

# STATUS OF HSWA COMPLIANCE ACTIVITIES



April 12, 1996

Craig A. Snider  
U. S. Department of Energy

## NMED Developed For EPA Region VI The WIPP RCRA Facility Assessment (RFA) (NMED/DOE/AIP 94/1)

- RFA evaluated release potential of hazardous constituents from 77 SWMUs described in Rev. 3 of the Part B Application
- EPA identified 16 SWMUs in the draft HSWA permit requiring further assessment under the RCRA Facility Investigation (RFI) process
- EPA encouraged DOE to evaluate SWMUs under the voluntary RFI process
- Subpart S regulations remove regulatory disincentives for responsible operators willing to complete voluntary corrective actions



In August, 1995, DOE submitted the "Voluntary Release Assessment/Corrective Action Work Plan", evaluating potential releases from the 16 SWMUs

- DOE Committed to:
  - Complete release assessment sampling at 11 SWMUs
  - Initiate corrective actions at three SWMUs
  - Request formal determination of No Further Action (NFA) at remaining two SWMUs
- DOE met with EPA Region VI and NMED to evaluate and obtain approval of proposed assessment sampling protocols

### Voluntary Release Assessment Corrective Action Program

- Intended to be first phase in implementing the RFI corrective action process
- Data generated by sampling program will update information in the RFA
- Data will demonstrate that DOE is not required to proceed with a phase 2 RFI
- Implement voluntary corrective actions to reduce or eliminate the need to complete corrective actions under HSWA permit authority

**Status of Voluntary Release Assessment Corrective  
Action Program**

- DOE collected 271 voluntary release assessment samples at 11 SWMUs
- Analytical data illustrated that constituent concentrations in all 11 SWMUs are below Subpart S soil concentrations action levels and EPA Region III risk-based concentrations
- Analytical data illustrated that constituent concentrations in mudpit areas are equivalent to background concentrations
- Analytical data illustrated that no release has occurred from the 11 SWMUs

**Based upon sampling results and criteria contained in  
the preamble of Subpart S Rule**

- No additional RFI assessments should be required at these 11 SWMUs
- After appropriate public notification and agency approval, a “No Further Action” determination should be granted for these SWMUs
- Additionally, hundreds of similar mudpits (SWMUs) exist outside WIPP boundary and regulations do not require corrective actions at these sites

**SWMUs Where Voluntary Release Assessment  
Sampling Is Complete and NFA Requested**

- SWMU 001g (H-14/P-1 drill pad)
- SWMU 001h (H-15/P-2 drill pad)
- SWMU 001j (P-3 mud pit)
- SWMU 001k (P-4 drill pad)
- SWMU 001L (WIPP-12/P-5 drill pad)
- SWMU 001m (P-6 drill pad)
- SWMU 001n (P-15 drill pad)
- SWMU 001s (ERDA 9 drill pad)
- SWMU 001t (IMC 374 drill pad)
- SWMU 001x (WIPP-13 drill pad)
- SWMU 004a (Port-A-Camp storage area)

**Proposed Voluntary Corrective Actions**

- SWMU 001o (Badger Unit drill pad)
- SWMU 001p (Cotton Baby drill pad)
- SWMU 001q (DOE-1 drill pad)

*oil & gas  
exploration*

*potash evaluation*

**Mitigate SWMUs 001o, 001p, 001q By Covering  
Mudpit Areas with Compacted Caliche Cap**

This proposal is based on the decision factors contained in Part 264.525(B) of the proposed Subpart S regulations, and include:

- Long-term reliability and effectiveness
- Reduction of toxicity, mobility or volume of waste constituents
- Implementability
- Cost

**Other Factors Supporting Decision To Cap-In-Place**

- Depth to groundwater
- Concentrations are both low and contained
- Long-term land use at WIPP
- Geology and Climate
- Removal and placement at commercial landfill may pose greater potential exposure than capping-in-place
- Capping can be completed by local contractor
- Materials are on site
- Permeability testing indicates cap will effectively contain vertical or lateral migration
- No impact to land use
- Limits future liability
- No off-site disposal costs

### Request for NFA On Remaining 2 SWMUs

- SWMU 003a (Brinderson landfill)
- SWMU 003b (Construction landfill)

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### In The Preamble Of The Proposed Subpart S Rules, The EPA Recognizes Releases Or Potential Releases From SWMUs May Be Regulated Under Other Permitting Authority

- Section VI(b)(2) of proposed 40 CFR Part 264.501, "...EPA does not intend to utilize section 3004(u) corrective action authority to supervise or routinely re-evaluate such permitted releases."
- "...In the course of investigating RCRA facilities for corrective action purposes, the EPA may find situations where permitted releases from SWMUs have created threats to human health and the environment."

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### Basis Of No Further Action Determination Request

- Documentation indicating Brinderson and Construction landfills were BLM permitted landfills
- Landfills operated, inspected, and closed in accordance with requirements of BLM operating permits
  - permits limited DOE to construction debris only
  - required BLM inspection
  - required reclamation upon closure
- DOE completed review of DOE, BLM, and NMED landfill management records
- DOE conducted interviews with both BLM and NMED personnel responsible for inspecting the landfills

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### Documentation For Closure Of Landfill Sites

- BLM realty and hazardous waste specialists documented only construction debris was disposed
- BLM realty and hazardous waste specialists approved closure of both sites
- BLM completed inspection of Brinderson landfill reclamation
- DOE operating records from 1988 to present document disposal of only construction debris
- BLM Realty Specialist indicates
  - during numerous inspections, no evidence of improper disposal
- Carlsbad NMED Environmentalist indicates
  - witnessed no disposal of materials not specifically allowed under BLM permit

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## Summary Of Voluntary Release Assessment/Corrective Action Program

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### No Further Action Justification

- Phase 1 of the voluntary RCRA facility investigation (RFI) completed
- Based on analytical data collected during release assessment program, DOE has submitted a "request for no further action" for each of the 11 SWMU mud pits
- Because the EPA does not intend to utilize section 3004(u), corrective action authority to supervise or routinely re-evaluate permitted releases, the DOE has submitted a "request for no further action" for Brinderson and Construction landfill sites

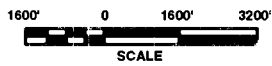
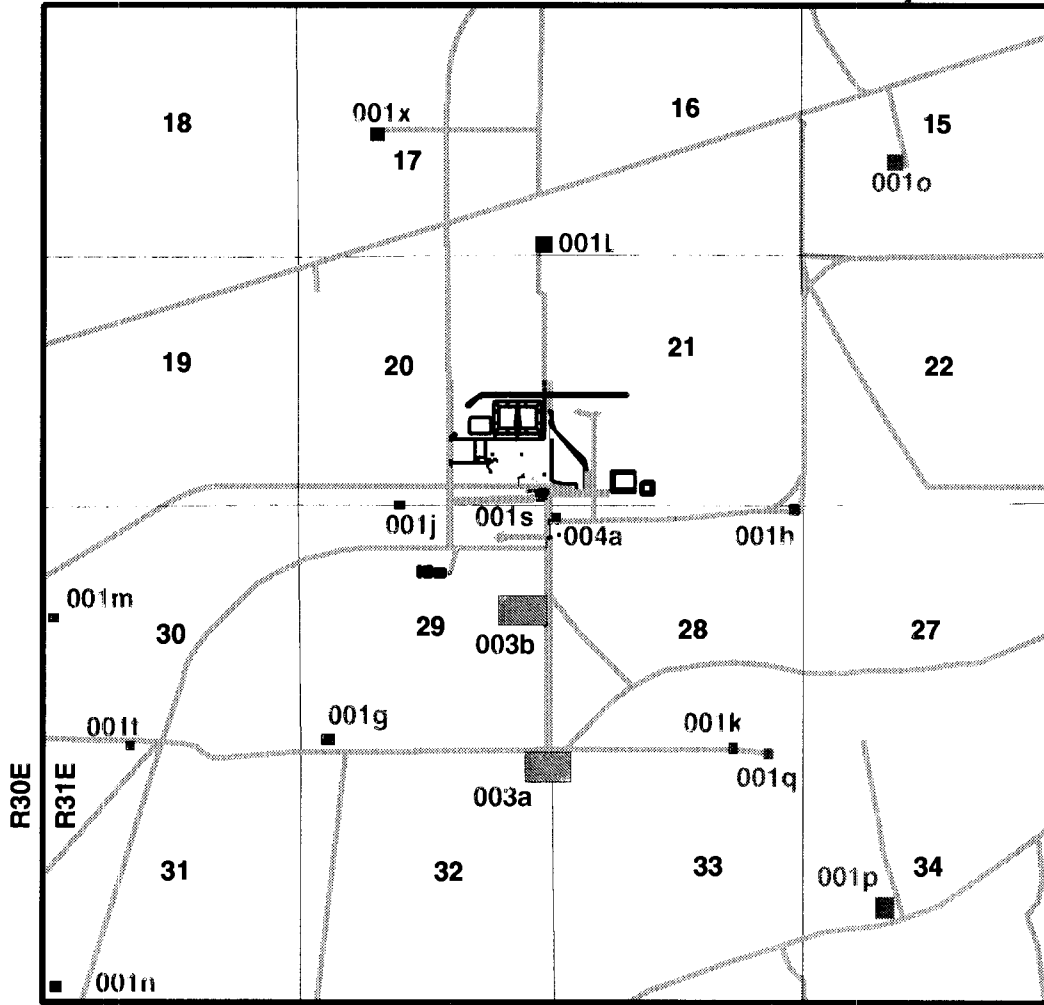
16



## Recommendations

- The DOE suggests that all voluntary corrective actions be carried out under a voluntary corrective action agreement, and that these corrective actions be excluded from the HSWA permit
- The DOE intends to initiate voluntary corrective actions at the Badger Unit, Cotton Baby, and DOE-1 SWMU sites by capping and reclaiming each site
- The DOE proposes that all no further action determinations be officially documented in the HSWA permit

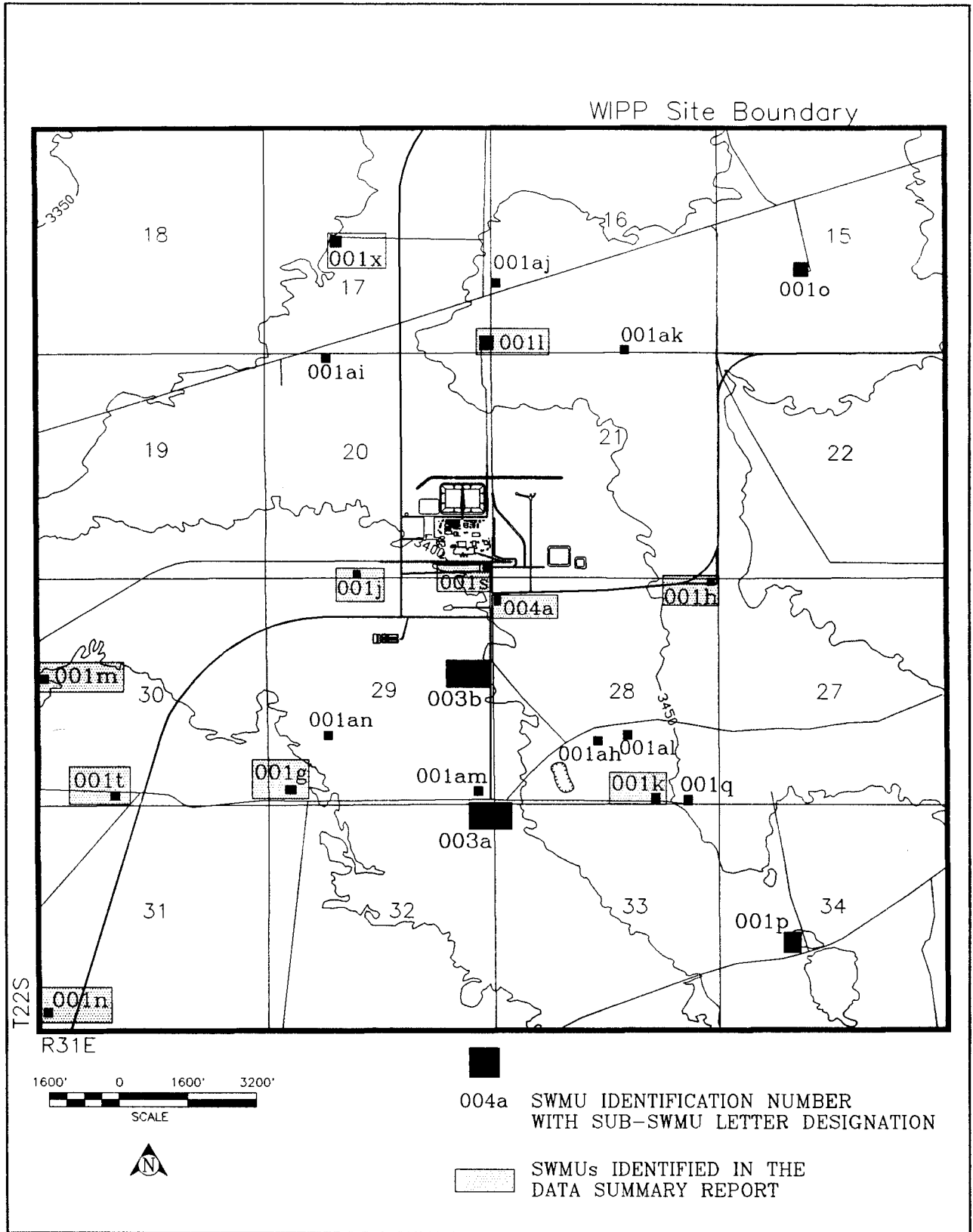
WIPP Site Boundary



- NFA MUD PITS
- CORRECTIVE ACTION MUD PITS
- NFA LANDFILLS

■ SWMU IDENTIFICATION NUMBER WITH SUB-SWMU LETTER DESIGNATION





Location of SWMUs within the WIPP Site Boundary

**VOLUNTARY RELEASE ASSESSMENT SAMPLING HAS BEEN COMPLETED, AND A REQUEST FOR A FORMAL DETERMINATION FOR NO FURTHER ACTION HAS BEEN SUBMITTED FOR AT THE FOLLOWING SWMUS:**

SWMU 001g (H-14/P-1 Drill Pad)  
SWMU 001h (H-15/P-2 Drill Pad)  
SWMU 001j (P-3 mud pit)  
SWMU 001k (P-4 Drill Pad)  
SWMU 001L (WIPP-12/P-5 Drill Pad)  
SWMU 001m (P-6 Drill Pad)  
SWMU 001n (P-15 Drill Pad)  
SWMU 001s (ERDA 9 Drill Pad)  
SWMU 001t (IMC 374 Drill Pad)  
SWMU 001x (WIPP-13 Drill Pad)  
SWMU 003a (Portacamp Storage Area) (formerly 004a)

**VOLUNTARY CORRECTIVE ACTIONS HAVE BEEN PROPOSED AT THE FOLLOWING SWMUS:**

SWMU 001o (Badger Unit Drill Pad)  
SWMU 001p (Cotton Baby Drill Pad)  
SWMU 001q (DOE -1 Drill Pad)

**A REQUEST FOR A FORMAL DETERMINATION FOR NO FURTHER ACTION HAS BEEN SUBMITTED FOR THE FOLLOWINGS SWMUS:**

SWMU 002a (Brinderson Landfill) (formerly 003a)  
SWMU 002b (Construction Landfill) (formerly 003b)

**TARGET ANALYTES AND PROPOSED EPA ANALYTICAL METHODS  
FOR CHARACTERIZING SWMU MUDPITS AT THE WIPP**

PARAMETER	EPA ANALYTICAL METHOD (or equivalent)
<b>Inorganic Analytes</b>	
Arsenic	6010
Barium	6010
Cadmium	6010
Chromium	6010
Lead	6010
Mercury	7470/7471
Thallium	6010
<b>Organic Analytes</b>	
Benzene	8240/8260
Chloroform	8240/8260
1,2 Dichloroethane	8240/8260
Ethylbenzene	8240/8260
Toluene	8240/8260
1,1,1-Trichloroethane	8240/8260
Vinyl Chloride	8240/8260
Xylenes	8240/8260

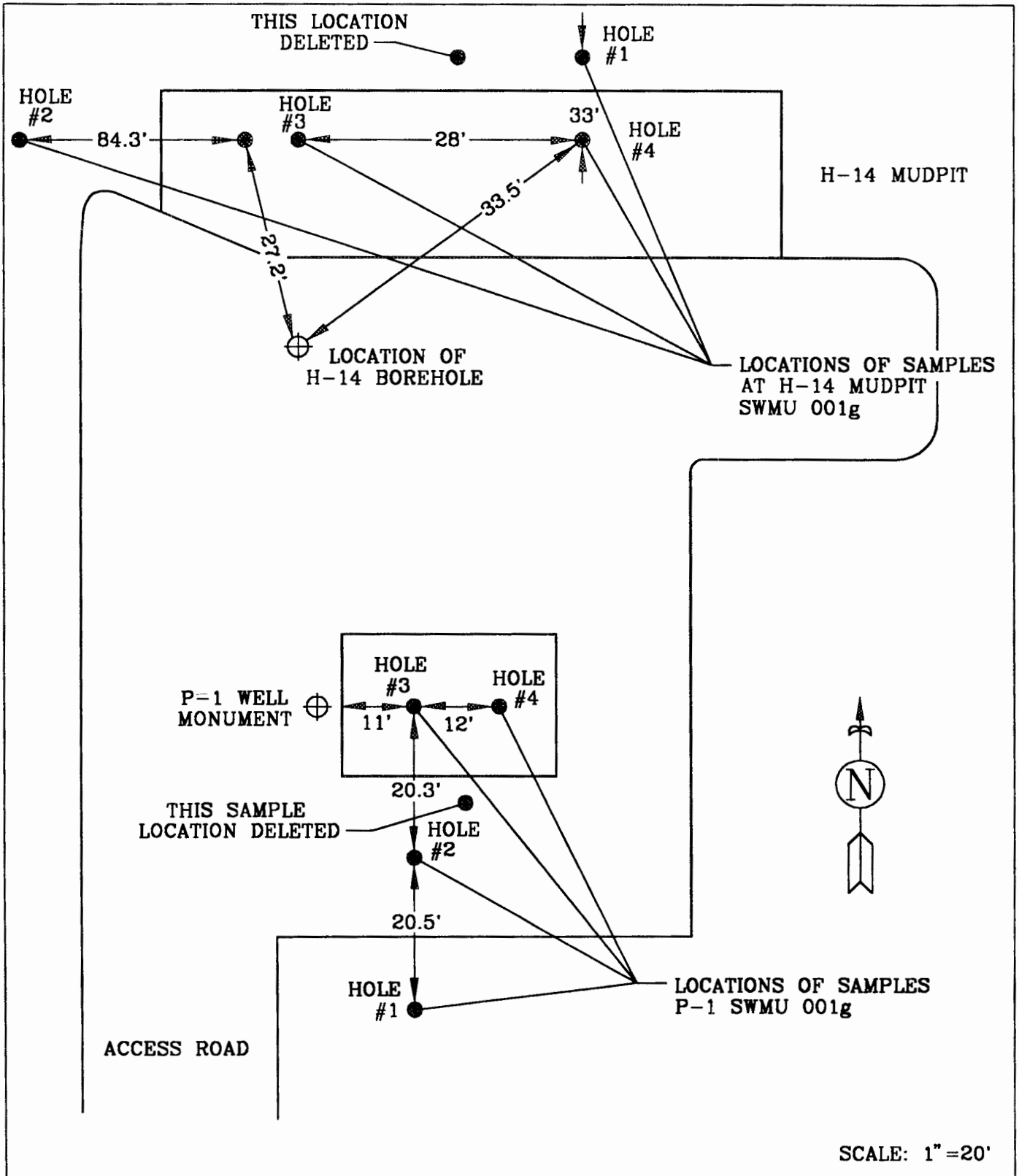
**TARGET ANALYTES AND PROPOSED EPA ANALYTICAL METHODS FOR  
CHARACTERIZING THE PORTACAMP STORAGE AREAS**

Parameter	EPA Analytical Method (or equivalent)
Arsenic***	6010
Barium***	6010
Cadmium***	6010
Chromium***	6010
Lead***	6010
Mercury***	7470/7471
Nickel***	6010
Selenium***	6010
Silver***	6010
Thallium***	6010
Acetone*	8240/8260
Benzene*	8240/8260
Bromoform*	8240/8260
n-Butyl alcohol*	8260
Carbon tetrachloride*	8240/8260
Chlorobenzene*	8240/8260
Chloroform*	8240/8260
Cresols	8040/8270
Cyclohexane*	8240/8260
Cyclohexanone	8240/8260
o-Dichlorobenzene*	8260/8270
p-Dichlorobenzene*	8260/8270
1,1-Dichloroethane*	8240/8260
1,2-Dichloroethane*	8240/8260
1,1-Dichloroethene*	8240/8260
cis-1,2-Dichloroethene*	8240/8260

Parameter	EPA Analytical Method (or equivalent)
2,4-Dinitrotoluene**	8250/8270
2-Ethoxyethanol*	8240/8260/8015 (mod.)
Ethyl acetate*	8240/8260
Ethylbenzene*	8240/8260
Hexachloroethane**	8250/8270
Isobutanol*	8240/8260/8015 (mod.)
Methanol*	8240/8260/8015 (Mod.)
Methylene Chloride*	8240/8260
Methyl Ethyl Ketone*	8240/8260
4-Methyl-2-pentanone*	8240/8260
Nitrobenzene**	8250/8270
Polychlorinated biphenyls(- PCB)	8080/8081
Pyridine**	8250/8270
1,1,2,2-Tetrachloroethane*	8240/8260
Tetrachloroethylene*	8240/8260
Toluene*	8240/8260
1,1,1-Trichloroethane*	8240/8260
1,1,2-Trichloroethane*	8240/8260
Trichloroethylene*	8240/8260
Trichlorofluoromethane*	8240/8260
1,1,2-Trichloro- 1,2,2-trifluoroethane*	8240/8260
Vinyl chloride*	8240/8260
Xylenes*	8240/8260

\* - Volatile, \*\* - Semivolatile, \*\*\* - Metal

SAMPLE LOCATION MAP SWMU 001g (H-14 & P-1)





**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001g, H-14**

Bore Number:	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	BORE #4	BORE #4	EQ BLANK
Depth (inches):	12-24	60-72	12-24	60-72	12-24	60-72	12-24	60-72	
Sample Date:	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95
WID Sample Numbers:	RA-95-131	RA-95-132	RA-95-133	RA-95-134	RA-95-135 RA-95-136	RA-95-137 RA-95-138	RA-95-141 RA-95-142	RA-95-143 RA-95-144	RA-95-139 RA-95-140

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UB	0.1 UB	0.1 U	0.1 U
Barium (Ba)	0.34	1.0	0.43	0.41	0.57	0.74	0.44	0.72	0.21
Cadmium (Cd)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium (Cr)	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Lead (Pb)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Thallium (Tl)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	NA	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - J Estimated value
  - NA Not Analyzed
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001g, Mudpit P-1**

<b>Bore Number:</b>	<b>BORE #1</b>	<b>BORE #1</b>	<b>BORE #2</b>	<b>BORE #2</b>	<b>BORE #3</b>	<b>BORE #3</b>	<b>BORE #4</b>	<b>BORE #4</b>	<b>FD BLANK</b>
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	60-72	12-24	60-72	
<b>Sample Date:</b>	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95	10/4/95	10/5/95	10/4/95
<b>WID Sample Numbers:</b>	RA-95-145	RA-95-146	RA-95-147	RA-95-148	RA-95-149	RA-95-151	RA-95-153	RA-95-157	RA-95-155
					RA-95-150	RA-95-152	RA-95-154	RA-95-158	RA-95-156

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.2 UB	0.2 UB	0.2 UB	0.1 UB	0.2 UB	0.1 U	0.2 UB	0.2 UB	0.1 U
Barium (Ba)	0.49	0.46	0.29	0.33	0.68	0.69	0.75	0.89	0.037
Cadmium (Cd)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.006	0.005 U	0.005 U	0.005 U
Chromium (Cr)	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Lead (Pb)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001 U	0.0002 U	0.0002 U	0.0002 U	0.0004	0.0002 U	0.0002 U	0.0002 U
Thallium (Tl)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	NA	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

B Detected in the blank

FD BLANK Field Blank

J Estimated value

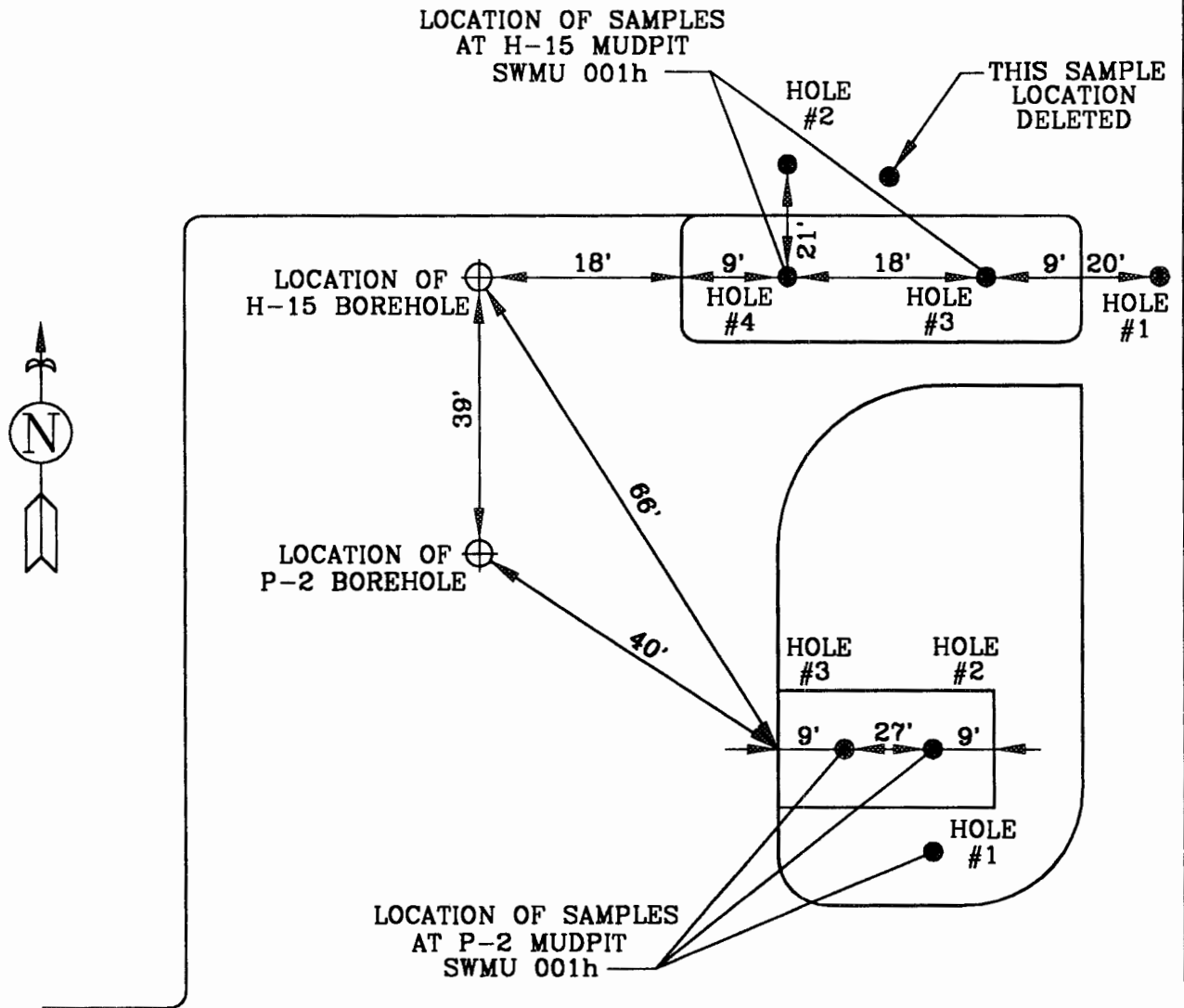
NA Not Analyzed

R Rejected value

U Not detected; value is method reporting limit

UB Detected in the blank and qualified as not detected

# SAMPLE LOCATION MAP SWMU 001h (H-15 & P-2)



SCALE: 1" = 20'

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001h, H-15**

<b>Bore Number:</b>	<b>BORE #1</b>	<b>BORE #1</b>	<b>BORE #2</b>	<b>BORE #2</b>	<b>BORE #3</b>	<b>BORE #3</b>	<b>BORE #4</b>	<b>BORE #4</b>	<b>EQ BLANK</b>
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	60-72	12-24	60-72	10/24/95
<b>Sample Date:</b>	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95
<b>WID Sample Numbers:</b>	RA-95-175	RA-95-176	RA-95-177	RA-95-178	RA-95-179 RA-95-180	RA-95-183 RA-95-184	RA-95-185 RA-95-186	RA-95-187 RA-95-188	RA-95-181 RA-95-182

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.2 UB	0.2 U	0.1 UB	0.2 U	0.1 UB	0.2 U	0.2 UB	0.5 U	0.1 U
Barium (Ba)	0.43 UB	1.3 B	0.79 B	0.99 B	0.44 UB	1.1 B	0.36 UB	1.2 B	0.005 U
Cadmium (Cd)	0.005 U	0.01 U	0.005 U	0.01 U	0.005 U	0.02 U	0.005 U	0.02 U	0.005 U
Chromium (Cr)	0.02 U	0.04 U	0.02 U	0.04 U	0.02 U	0.04 U	0.02 U	0.1 U	0.02 U
Lead (Pb)	0.05 U	0.1 U	0.05 U	0.1 U	0.05 U	0.1 U	0.05 U	0.2 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001	0.0001 U	0.0001	0.0001 U	0.0001	0.0001 U	0.0001	0.0001 U
Thallium (Tl)	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	1 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
1,2-Dichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Chloroform	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Ethyl benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Toluene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Vinyl chloride	NA	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ
Xylenes, total	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ

B Detected in the blank

EQ BLANK Equipment Rinse Blank

J Estimated value

NA Not Analyzed

R Rejected value

U Not detected; value is method reporting limit

UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001h, Mudpit P-2**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	EQ BLANK
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	60-72	
<b>Sample Date:</b>	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95	10/24/95
<b>WID Sample Numbers:</b>	RA-95-189	RA-95-190	RA-95-191	RA-95-193	RA-95-195	RA-95-197	RA-95-199
			RA-95-192	RA-95-194	RA-95-196	RA-95-198	RA-95-200

Analytes

**Leachable Metals (mg/L)**

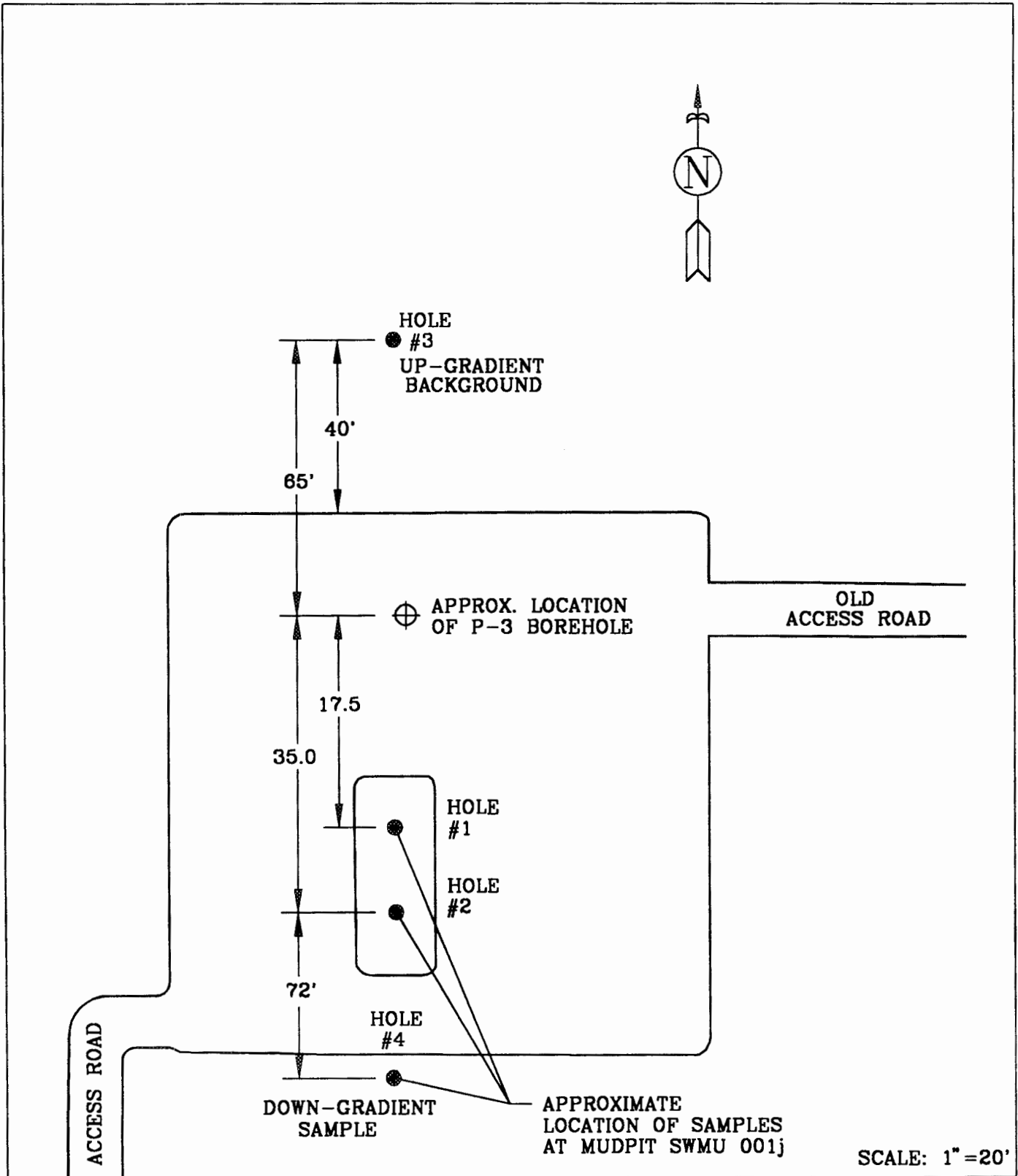
Arsenic (As)	0.1 UB	0.5 U	0.1 UB	0.5 U	0.1 UB	0.5 U	0.1 U
Barium (Ba)	0.28 UB	1.2 B	0.39 UB	1.2 B	0.29 UB	1.1 B	0.005 U
Cadmium (Cd)	0.005 U	0.02 U	0.005 U	0.02 U	0.005 U	0.02 U	0.005 U
Chromium (Cr)	0.02 U	0.1 U	0.02 U	0.1 U	0.02 U	0.1 U	0.02 U
Lead (Pb)	0.05 U	0.2 U	0.05 U	0.2 U	0.05 UJ	0.2 UJ	0.05 UJ
Mercury (Hg)	0.0001 U	0.0001	0.0001 U	0.0002	0.0001 U	0.0001	0.0001 U
Thallium (Tl)	0.2 U	1 U	0.2 U	1 U	0.2 U	1 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - J Estimated value
  - NA Not Analyzed
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

SAMPLE LOCATION MAP SWMU 001j (P-3)  
SAMPLED 07/26/95 & 07/27/95



SCALE: 1" = 20'

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU #001j, Mudpit P-3**

<b>Bore Number:</b>	<b>BORE #1</b>	<b>BORE #1</b>	<b>BORE #2</b>	<b>BORE #2</b>	<b>BORE #3</b>	<b>BORE #3</b>	<b>BORE #3</b>	<b>BORE #3</b>
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	12-24	60-72	60-72
<b>Sample Date:</b>	7/26/95	7/26/95	7/26/95	7/26/95	7/26/95	7/26/95	7/27/95	7/27/95
<b>WID Sample Numbers:</b>	RA-95-001	RA-95-004	RA-95-013	RA-95-016	RA-95-019	RA-95-021	RA-95-024	RA-95-023
	RA-95-003	RA-95-006	RA-95-015	RA-95-018	RA-95-020	RA-95-022 Duplicate	RA-95-025	RA-95-026 Duplicate

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.2 UB	0.2 UB	0.2 UB	0.2 UB	0.1 UB	1 U	1 U	1 U
Barium (Ba)	0.47 UB	0.75 B	0.71 UB	1.1 B	0.35 UB	0.42 UB	0.48 UB	0.69 UB
Cadmium (Cd)	0.005 U	0.005 U	0.005 U	0.005 U	0.05 U	0.05 U	0.05 U	0.05 U
Chromium (Cr)	0.02 U	0.02 U	0.02 U	0.02 U	0.2 U	0.2 U	0.2 U	0.2 U
Lead (Pb)	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.5 U	0.5 U	0.5 U
Mercury (Hg)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium (Tl)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	2 U	2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - BR Sample was broken in transit
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - NA Not analyzed
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

Samples RA-95-002, RA-95-005, RA-95-008, RA-95-011, RA-95-014, RA-95-017 were not analyzed. Samples RA-95-007 and RA-95-010 were broken in transit.

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU #001j, Mudpit P-3**

<b>Bore Number:</b>	<b>BORE #4</b>	<b>BORE #4</b>	<b>BORE #4</b>	<b>BORE #4</b>	<b>EQ BLANK</b>	<b>FD BLANK</b>
<b>Depth (inches):</b>	12-24	12-24	60-72	60-72		
<b>Sample Date:</b>	7/27/95	7/27/95	7/27/95	7/27/95	7/26/95	7/26/95
<b>WID Sample Numbers:</b>	RA-95-027	RA-95-028	RA-95-031	RA-95-032	RA-95-009	RA-95-012
	RA-95-029	RA-95-030	RA-95-033	RA-95-034		
		Duplicate		Duplicate		

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	1 U	0.1 U	1 U	1 U	0.1 U	0.1 U
Barium (Ba)	0.68 UB	1.2 B	0.67 UB	0.76 B	0.019 UB	0.016 UB
Cadmium (Cd)	0.05 U	0.06	0.06	0.05 U	0.005 U	0.005 U
Chromium (Cr)	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U
Lead (Pb)	0.5 U	0.5 U	0.5 U	0.5 U	0.05 U	0.05 U
Mercury (Hg)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0008 U	0.0008 U
Thallium (Tl)	2 U	0.2 U	2 U	2 U	0.2 U	0.2 U

**Leachable Volatiles (mg/L)**

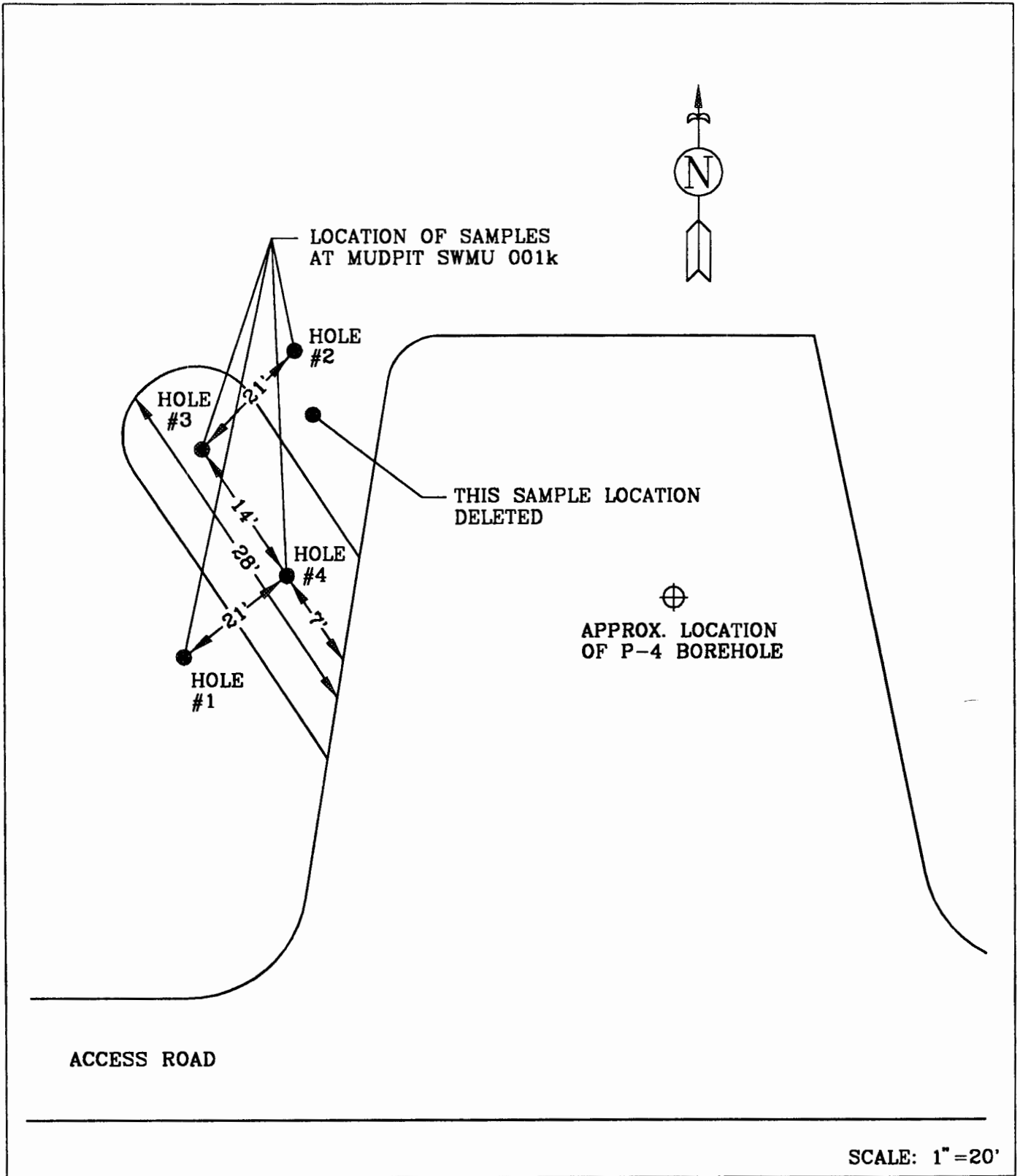
1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - BR Sample was broken in transit
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - NA Not analyzed
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

Samples RA-95-002, RA-95-005, RA-95-008, RA-95-011, RA-95-014, RA-95-017 were not analyzed. Samples RA-95-007 and RA-95-010 were broken in transit.



SAMPLE LOCATION MAP SWMU 001k (P-4)



**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001k, Mudpit P-4**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	BORE #4	BORE #4
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	60-72	12-24	60-72
<b>Sample Date:</b>	10/23/95	10/23/95	10/23/95	10/23/95	10/23/95	10/23/95	10/23/95	10/23/95
<b>WID Sample Numbers:</b>	RA-95-159	RA-95-160	RA-95-161	RA-95-162	RA-95-163 RA-95-164	RA-95-167 RA-95-168	RA-95-169 RA-95-170	RA-95-171 RA-95-172

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 UB	0.2 UB	0.1 UB	0.1 UB	0.2 UB	0.1 UB	0.2 UB	0.1 U
Barium (Ba)	0.63 B	0.59 B	0.57 B	0.74 B	0.59 B	0.59 B	0.6 B	0.76 B
Cadmium (Cd)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Chromium (Cr)	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Lead (Pb)	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Mercury (Hg)	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 J
Thallium (Tl)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	NA	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - NA Not Analyzed
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001k, Mudpit P-4**

<b>Bore Number:</b>	EQ BLANK	FD BLANK
<b>Depth (inches):</b>		
<b>Sample Date:</b>	10/23/95	10/23/95
<b>WID Sample Numbers:</b>	RA-95-165	RA-95-173
	RA-95-166	RA-95-174

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 U	0.1 U
Barium (Ba)	0.048 UB	0.038 UB
Cadmium (Cd)	0.005 U	0.005 U
Chromium (Cr)	0.02 U	0.02 U
Lead (Pb)	0.05 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001 U
Thallium (Tl)	0.2 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U
Benzene	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U
Toluene	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U

---

B Detected in the blank  
EQ BLANK Equipment Rinse Blank  
FD BLANK Field Blank  
J Estimated value  
NA Not Analyzed  
R Rejected value  
U Not detected; value is method reporting limit  
UB Detected in the blank and qualified as not detected

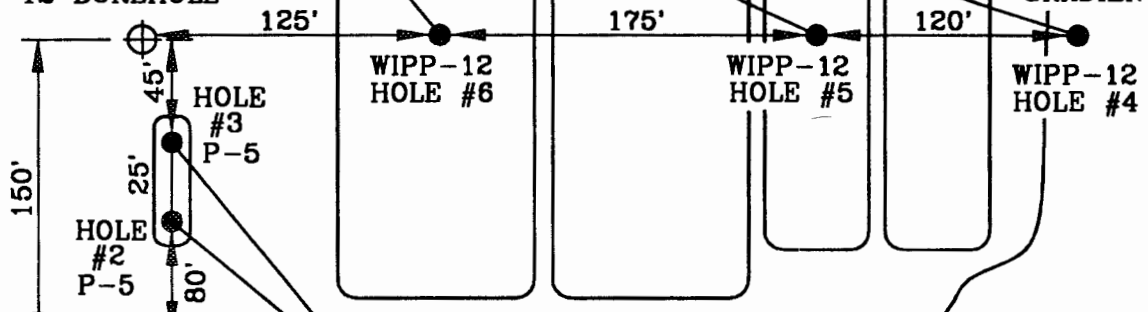
SAMPLE LOCATION MAP SWMU 001L (WIPP-12 & P-5)



APPROXIMATE  
LOCATION OF SAMPLES  
AT WIPP-12 MUDPIT  
SWMU 001L

LOCATION OF  
WIPP-12 BOREHOLE

DOWN-  
GRADIENT



WIPP-12  
HOLE #6

WIPP-12  
HOLE #5

WIPP-12  
HOLE #4

HOLE  
#3  
P-5

HOLE  
#2  
P-5

HOLE  
#1  
UP-GRADIENT

APPROXIMATE  
LOCATION OF SAMPLES  
AT P-5 MUDPIT  
SWMU 001L

ACCESS ROAD

SCALE: 1" = 100'

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 0011, Mudpit P-5**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	EQ BLANK
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	60-72	
<b>Sample Date:</b>	11/7/95	11/7/95	11/7/95	11/7/95	11/7/95	11/7/95	11/7/95
<b>WID Sample Numbers:</b>	RA-95-240	RA-95-241	RA-95-242	RA-95-244	RA-95-248	RA-95-250	RA-95-246
			RA-95-243	RA-95-245	RA-95-249	RA-95-251	RA-95-247

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 U	0.1 UB	0.2 U	1 U	0.2 U	0.5 U	0.1 U
Barium (Ba)	0.68	0.83	1.1	1.3	1.3	1.5	0.033
Cadmium (Cd)	0.005 U	0.01 U	0.02 U	0.05 U	0.02 U	0.02 U	0.005 U
Chromium (Cr)	0.02 U	0.02 U	0.04 U	0.2 U	0.04 U	0.1 U	0.02 U
Lead (Pb)	0.05 U	0.05 U	0.1 U	0.5 U	0.1 U	0.2 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Thallium (Tl)	0.2 U	0.2 U	0.4 U	2 U	0.4 U	1 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

B Detected in the blank

EQ BLANK Equipment Rinse Blank

J Estimated value

NA Not Analyzed

R Rejected value

U Not detected; value is method reporting limit

UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 0011, WIPP-12**

<b>Bore Number:</b>	BORE #4	BORE #4	BORE #5	BORE #5	BORE #6	BORE #6	FD BLANK
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	60-72	
<b>Sample Date:</b>	11/7/95	11/7/95	11/7/95	11/7/95	11/7/95	11/7/95	11/7/95
<b>WID Sample Numbers:</b>	RA-95-252	RA-95-253	RA-95-254	RA-95-256	RA-95-258	RA-95-260	RA-95-262
			RA-95-255	RA-95-257	RA-95-259	RA-95-261	RA-95-263

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 U	0.1 UB	0.1 U	0.2 U	0.1 UB	0.2 U	0.1 U
Barium (Ba)	0.34	0.34	0.43	1.4	1.4	1.7	0.036
Cadmium (Cd)	0.005 U	0.005 U	0.005 U	0.02 UJ	0.005 UJ	0.02 UJ	0.005 UJ
Chromium (Cr)	0.02 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.02 U
Lead (Pb)	0.05 U	0.05 U	0.05 U	0.1 U	0.05 U	0.1 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Thallium (Tl)	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

B Detected in the blank

FD BLANK Field Blank

J Estimated value

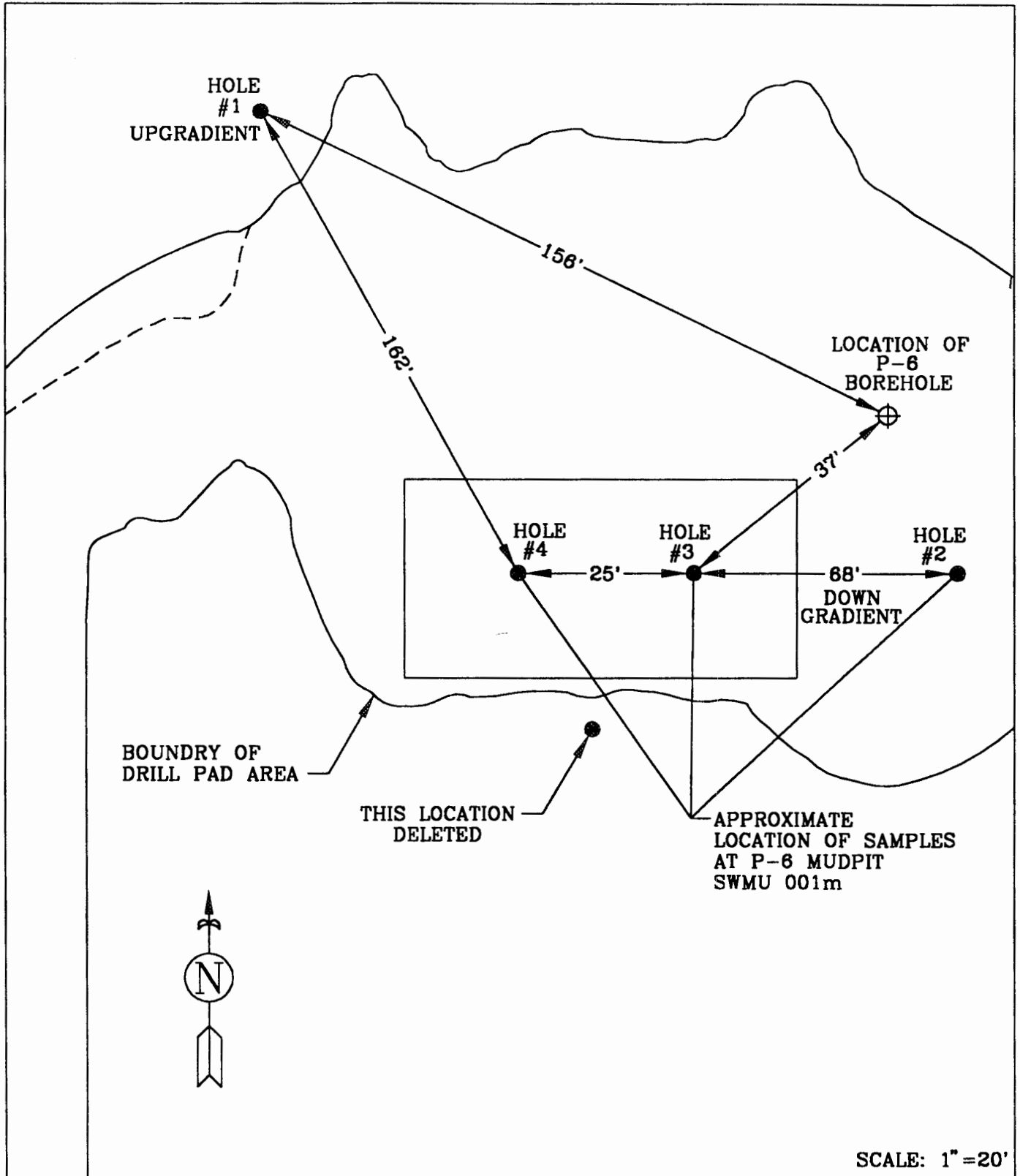
NA Not Analyzed

R Rejected value

U Not detected; value is method reporting limit

UB Detected in the blank and qualified as not detected

SAMPLE LOCATION MAP SWMU 001m (P-6)  
SAMPLED 08/02/95



**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU #001m, Mudpit P-6**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	BORE #3	BORE #4	BORE #4
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	12-24	60-72	12-24	60-72
<b>Sample Date:</b>	8/2/95	8/2/95	8/2/95	8/2/95	8/2/95	8/2/95	8/2/95	8/2/95	8/2/95
<b>WID Sample Numbers:</b>	RA-95-061	RA-95-063	RA-95-065	RA-95-067	RA-95-069	RA-95-070	RA-95-077	RA-95-079	RA-95-081
	RA-95-062	RA-95-064	RA-95-066	RA-95-068	RA-95-071	RA-95-072	RA-95-078	RA-95-080	RA-95-082
									Duplicate

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	1 U	1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	1 U	1 U
Barium (Ba)	0.46 UB	0.26 UB	0.24 UB	0.95 B	0.46 UB	0.71 UB	0.35 UB	0.68 UB	1.2 B
Cadmium (Cd)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chromium (Cr)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Lead (Pb)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Mercury (Hg)	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0003 UBJ	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ
Thallium (Tl)	2 U	2 U	2 U	2 U	0.2 U	2 U	0.2 U	2 U	2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.07	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected



**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU #001m, Mudpit P-6**

**Bore Number:** EQ BLANK    FD BLANK  
**Depth (inches):**  
**Sample Date:**    8/2/95            8/2/95  
**WID Sample Numbers:** RA-95-073    RA-95-075  
                                  RA-95-074    RA-95-076

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	1 U	1 U
Barium (Ba)	0.1 UB	0.05 UB
Cadmium (Cd)	0.05 U	0.05 U
Chromium (Cr)	0.2 U	0.2 U
Lead (Pb)	0.5 U	0.5 U
Mercury (Hg)	0.0002 UJ	0.0002 UJ
Thallium (Tl)	2 U	2 U

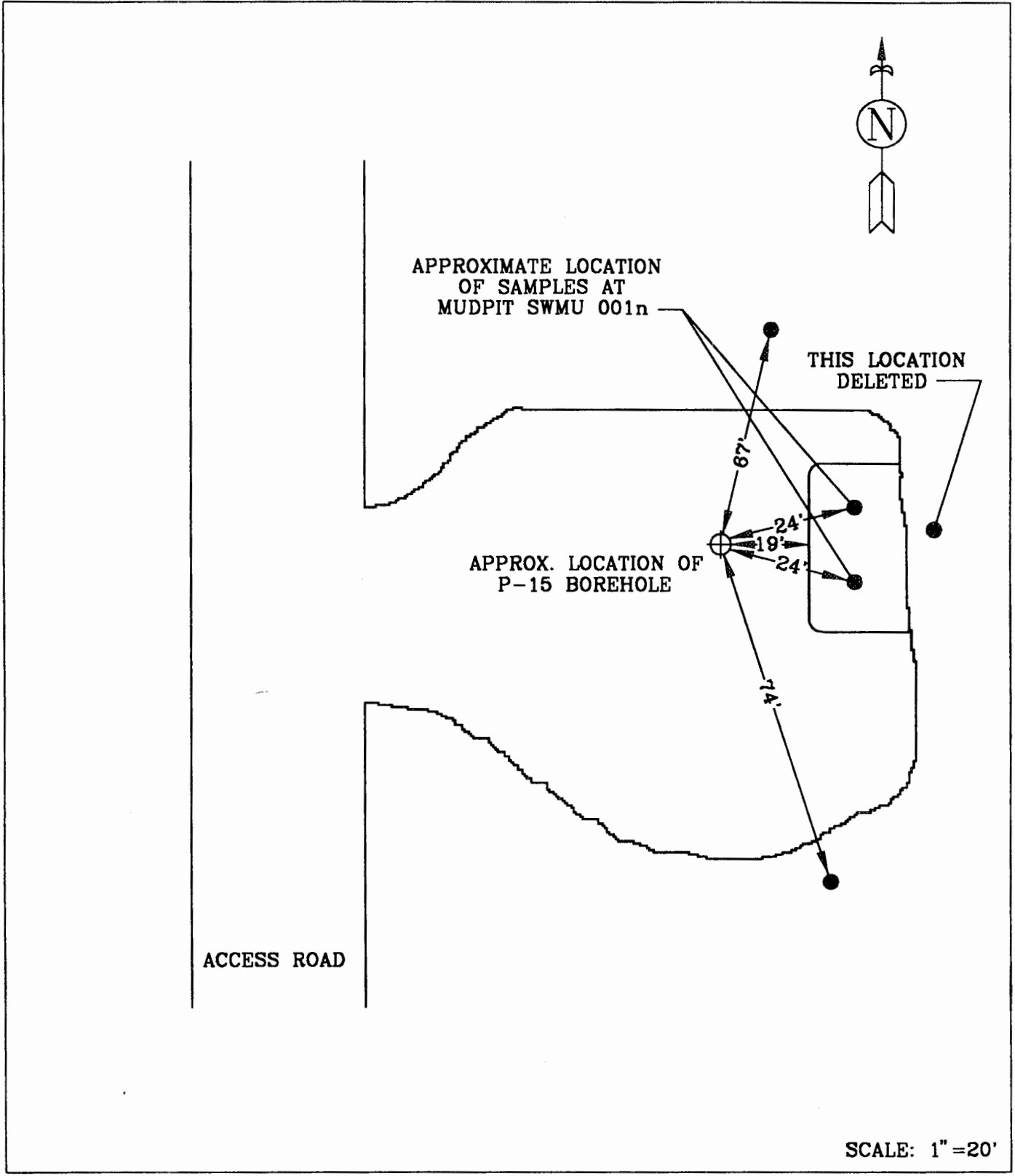
**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U
Benzene	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U
Toluene	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U

---

B Detected in the blank  
 EQ BLANK Equipment Rinse Blank  
 FD BLANK Field Blank  
 J Estimated value  
 R Rejected value  
 U Not detected; value is method reporting limit  
 UB Detected in the blank and qualified as not detected

SAMPLE LOCATION MAP SWMU 001n (P-15)



**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001n, Mudpit P-15**

<b>Bore Number:</b>	<b>BORE #1</b>	<b>BORE #1</b>	<b>BORE #2</b>	<b>BORE #2</b>	<b>BORE #3</b>	<b>BORE #3</b>	<b>BORE #3</b>	<b>BORE #3</b>
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	12-24	60-72	60-72
<b>Sample Date:</b>	8/4/95	8/4/95	8/4/95	8/4/95	8/4/95	8/4/95	8/4/95	8/4/95
<b>WID Sample Numbers:</b>	RA-95-083	RA-95-085	RA-95-087	RA-95-089	RA-95-091	RA-95-092	RA-95-097	RA-95-098
	RA-95-084	RA-95-086	RA-95-088	RA-95-090	RA-95-093	Duplicate	RA-95-099	RA-95-100 Duplicate

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Barium (Ba)	0.51 B	0.35 UB	0.42 B	0.54 B	0.51 B	0.45 B	0.3 UB	0.32 UB
Cadmium (Cd)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chromium (Cr)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Lead (Pb)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Mercury (Hg)	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ
Thallium (Tl)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001n, Mudpit P-15**

<b>Bore Number:</b>	<b>BORE #4</b>	<b>BORE #4</b>	<b>EQ BLANK</b>	<b>FD BLANK</b>
<b>Depth (inches):</b>	12-24	60-72		
<b>Sample Date:</b>	8/4/95	8/4/95	8/4/95	8/4/95
<b>WID Sample Numbers:</b>	RA-95-101	RA-95-105	RA-95-095	RA-95-103
	RA-95-102	RA-95-106	RA-95-096	RA-95-104

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	1 U	1 U	1 U	1 U
Barium (Ba)	0.34 UB	0.43 B	0.08 UB	0.05 U
Cadmium (Cd)	0.05 U	0.1 U	0.05 U	0.05 U
Chromium (Cr)	0.2 U	0.2 U	0.2 U	0.2 U
Lead (Pb)	0.5 U	0.5 U	0.5 U	0.5 U
Mercury (Hg)	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U
Thallium (Tl)	2 U	2 U	2 U	2 U

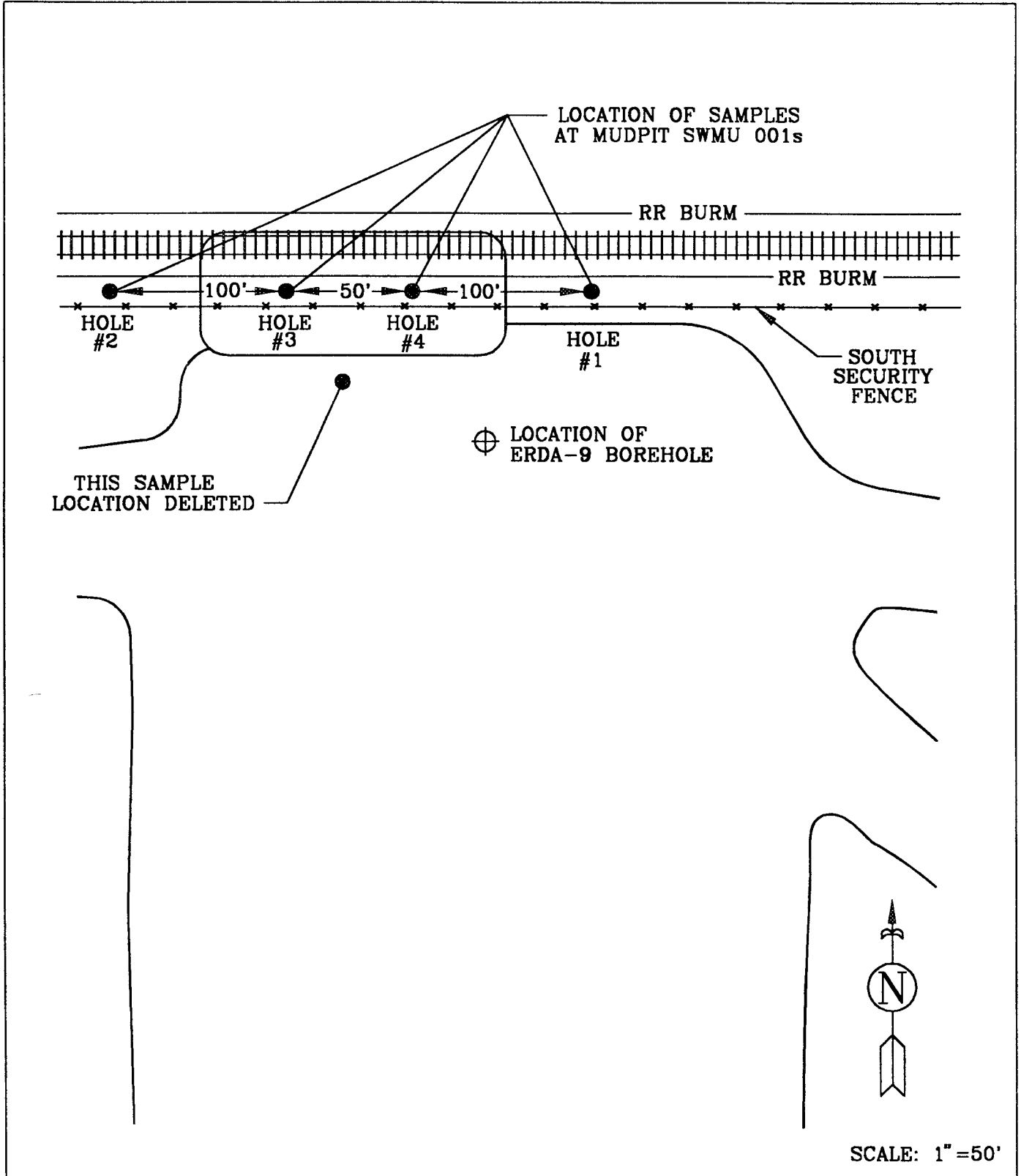
**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U	0.05 U

---

B Detected in the blank  
EQ BLANK Equipment Rinse Blank  
FD BLANK Field Blank  
J Estimated value  
R Rejected value  
U Not detected; value is method reporting limit  
UB Detected in the blank and qualified as not detected

SAMPLE LOCATION MAP SWMU 001s (ERDA-9)



**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001s**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	BORE #4	BORE #4
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	60-72	12-24	60-72
<b>Sample Date:</b>	11/9/95	11/13/95	11/9/95	11/13/95	11/9/95	11/13/95	11/9/95	11/13/95
<b>WID Sample Numbers:</b>	RA-95-201	RA-95-264	RA-95-202	RA-95-265	RA-95-203 RA-95-204	RA-95-266 RA-95-267	RA-95-207 RA-95-208	RA-95-268 RA-95-269

**Analytes**

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**Leachable Metals (mg/L)**

Arsenic (As)	0.2 UB	0.2 U	0.2 UB	0.1 UB	0.1 UB	0.1 U	0.1 UB	0.1 U
Barium (Ba)	0.66	0.71	0.54	0.64	0.59	0.6	0.53	0.66
Cadmium (Cd)	0.01 U	0.02 UJ	0.005 U	0.01 UJ	0.005 U	0.01 UJ	0.005 U	0.005 UJ
Chromium (Cr)	0.02 U	0.04 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Lead (Pb)	0.05 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001 U	0.0001	0.0004	0.0001 U	0.0004	0.0001 U	0.0003
Thallium (Tl)	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	NA	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - NA Not Analyzed
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001s**

<b>Bore Number:</b>	EQ BLANK	EQ BLANK	FD BLANK
<b>Depth (inches):</b>			
<b>Sample Date:</b>	11/9/95	11/9/95	11/13/95
<b>WID Sample Numbers:</b>	RA-95-205	RA-95-206	RA-95-270 RA-95-271

**Analytes**

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 U	NA	0.1 U
Barium (Ba)	0.027	NA	0.051
Cadmium (Cd)	0.005 U	NA	0.005 UJ
Chromium (Cr)	0.02 U	NA	0.02 U
Lead (Pb)	0.05 U	NA	0.05 U
Mercury (Hg)	0.0001 U	NA	0.0001 U
Thallium (Tl)	0.2 U	NA	0.2 U

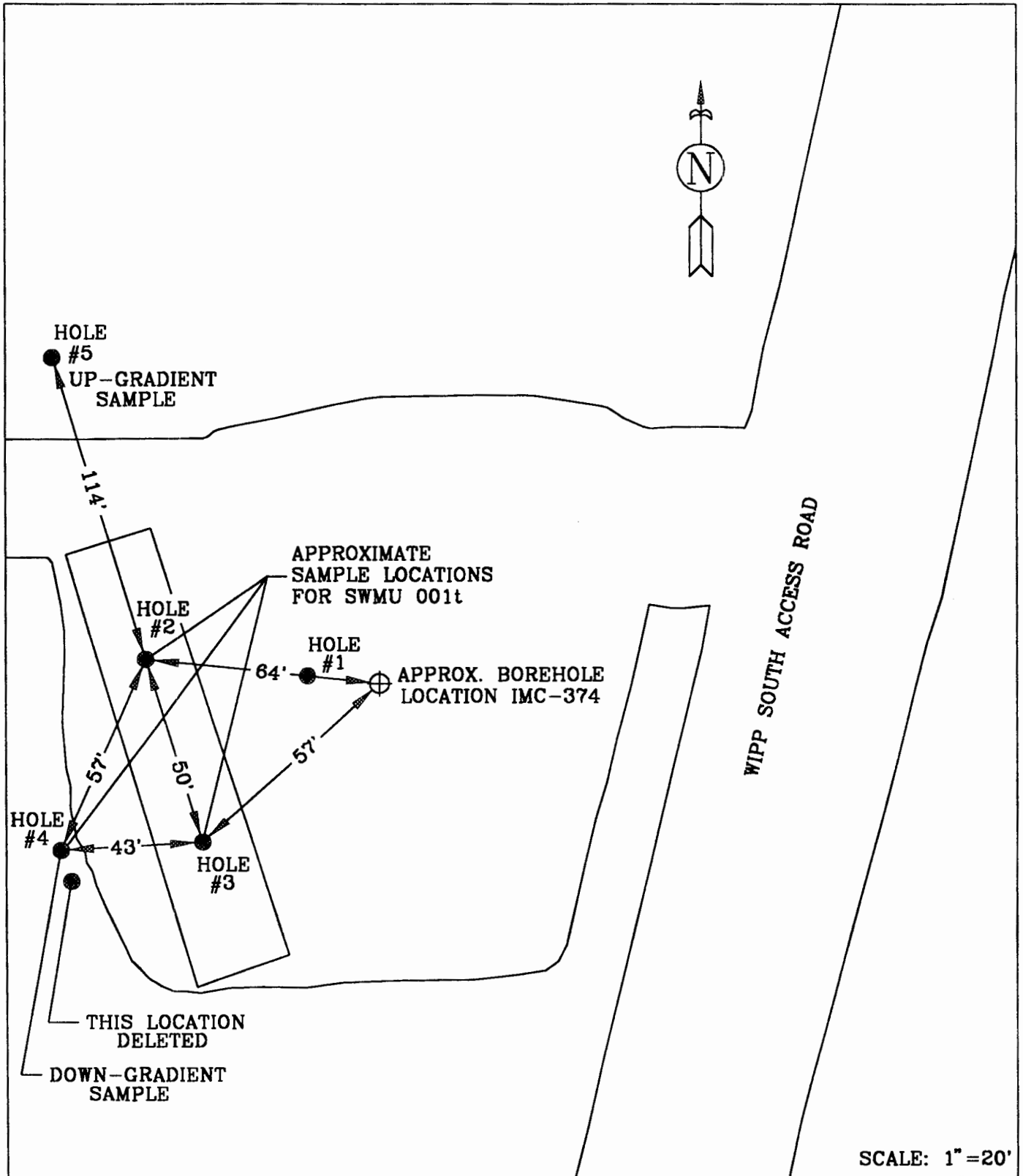
**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U

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B Detected in the blank  
EQ BLANK Equipment Rinse Blank  
FD BLANK Field Blank  
J Estimated value  
NA Not Analyzed  
R Rejected value  
U Not detected, value is method reporting limit  
UB Detected in the blank and qualified as not detected

SAMPLE LOCATION MAP SWMU 001t (IMC-374)  
SAMPLED 07/31/95 & 08/02/95





**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU #001t, Mudpit IMC 374**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	BORE #4	BORE #4
<b>Depth (inches):</b>	12-24	12-24	60-72	12-24	60-72	12-24	60-72	12-24	60-72
<b>Sample Date:</b>	7/31/95	7/31/95	7/31/95	7/31/95	7/31/95	7/31/95	7/31/95	8/2/95	8/2/95
<b>WID Sample Numbers:</b>	RA-95-035	RA-95-036	RA-95-041	RA-95-043	RA-95-045	RA-95-047	RA-95-049	RA-95-057	RA-95-059
	RA-95-037	RA-95-038	RA-95-042	RA-95-044	RA-95-046	RA-95-048	RA-95-050	RA-95-058	RA-95-060
		Duplicate							

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 U	1 U	1 U	0.2 UB	1 U	0.1 U	0.2 UB	1 U	1 U
Barium (Ba)	0.48 UB	0.66 UB	0.6 UB	0.68 UB	0.45 UB	0.83 B	0.48 UB	0.3 UB	0.36 UB
Cadmium (Cd)	0.05 U	0.05 U	0.06	0.05 U	0.05 U	0.05	0.05 U	0.05 U	0.07
Chromium (Cr)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Lead (Pb)	0.5 U	0.05 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Mercury (Hg)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 UJ
Thallium (Tl)	0.2 U	2 U	2 U	0.2 U	2 U	0.2 U	0.2 U	2 U	2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - J Estimated value
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU #001t, Mudpit IMC 374**

<b>Bore Number:</b>	<b>BORE #5</b>	<b>BORE #5</b>	<b>BORE #5</b>	<b>EQ BLANK</b>
<b>Depth (inches):</b>	<b>12-24</b>	<b>12-24</b>	<b>60-72</b>	
<b>Sample Date:</b>	<b>8/2/95</b>	<b>8/2/95</b>	<b>8/2/95</b>	<b>7/31/95</b>
<b>WID Sample Numbers:</b>	<b>RA-95-051</b>	<b>RA-95-052</b>	<b>RA-95-055</b>	<b>RA-95-039</b>
	<b>RA-95-053</b>	<b>RA-95-054</b>	<b>RA-95-056</b>	<b>RA-95-040</b>
		<b>Duplicate</b>		

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	1 U	1 U	0.1 UB	1 U
Barium (Ba)	0.25 UB	0.3 UB	0.27 UB	0.17 UB
Cadmium (Cd)	0.06	0.05 U	0.05 U	0.05 U
Chromium (Cr)	0.2 U	0.2 U	0.20 U	0.2 U
Lead (Pb)	0.5 U	0.5 U	0.5 U	0.05 U
Mercury (Hg)	0.0002 UJ	0.0002 UJ	0.0002 UJ	0.0002 U
Thallium (Tl)	2 U	2 U	0.2 U	2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U	0.05 U

B Detected in the blank

EQ BLANK Equipment Rinse Blank

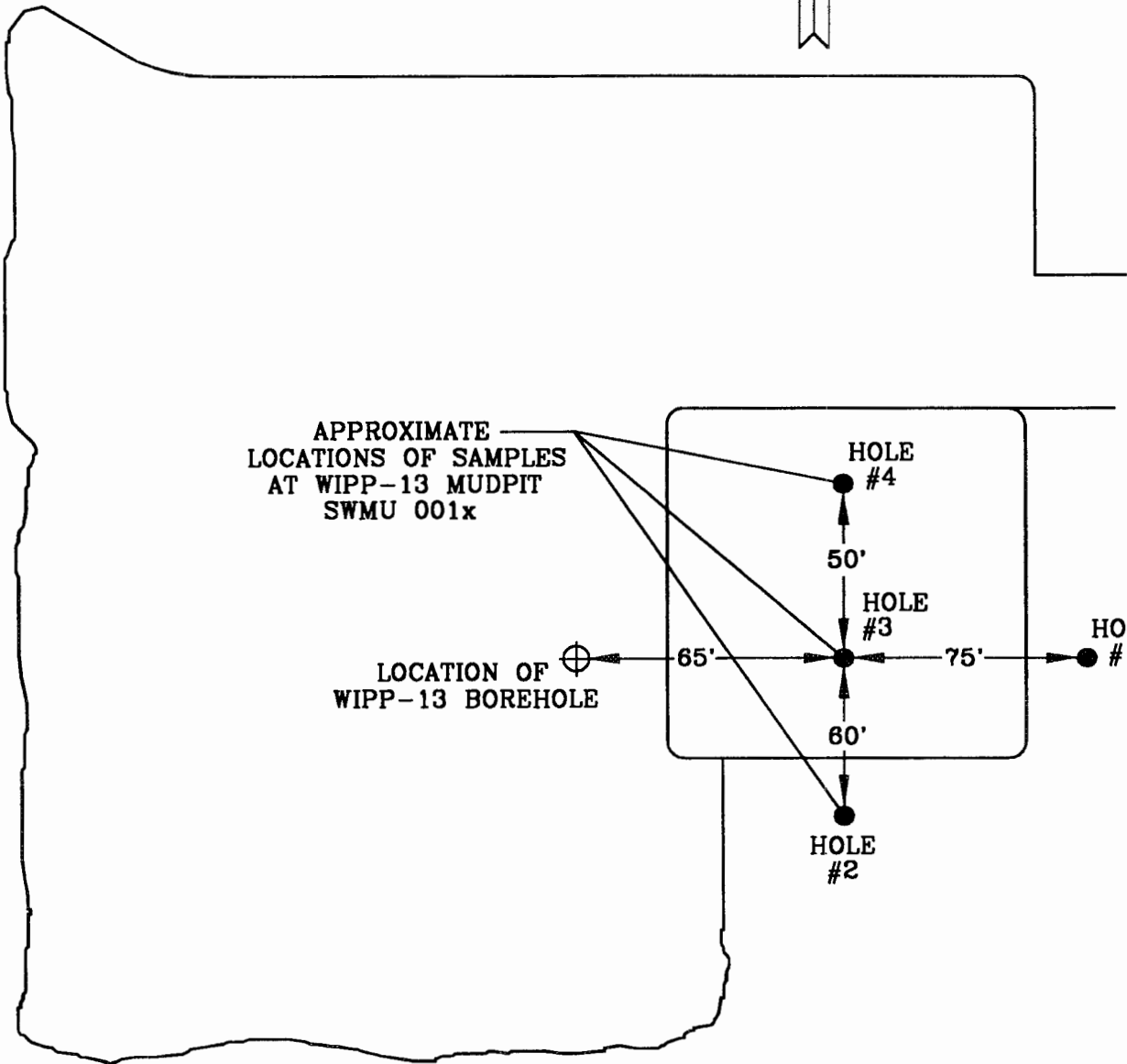
J Estimated value

R Rejected value


U Not detected; value is method reporting limit

UB Detected in the blank and qualified as not detected

SAMPLE LOCATION MAP SWMU 001x (WIPP-13)



APPROXIMATE  
LOCATIONS OF SAMPLES  
AT WIPP-13 MUDPIT  
SWMU 001x

LOCATION OF   
WIPP-13 BOREHOLE

HOLE  
#4

50'

HOLE  
#3

65'

75'

HOLE  
#1

60'

HOLE  
#2

SCALE: 1" = 20'

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001x, WIPP-13**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	BORE #3	BORE #3	BORE #4
<b>Depth (inches):</b>	12-24	60-72	12-24	60-72	12-24	12-24	60-72	60-72	12-24
<b>Sample Date:</b>	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95
<b>WID Sample Numbers:</b>	RA-95-107	RA-95-109	RA-95-111	RA-95-113	RA-95-115	RA-95-116	RA-95-119	RA-95-120	RA-95-125
	RA-95-108	RA-95-110	RA-95-112	RA-95-114	RA-95-117	Duplicate	RA-95-121	Duplicate	RA-95-126

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Barium (Ba)	0.34 UB	0.33 UB	0.38 UB	0.36 UB	0.28 UB	0.3 UB	0.44 B	0.25 UB	0.19 UB
Cadmium (Cd)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chromium (Cr)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Lead (Pb)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Mercury (Hg)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium (Tl)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 001x, WIPP-13**

<b>Bore Number:</b>	BORE #4	EQ BLANK	FD BLANK
<b>Depth (inches):</b>	60-72		
<b>Sample Date:</b>	8/9/95	8/9/95	8/9/95
<b>WID Sample Numbers:</b>	RA-95-127	RA-95-123	RA-95-129
	RA-95-128	RA-95-124	RA-95-130

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.2 UB	1 U	0.1 U
Barium (Ba)	0.36 UB	0.05 U	0.012 UB
Cadmium (Cd)	0.005 U	0.05 U	0.005 U
Chromium (Cr)	0.02 U	0.2 U	0.02 U
Lead (Pb)	0.05 U	0.5 U	0.05 U
Mercury (Hg)	0.0002 U	0.0002 U	0.0002 U
Thallium (Tl)	0.2 U	2 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U
Benzene	0.05 U	0.05 U	0.05 U
Chloroform	0.05 U	0.05 U	0.05 U
Ethyl benzene	0.05 U	0.05 U	0.05 U
Toluene	0.05 U	0.05 U	0.05 U
Vinyl chloride	0.1 U	0.1 U	0.1 U
Xylenes, total	0.05 U	0.05 U	0.05 U

B Detected in the blank

EQ BLANK Equipment Rinse Blank

FD BLANK Field Blank

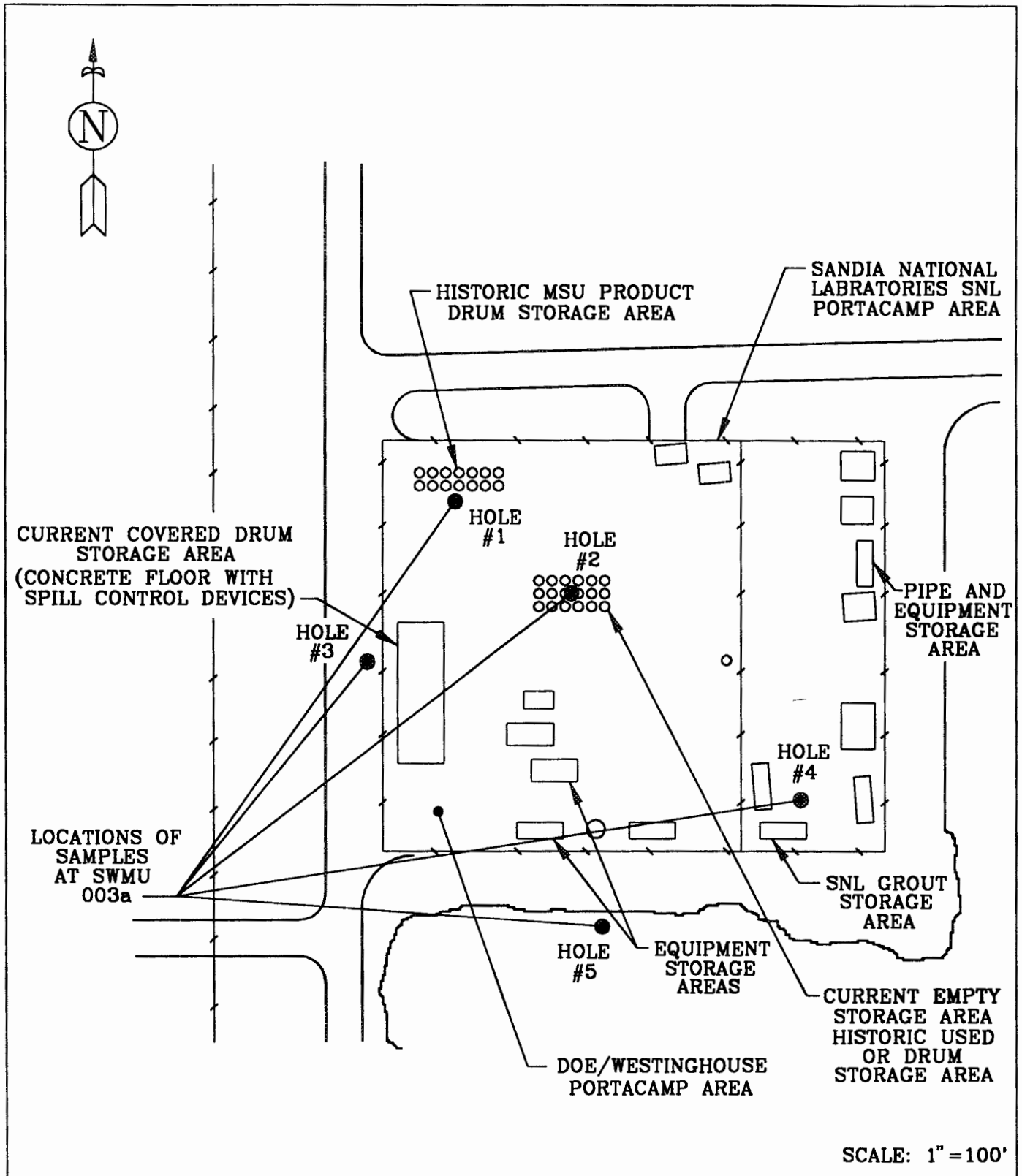
J Estimated value

R Rejected value

U Not detected; value is method reporting limit

UB Detected in the blank and qualified as not detected

# SAMPLE LOCATION MAP SWMU 003a (PORTACAMP STORAGE AREA)









**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 003a**

<b>Bore Number:</b>	BORE #1	BORE #1	BORE #2	BORE #2	BORE #3	BORE #3	BORE #4	BORE #4
<b>Depth (inches):</b>	12-24	36-48	12-24	36-48	12-24	36-48	12-24	36-48
<b>Sample Date:</b>	11/6/95	11/6/95	11/6/95	11/6/95	11/6/95	11/6/95	11/6/95	11/6/95
<b>WID Sample Numbers:</b>	RA-95-209	RA-95-211	RA-95-214	RA-95-217	RA-95-220	RA-95-224	RA-95-229	RA-95-232
	RA-95-210	RA-95-212	RA-95-215	RA-95-218	RA-95-221	RA-95-225	RA-95-230	RA-95-233
		RA-95-213	RA-95-216	RA-95-219	RA-95-222	RA-95-226	RA-95-231	RA-95-234

**Analytes**

**Leachable Semivolatiles (mg/L)**

Hexachlorobenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Hexachlorobutadiene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Hexachloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nitrobenzene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pentachlorophenol	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Pyridine	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

**Leachable PCBs (µg/L)**

PCB-1221	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
PCB-1232	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
PCB-1242/1016	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
PCB-1248	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
PCB-1254	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
PCB-1260	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

- 
- B Detected in the blank
  - EQ BLANK Equipment Rinse Blank
  - FD BLANK Field Blank
  - J Estimated value
  - NA Not Analyzed
  - PCB Polychlorinated biphenyls
  - R Rejected value
  - U Not detected; value is method reporting limit
  - UB Detected in the blank and qualified as not detected

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 003a**

<b>Bore Number:</b>	<b>BORE #5</b>	<b>BORE #5</b>	<b>EQ BLANK</b>	<b>FD BLANK</b>
<b>Depth (inches):</b>	<b>12-24</b>	<b>36-48</b>		
<b>Sample Date:</b>	<b>11/6/95</b>	<b>11/6/95</b>	<b>11/6/95</b>	<b>11/6/95</b>
<b>WID Sample Numbers:</b>	<b>RA-95-235</b>	<b>RA-95-236</b>	<b>RA-95-223</b>	<b>RA-95-237</b>
			<b>RA-95-227</b>	<b>RA-95-238</b>
			<b>RA-95-228</b>	<b>RA-95-239</b>

Analytes

**Leachable Metals (mg/L)**

Arsenic (As)	0.1 UB	0.1 U	0.1 U	0.1 U
Barium (Ba)	0.43	0.43	0.036	0.037
Cadmium (Cd)	0.005 U	0.005 U	0.005 U	0.005 U
Chromium (Cr)	0.02 U	0.02 U	0.02 U	0.02 U
Lead (Pb)	0.05 U	0.05 U	0.05 U	0.05 U
Mercury (Hg)	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Nickel (Ni)	0.02 U	0.02 U	0.02 U	0.02 U
Selenium (Se)	0.1 U	0.1 U	0.1 U	0.1 U
Silver (Ag)	0.01 U	0.01 U	0.01 U	0.01 U
Thallium (Tl)	0.2 U	0.2 U	0.2 U	0.2 U

**Leachable Volatiles (mg/L)**

1,1,1-Trichloroethane	NA	NA	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	NA	NA	0.05 U	0.05 U
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	0.05 U	0.05 U
1,1,2-Trichloroethane	NA	NA	0.05 U	0.05 U
1,1-Dichloroethane	NA	NA	0.05 U	0.05 U
1,1-Dichloroethene	NA	NA	0.05 U	0.05 U
1,2-Dichloroethane	NA	NA	0.05 U	0.05 U
2-Butanone	NA	NA	0.5 U	0.5 U
4-Methyl-2-pentanone	NA	NA	0.5 U	0.5 U
Acetone	NA	NA	0.5 U	0.5 U
Benzene	NA	NA	0.05 U	0.05 U
Carbon tetrachloride	NA	NA	0.05 U	0.05 U
Chlorobenzene	NA	NA	0.05 U	0.05 U
Chloroform	NA	NA	0.05 U	0.05 U

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 003a**

<b>Bore Number:</b>	<b>BORE #5</b>	<b>BORE #5</b>	<b>EQ BLANK</b>	<b>FD BLANK</b>
<b>Depth (inches):</b>	12-24	36-48		
<b>Sample Date:</b>	11/6/95	11/6/95	11/6/95	11/6/95
<b>WID Sample Numbers:</b>	RA-95-235	RA-95-236	RA-95-223	RA-95-237
			RA-95-227	RA-95-238
			RA-95-228	RA-95-239

**Analytes**

**Leachable Volatiles (mg/L)**

cis-1,2-Dichloroethene	NA	NA	0.05 U	0.05 U
Cyclohexane	NA	NA	0.1 UJ	0.1 UJ
Cyclohexanone	NA	NA	0.5 U	0.5 U
Ethyl acetate	NA	NA	0.1 U	0.1 U
Ethyl benzene	NA	NA	0.05 U	0.05 U
Toluene	NA	NA	0.05 U	0.05 U
Methylene chloride	NA	NA	0.05 U	0.05 U
Tetrachloroethene	NA	NA	0.05 U	0.05 U
Tribromomethane	NA	NA	0.05 U	0.05 U
Trichloroethene	NA	NA	0.05 U	0.05 U
Trichloroflouromethane	NA	NA	0.1 UJ	0.1 UJ
Vinyl chloride	NA	NA	0.1 U	0.1 U
Xylenes, total	NA	NA	0.05 U	0.05 U
2-Ethoxyethanol	NA	NA	50 UJ	50 UJ
Isobutanol	NA	NA	10 UJ	10 UJ
Methanol	NA	NA	10 UJ	10 UJ
n-Butanol	NA	NA	10 UJ	10 UJ

**Leachable Semivolatiles (mg/L)**

1,2-Dichlorobenzene	NA	NA	0.1 UJ	0.1 UJ
1,4-Dichlorobenzene	NA	NA	0.1 UJ	0.1 UJ
2,4,5-Trichlorophenol	NA	NA	0.5 UJ	0.5 UJ
2,4,6-Trichlorophenol	NA	NA	0.1 UJ	0.1 UJ
2,4-Dinitrotoluene	NA	NA	0.1 UJ	0.1 UJ
2-Methylphenol	NA	NA	0.1 UJ	0.1 UJ
3/4-Methylphenol	NA	NA	0.1 UJ	0.1 UJ

**Soil TCLP Analytical Results  
Voluntary Release Assessment  
SWMU # 003a**

<b>Bore Number:</b>	BORE #5	BORE #5	EQ BLANK	FD BLANK
<b>Depth (inches):</b>	12-24	36-48		
<b>Sample Date:</b>	11/6/95	11/6/95	11/6/95	11/6/95
<b>WID Sample Numbers:</b>	RA-95-235	RA-95-236	RA-95-223	RA-95-237
			RA-95-227	RA-95-238
			RA-95-228	RA-95-239

Analytes

**Leachable Semivolatiles (mg/L)**

Hexachlorobenzene	NA	NA	0.1 UJ	0.1 UJ
Hexachlorobutadiene	NA	NA	0.1 UJ	0.1 UJ
Hexachloroethane	NA	NA	0.1 UJ	0.1 UJ
Nitrobenzene	NA	NA	0.1 UJ	0.1 UJ
Pentachlorophenol	NA	NA	0.5 UJ	0.5 UJ
Pyridine	NA	NA	0.1 UJ	0.1 UJ

**Leachable PCBs (µg/L)**

PCB-1221	NA	NA	0.5 UJ	0.5 UJ
PCB-1232	NA	NA	0.5 UJ	0.5 UJ
PCB-1242/1016	NA	NA	0.5 UJ	0.5 UJ
PCB-1248	NA	NA	0.5 UJ	0.5 UJ
PCB-1254	NA	NA	0.5 UJ	0.5 UJ
PCB-1260	NA	NA	0.5 UJ	0.5 UJ

---

B Detected in the blank

EQ BLANK Equipment Rinse Blank

FD BLANK Field Blank

J Estimated value

NA Not Analyzed

PCB Polychlorinated biphenyls

R Rejected value

U Not detected; value is method reporting limit

UB Detected in the blank and qualified as not detected

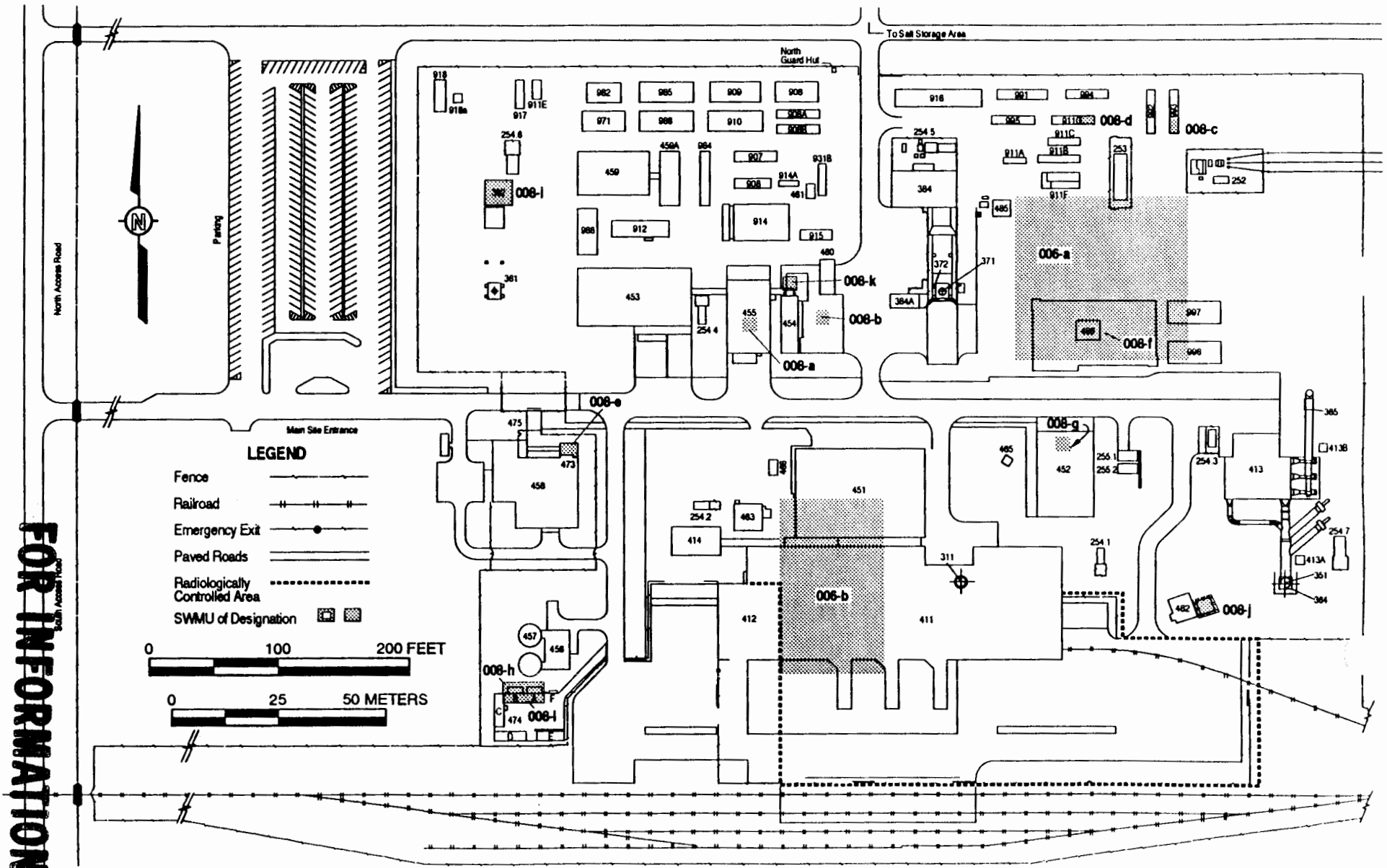
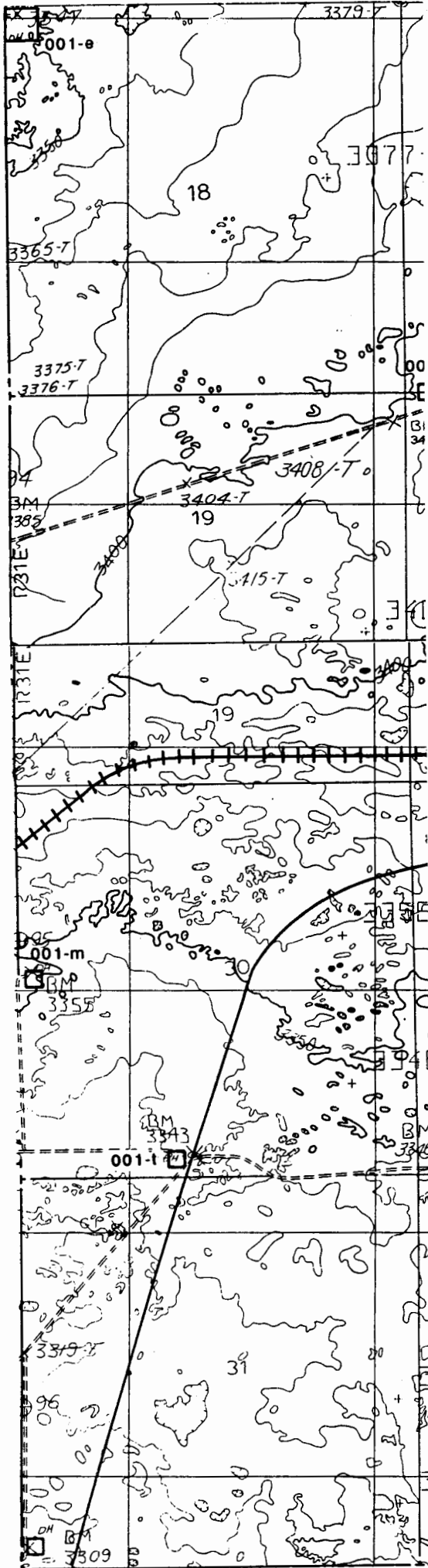


FIGURE J-2 SURFACE SATELLITE ACCUMULATION AREAS, HOLDING PONDS, AND SEPTIC LEACH FIELD

J-11

FOR INFORMATION ONLY

1-93



002-a

SWMU IDENTIFICATION NUMBER  
WITH SUB-SWMU LETTER  
DESIGNATION

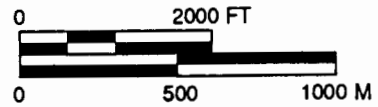


FIGURE J-1

LOCATION OF SWMUs  
WITHIN THE 16 - SQUARE - MILE  
WIPP LEGAL BOUNDARY AREA

**FOR INFORMATION ONLY**