER Readings CH1	Contamination Criteria CH2	FIDLER Readings CH2	FIDLER Readings Out Channel	Plutonium - 238		Thorium - 232	
	Units: CPM	Units: CPM	Units: KCPM	Units: KCPM	Units: KCPM	Units: pCi/g		Units: pCi/g	
	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	Note:	RESULTS	Note:
01N01	113	60	8.06	3.2	NC	3	a	1	a
01N02	113	130	8.06	8.01	NC	25	b	0.9	a
01N03	113	110	8.06	8.0	NC	60	b	1.1	a
01N04	113	75	8.06	7.0	NC	6	a	0.7	a
01N05	113	100	8.06	8.0	NC	15	a	1.3	a
01N06	113	90	8.06	7.5	NC	25	b	1.1	a
01N07	113	40	8.06	3.5	NC	10	a	0.3	a
01N14	113	120	8.06	9.0	NC	38	b	1.1	a
01N15	113	105	8.06	9.0	NC	34	b	1	a
01N16	210.6	130	12.22	9.0	NC	NR		NR	
01N17	210.6	135	12.22	9.0	NC	21	a	0.7	a
01N18	210.6	120	12.22	9.0	NC	24	a	0.6	a
01N19	210.6	135	12.22	9.0	NC	NR		NR	
01N21	170.3	110	9.72	7.5	NC	NR		NR	
01N22	210.6	135	12.22	7.0	NC	20	a	0.6	a
01N23	210.6	145	12.22	7.0	NC	17	a	0.9	a
02N01	98.8	70	6.76	4.4	NC	12	a	0.5	a
02N02	98.8	90	6.76	9.0	NC	25	b	1	a
02N03	98.8	90	6.76	8.5	NC	21	a	0.9	a
02N04	98.8	30	6.76	4.5	NC	NR		NR	
02N05	98.8	60	6.76	6.5	NC	19	a	0.8	a
02N06	98.8	60	6.76	6.0	NC	17	a	0.8	a
02N07	98.8	60	6.76	4.5	NC	1	a	0.4	a
02N08	98.8	100	6.76	6.5	NC	NR		NR	
02N11	157.3	55	8.45	3.5	NC	0	a	0.5	a
02N14	98.8	110	6.76	8.0	NC	6	a	0.5	a
02N15	179.4	120	10.92	9.0	NC	37	b	1	a
02N16	179.4	140	10.92	9.5	NC	28	b	1	a
02N17	179.4	130	10.92	6.0	NC	31	b	0.9	a

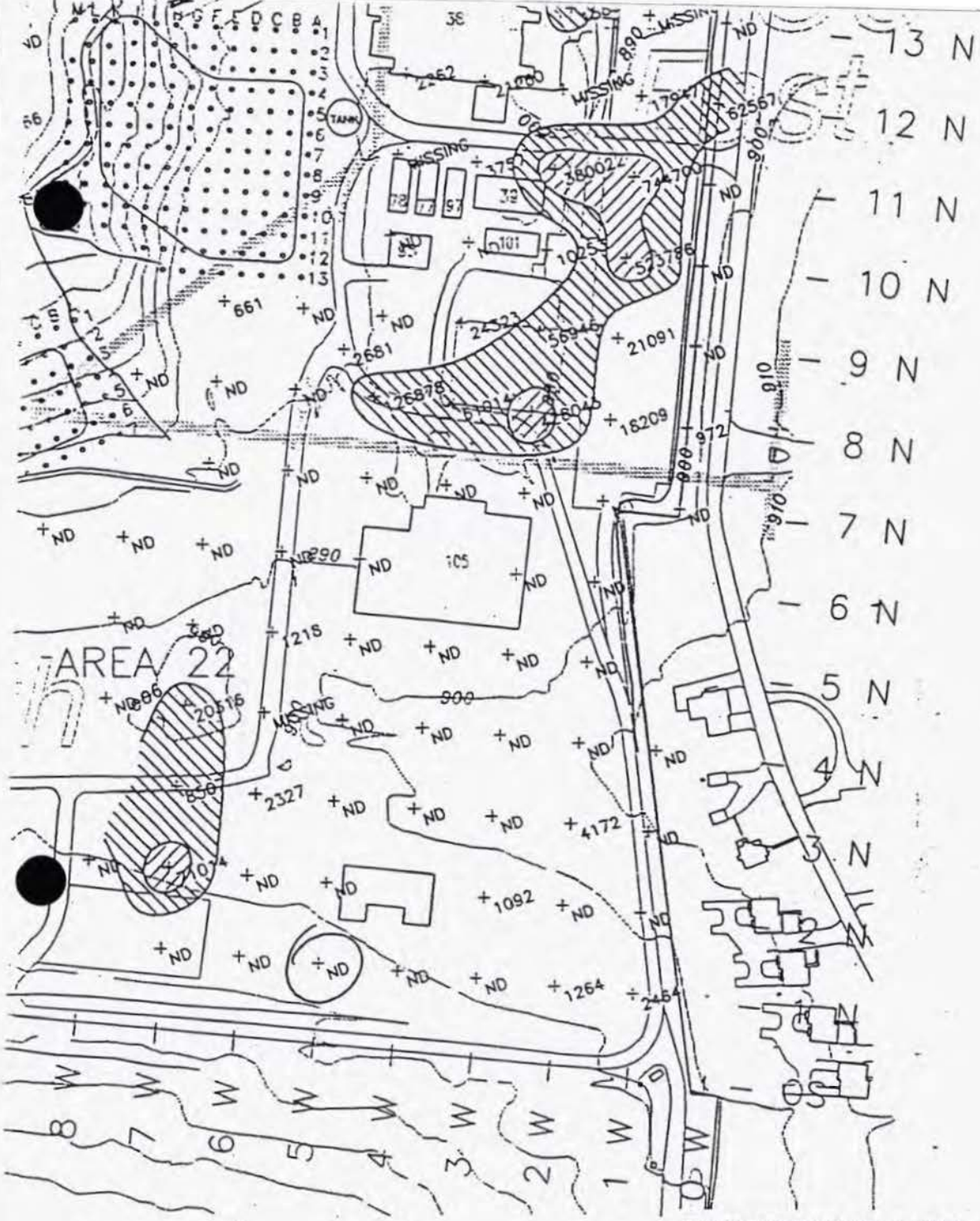


PETREX DATA (RELATIVE)

PRS 312
TOTAL C5-C11 PETROLEUM HYDROCARBONS
TOTAL IONS

LEGEND

Relative Response Values (in ion counts):			
NonAOC–West	NonAOC–East	NonAOC–North	Area 61
≥ 29,000,000	≥ 11,500,000	≥ 23,000,000	≥ 25,000,000
3,000,000–28,999,999	1,600,000–11,499,999	4,000,000–22,999,999	3,000,000–24,999,999



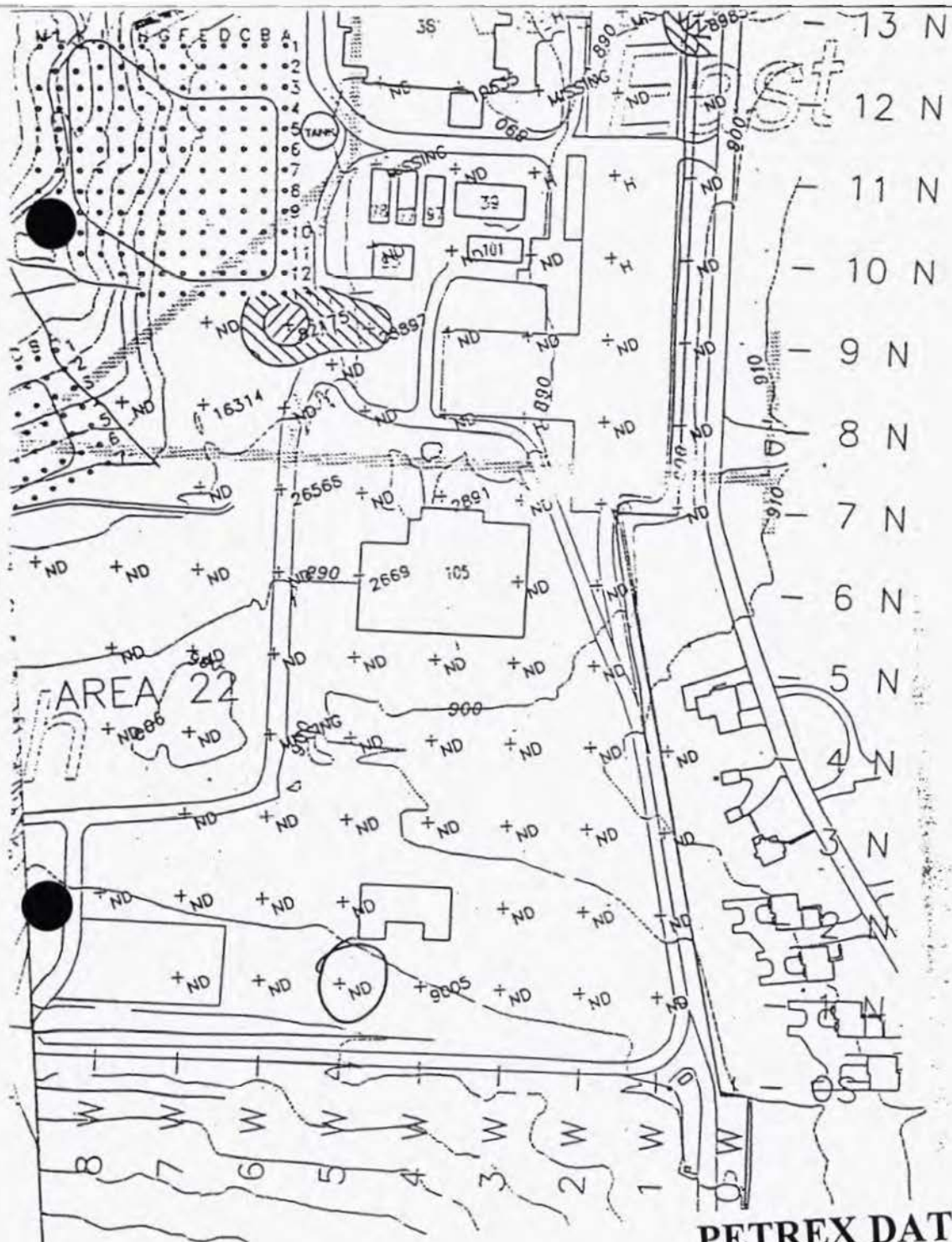
PRS 312
TOTAL SEMIVOLATILE HYDROCARBONS
TOTAL IONS

PETREX DATA (RELATIVE)

LEGEND

Relative Response Values (in ion counts):

NonAOC–West	NonAOC–East	NonAOC–North	Area 61
≥ 1,000,000	≥ 300,000	≥ 800,000	≥ 1,400,000
100,000–999,999	30,000–299,999	80,000–799,999	180,000–1,399,999



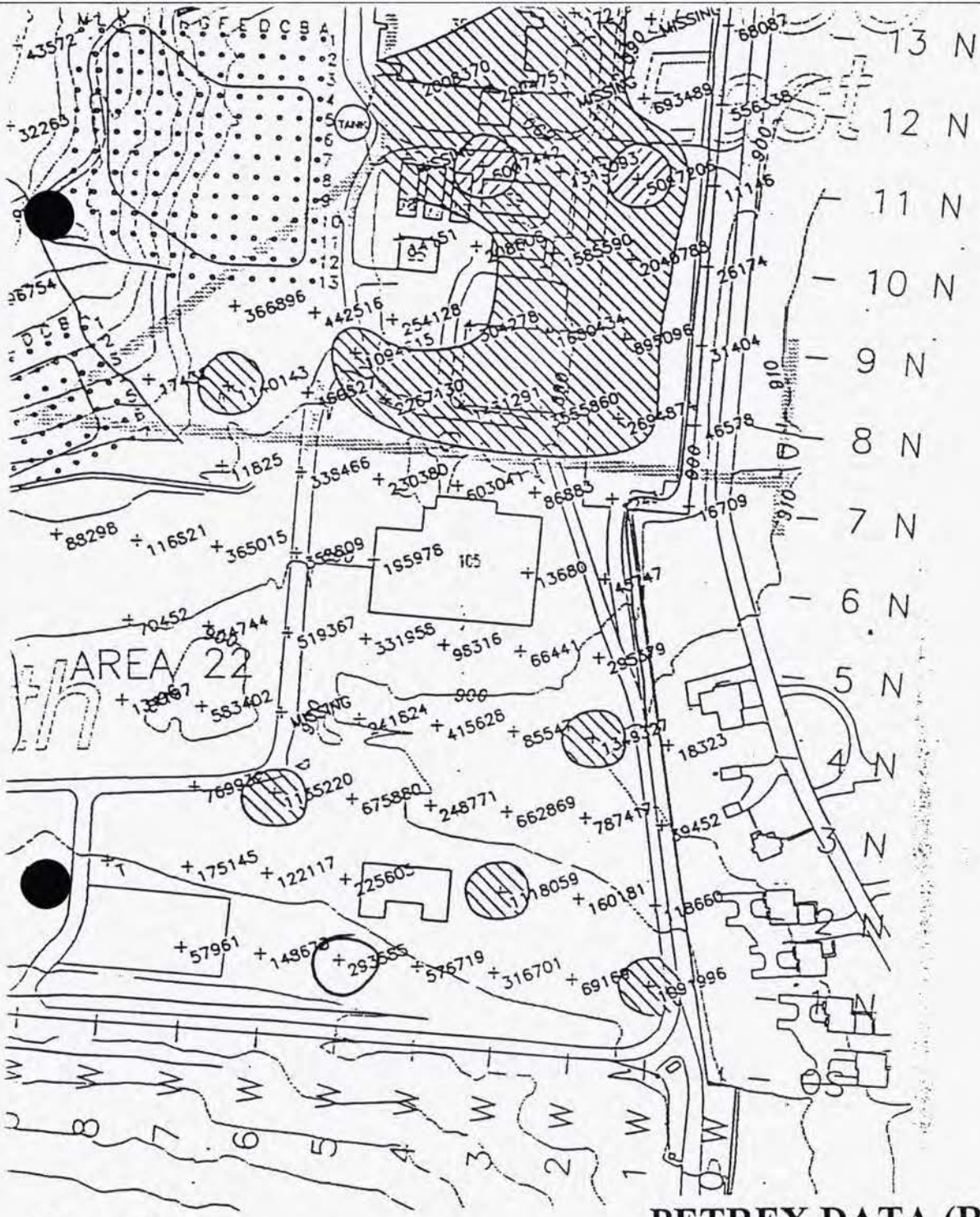
PETREX DATA (RELATIVE)

PRS 312
TOTAL HALOGENATED HYDROCARBONS
TOTAL ION COUNTS

LEGEND

Relative Response Values (in ion counts):

NonAOC–West	NonAOC–East	NonAOC–North	Area 61
≥ 500,000	≥ 80,000	≥ 400,000	≥ 250,000
50,000–499,999	20,000–79,999	40,000–399,999	35,000–249,999



PETREX DATA (RELATIVE)

PRS 312
Total Aromatic Hydrocarbons
Total Ion Counts

LEGEND

Relative Response Values (in ion counts):

uth	NonAOC–West	NonAOC–East	NonAOC–North	Area 61
	≥ 20,000,000	≥ 5,000,000	≥ 10,000,000	≥ 5,800,000
9,999	2,600,000–19,999,999	850,000–4,999,999	1,500,000–9,999,999	1,400,000–5,799,999

FIELD DATA
OTHER SOILS CHARACTERIZATION
PRS 312 (ALSO KNOWN AS HOT SPOT SO971)

Key to interpreting sample data:

Sample nomenclature is of the form **XXYY-ZZ00**

Where:

XX = Area designation
- 87 = PRS 308
- 86 = PRS 310/382
- 83 = prs 312

YY = Sample Location
- 01 = Historical Hot Spot Location
- 02 = Approx 10 feet north of historical location
- 03 = Approx 10 feet south of historical location
- 04 = Approx 10 feet west of historical location
- 05 = Approx 10 feet east of historical location

ZZ = Sample Type
- 50 = Soil

00 = Sample Depth
- 01 = Surface
- 04 = 0-4 feet
- 08 = 4-8 feet
- 12 = 8-12 feet

FIDLER DATA

HEALTH PHYS:

NAME J. TACKETT

HP NO. 5983 RWP # 95-00374 Page 1 of 2

	INST./PROBE ID #	NEXT CAL. DUE DATE	INST. OPERATOR NAME AND HP NO.
OVERHOFF			
PAC			
SRM 200	2863/2186	4-12-95	TACKETT 5983
PUG			
BETA/GAMMA			
FIDLER	3664/3665	4-19-95	TACKETT 5983
ELECTRA α/β	5336/5339	4-6-95	TACKETT 5983

DATE	DESCRIPTION	AREA	COUNT RESULTS								
	OTHER SOILS SAMPLING & ANALYSIS HS S0971		ELECTRA		PAC	SRM 200	PUG	BETA GAMMA	FIDLER		
			DPM		DPM	DPM	CPM	MR/HR	CPM		
3/7/95	WESTON	S4100 W3000	100 cm²		100 cm²	100 cm²	100 cm²		CH-1	OUT	CH-2
			α	β				Bkg	140	4.5 K	4K
								Pu	22K	27 K	4.5 K
3/7/95	INSTRUMENT CHECK	BLD. 88	828	289K				Th	3 K	36 K	32 K
	BACKGROUND CHECK	S 4100 W 3000	20	1.2 K					170	7K	6 K
	PRE-SCAN 8301								ND		ND
	SS# 8301 - 5001		ND						ND		ND
	SS# 8304 - 5004		ND						ND		ND
	PRE-SCAN - 8302								ND		ND
	SS# 8302 - 5001		ND						ND		ND
	SS# 8302 - 5004		ND						ND		ND
	PRE-SCAN 8303								ND		ND
	SS# 8303 - 5001		ND						ND		ND
	SS# 8303 - 5004		ND						ND		ND
	PRE-SCAN 8304								ND		ND
	SS# 8304 - 5001		ND						ND		ND
	SS# 8304 - 5004		ND						ND		ND
	PRE-SCAN - 8305								ND		ND
	SS# 8305 - 5001		ND						ND		ND
	SS# 8305 - 5004		ND						ND		ND
	PERSONNEL CHECK:										
	JEFF TACKETT		ND								
	SCOTT PITHER		ND								

Reviewed by: [signature] HP# 4559 DATE 3/11/95

COMMENTS: N/D = NON-Detectable (≤ BACKGROUND) SS = SOIL SAMPLE

β CHECK SOURCE = 800 dpm α ; 300 k dpm β ± 20%. ALL RESULTS ARE RECORDED MINUS

DATE	DESCRIPTION	AREA	COUNT RESULTS							
	OTHER SOILS HOT SPOT 50971		ELECTRA		PAC	SRM 200	PUG	BETA GAMMA	FIDLER	
			DPM		DPM	DPM	CPM	MR/HR	CPM	
3-7-95	WESTON	S 4100 W 3000	100 cm²		100 cm²	100 cm²	100 cm²		CH-1	OUT	CH-2
			α	β				BG	140	4.5K	4K
								U	22K	27K	4.5K
3-7-95	INSTRUMENT CHECK	BLD 88	828	287K				Th	3K	36K	32K
	WENDLE McDONALD	S 4100 W 3000	ND								
	BOB BRYCE										

FIDLER DATA

Reviewed by: _____ HP# _____ DATE _____

COMMENTS: ND = NON-DETECTABLE (≤ BACKGROUND) SS = SOIL SAMPLES

(α/β CHECK SOURCE = 800 dpm α; 300K dpm β ± 20%. ALL RESULTS ARE RECORDED MINUS

MOUND SOIL SCREEN DATA

TEST RESULTS - SODIUM IODIDE SOIL SCREEN
(MD-80030, OP. 1355)
400 SECOND COUNT
PREPARED BY BETTY PETERS -EXT. 4408

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	88 KEV WINDOW pCi/g	17 KEV WINDOW pCi/g	MORE ISO-TOPES	GRID LOCATION	WELL
9501935	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.0	23	N	WESTON HS S0791 8301-5001	C
9501933	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.6	9	N	WESTON HS S0791 8301-5004	A
9501936	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.4	7	N	WESTON HS S0791 8302-5001	A
9501934	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.4	24	N	WESTON HS S0791 8302-5004	C
9501937	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.0	0	N	WESTON HS S0791 8303-5001	A
[illegible]32	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.0	8	N	WESTON HS S0791 8303-5004	A
9501929	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.0	0	N	WESTON HS S0791 8304-5001	B
501931	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.0	16	N	WESTON HS S0791 8304-5004	C
9501930	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.1	19	N	WESTON HS S0791 8305-5001	C
9501938	03/07/95	03/08/95	J. TACKETT 5983	CONT	1.2	19	N	WESTON HS S0791 8305-5004	C