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U.S. ARMY ENGINEER DIVISION HUNTSVILLE, ALABAMA







DFINAT

REMEDIAL INVESTIGATION REPORT AT THE ASH LANDFILL SITE APPENDICES VOLUME I SENECA ASH LANDFILL DRAFT RI REPORT

APPENDIX A HISTORICAL GROUNDWATER MONITORING DATA

INDIVIDUAL WELL HISTORIES

SENECA ASH LANDFILL DRAFT RI REPORT

INDIVIDUAL WELL HISTORIES

October 20, 1993

K:\SENECA\ASH-RI

						HIS	TORICAL D.	ATA FOR MOI ASH LAND	VITORING WE FILL	LL PT-10								
	Source: Units	Galson Oct 1987	Gaison Mar 1989	NET Jan 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NET Mar 1997	NET June 1992	GTC Dec 1992	ES Jan 1991	ES April 1993	E: Jane 199
VOLATILE ORGANICS																		A water
Chloromethane	µg/L	ND	-	ND	ND	ND	41	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	NE
Bromomethane Vinyl Chloride	µg/L µg/L	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
Chloroethane	μg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Methylene Chloride	µg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
1,1 - Dichloroethene	μg/L	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE
Chloroform	μg/L μg/L	ND	_	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
1,2-Dichloroethane	µg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
1,1,1-Trichloroethane	μg/L	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
Carbon Tetrachloride Bromodichloromethane	μg/L μg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
1,2-Dichloropropane	µg/L	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NIC
cis-1,3-Dirchloropropene	μg/L	ND	_	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
Trichloroethene Dibromochloromethane	μg/L μg/L	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
1,1,2-Trichloroethane	μg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Benzene	μg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
trans-1,3-Dichloropropene	μg/L ug/L	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
Bromoform Tetrachloroethene	μg/L μg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
1,1,2,2-Tetrachlomethane	µg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
Toluene	μg/L	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Nr
Chlorobenzene Ethylbenzene	μg/L μg/L	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
2-Chloroethywinyl Ether	μg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	
1,3-Dichlorobenzene	µg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				_
1,2-Dichlorobenzene	µg/L	ND ND	-	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	_	_	
1,4-Dichlorobenzene 1,2-Dichloroethene (total)	μg/L μg/L	ND -	_	ND -	ND	ND	ND -	- 40	ND	ND -	ND	ND -	ND -	ND	_	ND	ND	NE
cis-1,2-Dichloroethene	μg/L	_	_		_	_	_	-			_	_		-	ND	_	-	-
trans-1,2-Dichloroethene	µg/L	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	-	-
Trichlorofluoromethane	µg/L	ND		ND _	ND	ND	ND	ND	ND	ND	ND	ND -	ND	ND	ND	ND	ND	NE
Acetone Carbon Disulfide	μg/L μg/L	_	_	_	_	_	_	_	_	_	_	_	-	_	_	ND	ND	NE
4-Methyl-2 Pentanone	μg/L	-			_	-				-	_		-	_	-	ND	ND	NE NE
2-Hexanone	µg/L	=	-	_	_	-	_	-		-	_	-	-	_	_	ND ND	ND ND	NE
Styrene Xylene (total)	μg/L μg/L			_	_	_		_	_		_	_	_			ND	ND	NE NE
Total Volatile Organics	ug/L	0	0	0	0	0	41	2	34	0	0	0	0	0	0	0	0	
	55550600000000					a processing the second					10,000,000,000,000,000,000,000				1 11 111 100 100 100		99,000000099,000.000	
METALS Aluminum	mg/L			-	_		_	-	-	_			_			0.0717		45.8
Antimony	mg/L	-	-	_	-	-	-		-	-	_	_	_	-	_	ND	-	NIT
Arsenia	mg/L	ND	ND	_	ND		ND		ND		ND	_	ND			ND	_	NE 183
Barium Beryfium	mg/L mg/L	0.22	0.2	_	ND	_	ND	_	0.23	_	0.191	_	0.185	_	_	0.201 ND	_	NE
Cadmium	mg/L	0.001	ND	_	ND	_	ND	_	ND	_	ND	-	ND	_	-	ND	_	ME
Calcium	mg/L	-	-	_		-		_		-	=	_		_		86.2	-	80900 NE
Chromium	mg/L	ND	ND	-	0.002	-	ND	-	ND	_	ND	-	ND	_	-	ND ND	-	NE
Cobalt Copper	mg/L mg/L													<u>-</u>		ND		NE NE 127
Iron	mg/L	ND	ND	_	0.25	_	0.64	_	0.14	-	0.235	-	0.124	_	_	0.245	-	127
Lead	mg/L	ND	ND		ND		ND		ND	_	ND	_	ND	_		ND 34.7		NE 34400
Magnesium	mg/L mg/L	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.112	_	121
Manganese Mercury	mg/L	ND	ND	_	ND	_	ND	_	ND	-	ND	-	ND	_	_	ND	-	NE
Nickel	mg/L	_	-	_		_		_	-	-	_	_		-	_	ND	-	NE
Potassium	mg/L	2.52	2.2		1.3	-	2.2 ND	_	2.56 ND	_	2.31 ND	_	2.28 ND	-	_	2.15 ND	_	2460
Selenium Silver	mg/L mg/L	ND ND	ND ND		ND ND		ND		ND		ND		ND	_		ND		NE NE
Sodium	mg/L	47	35	_	38	_	38	_	38.2	-	40	_	37.4	-	_	34.1	_	41500
Thallium	mg/L		-				_		_							ND	_	NE
Vanadium	mg/L	_	-	_	_	_	_	_	_	_	_	_	_	_	_	ND 0.0024	_	NE 9.1
Zinc Cyanide	mg/L mg/L		_	_	_		_	_	_	_	_		_	-	_	ND	_	3.8
										••••••								
MISCELLANEOUS			AUT		N-	3866		0.028	ND		0.051		ND			***************************************	ND	0.04
Total Organic Halogens/Halides (TOX) Chloride	mg/L mg/L	68	ND 61	_	ND 69	_	65.6	0.028	55.2	_	67.9	_	56.5	_		ND 52	62 62	0.05
Conductivity (field)	mg/L μmhos/cm	600	760	_	530	860	610	740	690	914	837	930	910	830		540	590	560
Conductivity (lab)	µmhos/cm		_	-	-	-	-	-	720	-	900	-	824	-	-	777	810	800
Nitrite Nitrogen	mg/L	4.00%	0.006	-	-	-	ND	_	ND	-	ND	-	ND	-	-	ND ND	ND -	
Nitrate/Nitrite Nitrogen Nitrate as N - Calculation	mg/L mg/L	ND	0.035		ND		עא		UND		מא		עא			ND	ND	NE
pH (Lab)	std units	7.3	8	_	7.4	_	7.5	_	7.4	_	7.8	-	7.2	_	_	7.58	7.34	7.39
pH (field)	std units	7.7		7.05	7.17	7.11	7.55	6,5	8.13	6.18	6.12	7.23	6.91	7.19		7.18	7.2	7.91
Sulfate	mg/L	18	38	_	17	-	36 ND	-	35.2	-	17.1	=	20	_	_	20	21	16
Total Organic Carbon (TOC)	mg/L Celcius	1.1	2	10	20 7	13	ND 12	10	5.3 10	11	10.8 16	11	7 11	10	_	2.7 10.2	11	19 10.4
Temperature (field)																		

						HI	STORICAL DA	ATA FOR MO	NITORING W	ELL PT-11								
Parasi eters	Source: Units	Galsos Oct 1987	Galson Mar 1989	NET Jan 1990 M	NET ar 1990	NET June 1990	NET Sept 1990	NET Des 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NET Mar 1992	NET June 1992	GTC Dec 1997	ES Jan 1991	ES April 1993	E5 Jane 1993
VOLATILE ORGANICS										**********								
Chloromethane	μg/L μg/L	ND ND	_	ND	ND ND	ND ND	270 ND	ND	17	ND	3.19	ND	ND	ND	ND	ND	ND	NE
Bromomethane Vinyl Chloride	μg/L μg/L	ND ND	=	ND ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NC NF
Chloroethane	µg/L	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
Methylene Chloride 1,1-Dichloroethene	μg/L μg/L	ND ND	_	ND 1.5	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	2 ND	NE
1,1-Dichloroethane	μg/L	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
Chloroform	µg/L	ND ND	-	ND ND	ND ND	ND	ND ND	ND 2	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
1,2-Dichloroethane 1,1,1-Trichloroethane	μg/L μg/L	ND		ND	ND	ND ND	ND	ND	ND 2	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
Carbon Tetrachloride	μg/L	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Bromodichloromethane 1,2-Dichloropropane	µg/L µg/L	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
cis-1,3-Dirchloropropene	μg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Trichloroethene	µg/L	ND		ND	ND	ND	ND	ND	1	ND	2.66	ND	ND	ND	ND	ND	ND	NE NE
Dibromochloromethane	μg/L μg/L	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	NE NE
Benzene	μg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	NE
trans-1,3-Dichloropropene	HOA.	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
Bromoform Tetrachloroethene	μg/L μg/L	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND 4	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
1,1,2,2-Tetrachloroethane	μg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	, ND
Toluene Chlorobenzene	μg/L	ND ND	-	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	, ND
Ethylbenzene	µg/L µg/L	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
2-Chloroethylvinyl Ether	μg/L	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	-	, NE
1,3-Dichlorobenzene 1,2-Dichlorobenzene	ug/L	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND			-	_
1,4-Dichlorobenzene	µg/L µg/L	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	_	_	_	
1,2-Dichloroethene (total)	μg/L	-	_	12	_		_	-	_				-			ND	ND	NE
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	µg/L µg/L	ND	_	ND	ND	ND	ND	ND	ND.	ND	ND	ND	ND	ND	ND ND	_	-	
Trichlorofluoromethane	μg/L μg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		_	
Acetone	µg/L	-	-	-	-	_	_	-		-	-	_	-	-	-	-	ND	ND
Carbon Disulfide 4—Methyl—2 Pentanone	μg/L μg/L	_	_	_	_	_	_	_	_	_	_		_	_	_	_	ND ND	ND
2-Hexanone	μg/L			-	_	-	-		=		-						ND	NE NE NE
Styrene	µg/L	-		-	-	-	-	_	-	_	-	-	_	-	_	-	ND	NE
Xylene (total) Total Volatile Organics	µg/L µg/L	0	0	1.5	0	0	270	2	24	0	5.85	0	0	0	0	0	ND 2	ND 0
		garrere sparer e										n nintratatataran dinggaya ya			inn effert en eussan. Start			
METALS Aluminum	mg/L			_	-			_	<u> </u>					-	-	13.7	_	4090.00
Antimony	mg/L	-	-	_	_	-	-	-	-	-	-	-	-	_	-	ND	-	ND
Arsenic Barium	mg/L mg/L	ND 0.08	ND 0.095		ND 2.1		0.04		ND 0.083		ND 0.23		ND 0.271			0.0024		1,20
Berylium	mg/L	_	_	_	_	_	_	_	_	_	-	_	0.2/1	_	_	0.0013	_	0.43
Cadmium	mg/L	ND	ND	_	ND	_	ND		ND	_	ND	_	ND	_		ND		ND
Calcium Chromium	mg/L mg/L	ND	ND	_	0.016	_	0.25	_	ND	_	ND	_	ND	_	_	334 0.0161	_	135000.00 5.000
Cobalt	mg/L	-	_	_	-	_	0.25	_	-	_	-	_	-	_	_	0.0372	_	ND
Copper	mg/L	_	ND -	-	140		270	_	1,68	_	12.8			-		0.0403	-	6.20
Iron Lead	mg/L mg/l.	ND ND	ND ND		0.05	_	0.06	_	ND		ND	_	15.8 ND			17.8 0.0177	_	4860.000 3.00
Magnessim	mg/L mg/L mg/L	-	-	-	_	-	-			-	_	_	-			69.2	-	37500.00
Manganese	mg/L	ND	ND	_	ND	-	ND	_	ND	_	ND	_	ND	***	_	3.18 0.00015	_	181.000 ND
Mercury Nickel	mg/L mg/L	-					-		_				-			0.00015		ND
Potassism	mg/L	2.63	2.1	-	20	-	26	-	2.48	_	4.47	-	4.7	~	_	5.27	_	3590.00
Selenium Silver	mg/L	ND ND	ND ND		ND ND		ND ND		ND ND		ND ND		ND ND	-	-	ND ND		ND ND
Sodium	mg/L mg/L	59	46	_	54	_	30	_	38	_	39.8	_	37.1	_		46.6	_	35000.00
Thallium	mg/L						_		_	_						ND	-	ND
Vanadium Zinc	mg/L mg/L	_	_	=	_	_	_	_	_	_		_	_	-	_	0.0156 0.136	_	8.20 32.30
Cyanide	mg/L		_		_				_					-		ND		ND ND
															000000000000000000000000000000000000000			
MISCELLANEOUS Total Organic Hulogens/Halides (TOX)	mg/L	11	0.01	39090 30000	10.3		_	0.028	0.011		0.032	_	ND	codomiciónos,		ND	ND	0.05
Chloride	mg/L	33 49	46	-	40	_	48.2	-	41.4	_	42	_	35.4	_	_	40	43	48.0
Conductivity (field)	μmhos/cm	1200	770	490	740	1200	720	840	710	1112	1000	1110	1000	1010		700	_	800
Conductivity (lab) Nitrite Nitrogen	μmhos/cm mg/L	_	_	_	_	_	_	-	870	_	_	_	918	_	_	1090 ND	1100	900,00
Nitrate/Nitrite Nitrogen	mg/L mg/L	0.1	0.12		0.34	_	0.27		0.22	_	0.5	_	ND	_	_	0.4	ND	0.19
	mg/L		-	-	-	-	_	-	14,7	-	-	_	_	_	-	0.4	-	_
	std units	7.2 8.1	7.8	6.5	7.4 7.22	7.22	7.4	6.4	7.2 8.63	6.34	7.6 6.3	7.4	7.3 6.96	7.18		7.4 7.38	7.31	7.29 7.17
pH (Lab)	and penins						7.7	0.4	0.03	0.54	0.5	7.79	0.50	1.16		1.30		1.11
Nitrate as N — Calculation pH (Lab) pH (field) Sulfate	std units mg/L	160	190	_	170	-	68	_	204	-	143.4	_	169			281	170	100.0
pH (Lab)	std units mg/L mg/L Celcius		190 4.4	9	170 52 8		68 17 14	- - 8		- 11	143.4 9.4 13	7	169 7 8	10	_	281 3.2 6.8	170 3	100.0 ND 12.6

The present of Color And 1887 - Gallet St. 1889 - 1										ANDFILL										
Characterises 4.4. 80 80 - 100 80 80 180 80 80 80 80 80 80 80 80 80 80 80 80 8	Personeture	Sonne: Units	Gulson Aug 1987	Galson Get 1987	Galses Mar 1989	NET Jan 1990	NET Mar 1990	NBT Japa 1990	NET Sept 1990	NET Dec 1990									ES April 1993	ES June 1993
Name	VOLATELE ORGANICS								***********											
Varied Control April Sept Sep					-				51	ND									ND	ND
Calestrates					_	ND 7						ND	ND 160					ND	ND	ND
Medipleace Charles		uel.			_	ND				ND	ND		ND.	ND			ND	ND.	ND ND	100 ND
Line	ethylene Chloride	µg/L	ND	ND	-	ND	ND	ND	ND	ND									ND	ND 63
Charlestee sight No NO NO NO NO NO NO NO	I-Dichloroethene	µg/L												ND	ND	ND	6		ND	ND
12-Debterentheman																			ND	ND
Liming Control Contr					_														ND ND	ND ND
Carbon Femalescent and Age					_	ND	ND		ND	ND	ND	ND	ND				ND		ND	ND ND ND
13-District properties					-					ND				ND					ND	ND
in 1-13-Deckhorpergree xif_ ND ND ND ND ND ND ND N	omodichloromethane										ND	ND	ND						ND ND	ND ND ND
Techherches	-1.3-Direhloropropene																		ND	ND
1.1.2-Triestherwheate	richloroethene		1700	94	-	129	100	790	3100	870	130	2100	1350	170	323				45	1400
																			ND	1400 ND ND
Page		μgC			_									ND					ND	ND
Breashorn	nns-13-Dichloropropene			ND					ND	ND	ND	ND	ND	ND	ND	ND	ND		ND ND	ND ND
Trensherschenkense	romoform	HEL.																	ND	ND ND
Toleres	etrachloroethene	µg/L	ND				ND		ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND
Chiesensees		µg/L	ND																ND	ND ND ND
Supplement Sup	blorobearen										ND			ND					ND ND	ND
2-Chlerophysing Base	hylbenzene				-				ND					ND	ND	ND	ND	ND	ND	ND
13-Delichorhoanness	-Chloroethylvinyl Ether	µg/L	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	_
14-Delsherekenergean											ND			ND	ND	ND	ND	-	_	_
12-Distributersheese 15-Distributersheese		µg/L	ND	ND		ND	ND	ND	ND	ND	ND							_		_
dis-12-Dishloresthese pgL -g			-	-	-		-	-	-	-	-	-	-	-	-	-	-	320	36	2000
Trans-12-Dishlorestates	cis-1,2-Dichloroethene		_	-	-	-	-	-	-		_	-	-	_	-	-		-	-	-
Acctose pspl.					-													_	-	-
Carbon Distrible			ND	ND		ND	ND	ND	ND	ND	ND	ND	ND.	ND	ND		ND	ND	ND	ND
Chemistry Page		ug/L	-	-	_	_	_	_	_	_	_	_	_	_	_		_		ND	ND
2-Heansnee			_	-	_	-	_	-	_	_	_	_	_	_	-	_	-	ND	ND	ND ND
	-Hexanone	μg/L	-		-	-	_	-	_	-	_	-	-	-	-	-	-	ND	ND	ND
Teal Vergins		Hg/L	_	_		_			_	_				_		- 1	-		ND ND	ND ND
Administration mg/L	otal Volatile Organica		1700	189	0	136	100	790	3291	870	133	2216	1580.15	174.2	342.8	119	4660		81	3563
Aluminum mgL		100000000000000000000000000000000000000				384	2000										20,000000000000000			
Astreacy mgL	MBTALS								*****	2000000					300.000; 000000000	9141111		615		5550
Assets mg/L			_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	ND	_	ND
Barium			-			_		-		-		-		-		_		ND	_	1.8
Cafinism	rium	mg/L	-	0.05	0.031	-	ND	-	ND	-	0.04	-	0.073	-	0.142	-	-		-	68.2
Cabina	eryllium		_	ND	ND	_	ND	_	ND	-	ND	_	ND	-	ND.	_	-		_	0.4
Chromitum				- 70	ND -		- 70		ND		ND -		ND -		ND -					ND 267000
Cobalt			-	ND	ND	-	0.01	-	ND	_	ND	-	ND	_	ND	-	-	0.0067	-	7.8
Iron		mg/L			-	_	_		_		_	-			-					4.6 5.8
Lead		mg/L	-	**D	ND	-	45	-	7.0	-	200	-	176	-	20.7	-	-		-	5.8
Magagatium			_	ND		_				_	ND	_	3.76 ND		ND	_	_	0.0094		6550 4.1
Manganace		mg/L	-	-	-	_	~	_	-	_	-	_	-	-	-	-	_		-	35700
Nike mgL	anganese	mg/L	-	-	_	-	_	-	-	-	-	_	-	-	-	-	-		-	288
Potassium mg/L	ercury			ND	ND		ND		ND		ND		ND		ND					ND ND
Selenium mgL				2 58	1.8	_	ND		50	_	2 30		3 26		4 93	_			_	4160
Silver				ND		_		_		_		_	ND	_		_	_		_	ND
Tabilium mgL	lver			ND	ND	-	ND	_	ND	_	ND	_	ND	_	ND	-	_		-	ND ND
Vanisdium mgL			-	100	45	-	37	_	160	_	15.8	-	129	-	47.4	-	-		_	137000
Zinc mgL - -		mg/L	_					-							-					ND
MISCELLANSCRISS Total Organic Halogenu/Halides (TOX) mgL 2.08 180 0.085 - 0.15 0.87 0.6 - 1.722 - 0.27 0.31		mg/L	_	_	_	_	_	_	_	_	_	_	, _	_	_	_	_		_	8.3 38.1
MISCEL ANEGUS Total Crganic HalogenuPfaileds (TOX) mgL 2.08 180 0.085 - 0.15 0.87 0.6 - 1.722 - 0.27 0.31			-	_	-	-	-	-	-	-	-	-	-	-	-	_	-		_	ND
Total Organic Halogens/Halides (TOX) mgL mgL - 158 40 - 208 mgL - 158 40 - 356 - 202 - 13.8 - 202 - 13.8 - 204 - 19.1 - 13.9 Conductivity (field) mmbox/em - 1300 1400 520 460 2700 2500 860 630 2220 2210 1080 1635 970 - 925 Conductivity (ab) mgL - 250 - 308 Nitrate/Nitrite Nitrogen mgL - 0.33 1.4 - 0.44 - 0.21 - 0.32 - 0.24 - 0.52 - 0.008 Nitrate/Nitrite Nitrogen mgL																				
Chloride mgL - 158 40 - 36 - 202 - 13.8 - 264 - 19.1 13.9 Conductivity (field) μm bookem - 1300 1400 520 460 2700 2500 860 630 2220 2210 1080 1635 970 - 925 Conductivity (18b) μm bookem 2250 - 1025 938 Nixriee Nitrogen mgL				440	0.000		0.16			0.07		<u> </u>	1 200			817438				
Conductivity (field) μ m hoskm -	otal Organic Halogens/Halides (TOX)	mg/L	2.08	180		_				0.87		_		_		_	_		0.05	2.1 170
Conductivity (lab) mgL			_	1300		520	460	2700	2500	860		2220		1080		970	-		-	1580
Nitrite Nitrogen mgL	onductivity (lab)		_				-					-		-		-	-	938	770	1700
Nitrate's N' - 0.33 1.4 - 0.44 - 0.21 - 0.32 - 0.24 - 0.52 0.01 Nitrate's N' - Calculated mgL	itrite Nitrogen	mg/L	-	-		-	-	_		-	-	-	-	-	_	-	-		ND	-
pH (Lab)	itrate/Nitrite Nitrogen			0.33	1.4						0.32				0.52	-	_		ND	ND
pH (field) std. units - 7 - 6.75 6.75 6.84 7.05 6.25 7.44 6.32 6.3 7.01 6.66 7.06 - 6.87 Sulfate mgL - 289 300 - 250 - 388 - 159.5 - 337.5 - 263 - 210			_	- 2	7.8	_		-	7	_	7		7	-	72		_		6.89	6.98
Sulfate mgL - 289 300 - 250 - 388 - 159.5 - 337.5 - 263 210	(Cao)			7	7.0	6.75	6.75	6,84	7,05	6.25	7.44	6,32	6.3	7.01		7.06	_		0.89	7.16
Total Connais Carbon (TOC) mpl 29 24 - 33 - 7 - 98 - 81 - 2	lifate		-			_	250	-	388	_	159.5			_			_		110	340
	otal Organic Carbon (TOC)	mg/L	-	2.9	2.4		33	-		_	9.8	_	8.1	-	2	_	-	3	2	4
Temperature (field) Celcius	emperature (field)	Cekius	_	-	-	8	5	15	14	8	7	12	15	10	6	12	-	7	_	13.3

									ANDFILL										
Parsanters	Senne: Units	Gulson Aug 1987	Galson Oct 1987	Galson Mar 1989	NET Jan 1990	NET Max 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NBT Dec 1991	NET Mar 1992	NET June 1992	GTC Dec 1992	ES Jan 1993	ES April 1993	1une 1993
VOLATILE ORGANICE							×												
Chloromethane	μg/L	ND	ND	-	ND	ND	ND	210	ND	8	ND	ND	ND	ND	ND	ND	ND	ND	NE
Bromomethane	μgiL	ND ND	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
Vinyl Chloride Chloroethane	µg/L µg/L	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Methylene Chloride	Hg.L	ND	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
1,1-Dichloroethene	μg/L	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
1,1-Dichloroethane	μgAL	ND ND	ND ND	-	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE
Chloroform 1,2-Dichloroethane	µgL µgL	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE NE
1,1,1-Trichloroethane	µg/L	ND	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Carbon Tetrachloride	TREE	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	μgL	ND	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
1,2-Dichloropropane cis-1,3-Dirchloropropene	μ εί μεί	ND ND	ND	_	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Trichloroethene	µgL.	ND	ND		2.4	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Dibromochloromethane	Mg/L	ND	ND	TITE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
1,1,2-Trichloroethane	μg/L	ND	ND	-	ND ND	ND	ND	ND ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	NE
Benzene	μg/L	ND ND	ND ND		ND	ND ND	ND ND	ND	ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
trans-1,3-Dichloropropene Bromoform	μg/L μg/L	ND	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Tetrachloroethene	µg/L	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	_	ND	ND	ND ND	ND ND	ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND ND	NE
Toluene Chlorobenzene	μgiL	ND ND	ND ND	= =	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
Ethylbenzene	μg/L μg/L	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
2-Chloroethylvinyl Ether	µg/L	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	_
1,3-Dichlorobenzene	μg/L	ND	ND	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	_	
1,2-Dichlorobenzene	μg/L	ND ND	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	-	-	
1,4-Dichlorobenzene 1,2-Dichloroethene (total)	µg/L µg/L	ND	-	_				-		-	-	-	-	-	-	_	ND	ND	NE
cis-1.2-Dichloroethene	µg/L	_	-	_	-	_		-	-	_		-	_		_	ND		_	-
trans-1,2-Dichloroethene	µg.L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	~
Trichlorofluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND.	NE
Acetone Carbon Disulfide	μg/L μg/L		_	_	_	_	_	_	_	_	_	_	_	_	_	_	ND	ND	NE
4-Methyl-2 Pentanone	μgL	_	_	_	_	_	-	-	-	-	_	_	_	_	_	_	ND	ND	NE NE
2- Нехапоне	μ ε/L μ ε/L	-		-			_	-	-	-	-	_	_	_	_	-	ND	ND	NE
Styrene	μgL		_	-		-	-	_	-	-	-	_	-	_	_	_	ND ND	ND ND	NE NE
Xylene (total) Total Volatile Organics	μg/L μg/L	0	0	0	2.4	0	0	212	0	8	0	0	0	0	0	0	0	0	145
500000000000000000000000000000000000000	***************************************				300000000000000000000000000000000000000	800000000000000000000000000000000000000		g.::::::::::::::::::::::::::::::::::::				999999999999999							000000000000000000000000000000000000000
METALS				· · · · · · · · · · · · · · · · · · ·			<u>:</u>									***************************************	0.407		200
Alumimum	mg/L	_	_	_		_						_		_			0.407 ND	_	369 NE
Antimony Arsenic	mg/L mg/L	_	ND	ND	_	ND	-	ND	_	ND	_	ND	_	ND	_	-	ND	_	NE
Barium	mg/L	-	0.09	0.014	_	0.63	-	ND	-	0.071	_	0.157	-	0.133	-	-	0.0976		54.4 NE
Beryllium	mg/L	-		_	-		_	-	-	-	-	-	-	-	-	-	ND	-	NE NE
Cadmium Cakium	mg/L		ND	ND		0.002		ND		ND		ND		ND			70.5		25200
Chromium	mg/L mg/L	_	ND	ND	_	0.124	_	0.09	_	ND	_	ND	-	ND	-	_	ND	-	NE
Cobalt	mg/L	-	_	-	_	-	_	_	_	_	- 00	-			-	_	ND		NO
Copper	mg/L	-			_	_	_		-	_	-	-	-	-	-	_	0.0028	-	3.5
Iron	mg/L	-	ND	ND	_	97 0.024	_	98 ND	_	0.87 ND		11 ND	_	11.3 0.029	_		0.988	-	SO
Lead Magnesium	mg/L mg/L		ND	ND -		0,024		ND -		ND -		ND -	<u>_</u>	0.029			17.7		12700
Manganese	mgL	_	-	_	_	_		_	-	-	-	-	_	_	_	_	0.191	_	17.8
Mercury	mg/L	_	ND	ND		ND		ND	-	ND	-	ND		ND	_	_	ND	_	NE
Nickel	mg/L	_		-	-	12	_	12	-	120	_	4.36	-	3.76	_	_	ND 1.93	_	NE
Potassium	mgL		2.09 ND	1.7 ND	-	ND	_	ND	_	1.79 ND		ND	_	ND	_		ND		2200 NE
Selenium Silver	mg/L mg/L		ND	ND		ND	_	ND	_	ND	-	ND		ND	-	_	ND	_	NE
Sodium	mg&	_	36	28	_	28	-	27	-	27.7	-	32	-	27.2	-	_	28.8	_	559000
Thallium	mg/L	_		_	_	=	_			_							ND ND	-	NE NE
Vanadium	mg/L	-	-	-	_	_	_	_	_	_	_	_	_	_	_		0.0148	_	13.5
Zinc Cyanide	mgL		_			_	_		_	_	_	_	_	_		-	ND		5.2
PROPERTY AND PROPE	-,-		***************************************			**************		•••••							49,39,50,000		220 - 127 - 11111		
MISCELLANEOUS	breedenge jan.						gw'r			77766469						A Proposition of the Contract			198668
Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	0.01	-	ND	-		0.012	ND	_	0.016	_	ND	-	-	ND	ND	0.02
Chloride	mg/L	_	8 410	13 520	250	18 350	480	8.7 380	420	10.8 360	580	7.5 640	600	6.7 580	540		8.1 365	350	390
Conductivity (field) Conductivity (lab)	µmhos/cm		- 410	-		- 330		-	-	455	500	-	-	532	-	-	500	530	510
Nitrite Nitrogen	mgL	_	_	~	_	-	_	_	-	_	_	_	_	_	_	-	ND	ND	-
Nitrate/Nitrite Nitrogen	mg/L		0.13	0.16	_	0.28	-	0.12		0.17	-	0.39	_	ND	_		0.2	0.2	0.32
Nitrate as N - Calculation	mg/L	-	-	-	-	-	_	-	_	2.5	-	70	-	-	_	_	0.2	ND	7.55
pH (Lab)	std. units	_	7.5 7.7	8.3	7.15	7.7 7.54	7.42	7.7 7.65	6.25	7.6 8.64	6.68	7.9 6.76	7.58	7.6 7.34	7.38		8.02 6.55	7.58 7.5	7.33
pH (field) Sulfate	std, units mg/L	-	45	57	7,13	50	7.92	44.4		82.8	- 0.06	67		61.4	1.30	_	35	42	7.81
Total Organic Carbon (TOC)	mg/L	_	1.1	4.6	_	29	_	ND	_	11.1	-	5.5	_	4	-	_	0.7	ND	2
	Celeius	-	_	_	9	7	13	14	8	7	10	13	8	6	11	-	8	8	11.2
Temperature (field) Turbidity	NTUs																>200	21	

						HISTORI		R MONITORI LANDFILL	NG WELL PT	-16						
Parameters	Source: Units	Galson Mar 1989	NET Jan 1990	NET Mat 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NBT Mat 1992	NET June 1992	GTC Dec 1992	ES Jan 1993	ES E April 1993 Jane 199
VOLATILE ORGANICS									300000							
Chloromethane	μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND NI ND NI
Bromomethane Vinyl Chloride	μg/L	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND NI ND ND
Chloroethane	μg/L μg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND NI
Methylene Chloride	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND NI
1,1 - Dichloroethene	µg/L		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND NI
1,1 - Dichloroethane Chloroform	μg/L μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND NI
1,2-Dichloroethane	µg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND NI
1,1,1-Trichloroethane	μg/L		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND NI ND NI
Carbon Tetrachloride Bromodichloromethane	μg/L μg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND N
1,2-Dichloropropane	Hg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND NI
cis-1,3-Dirchloropropene	μg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND NI
Trichloroethene Dibromochloromethane	μg/L		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND ND	ND NI
1,1,2-Trichloroethane	μg/L μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND N
Benzene	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND N
trans-1,3-Dichloropropene	µg/L	-	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND NI
Bromoform Tetrachloroethene	μg/L μg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND N
1,1,2,2-Tetrachloroethane	µg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND N
Toluene	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND NI
Chlorobenzene	μg/L		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND N
Ethylbenzene 2-Chloroethylvinyl Ether	μg/L μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	-
1,3 - Dichlorobenzene	из/	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	_	- '-
1,2-Dichlorobenzene	µg/L	_	ND	ND	ND	ND ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	_	-
1,4 - Dichloro benzene 1,2 - Dichloro ethene (total)	μg/L μg/L	_	ND	ND	ND	עא	ND	ND	ND -	ND -	ND -	ND	ND	_	ND	ND N
cis-1,2-Dichloroethene	µg/L	-	_	_		-		_	-		_	_	-	ND	-	_
trans-1,2-Dichloroethene	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-
Trichlorofluoromethane	μg/L	_	ND	ND	ND	ND	ND -	ND	ND	ND	ND	ND	ND -	ND _	ND	ND N
Acetone Carbon Disulfide	μg/L μg/L	_	_	_	_	_	-	_	_	_	_	_	_	_	ND	ND N
4-Methyl-2 Pentanone	µg/L	_	-	-	-	_	_	-					-	_	ND	ND N
2-Нежавопе	μg/L μg/L	-		-	-	-	-	-	-	_	_	-	-	-	ND ND	ND N
Styrene Xylenes (total)	μg/L μg/L	_		_	_	_	_			_	_	_	_	-	ND	ND N
Total Volatile Organics	µg/L	0	0	Ő	0	0	0	0	0	0	0	0	0	0	0	0
METALS					- 0000000000000000000000000000000000000		-	_		- colodococcio soci	-	_			0.292	- 19
Aluminum Antimony	mg/L mg/L	_	_	_	-	_	-	-	-	-	-	-	_	-	ND	- N
Arsenic	mg/L	ND		ND	-	ND	-	ND		ND	_	ND		_	ND	- N
Barium	mg/L	0.087	-	ND	-	ND	-	0.077	_	0.221	_	0.046	_	_	0.0527 ND	- 45. - N
Beryllium Cadmium	mg/L mg/L	ND	_	ND	_	ND	-	ND		ND	_	ND	_	-	ND	- N
Calcium	mg/L	- ND		-		_		_	_	-	_	_			107	- 11400
Chromium	mg/L	ND	-	0.013	-	ND	-	ND	-	0.057	_	ND	_	-	ND	- N
Cobalt	mg/L			-											ND ND	- N
Copper Iron	mg/L mg/L	ND	_	12	_	22	_	11.1	_	63.8	_	2.76	-	_	0.225	- 2 - 22
Lead	mg/L	ND		ND		ND		ND		ND		ND			ND	-
Magnesium	mg/L	-	-	-	-	-	-	-	_	-	_	_	_	_	13.8 0.0464	- 1380 - 8
Manganese	mg/L	ND	_	ND	_	ND	_	ND	_	ND	_	ND	_	_	ND	- N
Mercury Nickel	mg/L mg/L	ND -		- ND		-	-	-	_		-	-	-	-	ND	- N
Potassium	mg/L	0.6	-	ND	-	3.4	-	2.28	-	6.12	-	1.38	-	-	ND	- 95
Selenium	mg/L	ND		ND	_	ND		ND ND	_	ND ND		ND ND			ND ND	- N
Silver	mg/L	ND 4.4	_	ND 5.2	_	ND 6.3	_	4.33	_	7.63	_	5.33	_	_	4.9	- 613
Sodium Thallium	mg/L mg/L	7.7	-	-	_		_	-		-			_	_	ND	- N
Vanadium	mg/L	-	-		-	-		-	-	-	-	-	-	-	ND	- N
Zinc	mg/L	_	_	_	_	_	_	_	_	_	_		_	_	0.0025 ND	- 8 - N
Cyanide	mg/L															
MISCELLANBOUS								20.0003							3 8 9	
Total Organic Halogens/Halides (TOX)	mg/L	ND	_	0.044	_		0.024	ND	-	0.017	-	ND	_	-	ND	ND 0.0
Chloride	mg/L	18	360	17 350	520	13.5 440	410	16.7 400	672	16.2 700	660	12.4 580		_	9.2 361	345 45
Conductivity(field) Conductivity(lab)	µmhos/cm	600	360	330	320	- 440	- 410	700	-	700	-	516	570		583	9 1 345 45 570 60
Nitrite Nitrogen	mg/L	-	-	-	-	-	-	-	-	-	_	-	-	-	ND	-
Nitrate/Nitrite Nitrogen	mg/L	0,77	-	2.45		0.49		0.34	_	0.4		0.25		_	ND	ND N
Nitrate as N - Calculation	mg/L	7.0	-	72		7.1	_	7.2	_	7.6	_	7.2	_	_	ND 7.17	7.14 7.0
pH (Lab) pH (field)	std. units	7.9	6.75	7.2 7.35	7.31	7.35	6.2	7.86	6,57	6.82	7.36	7.29	7.25	_	7.17	7.1 7.2
	mg/L	60	0.75	34	-	50		38	-	95	-	44.4		-	27	26 2
Sulfate			***	22	_	8.5		5.7	_	ND	_	2	_	_	1.4	3
Sulfate Total Oganic Carbon (TOC) Temperature (field)	mg/L Celcius	9.4	6	4	16	15	8	6	13	15	7	5	12	-	5.1	5.5 13.

HISTORICAL DATA FOR MONITORING WELL PT-17 ASH LANDFILL

Parameters	Source: Units	Galton Mar 1989	NET Jan 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NET M# 1992	NET June 1992	GTC Dec 1992	BS Jan 1993	BS April 1993	ES June 1993
VOLATILE ORGANICS								SE 38-67 1 A									
hloro methane	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Bromomethane	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
inyl Chloride	μg/L μg/L		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
Aethylene Chloride	µg/L µg/L	_	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
,1-Dichloroethene	μg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
,1-Dichloroethane	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Chloroform	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
,2-Dichloroethane	µg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
1,1,1-Trichloroethane	μg/L	-	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NL
Carbon Tetrachloride Bromodichloromethane	µg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
1,2-Dichloropropane	μg/L μg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
is - 1,3 - Dirchloropropene	Hg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Trichloro ethene	µg/L	1007	170	90	400	340	92	220	460	529	75.1	100	72.4	160	140	27	210 NI
Dibro mochloro methane	иг/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1,2-Trichloroethane	Mg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Benzene	µg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
rans-1,3-Dichloropropene	µg/L	_	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI
Bro mo form	μg/L	_	ND ND	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	NI
Tetrachloroethene 1,1,2,2-Tetrachloroethane	μg/L ue/l		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Toluene	μg/L μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Chlorobenzene	μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Ethylbenzene	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
2-Chloroethylvinyl Ether	µg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	_	-
1,3 - Dichlorobenzene	Hg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		_		
1,2 - Dichloro benzene	μg/L	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	-	-
1,4 - Dichlorobenzene	Hg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	27	2	4
1,2-Dichloroethene (total) cis-1,2-Dichloroethene	μg/L													35			
trans - 1,2 - Dichloroethene	μg/L μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	
Trichlorofluoromethane	μg/L	_	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	-
Acetone	µg/L		-	_	-	_	-	-	-	-	_	_	_	-	ND	ND	NI
Carbon Disulfide	Mg/L	-	_	-	-	-	-	-	_	_	-	-	-	-	ND	ND	NI
4-Methyl-2 Pentanone	µg/L	-	-	_	_	_	-	_				-			ND	ND	NI NI
2-Hexanone	µg/L	-	-	_	-	-	-	_	-	-	-	-	_	-	ND ND	ND ND	NE NE
Styrene	μg/L.	_	_	_	-	-		_	_						ND	ND	NI
Xylene Total Volatile Organics	µg/L µg/L	0	170	90	400	342	92	238	460	529	75.1	100	72.4	195	167	30	254
Total votatile Organics	AND			*************													8088034-888-53
MRTALS		**********			0.0000	10000										100000000000000000000000000000000000000	
Aluminum	mg/L	_	-	_	-	-	-	-	-	***	-	-	-	-	17.1	-	293
Antimony	mg/L		-		-	-	-	-	-		-	AVD.	-	-	ND	_	NI
Arsenic	mg/L	ND		ND		ND ND		ND 0,086		ND 0,089		ND 0.062			0.144		NE 57.8
Barium	mg/L mg/L	0.072	_	ND	_	ND	_	0.086	_	0.089	_	0.002	_		0.00057	-	NE
Beryllium Cadmium	mg/L	ND	_	ND	_	ND	_	ND	-	ND	_	ND	_	_	ND	-	NE
Calcium	mg/L	-	-	-	_		_	-	-		-	_	_	_	129	-	216000
Chromium	mg/L	ND	_	0.02	_	ND	_	ND	_	ND		ND	_	_	0.0212	_	NE
Cobalt	mg/L	_	-	-	_	_	-		-	-	-		_	_	0.0135	-	NE
Copper	mg/L	-	-		-		_	-	-		-		-	_	0.016	-	3.
Iron	mg/L	ND	-	17	-	1.1	-	9.51	-	9.66	_	6.66	-	_	24.1	_	825
Lead	mg/L	ND	-	ND		ND		ND		ND		ND		_	0.0066		26500
Magnesium	mg/L	_	_	_	_		_		_	_	_			_	16.9 0.626	_	812
Manganese	mg/L	ND	-	ND	_	ND	_	ND	_	ND	_	ND	_	_	ND	-	NI
Mercury Nickel	mg/L mg/L	ND -		-		-	_		_	-	_		-	-	0.032		NI
Potassium	mg/L	1	-	ND	-	3.2	_	2.44	-	2.26	_	1.92	_	-	3.77	-	2200
Selenium	mg/L	ND		ND		ND		ND	-	ND	-	ND	_		0.0021	-	NE
	mg/L	ND	_	ND	-	ND	_	ND	-	ND	_	ND	-	_	ND		NI
Silver		29	-	23	-	29	-	22.4	-	30.7	_	21.8	-	-	26	-	101000
Sodium	mg/L			_		-	-	-		-					ND		NE NE
Sodium Thallium	mg/L		-	_	-	_	_	_	_	_	_	_	_	-	0.0227 0.0714	_	NL 47.5
Sodium Thallium Vanadium	mg/L mg/L	-					_	_	_		_	_			0.0714 ND	_	NI.
Sodium Thallium Vanadium Zinc	mg/L mg/L mg/L	=	=	_	_	-									110	00.000.00.000.000	AL.
Sodium Thallium Vanadium Zinc	mg/L mg/L					_	_										
Sodium Thallium Vanadium Zine Cyanide	mg/L mg/L mg/L				Ξ.	_	_	-					3 3 × 5 × 1				
Sodium Thallium Vanadium Zine Cyanide MISCELLANBOUS	mg/L mg/L mg/L mg/L			- ND	= =	-	0.064	0.186	_	0.27	_	0.07	_	_	0.1	-	0.22
Sodium Thallium Vanadium Zine Cyanide MISCELLANBOUS Total Organic Halogens/Halides (TOX)	mg/L mg/L mg/L mg/L mg/L	0.042	<u>-</u> -				-	37.4	-	32.3	-	31.6	Ξ	=	30	25	2.7
Sodium Thallium Vanadium Zine Cyanide MISCHLANBOUS Total Organic Halogens/Halides (TOX) Chloride	mg/L mg/L mg/L mg/L mg/L mg/L	Ξ.	<u>-</u>	- dn	_	26 620	0.064		845			31.6 750	740		30 470	420	530
Sodium Thallium Vanadium Zine Cyanide MISCHILANBOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field)	mg/L mg/L mg/L mg/L mg/L	0,042 71	<u>-</u> -	ND 46		26 620	-	37.4	-	32.3	-	31.6	-	-	30 470 721		2.7
Sodium Thallium Vanadium Zine Cyanide MISCHLIANBOUS Total Organic Halogens/Halides (TOX) Coloride Conductivity (field) Conductivity (lab) Nitrite Nitro gen	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.042 71 730	370	ND 46 340	610	620	660	37.4 580	-	32.3 870	800	31.6 750 593			30 470 721 ND	500	530 720
Sodium Thallium Vanadium Zine Cyanide MISCHLLANBOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (inb) Nitrite Nitro gen Nitrate an N	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0,042 71	<u>-</u> -	ND 46 340	610	620	660	37.4 580	-	32.3 870	800	31.6 750	=	=	30 470 721 ND 0.11	420	536 720
Sodium Thallium Vanadium Zine Vyanide MISCHLIANBOUS Total Organic Halogens/Halides (TOX) Cloride Conductivity (field) Conductivity (field) Nitrate as IN	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0,042 71 730 - - 1.2	370	ND 46 340 	610	0.39	660	37.4 580 - 0.15	-	32.3 870 — 0.34	800	31.6 750 593 - 0.56	-	-	30 470 721 ND 0.11 0.11	420 500 - 0.39	530 720 0.28
Sodium Thallium Vanadium Line Cyanide MISCHILANBOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (field) Nitrate an N Nitrate an N Nitrate an N H(Lab)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.042 71 730 - 1.2	370	ND 46 340 - 0.45 - 7.1	610	0.39 - 7.1	660	37.4 580 - - 0.15 - 7.2	845 - - - - -	32.3 870 — 0.34 — 7.6	800 - - - -	31.6 750 593 - 0.56	=	-	30 470 721 ND 0.11 0.11 7.16	420 500 - 0.39 7.19	530 720 0.28
Sodium Thallium Vanadium Zinc Cyanide MISCELLANBOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (fielb) Nitrite Nitro gen Nitrate as N Nitrate as N — Calculation pH (Lab) pH (field)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.042 71 730 - 1.2 - 8	370	ND 46 340 - 0.45 - 7.1 6.96	610	620 - 0.39 7.1 7.2	660	37.4 580 - - 0.15 - 7.2 7.75	-	32.3 870 — 0.34 — 7.6 6.79	800	31.6 750 593 - 0.56 7.3 7.13	7.12	-	30 470 721 ND 0.11 0.11 7.16 6.8	420 500 - 0.39 - 7.19 6.94	22 530 720 0.28 6.97
Sodium Thallium Vanadium Zine Cyanide MISCELLANBOUS Total Organic Halogens/Halides (TOX) Caloride Conductivity (field) Conductivity (lab) Nitrite Nitro gen Nitrate as N — Calculation pH (Lab) pH (field) Sulfate	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.042 71 730 - 1.2 - 8 - 86	370	ND 46 340 0.45 7.1 6.96 110	- 610 - - - - - - 7.2	7.1 7.2 20	660	37.4 580 - 0.15 - 7.2 7.75 73.7	845 - - - - - 6.51	32.3 870 - 0.34 - 7.6 6.79 72.4	800 - - - -	31.6 750 593 - 0.56 7.3 7.13 65.1	=	-	30 470 721 ND 0.11 0.11 7.16 6.8	420 500 - 0.39 - 7.19 6.94 24	22 530 720 0.28 6.97
Sodium Thallium Vanadium Zinc Cyanide MISCELLANBOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (fielb) Nitrite Nitro gen Nitrate as N Nitrate as N — Calculation pH (Lab) pH (field)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.042 71 730 - 1.2 - 8	370	ND 46 340 - 0.45 - 7.1 6.96	610	620 - 0.39 7.1 7.2	660	37.4 580 - - 0.15 - 7.2 7.75	845 - - - - -	32.3 870 — 0.34 — 7.6 6.79	800 - - - -	31.6 750 593 - 0.56 7.3 7.13	7.12	-	30 470 721 ND 0.11 0.11 7.16 6.8	420 500 - 0.39 - 7.19 6.94	530 720 0.28

					HI	STORICAL DA	ATA FOR MOR ASH LAND		ELL PT-18							
Parameters	Source: Units	NET Jan 1990	NET Mar 1990	NET Jane 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NET Mæ 1992	NET Jane 1992	GTC Dec 1992	RS Jan 1993	ES April 1993	June 199
VOLATILE ORGANICS				880000000000000000000000000000000000000					1.1794999							
Chloro methane Bro mo methane	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
Vinyl Chloride	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	NI
Chloroethane Methylene Chloride	µg/L µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
1,1-Dichloroethene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	N
1,1-Dichloroethane Chloroform	μg/L μg/L	ND 86	ND 230	ND ND	ND 610	ND 700	ND 490	ND 490	ND 457	ND 157	ND 11.7	ND 175	ND 270	ND 200	ND 300	N1 30
1,2-Dichloroethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1,1-Trichloroethane Carbon Tetrachloride	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	N
Bro modichloro methane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
1,2-Dichloropropane cis-1,3-Dirchloropropene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
Trichloroethene	μg/L	2500	7600	5900	17000	22000	15000	12000	10000	3710	9840	7920	14000	10000	16000	1300
Dibromochloromethane	μg/L	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N
1,1,2-Trichloroethane Benzene	μg/L μg/L	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND 2.58	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
trans-1,3-Dichloropropene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N)
Bromoform Tetrachloroethene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND 250	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
1,1,2,2-Tetrachioroethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N:
Toluene Chlorobenzene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N
2-Chloroethylvinyl Ether 1,3-Dichlorobenzene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND _	_	_	
1,2-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-		_	
1,4 - Dichlorobenzene 1,2 - Dichloroethene (total)	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	440	450	59
cis-1,2-Dichloroethene	μg/L	-	-	_	_	-	-	_		-		_	700	-	-	77
trans-1,2-Dichloroethene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	_	-	
Trichlorofluoromethane Acetone	μg/L μg/L	- 10	- ND	-	-	ND -	- ND	- 140		-	- ND		- ND	ND	ND	N1
Carbon Disulfide	µg/L	-	_	-	-	-	-	-	-	-	_	_	-	ND ND	ND ND	NI NI
4-Methyi-2 Pentanone 2-Hexanone	μg/L μg/L		· -						-					ND	ND	NI NI
Styrene	μg/L	_	_	-	_	-	-	_		_	_			ND ND	ND ND	NI NI
Xylenes (total) Total Volatile Organics	μg/L μg/L	2586.00	7830.00	5900.00	17610.00	22700.00	15740.00	12490.00	10459.58	3871.70	9851.70	8095.00	14980.00	10640.00	16750	1389
METALS	22.20.00.00.00.00.00.00.00.00.00.00.00.0															
Aluminum	mg/L	-		-	_				_	-	-		-	11.3	_	58
Antimony	mg/L mg/L	_	ND	-	ND	_	ND	_	ND	_	ND	_	_	ND ND	_	NI 1.
Arsenic Barium	mg/L		ND	-	ND	_	0.054	_	0,043	_	0.07		-	0.123	-	42. 0.4
Beryllium Cadmium	mg/L	_	ND	_	ND	_	ND	_	ND	_	ND	=		0.00079 ND		0.4 N1
Calcium	mg/L mg/L		_	_	_	_	-	-	-	=	_		_	223		21600
Chromium	mg/L	_	0.003	_	ND	_	ND	_	ND	-	ND		_	0.0127 ND	_	NI NI
Cobalt Copper	mg/L mg/L		_	-	-		-	_			-			0.0246		3.
Iron	mg/L	-	2	_	8.5 ND	-	3.89 ND	_	1.38 ND	-	8.14	_	_	14	_	82 2.
Lead Magnesium	mg/L mg/L		ND		- ND		- ND		ND -		ND -			0.0166 30.3		2650
Manganese	mg/L	_	ND	_	ND	_	ND	-	ND		ND		_	1.02 0.00036	_	81 NI
Mercury Nickel	mg/L mg/L	-	- 40		-		- 10		- ND		- ND			0.0185		NI
Potassiu m	mg/L	-	ND	-	5.1	-	2.77	_	2.31	-	2.79	-	-	3.54	-	220
Scienium Silver	mg/L mg/L	-	ND ND		ND ND		ND ND	-	ND ND		ND ND		-	ND ND	-	NI NI
Sodium	mg/L	-	86	-	99	-	102	-	107	_	95.5	_	-	100	-	10100
Thallium Vanadium	mg/L mg/L							-						ND 0.013		NI NI
Zinc	mg/L	_	-	-	_	-	-	_	_	-	-	-	_	0.511	_	47.
Cyanide	mg/L			-	-				_		- 5.5.2.5.5.2.2.2.2.2	_		ND	-	NI
MISCELLANEOUS COMPGUNDS																
Total Organic Halogens/Halides (TOX)	mg/L mg/L		0.333 72	_	75.2	1.88	1.7 76.8	_	4.422 66.8	_	4.52 52.6	_	_	4.5 57	12 59	6.
Chloride Conductivity(field)	mg/L μmhos/cm	670	680	1800	1600	1400	1300	1650	1710	2100	1788	1370		975	900	110
Conductivity (lab)	μmhos/cm	_	-	_				_		=	1548			1440 ND	1300	140
Nitrite Nitrogen Nitrate as N	mg/L mg/L		ND		ND		ND		ND	Uliage-s	ND	_	_	ND 0.01	ND	NI
Nitrate as N - Calculation	mg/L	-	_	-	-	_		-	-	-	7	_	_	0.01	_	
pH (Lab) pH (field)	std. units	6.7	6.9 6.8	6.89	6.9 7	6.5	6.9 7.32	6.54	7.5 6.69	6,86	6.38	6.88		7.08 6.89	7.11 6.89	6.8 7.0
Sulfate	mg/L	-	340	_	245	-	287.5	_	230	-	351	-	-	280	200	22
Total Organic Carbon (TOC) Temperature (field)	mg/L Celcius	8	32 5	15	12 14	10	14.6	13	11.4 15	9	6	11		7.25	5 5	12.
Nephelometric Turbidity Units	NTUs	8	5	15	14	10	8	13	15	9	•			>200	46.9	6.4+

					HI	STORICAL DA	ASH LAND		ELL PT-20							
Firmeters	Source: Units	NET Jan 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NBT M# 1991	NET Jane 1991	NET Sept 1991	NET Dec 1991	NET Mar 1992	NET June 1992	NET Dec 1992	ES Jan 1993	RS April 1993	June 1990
VOLATILE ORGANICS								*****	***************************************		* ***********				, y	~
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Bromomethane Vinyl Chloride	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	NE
Chloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND
Methylene Chloride	Mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloro ethene 1,1-Dichloro ethane	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
1,2-Dichloro ethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND
Carbon Tetrachloride Bromodich loromethane	µg/L µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
1,2-Dichloro propane	Hg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dirchloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene Dibrom ochloromethane	μg/L	23 ND	26 ND	46 ND	52 ND	ND	35 ND	36 ND	30.1 ND	34.2 ND	20.9 ND	17.9 ND	ND	23 ND	6	32 ND
1,1,2 -Trichloroethane	µg/L µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND
Benzene	μg/L	ND	ND	ND	ND.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform Tetrachloroethene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
1,1,2,2-Tetrachloroethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	ND ND
Toluene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzen e	MR/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene 2-Chloroeth yivinyi Ether	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND
1,3-Dichloro benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	_	_
1,2-Dichloro benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-		-	-
1,4-Dichloro benzene 1,2-Dichloro ethene (total)	mg/L mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		26	7	40
cis-1,2-Dichloroethene	μg/L		_			_		_		-			26			49
trans-1,2-Dichloroethene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Trichlorofluoromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	-	-
Acetone Carbon Disulfide	μg/L μg/L	_	_	_	_	_	_	_	_	_	_	_	_	ND ND	ND ND	ND
4-Methyl-2 Pentanone	µg/L	_	-	-	-	_	_		-	-	-	_	_	ND	ND	ND ND
2-Hexanone	µg/L	-	_	_	-	-	-	-		-	-	-	-	ND	ND	ND
Styrene Xylenes (total)	μg/L	_	_	_			_	_	_	_	_	_		ND ND	ND ND	ND ND
Total Volatile Organics	μg/L μg/L	23	26	46	52	35	35	36	30.1	34.2	20.9	17.9	50	49	13	81
Aluminum	mad								-		_			7.01		2380
Antimony	mg/L mg/L	_		_	_	_	_	_	_	_	_	_	_	ND	_	ND
Arsenic	mg/L		ND		ND	-	ND		-	_	ND	-	_	ND	_	ND
Barium	mg/L	_	ND	-	ND	-	0.075	_	-	-	0.062	-	-	0.111	-	91.8
Beryllium Cadmium	mg/L mg/L	_	ND	-	ND	_	ND	_	_	_	ND	_		ND ND		0.32 ND
Calcium	mg/L		-	_	-	-	-	_		-	-	-	-	144	-	165000
Chromium	mg/L	-	0.003	-	ND	-	ND	-	-	-	ND	-	-	0.0086	-	ND
Cobalt	mg/L						-				_			0.0069	-	ND 3.5
Copper	mg/L mg/L	_	1.6	_	8.6	_	3.48	_	_	-	2.19	_	_	8.91	_	3250
Lead	mg/L	-	ND	_	ND		ND	_	_	-	ND	-	_	0.003		1.4
Magnesium	mg/L	-	_	_	-	-	-	_	-	-	-	-	-	16.1	-	17300
Manganese Mercury	mg/L mg/L		ND		ND	_	ND	_	_	_	ND	_	_	0.216 ND		79.8 ND
Nickel	mg/L		_		_		_	-	_	_			_	0.012		8.9
Potassium	mg/L	_	ND	-	4.5	-	1.79	-	-	-	1.44	-	-	1.9	-	2350
Selenium	mg/L		ND ND		ND ND		ND ND				ND ND	_		ND		ND ND
Silver	mg/L mg/L	_	35	_	44	_	32.7	_	_	_	30.4	_	_	ND 29.7	_	34000
Sodium			-	_		-	-			_	_	_	-	ND	_	ND
Sodium Thallium	mg/L			-	-	-	-	-	-	-	-	-	_	0.0097	-	3.7
Thallium Vanadium	mg/L	-	-						-	_	_	-	-	0.0315	_	13.7 1.9
Thallium Vanadium Zinc	mg/L mg/L	=	-				_	_	_	_		_	_	ND		1.3
Thallium Vanadium	mg/L	Ξ	Ξ.						_	_	-	_	_	ND	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Thellium Vanadium Zinc Cyanide MISCELLANEOUS	mg/L mg/L mg/L	Ξ	= =	Ξ			_	_	_			_	_			
Thallium Vanadium Zinc Cyanide MISCELLANEOUS Total Organic Halogens/Halides (TOX)	mg/L mg/L mg/L	= =	0.016	= = =		0.024	0.044	<u>-</u>		-	0.02	_	-	0.02	ND	0.03
Thallium Vanadium Zine Cyanide MISCRLANEOUS Total Organic Halogens/Halides (TOX) Chloride	mg/L mg/L mg/L mg/L	=	0.016 24	- - - 720	47.7	0.024	0.044	- - 1030	_	=	0.02 21	Ξ		0.02 13.7	9	33
Thallium Vanadium Zinc Cyanide MISC BL LANBOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field)	mg/L mg/L mg/L	= =	0.016			-	0.044	-		-	0.02	_	=	0.02		33 675
Thallium Zine Cyanide MISCRLANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (lab) Nitrite Nitrogen	mg/L mg/L mg/L mg/L mg/L mg/L	- 685	0.016 24 360	720	880	660	0.044 17.7 560	1030	1110	1040	0.02 21 1162 766	730	=======================================	0,02 13,7 510 796 ND	9 410 690	910
Thallium Vanadium Zine Cyanide MISCELLANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (Beld) Conductivity (Iab) Nitrite Nitrogen Nitrate/Nitrite Nitrogen	mg/L mg/L mg/L mg/L mg/L mg/L µmhos/cm mg/L mg/L mg/L	685	0.016 24 360	720	880	660	0.044 17.7 560 - -	1030	1110	1040	0.02 21 1162 766 - ND	730	-	0.02 13.7 510 796 ND 0.06	9 410 690	33 675
Thallium Zinc Cyanide MISCRILANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (lab) Nitrite Nitrogen Nitrate Nitrice Nitrogen Nitrate on Nitrate on Nitrate on Notation	mg/L mg/L mg/L mg/L mg/L mmhos/cm mg/L mg/L mg/L mg/L	685	0.016 24 360	720	0.09	660	0.044 17.7 560 - 0.09	1030	1110	1040	0.02 21 1162 766 ND	730	=======================================	0.02 13.7 510 796 ND 0.06 0.06	9 410 690 - ND	910 ND
Thallium Vanadium Zinc Cyanide MISC BLLANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (Beld) Conductivity (Inb) Nitrite Nitrogen Nitrate/Nitrite Nitrogen Nitrate as N - Calculation pH (Lab)	mg/L mg/L mg/L mg/L mg/L mg/L µmhos/cm mg/L mg/L mg/L	685	0.016 24 360	720	880	660	0.044 17.7 560 - 0.09 - 7.2 7.58	1030	1110 - - - -	1040	0.02 21 1162 766 - ND	730	=======================================	0.02 13.7 510 796 ND 0.06	9 410 690	33 675 910 ND
Thallium Vanadium Zinc Cyanide MISCELLANEOUS Total Organic Halogens/Halides (TOX) Conductivity (field) Conductivity (lab) Nitrite Nitrogen Nitrate/Nitrite Nitrogen Nitrate as N - Calculation pH (Lab) pH (field) Sulfate	mg/L mg/L mg/L mg/L mg/L µmhos/cm µmhos/cm mg/L mg/L mg/L std. units std. units mg/L	685	0.016 24 360 	720 - - - -	0.09 7.1 7.15	660	0.044 17.7 560 - 0.09 7.2 7.58 104.5	1030 - - - - - - - - - - - - - - - - - -	1110	1040	0.02 21 1162 766 ND -7.3 7.15	730	=======================================	0.02 13.7 510 796 ND 0.06 0.06 7.17 6.88 120	9 410 690 ND 7.04 7.36 70	33 675 910 ND 6.93 7.14
Thallium Zinc Cyanide MISC BLANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (lab) Nitrite Nitrogen Nitrate/Nitrite Nitrogen Nitrate as N — Calculation pH (Lab) pH (field)	mg/L mg/L mg/L mg/L mg/L mg/L µmhos/cm mg/L mg/L mg/L std. units	685	0.016 24 360 0.36 7.11 7.16	720 - - - -	0.09 7.1 7.15	660	0.044 17.7 560 - 0.09 - 7.2 7.58	1030 - - - - - - - - - - - - - - - - - -	1110	1040 	0.02 21 1162 766 ND - 7.3 7.15	730 - - - - - - 7.18	=======================================	0.02 13.7 510 796 ND 0.06 0.06 7.17 6.88	9 410 690 - ND - 7,04 7,36	33 675 910 ND 6.93 7.14

HISTORICAL DATA FOR MONITORING WELL PT-21 ASH LANDFILL

	Sources	NET	NET	NET	NET	NET	NBT	NET	NBT	NET	NET	NET	GTC	BS	HS	· ····································
Prender	Units	Jes 1990	Mar 1990	June 1990	Sept 1990	Des 1990	Mar 1991	June 1991	Sept 1991	Dec 1991	Mar 1992	June 1992	Dec 1992	Jan 1995	April 1993	Jane 1993
VOLATILE ORGANICS														en lase po		
Chloromethane	μg/L	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND ·	-	ND	ND
Bromomethane Vinyl Chloride	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	ND ND	ND
Chloroethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND ND
Methylene Chloride	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND ND
1,1-Dichloro ethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND
1,1-Dichloro ethane	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND ND	ND	-	ND ND	ND ND
Chloroform 1,2-Dichloro ethane	μg/L μg/L	ND	ND	ND ND	ND	ND	ND 1	ND	ND ND	ND ND	ND ND	ND	ND ND	_	ND	ND
1,1,1 - Trichloroethane	μg/L	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND		ND	ND ND ND
Carbon Tetrachloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND
Bromodich loromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND
1,2-Dichloro propane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND
cis-1,3-Dirchloropropene Trichloroethene	μg/L	ND ND	ND ND	ND ND	ND 1	ND	ND	ND	ND ND	ND 2.5	ND 2.4	ND 2.3	ND ND		ND ND	ND 3
Dibrom ochloromethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
1,1,2 - Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND
Benzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	6
trans-1,3-Dichloropropene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	ND ND	ND ND
Bromoform Tetrachloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	_	ND	NE
1,1,2,2-Tetrachloroethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Toluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND
Chlorobenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND
Ethylbenzene	μg/L	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	_	ND	ND
2-Chloroethylvinyl Ether 1.3-Dichlorobenzene	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND	ND	ND	ND ND	ND	_	_	_
1,2-Dichloro benzene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,4-Dichloro benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-
1,2-Dichloro ethene (total)	μg/L	_	_	-	_	-	_						-	-	10	13
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-	-	-	17	_	-	-
trans-1,2-Dichloroethene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	-	-
Trich lorofluoromethane Acetone	μg/L μg/L	ND -	עט		ND -	- ND	- ND	ND -	ND -	ND -	- ND	- ND			ND	NE
Carbon Disulfide	μg/L	_	_	_	_	_	_	_	_	_	_	-	-	-	ND	NE
4-Methyl-2 Pentanone	μg/L	_	_	-	-	-	_		111-				-	_	ND	NE NE
2-Hemmone	μg/L	_	_	_	-	_	-	-	-	-	-	-	-	-	ND	NE
Styrene	μg/L	_	-	_		-	_		_	_		_	_	_	ND ND	NE NE
Xylenes (total) Total Volatile Organics	μg/L		0	0	1	10	4	2	0	2.5	2.4	2.3	17	0	10	22
Total volatile Cagaines	μg/L					***************************************										
METALS					35.5								reserves of the second	2111		
Aluminum	mg/L	-	-	-	-	-	-	-	-	_	_	-	_	_	_	
Antimony	mg/L	_	_		ND	_	ND						_		_	-
Arsenic Barium	mg/L mg/L				1.1		0.144	-	_							
Beryllium	mg/L	-	_	_	-	_	_	_	-	_	-	_	-	_	-	-
Cadmium	mg/L	-	_		ND		ND	-								
Calcium	mg/L	_	-	-	-	-	-	-	_	-	-	-	_	-	-	-
Chromium	mg/L	_	-	_	0.08	-	ND	_	_	_	_	_	_	_	-	
Cobalt	mg/L mg/L															
Copper Iron	mg/L	_	_	_	85	_	0.842	_	_	_	-	_	_	_	-	_
Lead	mg/L	_	_	-	0.027		ND	_	_	_	-	_	_	_		
Magnesium	mg/L	-	-	-	-	_	-	_	-	-	_	-	-	-	-	-
Manganese	mg/L		_	_	ND	_	ND	_	_	_	_	-	_	_		-
Mercury Nickel	mg/L				ND -		- ND									
Potassium	mg/L mg/L	_	_	_	9.5	_	45.6	_	_	-	-	_	-	-	-	_
Selenium	mg/L	-	_		ND	_	ND	_	-	-	-	-	_	-	_	-
Silver	mg/L	-	-	-	ND	-	ND	_		-	-	-	-	-	_	-
Sodium	mg/L	_	-	_	32	_	45.6	_	_	-	_	-	-	_	_	-
Thallium	mg/L				<u>_</u>											
Vanadium Zinc	mg/L mg/L		_	_	_	_	_	_	_	_	_	_	_	_	_	_
Cyanide	mg/L	_	_	_	ND		ND						_			
	1			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,												
MISCELLANEOUS			20000000			0.031	0.03	110-450-550-5566				2000			759999	
Total Organic Halogens/Halides (TOX)	mg/L	-	_	_	74.2	0.03 (0.02	_		_	_	_	_	_	_	
Chloride Conductivity (field)	mg/L µmhos/cm	460	400	670	750	900	410	980	1100	1130	1130	970		_	600	
Conductivity (left)	umbos/cm	-	-	-	-		-		-	-	-	-		-	-	
Nitrite Nitrogen	mg/L	_	-	_	-	_	-	-		-	_	_	-	-	_	-
Nitrate/Nitrite Nitrogen	mg/L	-			0.6	_	0.26			_					_	
Nitrate as N - Calculation	mg/L	-	-	-		-	_	-	-	_	-	-	-	_	-	-
pH (Lab)	std. units	-		7.4	7.7	-	8.39	-	706	224	7.00	726	_	-	7.04	-
pH (field)	std. units	6,95	7,37	7.4	7.45	6.85	170	6.86	7.06	7.24	7.02	7.36			7.04	
Sulfate	mg/L mg/L	_	_	_	6.6	_	5.5	_	_	_	_	_	_	_	_	
Total Operanic Carbon (TOC)																
Total Organic Carbon (TOC) Temperature (field)	Celcius	10	8	13	14	8	8	11	12	10	8	10	-	_	9	_

HISTORICAL DATA FOR MONITORING WELL PT-22 ASH LANDFILL

Chloromethane Bromomethane Bromomethane Bromomethane Bromomethane Bromomethane Lipt Lipt Lipt Lipt Lipt Lipt Lipt Lipt	ND ND ND ND	40.00	Mar 1990	nhallanioocowacoccodii	And the second second second second second									Jan 1993	April 1993	June 1993
Chloromethane Pagl. Romomethane Pagl. Pick on Methane Pick on	ND ND ND											Jacobski se si ili si si si si	vi 885.05, 1			
Viny Chloride Chlorotchane Methylene Chloride 1,1-Dichlorotchane Methylene Chloride 1,1-Dichlorotchane Methylene Chloride 1,1-Dichlorotchane Methylene Chloride Methylene Chloride Methylene Chloride Methylene Chloride Methylene	ND ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorocthane Methylene Chloride 1,1—Dichlorocthane 1,1—Dichlorocthane 1,1—Dichlorocthane 1,2—Dichlorocthane 1,2—Trichlorocthane 1,2—Trichlorocthane 1,2—Trichlorocthane 1,2—Dichlorocthane 1,2—Dichloroctha	ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
Methylene Chloride I,1 - Dichloroethane			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND
1,1—Dichloroethane 1,1—Dichloroethane 1,2—Dichloroethane 1,2—Dichloroethane 1,2—Dichloromethane 1,2—Dichloromethane 1,2—Dichloropropene 1,2—Trichloroethane 1,2—Dichloropropene 1,2—Dichloropropene 1,3—Dichloropropene 1,4,4—Trichloroethane 1,4,5—Tetrachloroethane 1,4,5—Tetrachloroethane 1,4,6—Dichloropropene 1,4,6—Dichloroprop	ND	ND	ND	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform ###	ND	, ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
1,2—Dichlorocthane 1,1,1—Trichlorocthane 2,2—Dichloropropane 1,2—Dichloropropane 1,2—D	ND ND		ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Tichlorocthane Carbon Tetrachloride Beomodichloromethane 1,2-Dichloropropane ministration 1,2-Dichloropropane ministration 1,1,2-Tichloropropane ministration 1,1,2-Trichlorocthane ministration 1,1,2-Trichlorocthane ministration 1,1,2-Trichlorocthane ministration 1,1,2-Trichlorocthane ministration 1,1,2-Tetrachlorocthane ministration 1,1,2-Dichlorocthane ministration 1,2-Dichlorocthane ministration ministration 1,2-Dichlorocthane ministration minist	7	7	6	10	8	7	8	8	ND	3	4.4	ND	5.2	5	ND	ND
Beomodichloromethane April	1		ND	ND	ND	ND	1	ND	ND	1.3	ND	ND	ND	ND	ND	ND ND
1,2—Dichloropropane is-1,3—Dirchloropropene pgL Trichloroethene Dibromochloromethane 1,1,2—Trichloroethane pgL Benzene trans—1,3-Dichloropropene pgL Trichloroethene Benzene trans—1,3-Dichloropropene pgL Trichloroethene pgL Trichloroethene pgL Trichloroethene pgL Trichloroethene pgL Trichloroethene pgL Trichlorobenzene pgL Trichloroethene pgL Tr	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
cis-1,3-Dirchloropropener	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND
Trichloroethene Dibromoch Izon methane 1,1,2-Trichloroethane Benzzene Hg/L Benzzene Hg/L Tetrachloroethene Hg/L Tetrachloroethene Hg/L Tetrachloroethene Hg/L Tetrachloroethene Hg/L Tetrachloroethene Hg/L Toluene Hg/L Toluene Hg/L Chloroethene Hg/L Toluene Hg/L Chloroethyvinyl Ether Hg/L 1,3-Dichlorobenzzene Hg/L 1,2-Dichloroethene Hg/L 1,2-Dichloroethene Hg/L 1,2-Dichloroethene Hg/L 1,2-Dichloroethene Hg/L Trichlorofloroethene Hg/L Actone Lam-1,2-Dichloroethene Hg/L Trichlorofloroethene Hg/L Actone Lambon Hg/L Actone Lambon Hg/L -Methyl-2-Pentanone Hg/L Styene Hg/L MBTALS Aluminum MBTALS Aluminum MBTALS Aluminum MBTALS Aluminum Mg/L Antimony Antimony Mg/L Cadmium Mg/L Cadmium Mg/L Cadmium Mg/L Cadmium Mg/L Cadmium Mg/L Cadmium Mg/L Cosper Mg/L Mangassum Mg/L Mg/	ND	, ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2—Trichloroethane Benzene	87	. 87	100	200	87	93	110	100	74.9	69.3	73.9	98.9	89 ND	ND	79 ND	87 ND
Benzene ##L Trans-1,3-Dichloropropene ##L Bromoform ##L Tetrachloroethene ##L Tetrachloroethene ##L Tolusene ##L Ehybtenzene ##L L3-Dichlorobenzene ##L L3-Dichloroethene ##L L3-Dichloroethene ##L Trans-1,2-Dichloroethene ##L Trans-1,2-Dichloroethene ##L Acetone ##L Acetone ##L Acetone ##L Acetone ##L Acetone ##L Acetone ##L Arenic ##L Acetone ##L Acetone ##L Arenic ##L Acetone ##L Acetone ##L Arenic ##L Acetone ##L Arenic ##L Arenic ##L Arenic ##L Arenic ##L Arenic ##L Arenic ##L Antimony ##L Ant	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND
trans—1,3—Dichleropropene ### ###	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform ### Lettrachloroethene ### Lettrach	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND ND ND
1,1,2,2—Tetrachloroethane Tolaene	ND	, ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tolsee ###	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Chlorobenzene ##L Chlorobenzene ##L Ethylbenzene ##L 2-Chloroethylvinyl Ether ##L 1,3-Dichlorobenzene ##L 1,3-Dichlorobenzene ##L 1,4-Dichlorobenzene ##L 1,4-Dichlorobenzene ##L 1,2-Dichloroethene ##L cis-1,2-Dichloroethene ##L cis-1,2-Dichloroethene ##L Trichloroflucromethane ##L Acctone ##L Carbon Disulfide ##L 4-Methyl-2 Pentanone ##L Styene ##L Styene ##L WHI METALS Aluminum ##L Antimony mg/L Arsenic mg/L Barium mg/L Cadmium mg/L Cadmium mg/L Cadmium mg/L Cadmium mg/L Cadmium mg/L Chonium mg/L Cohalt mg/L Copper mg/L Iron mg/L Mangassium mg/L Mangassium mg/L Mangassium mg/L Mangassium mg/L Mangassium mg/L Schenium mg/L Schenium mg/L Copper mg/L Iron mg/L Mangassium mg/L Mangassium mg/L Mangassium mg/L Schenium mg/L Schenium mg/L Mangassium mg/L Miscallaneous Total Organic Halogens/Halides (TOX) Mg/L Conductivity (field) mn/o/m Mitrite Nitrogen	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bityltenzene ### L 2-Chlorocthytvinyt Bither ### L 1,3-Dichlorobenzene ### L 1,3-Dichlorobenzene ### L 1,3-Dichlorobenzene ### L 1,4-Dichlorobenzene ### L 1,2-Dichlorobenzene ### L 1,2-Dichlorocthene ### L 1,2-Dichlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND.	ND	ND	ND
1,3—Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND	ND	ND	ND
1,2—Dichlorobenzene	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND -			
1,4 — Dichloro benzene 1,2 — Dichloro ethene (total) cis — 1,2 — Dichloro ethene trans — 1,2 — Dichloro ethene Trichloro fluoro methane Acctone Acctone Acctone Acctone Acctone Acctone Appl. Acctone Appl. Acctone Appl. Appl. Styene Appl. Appl. Styene Appl. Appl. Aluminum Antimony METALS Aluminum METALS Aluminu	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-		-	
1,2—Dishloroethene (total) cis -1,2—Dishloroethene trans -1,2—Dishlor	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-		-	-
trans-1,2-Dichloroethene	_	-				_							150	140	140	140
Trichlorofluoromethane	4	-	ND	ND	ND	4	4	3	ND	1.4	1.7	2.4	ND		_	
Acctone Acctone Acctone Acrebon Disulside A-Methyl-2 Pentanone Appl. A-Methyl-2 Pentanone Appl. Appl. Appl. Appl. Appl. Appl. Appl. Aluminum Antimony Antimony Antimony Antimony Berytlium Berytlium Mg/L Cadmium Mg/L Cadmium Mg/L Cadmium Mg/L Cadmium Mg/L Cabalt Mg/L Cobalt Mg/L Cobalt Mg/L Mg/L Cobalt Mg/L Copper Mg/L Mg/L Mg/L Mg/L Mg/L Mg/L Mg/L Mg/L	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	_
4-Methyl-2 Pentanone	-	_	-	-	-	_	_	-	_	-	-	-	-	ND	ND	ND
2—Hexmone Stytene μg/L Xylenes (total) μg/L Xylenes (total) μg/L Xylenes (total) μg/L Total Volatile Organics μg/L Aluminum mg/L Antimony mg/L Artenic mg/L Barium mg/L Barium mg/L Cadmium mg/L Cadmium mg/L Calcium mg/L Cadmium mg/L Cobalt mg/L Cobalt mg/L Lend mg/L Iron mg/L Iron mg/L Manganese mg/L Manganese mg/L Manganese mg/L Manganese mg/L Sickel mg/L Sickel mg/L Sodium mg/L Nickel mg/L Sodium mg/L Sodium mg/L Sodium mg/L Vanadium mg/L Notal mg/L Coductivity (feld) mg/L MBCRILLANBOUS Total Organic Halogens/Halides (TOX) Conductivity (feld) μmhos/cm Mp/L Conductivity (feld) μmhos/cm mg/L Conductivity (feld) μmhos/cm mg/L Conductivity (feld) μmhos/cm mg/L Thitrite Nitrogen	-	_	-	_	-	-	_	-		-	-		_	ND ND	ND ND	ND
Styene Aylones (total) MBTALS Aluminum myL Artenic myL Beryllium myL Beryllium myL Cadmium myL Cadmium myL Cadmium myL Cadmium myL Cadmium myL Chromium myL Chromium myL Chromium myL Chromium myL Cobalt myL Lead myL Iron myL Iron myL Stylium myL Stylium myL Cobalt myL Iron myL Iron myL Iron myL Iron myL Stylium myL Magnesium myL Magnesium myL Magnesium myL Selenium myL Selenium myL Sodium myL Solium myL														ND	ND	ND ND
Xylenes (total)	_	_	_	_	_	_		-	_	-	-	-	-	ND	ND	ND
Aluminum Antimony Antimony Antimony Antimony Antimony Antimony Antimony Barium Beryllium mg/L Cadmium mg/L Cadmium mg/L Calcium mg/L Chromium mg/L Chromium Cobalt mg/L Lend mg/L Iron mg/L Iron mg/L Mapnesium mg/L Mapnesium mg/L Mapnesium mg/L Mercury Nickel mg/L Mercury Nickel mg/L Mercury Nickel mg/L Mercury mg/L Coductivity mg/L Conductivity (field) mg/L Conductivity (field) mg/L Conductivity (field) mg/L	_	_		_		_			-			- 1017	-	ND	ND	ND
Alu minum	99	. 99	106	216	95	104	123	111	74.9	75	80	101.3	244.2	234	219	227
Aluminum my/L Antimony mg/L Arsenic mg/L Barium mg/L Beryllium mg/L Cadmium mg/L Cadmium mg/L Cadmium mg/L Cobalt mg/L Cooper mg/L Iron mg/L Lead mg/L Iron mg/L Iron mg/L Iron mg/L Iron mg/L Iron mg/L Iron mg/L Magnesium mg/L Magnesium mg/L Magnesium mg/L Mercury mg/L Nickel mg/L Potassium mg/L Nickel mg/L Selenium mg/L Silver mg/L Sodium mg/L Thallium mg/L Sodium mg/L Thallium mg/L Tine mg/L Tyandie mg/L Total Ceganic Hailogens/Haildes (TOX) Cyanide MISCRILANEOUS Total Ceganic Hailogens/Haildes (TOX) Chloride Conductivity (field) Conductivity (field) Conductivity (field) Conductivity (field) Mmhos/cm mg/L Conductivity (field) Amhos/cm mg/L Conductivity (field) Amhos/cm mg/L Thirtire Nitro gen																
Arsenic mg/L Barrium mg/L Beryllium mg/L Cadmium mg/L Cadmium mg/L Cadmium mg/L Chomium mg/L Chomium mg/L Copalt mg/L Copper mg/L Lead mg/L Magnesium mg/L Magnesium mg/L Magnesium mg/L Mercury mg/L Mercury mg/L Nickel mg/L Potassium mg/L Selenium mg/L Sodium mg/L Sodium mg/L Sodium mg/L Thallium mg/L Vanadium mg/L Zine mg/L Cyanide mg/L MECUNICANEDUS Total Organic Halogens/Halides (TOX) Chloride Chonductivity (field) Conductivity (field) mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	-	L -	_	-	_	_	-		_	-	-	-	-	21	-	4790
Barium mg/L Barium mg/L Cad mium mg/L Cad mium mg/L Calcium mg/L Colcium mg/L Cobalt mg/L Copper mg/L Copper mg/L Lead mg/L Magnesium mg/L Magnesium mg/L Magnesium mg/L Magnesium mg/L Magnesium mg/L Sodium mg/L Solenium mg/L Solenium mg/L Solium mg/L Codadium mg/L Tolium mg/L Cyanide mg/L MBCRILANBOUS Total Organic Halogens/Halides (TOX) Conductivity (Seld) µm/solem Conductivity (Seld) µm/solem Conductivity (Seld) µm/solem Conductivity (Seld) µm/solem MBCRILANBOUS Total Organic Halogens/Halides (TOX) Conductivity (Seld) µm/solem Conductivity (Seld) µm/solem mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/	-	L -		_	ND	_	ND	-	_		ND	-		ND 0.0037	_	ND 1.5
Beryllium my/L Cade mium my/L Cade mium my/L Calcium my/L Calcium my/L Chromium my/L Cobalt my/L Copper Iron my/L Iron my/L Lead mg/L Magnesium my/L Magnesium my/L Mercury my/L Mercury my/L Selenium my/L Selenium my/L Sodium my/L Sodium my/L Sodium my/L Sodium my/L Candot my/L Candot my/L Candot my/L Condoctivity (field) my/L Condoctivity (field) µmhos/cm Condoctivity (field) µmhos/cm Mitrice Nitrogen my/L Condoctivity (field) µmhos/cm my/L my/L Condoctivity (field) µmhos/cm my/L my/L my/L my/L my/L my/L my/L my/			ND ND		ND		0.071				0.06			0.176		101
Cadeium mg/L Calcium mg/L Calcium mg/L Cobalt mg/L Copper mg/L Iron mg/L Magnesium mg/L Mapnesium mg/L Margaesium mg/L Nickel mg/L Potassium mg/L Selenium mg/L Sodium mg/L Taglum mg/L Vanadium mg/L Zine mg/L Cyanide mg/L MISCRILANEOUS mg/L Total Organic Halogens/Halides (TOX) mg/L Conductivity (field) mg/L Mittre Nitrogen mg/L	_	_	-	-	-	-	_	-	-	-		-	-	0.0011	-	0.43
Che mium	_		ND	_	ND		ND	-		_	ND			ND 159	-	ND 166000
Cobalt mg/L Copper mg/L Iron mg/L Iron mg/L Lead mg/L Magnesium mg/L Magnesium mg/L Mangense mg/L Mercury mg/L Nickel mg/L Potassium mg/L Silver mg/L Sodium mg/L Thallium mg/L Vanadium mg/L Thallium mg/L Cyanide mg/L MISCRLLANEOUS Total Organic Halogens/Halides (TOX) Chloride mg/L Conductivity (field) µmhos/em Mitrite Nitrogen	_		0.008	_	ND	-	ND	_	_	_	ND	_	_	0.0283	_	6.4
Coppet	_	-	0.008	_	ND -	_	AD -	_	_	_	-	_	-	0.0138	-	3.4
Iron mg/L Lead mg/L Magnesium mg/L Manganese mg/L Mercury mg/L Nickel mg/L Potasaium mg/L Selenium mg/L Sodium mg/L Sodium mg/L Thallium mg/L Zinc mg/L Zinc mg/L MISCRILLANBOUS Total Organic Halogens/Halides (TOX) mg/L Conductivity (Seld) µmhos/cm Mittree Nitrogen	_		-	_	_	_	_		_		-	-	-	0.0264	_	8.1
Mapnesium mg/L	-	L -	5.2	-	9.9	-	2.84	-	_	-	4.04	-	_	0.0082	-	6270
Manganese mg/L Mercury mg/L Nickel mg/L Potasaiu m mg/L Selenium mg/L Silver mg/L Sodium mg/L Thallium mg/L Vanadiu m mg/L Zinc mg/L Cyanide mg/L MISCRLLANEOUS mg/L Total Organic Halogens/Halides (TOX) mg/L Chloride mg/L Conductivity (field) µmhos/cm Nitrite Nitro gen mg/L		L -	ND		ND		ND				ND			23.6		20100
Mercury mg/L Nickel mg/L Potasaiu m mg/L Seleniu m mg/L Seleniu m mg/L Sodiu m mg/L Sodiu m mg/L Totallium mg/L Vanadiu m mg/L Zine mg/L MISCRILANEOUS Total Organie Halogens/Halides (TOX) Chloride mg/L Conductivity (field) mg/L Conductivity (field) mg/L Conductivity (lab) mg/L Mitrite Nitrogen	_		_	_	_	_	-	_	-	_	-	-	_	0.562	_	145
Nickel mg/L Potassium mg/L Selenium mg/L Selenium mg/L Silver mg/L Sodium mg/L Thallium mg/L Vanadium mg/L Zinc mg/L Cyanide mg/L MISCRILANEOUS mg/L Conductivity(Seld) mg/L Conductivity(Isb) mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	_		ND		ND	-	ND		_	***	ND	_	_	ND		ND
Selenium mg/L	_	L -		_		-	1,59	_	-	_	1.51	_	-	0.0368 4.89	_	2750
Silver mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	_		ND ND	_	4.6 ND	-	ND	_	_	_	ND	_	_	ND	_	ND ND
Sodium my/L Thallium mg/L Vanadium mg/L Zinc mg/L Cyanide mg/L MISCRILLANEOUS Total Organic Halogens/Halides (TOX) mg/L Caloride mg/L Conductivity (field) mg/L Conductivity (lab) mg/L mmhos/cm Mitrite Nitrogen mg/L			ND		ND	***	ND	_		-	ND	_	_	ND	-	ND ND
Thallium mg/L Vanadium mg/L Zinc mg/L Cyanide mg/L MISCRLLANEOUS MISCRLLANEOUS MISCRLANEOUS Total Organie Halogens/Halides (TOX) Chloride mg/L Conductivity (field) Conductivity (field) µmhos/cm Mitrite Nitro gen mg/L	_		60	-	68	-	54.2	-	-	-	51.5	-	-	52	-	70400
Zine Cyanide mg/L mg/L mg/L MISCRILANBOUS Total Organic Halogens/Halides (TOX) Chloride mg/L conductivity(5eld) mg/L conductivity(1ab) mg/L mthos/cm Mitrite Nitrogen mg/L		L –	_	-		-			-				_	0.0298		ND 8.9
Cyanide mg/L MISCRLLANEOUS Total Organic Halogens/Halides (TOX) mg/L Chloride Conductivity (field) μmhos/cm Conductivity (lab) μmhos/cm Mitrite Nitrogen mg/L mg/L	_	L -	_	_	_	_	_	_	_	_	_	_	_	0.107	_	34.4
MISCRLLANBOUS Total Organic Halogens/Halides (TOX) mg/L Chloride mg/L Conductivity(field)	_						_	_	-	-		_	-	ND		ND
Total Organic Halogens/Halides (TOX) mg/L Chloride mg/L Conductivity (field) µmhos/em Conductivity (lab) µmhos/em Mritic Nitrogen mg/L	a consequence							784 T.							AND SOLUTION STATE OF THE SOLUTION OF THE SOLU	
Chloride mg/L Conductivity(field) μmhos/cm Conductivity(lab) μmhos/cm Nitrite Nitrogen mg/L							0.100				0.00			014	0.12	0.17
Conductivity (field)	-	L -	0,0403	-	124	0.114	0.172 52.2	_	_	_	0.08 51.7	_	_	0.14 41	0.12	90
Conductivity (lab) µmhos/cm Nitrite Nitrogen mg/L	570	s/cm 570	460	860	1200	800	720	1290	1375	1420	1020	920	_	590	520	840
Nitrite Nitrogen mg/L	- 310		400	-	- 1200	_	-		_	_	881	-		933	840	1100
	-	L -	-	-	-	-	-	-	-	-	-	-	-	ND		
Nitrate/Nitirte Nitrogen mg/L			0.25		0.04		0.13				ND			ND ND	ND	ND
Nitrate as N - Calculation mg/L pH (Lab) std. units	-		7.1		7.3	_	7.4	_	_	_	7.3	-	_	7.34	6.95	6.93
pH (Lab) std. units pH (field) std. units	6.9		7.38	7.15	7.25	6.8	7.37	6.81	7.04	7.4	7.11	7.12		6.78	7.18	7.57 170 ND
Sulfate mg/L	-	L -	180	_	163		133	_	_	_	148	_	-	147	88	170
Total Organic Carbon (TOC) mg/L	_	L -	18	15	3.2	7	8.3	12	15	6	3 5	11	_	2.7 5.9	3	12.9
Temperature (field) Celcius Turbidity NTUs	8	ius 8	6	15	14		0	12	13	-	-	- 11	_	>200	51.5	12.5

							ASH LAN	ONITORING WE								
Paremeters	Source: Units	NET Jan 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET D∞ 1991	NET Mar 1992	NET June 1992	GTC D≈ 1992	ES Jan 1993	ES April 1993	June 199
VOLATILE ORGANICS																
Chloromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N N
Bromomethane Vinyl Chloride	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	N.
Chloroethane	µg/L µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Methylene Chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1-Dichloroethane	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
Chloroform 1,2-Dichloroethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1,1-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	7.9	ND	ND	ND	ND	ND	NI NI
Carbon Tetrachloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Bromodichloromethane	µg/L	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
1,2-Dichloropropane cis-1,3-Dirchloropropene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Trichloroethene	Hg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	NI NI
Dibromoc hloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1,2-Trichloroeth ane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	NI NI
trans-1,3-Dichloropropene Bromoform	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	NI
Tetrachloroethene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Toluene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Chlorobenzene	µg/L	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
Ethylbenzene 2-Chloroethylvinyl Ether	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND -	ND -	NI
1,3-Dichlorobenzene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	
1,2-Dichloroben zene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	
1,4-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-		***
1,2-Dichloroethene (total)	µg/L				_					-			ND	1 -	ND	NI
cis-1,2-Dichloroethene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	
trans-1,2-Dichloroethene Trichlorofluoromethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	-	-	
Acetone	µg/L	-	-	-	-	-	-	_	-	-	-	-	-	ND	ND	NI
Carbon Disulfide	μg/L	-		-	-	-	-	-	-	-	-	-	-	ND	ND	NI
4-Methyl-2 Pentanone	μg/L													ND ND	ND ND	NI NI
2-Hemnone	μg/L	_	_	_	_	_	_	_	_	_	_	_	_	ND	ND	NI
Styrene Xylenes (total)	μg/L μg/L	_	_	_	_	_	-	-	_	-	-	-	-	ND	ND	NI
Total Volatile Organics	µg/L	0	0	0	0	0	0	0	0	10.9	0	0	0	2	0	
METALS	- 4										_	_	_	33.8		153
Aluminum Antimony	mg/L mg/L	_	_	_	_	_	-	_	_	-	-	-	-	ND	_	NI
Arsenic	mg/L	_	ND	_	ND	-	ND	-	ND		ND	-	-	0.0027		NI
Barium	mg/L	-	ND	_	ND	_	0.043	_	0.068	-	0.054	-	-	0.251	-	48,
Beryllium	mg/L	-		-	NID.	_	ND	-	ND	_	ND		_	0.0019 ND	_	NI NI
Cadmium	mg/L		ND		ND		ND -		ND -		- 80			191		11600
Calcium Chromium	mg/L mg/L	_	0.005	_	ND	-	ND	_	ND	_	ND	-	_	0.0462	-	NI
Cobalt	mg/L	-	_	_			_	_	-				_	0.0281		NI
Copper	mg/L	-	_	-		-	-	-	-	-	-	-	-	0.0269	-	2.
Iron	mg/L	-	3.2	_	16 ND	_	4.63 ND	_	2.71 ND	_	S.3 ND		_	0.0105	_	180 NI
Lead	mg/L		ND		ND		- 40		- 70		- ND			25.9		1300
Magnesium Manganese	mg/L mg/L	_	_	_	-	_	-	_	_	_	_	-	_	1.29	_	48.
Mercury	mg/L	-	ND		ND		ND		ND	-	ND	~		ND	_	NI
Nickel	mg/L	-	-	-	-	-		-	-	-	-	-	-	0.0634	-	NI 171
Potassium	mg/L	-	1.2 ND	-	S.4 ND		1.62 ND	_	2.77 ND	_	1.9 ND	_	_	7.04 ND	_	NI
Selenium Silver	mg/L mg/L		ND		ND		ND		ND	_	ND			ND	-	NI
Sodium	mg/L	_	4.9	_	5.1	-	5.6	_	6.69	_	4.2	-	-	5.61	-	480
Thallium	mg/L	-	-	-			_	-	-	-	_	-		ND	-	1.
Vanadium	mg/L	_	_	-	-	_	_	-	_	-	-	-	-	0.0461	-	5.
Zinc	mg/L	-	-	-		_	-	_	_	_	_			0.118 ND		14. 14.
Cyanide	mg/L		-											ND		170
MISCELLANBOUS													20,200,000			
Total Organic Halogens/Halides (TOX)	mg/L	_			0.012	-	0.017	_	0.028	-	0.01	_	-	ND	0.03	0.0
Chloride	mg/L	-	10	-	14.5	_	12.8	_	10.8	-	9.6	-	-	12.8	10	1
Conductivity (field)	μmhos/cm	310	280	490	500	490	440	655	680	670	540	550		485 628	370	60
Conductivity (lab)	μmhos/cm	-	-		_	_	515	_	_	_	507	_	_	ND	590	60
Nitrite Nitrogen	mg/L	_	ND	_	0.06	_	ND	_	0.06	_	ND	_	_	0.05	0.06	NI
Nitrate/Nitrite Nitrogen Nitrate as N - Calculation	mg/L mg/L		-	-		_	_	-	_	-		-	-	0.05	-	
pH (Lab)	std. units	-	7.3	-	7.3	-	7.3	-	7.7	-	7.4	_	-	7.53	7.37	7.0
pH (field)	std. units	6.85	7.45	7.23	7,3	6,25	8.41	6.62	7.2	7.38	7.23	7.35	-	7.03	7.15	
Sulfate	mg/L	-	80	_	49 ND	_	58 16.6	_	43	_	44.4	_	_	34 1.5	18 ND	2
Total Organic Carbon (TOC) Temperature (field)	mg/L Cekius	8	22	14	ND 14	- 8	16.6	13	3.4 15	9	2 5	11		8	ND 4	
				1.4	1.4				1.0	,		**		>200		

						HISTORICAL	DATA FOR MC		SLL P1 -24							
Parametera	Source: Units	NET Jan 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NBT Dec 1990	NET Mar 1991	NET June 1991	NET Sopt 1991	NET Dec 1991	NET Mar 1992	NET June 1992	GTC Dec 1992	ES Jan 1993	ES April 1993	June 199
VOLATILE ORGANICS								30-1100000000								
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Bromomethane Vinyl Chloride	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	NI
Chloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	NI NI
Methylene Chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1-Dichloroethene 1,1-Dichloroethane	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI
Chloroform	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,2-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
1,1,1-Trichloroeth ane Carbon Tetrachloride	μg/L μg/L	ND ND	ND ND	ND ND	ND	ND	ND ND	ND	ND ND	126 ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI
Bromodichloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
1,2-Dichloropropane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
cis – 1,3 – Dirch loropropene Trich loroethene	μg/L μg/L	ND 4	ND 6	ND	ND 2	ND 6	ND 7	ND 8	ND 8.61	ND 2.8	ND 4.4	ND 6.2	ND 6.7	ND 7	ND	NI
Dibromoc hloromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1,2-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Benzene trans-1,3-Dichloropropene	ug/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	NI
Bromoform	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	NI NI NI NI
Tetrachloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
1,1,2,2 - Tetrachloroethane Toluene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	NI
Chlorobenzene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	NI NI
Ethylbenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
2-Chloroethylvinyl Ether 1,3-Dichlorobenzene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	-	-	
1,2-Dichloroben zene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,4-Dichlorobenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	
1,2-Dichloroethene (total)	µg/L	_				_		_					110	100	81	9
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	µg/L µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110 ND	_	_	
Trichlorofluoromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	
Acetone Carbon Disulfide	Hg/L	_	-	-	_	_	-	-	-	-	-	-	-	ND	ND	NI
4-Methyl-2 Pentanone	μg/L μg/L	_	_	_	_	_	_		_		_		_	ND ND	ND ND	NI NI
2-Hexanone	μg/L	-	_	_	-	-	-	-	-	-	-	-	-	ND	ND	NI NI
Styrene Xylenes (total)	μg/L μg/L	_	_	_	_	_	_	-	_	_	ND	ND	_	ND ND	ND ND	NI NI
Total Volatile Organics	µg/L	4	6	9	3	7	7	9	8.61	128.8	4.4	6,2	116.7	107	86	10:
													200000000000000000000000000000000000000			
Aluminum	mg/L				-	_	-		_	_	2882888	-		13.5	-	1180
Antimony	mg/L	-	_	-	-		_	-	_	-	-	-	-	ND	-	NI
Arsenic	mg/L		ND ND		ND ND		ND 0.065		ND 0,13		ND		-	0.0016		NI
Barium Beryllium	mg/L mg/L	_	ND -	_	-	_	0.003	_	0,15	_	0.054	_	_	0.116 ND	_	49.
Cadmium	mg/L		ND		ND		ND	-	ND	-	ND		-	ND		NI
Calcium	mg/L	_	0.041	-	ND	_	ND	-	0.037	-	NID.	_	_	125	-	1113000
Chromium Cobalt	mg/L mg/L		0.041	_	ND -	_	- ND	_	4.057	_	ND	_	_	0.0176	_	NI NI
Copper	mg/L	_	-	-	-	-	-	-	-	-	-	_	-	0.0111	-	2.0
Iron	mg/L	-	34	-	1.2 ND	-	8.79	-	33.7	-	4.13	-	-	17.8	-	1460
Lead Magnesium	mg/L mg/L		0.013				ND -		0.02		ND			0.0091 17.2		12500
Manganese	mg/L	-	-	_	-	-	-	-	_	_	-	_	-	0.375	_	51.:
Mercury	mg/L		ND		ND		ND		ND		ND			ND 0.0206		NI NI
Nickel Potassium	mg/L mg/L	_	ND	_	2.1	_	2.2	-	5.85	_	1.86	_	_	3.6	_	1890
Selenium	mg/L		ND	-	ND	-	ND	-	ND	-	ND	-	_	0.0012	_	NI
Silver	mg/L	-	ND	-	ND	-	ND	-	ND	-	ND	-	_	ND	-	NI
Sodium Thallium	mg/L mg/L	_	15		14		13.4	_	16.2	_	14.1	_	_	16.7 ND	_	15100 NI
Vanadium	mg/L		_	_		-	-	_	-	_	_	-	-	0.0195	-	4
Zinc	mg/L	-	-	-	-	-	-	-	-	_	-	-	-	0.0781	-	11.3
Cyanide	mg/L											*********		ND		1.1
MISCELLANEOUS																
Total Organic Halogens/Halides (TOX)	mg/L	-	0.0138	_	-	0.054	0.07	_	0.029	-	0.06	-	_	0.05	0.05	0.09
Chloride	mg/L µmhos/cm	350	30 330	510	17.4 500	540	19.7 420	725	16.2 770	740	21 700	650	_	17.6 425	16 390	16
Conductivity (field) Conductivity (lab)	μmhos/cm	330	330	310	- 300	340	540	- 12	770	740	627	630	-	663	620	500 650
Nitrite Nitrogen	mg/L	_	-	_		-	_	-	-	-	-	-	_	ND	-	-
Nitrate/Nitrire Nitrogen	mg/L		0.26	-	0,34	-	0.17		0.43	-	0.11	-		0.18	0.28	0.06
Nitrate as N - Calculation pH (Lab)	mg/L std. units	_	7.2	_	7	_	7,2	_	7.7	_	7.2	_	-	0.18 7.17	7.16	6.95
pH (field)	std. units	6,8	7.44	7.25	7,3	6.35	7.82	6.62	7.19	7.28	7.12	7.27	_	6.7	7.13	7.54
Sulfate	mg/L	_	120	-	125	_	80		93	-	75.7		_	55	44	7.54 37 NE
	mg/L	-	16		4.4	_	16.7	-	9.2	-	4	-	-	2	2	NE
Total Organic Carbon (TOC) Temperature (field)	Celcius	7.5	7	15	16	9	7	13	15	8	6	11		6	5	13.7

Vol.ATLE ORGANICS	BS
Chiconenthase	ND
Recommendance	ND
Viget Cheforder	ND
Calecotase	ND
Methylescelherie	ND
	ND
Chloroform	ND
12-Dichloroethase	ND
II, I	ND
	ND
12-Dishloropropane	ND
cis-13-Diskloropropense	ND N
Dibremos bieromethane	ND
1,1,2 = Trix-blorecthane	ND
Engange	ND
Frant = 1,3 - Dichloropropene	ND
Tetrachloroscheme	ND
1,1,2,7=fetrachlorocethane	ND
Toluce	ND
Chlorobenzene	ND ND
2-Chloroethywingitether	
1,3 - Dichloroben zene	ND N
12 - Dichloroethene (total) μg/L	ND
Cist 1,2 - Dichloroethene Hg/L ND ND ND ND ND ND ND N	
Reference	ND
Tirki loro Disordenthase µg/L ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND
Carbo Disulfide	ND ND ND ND ND ND ND ND
4-Methyl - 2 Pentanone μg/L ND 2-Hexanone μg/L ND 2-Hexanone μg/L ND 3-Hexanone μg/L ND 5-Hexanone μg/L ND 5-Hexanone μg/L ND 5-Hexanone μg/L ND 5-Hexanone μg/L ND 6-Hexanone μg/L ND 6-Hexanone μg/L	ND ND ND ND ND ND
2-Hemone μg/L - - - - - ND Styrene μg/L - - - - ND Styrene μg/L - - - - - ND ND ND μg/L - - - - ND Total Volatile Organics μg/L 0 0 0 0 0 0 0 0 0	ND ND ND ND
Xylenes (total)	
Total Volatile Organics	
MBTALS	0 0
Aluminum mg/L - 19	
Antimony mg/L ND - ND - ND - ND - ND - ND -	- 1680
Arsenic mg/L - ND	- ND
Beryllium mg/L ND	ND
	- 30.7 - ND
Cadmium mg/L - ND - ND - ND - ND - ND - ND	- ND
Cabium mg/L 109	- 60000
Chromium mg/L - 0.018 - ND	- ND
OVAL TO THE TOTAL THE TOTAL TO THE TOTAL TOT	- ND - 2.8
Copper	- 2040
Lead mg/L - ND - ND - ND ND 0.0029	- ND
Magnesium mg/L	- 9640 - 34.6
Manganese mg/L - - - - - - - - - - - ND	- ND
Nickel mg/L 0.0045	- ND
Potassium mg/L - ND - 4 - 4.33 2.34 1.08 Selenium mg/L - ND	- 1730 - ND
Sclenium mg/L - ND - ND <td>- ND</td>	- ND
Sodium mg/L - 23 - 17 - 16.5 14.5 17	- 459000
Thallium mg/L ND	
Vanadium mg/L ND Zinc mg/L 0.024	- ND - 10.5
Zinc	- 6.4
MISCELLANEOUS	
Total Organic Halogens/Halides (TOX) mg/L 0.024 0.012 0.01 ND Chloride mg/L - 30 - 21.2 - 22.6 23.9 21	ND ND 27 28
Conductivity (field) µmbos/cm 320 380 540 490 330 410 695 - 550 560 540 - 398	390 480
Conductivity (lab) µmhos/cm 495 624	540 650
Nitrite Nitrogen mg/L ND	, - 1
Intrate/Auther Milder	0.5 1.5
oH (Lab) std. units - 7.1 - 7.1 - 7.1 - 7.55	7.07 7.04
pH (field) std. units 6.9 7.29 7.22 7.2 6.45 7.55 6.63 - 7.35 7.15 7.17 - 7.17	7.13 7.09
Sulfate mg/L - 45 - 50 - 47.4 59 40	27 37
Total Organic Carbon (TOC) mg/L - 24 - ND - 7.9 6 1.1 Temperature (field) Celcius 8 7 14 15 8 6 11 15 8 5 11 - 6	
Templative (left)	1 2 5 12.7

						HISTORICA	ASH LAN	ITORING WELL DFILL	PT-26							
Parameters .	Source: Units	NET Jan 1990	NET Mar 1990	NET June 1990	NBT Sept 1990	NBT Dec 1990	NET Mar 1991	NET June 1991	NBT Sept 1991	NBT D≈ 1991	NBT Mar 1992	NET June 1992	GTC D∞ 1992	ES Jan 1993	ES April 1993	ES June 1993
VOLATILE ORGANICS																
Chloromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Chloroethane Methylene Chloride	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethe ne	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND ND ND ND ND ND ND
Chloroform	µg/L	ND	ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND
1,2-Dichloroethane 1,1,1-Trichloroethane	µg/L	ND ND	ND ND	ND	ND ND	ND ND	ND	ND ND	ND	4.1	ND	ND ND	ND	ND	ND	ND
Carbon Tetrachloride	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dirch loropropene	µg/L	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 1.77	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
Trich loroethene Dibromochloromethane	μg/L μg/L	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	Mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE
Benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND
Bromoform	µg/L	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
Tetrachloroethene	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
1,1,2,2 - Tetrachloroethane Toluene	µg/L µg/L	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzen e	Mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	Hg/L	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	_	_	-
1,3-Dichlorobenzene	µg/L	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND				
1,2-Dichlorobenzene 1,4-Dichlorobenzene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	_	-	_
1,2-Dichloroethene (total)	µg/L	-	-	_	-	_	_		_	_		_	-	ND	ND	ND
cis-1,2-Dichloroethene	µg/L	-	-	-									ND	-	-	
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	
Trichlorofluoromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	ND -	ND	ND	ND	NE
Acetone Carbon Disulfide	mg/L mg/L	_	_	_	_	_	_	_	_	_	_	_	-	ND	ND	ND ND ND ND ND
4-Methyl-2 Pentanone	µg/L	_	-	-	_	_		-	-	-			-	ND	ND	ND
2-Hemnone	μg/L μg/L	-	_	_	-	-	-	-	-	-	-	-	-	ND	ND	ND
Styrene	µg/L	-	-	-	_		-	-	-	-	-	_	-	ND ND	ND ND	ND
Xylenes (total)	μg/L	0	0	- 0	0			0	1.77	5.8	0	0	0	0	0	ND.
Total Volatile Organics	μg/L					•				3.0						
METALS											800000000000000000000000000000000000000					
Aluminum	mg/L	-	-	-	-	-	-	-	_	-	-	-	-	4.79 ND		42600 ND
Antimony	mg/L	_	ND	_	ND	_	0.05	_	ND	_	0.03	_	_	0.0056	_	3.3
Arsenic Barium	mg/L mg/L		0.43		ND		0.447		0.166	-	0.716		_	0.364	-	337
Beryllium	mg/L	_	-	-	-	_	_	_	_	-	-	_	-	0.0012	-	2.5
Cadmium	mg/L	-	ND	_	ND_		ND	-	ND	_	ND	-	-	ND		ND
Cakium	mg/L	_		_		-	-	-	-	_	-	_	-	512	-	319000
Chromium	mg/L	-	0.087	_	ND		0.087	_	ND	_	0.166	_	_	0.0041		64.9 30.8
Cobalt	mg/L mg/L							_	-		_	_	_	0.014	-	62.6
Copper Iron	mg/L	_	86	-	10	_	108	-	28.9	-	201	-	-	5.41	-	62.6 85700
Lead	mg/L	-	0.014	-	ND	_	ND	-	ND		0.056	-		0.0191	-	17.3
Magnesium	mg/L	-	_	-	_	_	-	_	-	-	-	_		65.9 1.95	_	66600 1360
Manganese	mg/L	-	ND		ND	_	ND	_	ND	_	ND	_	_	0.00013	_	ND
Mercury Nickel	mg/L mg/L		ND		ND -		- ND	-	-		-	_	_	0.0146	-	97.2 6990
Potassium	mg/L	_	5.9	_	4	-	9.9	_	4.66	-	8.1	-	-	2.1	-	6990
Selenium	mg/L	-	ND	-	ND	_	ND		ND	-	ND			ND	-	ND
Silver	mg/L	-	ND	-	ND	_	ND	~	ND	_	ND	-	_	ND	_	ND 30200
Sodium	mg/L	-	22	_	ิส	_	23.2		83.8		32.7			22.6 ND	_	1.2
Thallium Vanadium	mg/L mg/L												_	0.0053	-	60,3
Zinc	mg/L	_	_	-	_	_	-	_	_	_	_	-	-	0.062	-	282
Cyanide	mg/L	-	_	-	_					_		-		ND	_	2.6
MISCELLANEOUS			0.025		0.7300	0.056	ND	<u> </u>	0.094	_	ND	_		ND	ND	ND
Total Organic Halogens/Halides (TOX)	mg/L	_	6		29.9	0.056	15,7	_	45.3		17.2	_	_	10.2	12	11
Chloride Conductivity (field)	mg/L µmhos/cm	520	400	730	560	730	590	850	760	810	896	900	-	550	500	525
Conductivity (lab)	µmhos/cm	320	-	- 750		-			-	-	793	_	-	829	820	780
Nitrite Nitrogen	mg/L	-	-	-	~	-	-	-	-	-	-	-	-	ND	-	
Nitrate/Nitrite Nitrogen	mg/L		0,43	-	0.35	-	0.35	-	0.1		0.19	-		0,35	0.31	0.21
Nitrate as N - Calculation	mg/L	-	22	_	26	_	7.3	_	7.8	-	7.4	_	_	0.35 7.23	7.29	7.15
pH (Lab)	std. units	7.1	7.3 7.41	7.24	7.5 7.3	6.45	7.5	6.51	7.32	7.54	7.11	7.11	_	7.02	7.2	7.13
pH (field) Sulfate	std. units mg/L	7.1	150	1.24	80	0.45	120.5	6.51	102.5	7.54	137	7.21	-	107	110	100
Total Organic Carbon (TOC)	mg/L	_	26	_	8.8	-	23	-	11.6	-	4	-	-	1.9	2	2
Temperature	Cekius	9	6	14	15	8	7	12	18	10	6	10	-	7.75	6.5	11.1
Turbidity	NTUs	_	_	_	-	_	-	-			_	-		>200	14.1	~

						HISTORICAL D	ATA FOR MON		LL MW-27							
Parameters	Source: Units	NET Jas 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NBT Dec 1990	NBT Mac 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NET Mer 1992	NET Jane 1992	GTC Dec 1992	ES Jan 1993	ES April 1993	ES June 1993
VOLATILE ORGANICS																-
Chloromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	µg/L	ND	ND ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride Chloroethane	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Methylene Chloride	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1 - Dichloroethane Chloroform	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
1,2-Dichloroethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND
Bromodichloromethane 1,2-Dichloropropane	μg/L μg/L	ND ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND	ND ND	ND	ND ND	ND	ND ND
cis - 1,3 - Dirchloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	µ2/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane 1,1,2-Trichloroethane	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
Benzene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND ND ND ND
Bromoform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachioroethene 1,1,2,2-Tetrachioroethane	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Toluene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether 1,3-Dichlorobenzene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	-	
1,2-Dichlorobenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		-	-	-
1,4-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-			
1,2-Dichloroethene (total)	µg/L										-		ND ND	ND	ND -	ND
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	
Trichlorofluoro methane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
Acetone	μg/L	-	-			_	_	-	-	_	_	_	-	ND	ND	ND
Carbon Disulfide 4-Methyl-2 Pentanone	μg/L μg/L	_	_	_	_	_						_		ND ND	ND ND	ND ND
2-Hemnone		_	-	_	-	-	-	_	_	-	-		_	ND	ND	ND
Styrene	μg/L μg/L	-	-	-	-	-	-	-	-	-	-	-	_	ND	ND	ND
Xylenes (total) Total Volatile Organics	µg/L	0	- 0	0	0	0	0	0	0	0	0	0	0	ND 0	ND 2	ND
Total Volatile Organics	µg/L													on in the second		11 - 11
METALS														1140.0000000000000000000000000000000000		
Aluminum	mg/L		_		_								_	1.4 ND	- III - II	1090.0 ND
Antimony Arsenic	mg/L mg/L	_	_	_	_	_	ND	_	_	_	ND	-	-	0.0029	_	1.5
Barium	mg/L	-	-	-	-	_	0.072	_	-	-	0.072		-	0.0996	-	113.0
Beryllium	mg/L	-	-	-	-	_	ND		-		ND	_	_	0.00043 ND	-	ND ND
Cadmium Calcium	mg/L mg/L						ND				- 10			153		123000.0
Chromium	mg/L	_		-	-	_	ND	_	_	_	ND	_	-	ND	-	ND
Cobalt	mg/L	_		-						-			-	0.0066	_	ND
Copper	mg/L	_	_	_		_	10.2	_	_	_	8.13	_	_	0.0048 2.49	_	2.8 3320.0
Iron Lead	mg/L mg/L			_	_	_	ND	_	_	_	ND	_	_	0.0032	_	ND
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	15.5	_	19000.0
Manganese	mg/L	_	_	-	-	_	ND	_		-	ND	_	-	0.759 ND	_	818.0 ND
Mercury Nickel	mg/L mg/L						ND -				ND -	-		0.0058		ND
Potassiu m	mg/L	_	_	_	_	_	4.67	-	_	_	3.2	_	-	3.51	_	6210.0
Selenium	mg/L						ND	_	_		ND			ND		1.1
Silver	mg/L	_	_	_			ND 17.8	_	_	_	ND 20.1	_	_	ND 17.4	_	ND 16500.0
Sodium Thallium	mg/L mg/L	_	_			_	17.0	_		_	20.1	_	_	ND	_	ND
Vanadium	mg/L	-	-		-	-	-	-	_		-	-	-	ND	-	3.5
Zinc	mg/L		-	-		-	_	_	-	_	-	-	-	0.0171	-	12.9
Cyanide	mg/L		900. 000		_ 		Maria de la compansión de	_	udadorio e podedescolidad	— Socialists, procurativis	- Socradudelisaasiseksi		- zanga adap apak adap anda	ND	ede ude sees some see	ND
MISCRILLANBOUS						****										
Total Organic Halogens/Halides (TOX)	mg/L		-	-	-	_	0.023	-	_	-	0.01	-	-	ND	ND	ND
Chloride	mg/L	-		-	560	560	35.5	955	960	970	30,6	-	-	24	36	45
Conductivity (field)	μmhos/cm	480	470	650	560	560	490 630	855	860	870	660 615	690		427 661	700	600 760
Conductivity (lab) Nitrite Nitrogen	μmhos/cm mg/L	_	_	_	_	_	630		_	_	- 0,13	_	_	ND	700	760
Nitrate/Nitrite Nitrogen	mg/L	_	_	-	-	_	0.04	_			ND		-	0.06	ND	ND
Nitrate as N - Calculation	mg/L	-	-		-		7.4	-	-	-	2.6	_	-	0.06		
pH (Lab)	std. units	7,05	6.81	7.26	7.45	6.55	7.4 7.85	6.62	7.19	7.41	7.6 7.19	7.2	_	7.23 7.49	7.17 7.16	7.32 7.20
pH (field) Sulfate	mg/L	7,03	18,0	7.26	7,43	-	90.4	- 0.02	7.19	7.41	80.8	- 1.2		41	47	53
Total Organic Carbon (TOC)	mg/L	-	-	_	-	_	18.9	-	-	-	8		-	1.4	2	S3 ND
Temperature (field)	Celcius	7	6	15	16	8	7	14	19	7	6	12	_	6	7.5	13
Turbidity	NTUs	_	-	-	_	_		_		_			_	>200	26.1	-

Parameters VOLATILE ORGANICS Chloro methane Bromomethane Vinyl Chloride Chlorothane Methylene Chloride 1,1—Dichloroethane Methylene Chloride 1,1—Dichloroethane Chloroform 1,1—Dichloroethane 1,1,1—Dichloroethane 1,1,1—Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2—Dichloropropane cis—1,3—Dichloropropane Trichloroethene Dibromochloromethane 1,1,2—Tichloroethane Benzene trans—1,3—Dichloropropene Bromoform Tetrachloroethane Bromoform Ctranchloroethane Chloroethouthouthouthouthouthouthouthouthouthou	Sowcet Usiks #g/L #g/L	NET Js 1990 ND N	NET Mar 1990 ND N	NET Jane 1990 ND N	NET Sept 1990 ND N	NET Dos 1996 ND ND ND ND ND ND ND	NET Mar 1991 ND N	NET Juse 1991 ND ND ND	NBT Sept 1991 ND ND	NBT Dec 1991	NET Mar 1992	NRT Jame 1992 ND	GTC Dec 1991	#S Jan 1993 ND	BS April 1993 ND	ES June 1993
Chloro methane Romo methane Vinyl Chloride Chlorocthane Methylene Chloride 1,1—Dichlorocthane 1,1—Dichlorocthane Chloroform 1,1—Dichlorocthane 1,1,1—Trichlorocthane Carbon Tetrachloride Romodichkoromethane 1,2—Dichloropropane cia=1,3—Dirchloropropane cia=1,3—Dirchloropropene Trichlorocthene Dibromochloromethane 1,1,2—Trichlorocthane Remzene Trichlorocthene Tetrachloride Romoform Tetrachlorocthane Remzene Li,2,2—Tetrachlorocthane Chlorocthene Li,2,2—Tetrachlorocthane Tetrachlorocthene 1,1,2,2—Tetrachlorocthane Chlorocthorocthane 2—Chlorocthylvinyl Ether 1,3—Dichlorobenzene 1,4—Dichlorocthene 1,4—Dichlorocthene Trichloroflorocthene Trins-1,2—Dichlorocthene Trans-1,2—Dichlorocthene Trans-1,2—Dichlorocthene Trans-1,2—Dichlorocthene Trichlorofloromethane Acetone Carbon Dissilide 4—Methyl-2 Pentasone	HELL HERL HERL HERL HERL HERL HERL HERL	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND	ND N	ND ND ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND	ND ND			ND	ND	ND	ND	NID	
Bromomethane Vinyl Chloride Chloroethane Methylene Chloroethane 1,1 - Dichloroethane 1,1 - Dichloroethane 1,1 - Dichloroethane 1,1,1 - Trichloroethane 1,1,1 - Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2 - Dichloropropane cis - 1,3 - Dirchloropropane cis - 1,3 - Dirchloropropane Dibromochlane Dibromochlane 1,1,2 - Trichloroethane Benzene trans - 1,3 - Dichloropropene trans - 1,3 - Dichloropropene Bromoform Tetrachloroethane 1,1,2 - Tetrachloroethane Toluene Chloroethane Ehlybenzene 2 - Chloroethylvinyl Ethe 1,3 - Dichlorobenzene 1,4 - Dichlorobenzene 1,4 - Dichlorobenzene 1,4 - Dichlorobenzene 1,2 - Dichloroethane Trichloroethane Trichloroethane Trichloroethane Trichloroethane Trichlorofloroethane Carbon Disulfide 4 - Methyl - 2 Pentanone	HELL HERL HERL HERL HERL HERL HERL HERL	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND	ND N	ND ND ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND	ND ND			ND	ND	ND	ND		
Vinyt Chloride Chloroethane Methylene Chloride 1,1-Dichloroethane Methylene Chloride 1,1-Dichloroethane Chloroform 1,1-Dichloroethane Chloroform 1,1,1-Tichloroethane 1,1,1-Tichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cia=1,3-Dirchloropropene Trichloroethene Dibromochloromethane 1,1,2-Tichloroethane Benzene trans-1,3-Dichloropropene Bromoform Tetrachloroethene Tichloroethene Chloroethopiane Ethylbenzene 2-Chloroethylwinyt Ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichloroethene 1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloroethene Trichlorofluroemene 1,2-Dichloroethene Trichlorofluroemene Trichlorofluromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone	HEAL HEAL HEAL HEAL HEAL HEAL HEAL HEAL	ND ND ND ND ND ND ND ND ND ND ND ND	ND N	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND	ND ND ND ND	ND ND ND	ND		ND	ND	ND	ND	ND	ND	ND ND
Methylene Chloride 1,1-Dichloroethene 1,1-Dichloroethene 1,1-Tichloroethane Carbon Tetrachloride Bromodich bromethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene Trichloroethene Dibromochloroethene Dibromochloroethene Dibromochloroethene Enzane trans-1,3-Dichloropropene Bromoform Tetrachloroethene Bromoform Tetrachloroethene Li,2,2-Tetrachloroethane Bromoform Etransloroethene Li,2,2-Tetrachloroethane Chloroethydiay Ether 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,2-Dichloroethene 1,2-Dichloroethene 1,2-Dichloroethene Trichlorofluoromethane Carbon Disuffide Acetone Carbon Disuffide 4-Methyl-2 Pentanone	HBL HBL HBL HBL HBL HBL HBL HBL HBL HBL	ND N	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND ND	ND ND ND	ND		ND	ND	ND	ND	ND	ND	ND	ND ND
1,1—Dichloroethene 1,1—Dichloroethene 1,1—Dichloroethane 1,2—Dichloroethane 1,1—Tichloroethane 1,1—Tichloroethane 1,2—Dichloroethane 1,2—Dichloroethane 1,2—Dichloroethane 1,2—Dichloropropene Tichloroethene Dibro mochloromethane 1,1,2—Tichloroethane Benzene trans=1,3—Dichloropropene Bromoform Tetrachloroethene Dibromochloromethane 1,1,2—Tichloroethane Enomoform Tetrachloroethene Toluene Chloroethyvinyl Ether 1,3—Dichlorobenzene 1,2—Dichlorobenzene 1,2—Dichlorobenzene 1,2—Dichlorobenzene 1,3—Dichloroethene 1,2—Dichloroethene Trichloroethene (total) cis=1,2—Dichloroethene trans=1,2—Dichloroethene Trichlorofluoromethane Acetone Carbon Disulfide 4—Methyl-2 Pentanone	HST HST HST HST HST HST HST HST HST HST	ND N	ND ND ND ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Chloroform 1,1,2-Dishloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dishloropropane cia-1,3-Dishloropropane Trichloroethene Dibromoethloromethane 1,1,2-Trichloroethane Benzene transa-1,3-Dishloropropene Bromoform Tetrachloroethane Tetrachloroethane Tetrachloroethane 1,1,2,2-Tetrachloroethane Toluene Chloroethoptivinyl Ether 1,3-Dishlorobenzene 1,4-Dishlorobenzene 1,4-Dishloroethane 1,2-Dishloroethane 1,2-Dishloroethene trans-1,2-Dishloroethene trans-1,2-Dishloroethene trans-1,2-Dishloroethene Trichlorofloromethane Acetone Zarbon Disulfide 4-Methyl-2 Pentanone	HEL HEL HEL HEL HEL HEL HEL HEL	ND ND ND ND ND ND ND ND ND ND ND	ND ND ND ND ND	ND ND ND ND	ND ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane cia-1,3-Dirchloropropane cia-1,3-Dirchloropropane Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene trans-1,3-Dichloropropene Bromoform Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene 2-Chloroethylvinyl Ether 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichloroethene (total) cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloroethene Trichlorofluoromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone	HOL HOL HOL HOL HOL HOL HOL HOL HOL HOL	ND ND ND ND ND ND ND ND ND ND ND	ND ND ND ND	ND ND ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND
1,1,1—Trichloroethane Carbon Tetrachleride Bromodichloromethane 1,2—Dichloropropane cia=1,3—Dirchloropropene Trichloroethene Dibromochloromethane 1,1,2—Trichloroethane Benzene trans=1,3—Dichloropropene Bromoform Tetrachloroethene 1,1,2,2—Tetrachloroethane Toluene Chloroethene 1,1,2,2—Tetrachloroethane Toluene Chlorobenzene Ethylbenzene 1,3—Dichlorobenzene 1,3—Dichlorobenzene 1,3—Dichlorobenzene 1,4—Dichloroethene trans=1,2—Dichloroethene	HSC HSC HSC HSC HSC HSC HSC HSC HSC HSC	ND ND ND ND ND 27 ND ND	ND ND ND	ND ND		ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND
Carbon Tetrachloride Bromodich bromethane 1,2—Dichloropropane cia-1,3—Dirchloropropene Trichlorocthene Dibromochloromethane 1,1,2—Trichlorocthane Benzene trans-1,3—Dichloropropene Bromoform Tetrachlorocthene 1,1,2—Tetrachlorocthane Toluene Chlorobenzene Ethylbenzene 2—Chlorocthylvinyl Ether 1,3—Dichlorobenzene 1,2—Dichlorobenzene 1,2—Dichlorobenzene 1,2—Dichlorobenzene 1,2—Dichlorocthene trans-1,2—Dichlorocthene Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Acetone Carbon Disulfide 4—Methyl-2 Pentanone	rair rair rair rair rair rair rair rair	ND ND ND 27 ND ND	ND ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND
1,2—Dichloropropane cis—1,3—Dirchloropropene Trichlorocthene Dibro mochloromethane 1,1,2—Trichlorocthane Benzene trans—1,3—Dichloropropene Bromoform Tetrachlorocthane 1,1,2,2—Tetrachlorocthane Toluene Chlorochenzene Ethylbenzene Ethylbenzene 2—Chlorocthylvinyl Ether 1,3—Dichlorobenzene 1,2—Dichlorobenzene 1,2—Dichlorobenzene 1,2—Dichlorocthane trans—1,2—Dichlorocthene trans—1,2—Dichlorocthene trans—1,2—Dichlorocthene trans—1,2—Dichlorocthene trans—1,2—Dichlorocthene trans—1,2—Dichlorocthene Trichlorofluoromethane Acetone Carbon Disulfide 4—Methyl—2 Pentanone	491. 491. 491. 491. 491. 491. 491.	ND ND 27 ND ND	ND		ND ND	ND ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dirchloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene Irans-1,3-Dichloropropene Bromoform Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene 2-Chloroethylvinyl Ether 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichloroethene (total) cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloroethene Trichlorofluoromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone	49/L 49/L 49/L 49/L 49/L 49/L 49/L	ND 27 ND ND	ND	ND ND	ND	ND	ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Dibro mochloro methane 1,1,2—Trichloro ethane Benzene trans=1,3—Dichloropropene Bro moform Tetrachloro ethane 1,1,2,2—Tetrachloro ethane Toluene Chloro benzene Ethybenzene 2—Chloro ethykinyl Ethæ 1,3—Dichloro benzene 1,2—Dichloro benzene 1,4—Dichloro benzene 1,4—Dichloro ethane 1,2—Dichloro ethane trans=1,2—Dichloro ethane trans=1,2—Dichloro ethene trans=1,2—Dichloro ethene Trichloro fluoro methane Acetone Carbon Disulfide 4—Methyl-2 Pentanone	Herr Herr Herr Herr Herr Herr Herr Herr	ND ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2 — Trichloroethane Benzene trans—1,3 — Dichloropropene Bromoform terrachloroethene 1,1,2,2 — Tetrachloroethane Toluene Chlorobenzene Ethylbenzene 2 — Chloroethywinyl Ether 1,3 — Dichlorobenzene 1,2 — Dichlorobenzene 1,4 — Dichlorobenzene 1,2 — Dichloroethene trans—1,2 — Dichloroethene Trichlorofluoromethane Acetone - Acetone - Carbon Disulfide - Methyl — 2 Pentanone	μg/L μg/L μg/L μg/L μg/L	ND	37	39 ND	28	36	30 ND	39 ND	21.2	30.2 ND	28.4	25.8	30	30	22	ND ND
Benzene trans - 1,3 - Dichloropropene Bromoform Tetrachlorocthene 1,1,2,2 - Tetrachlorocthane Toluene Chlorobenzene Ethylbenzene Ethylbenzene 2 - Chlorocthylvinyl Ether 1,3 - Dichlorobenzene 1,2 - Dichlorobenzene 1,2 - Dichlorobenzene 1,2 - Dichlorobenzene 1,2 - Dichlorocthene trans - 1,2 - Dichlorocthene trans - 1,2 - Dichlorocthene trans - 1,2 - Dichlorocthene Carbon Disulfide 4 - Methyl - 2 Pentanone Carbon Disulfide 4 - Methyl - 2 Pentanone	μg/L μg/L μg/L μg/L		ND ND	ND	ND ND	ND ND	ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Bromoform Tetrachiorocthene 1,1,2,2 — Tetrachiorocthane Toluene Chiorobenzene Ethylbenzene Ethylbenzene 2,2—Dichlorocthywnyl Ether 1,3—Dichlorobenzene 1,4—Dichlorobenzene 1,4—Dichlorocenee 1,2—Dichlorocthene trans=1,2—Dichlorocthene trans=1,2—Dichlorocthene Trichlorofluoromethane Acetone Carbon Disulfide 4—Methyl-2 Pentanone	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND
Tetrachlorocthene 1,1,2,2 - Tetrachlorocthane Toluene Chlorobenzene Ethylbenzene 2 - Chlorocthylvinyl Ethor 1,3 - Dichlorobenzene 1,2 - Dichlorobenzene 1,4 - Dichlorobenzene 1,4 - Dichlorocthene 1,2 - Dichlorocthene trans - 1,2 - Dichlorocthene Carbon Disulfide 4 - Methyl - 2 Pentanone 2 - Hezanone	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND
1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethylbenzene 2,-Chloroethylvinyl Ethee 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,2-Dichloroethene Trichlorofluoromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone		ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	ND	ND	ND ND	ND ND	ND ND
Chlorobenzene Ethylbenzene 2-Chloroethylvinyl Ether 1,3-Dibilorobenzene 1,4-Dibilorobenzene 1,4-Dibilorobenzene 1,2-Dibilorobenzene 1,2-Dibiloroethene (total) cis-1,2-Dibiloroethene trans-1,2-Dibiloroethene trans-1,2-Dibiloroethene Carbon Disulfide 4-Methyl-2 Pentanone 2-Hezanone		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND ND
Ethylbenzene 2-Chloroethylvinyl Ether 1,3-Dishlorobenzene 1,2-Dishlorobenzene 1,2-Dishlorobenzene 1,2-Dishlorobenzene 1,2-Dishloroethene (total) cis-1,2-Dishloroethene trans-1,2-Dishloroethene trans-1,2-Dishloroethene Trichlorofluoromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
2Chloroethylvinyl Ether 1,3-Dishlorobenzene 1,2-Dishlorobenzene 1,4-Dishlorobenzene 1,2-Dishlorobenzene 1,2-Dishloroethene (total) cis-1,2-Dishloroethene trans-1,2-Dishloroethene trans-1,2-Dishloroethene Trishlorofluoromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone 2-Hezanone	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 - Dichloro benzene 1,4 - Dichloro benzene 1,2 - Dichloro ethene cis - 1,2 - Dichloro ethene trans - 1,2 - Dichloro ethene trans - 1,2 - Dichloro ethene Trichloro fluoro methane Acetone Carbon Disulfide 4 - Methyl - 2 Pentanone 2 - Hezanone	MB/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	~
1,4 - Dichlorobenzene 1,2 - Dichlorobenzene (totai) cis - 1,2 - Dichlorobene trans - 1,2 - Dichlorobene trans - 1,2 - Dichlorobene Trichlorofluoromethane Acetone Carbon Disulfide 4 - Methyl - 2 Pentanone 2 - Hezanone	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND				
1,2 - Dishloroethene (total) cis-1,2-Dishloroethene trans-1,2-Dishloroethene Trichlorofluoromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone 2-Hezanone	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_		_
trans - 1,2 - Dichleroethene Trichlerofluoromethane Acetone Carbon Disulfide 4 - Methyl - 2 Pentanone 2 - Hezanone	Mg/L	-	-	-	-	_	-	-	-	-	-	_	_	47	41	_
Trichlerofluoromethane Acetone Carbon Disulfide 4-Methyl-2 Pentanone 2-Hexanone	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	S1 ND	_	_	-
Acetone Carbon Disulfide 4-Methyl-2 Pentanone 2-Hexanone	MB/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	
4-Methyl-2 Pentanone 2-Hexanone	μg/L	-	-	-	-	_	-	_	_	_	-	-	-	ND	-	-
2-Hexanone	µg/L µg/L	_	_		_	_	_	_					_	ND ND		
Common o	µg/L	_		_	_	_	_	_				-	_	ND	_	_
Styrene	4g/L	-	-		_	-	-	_	-	-	-	_	_	ND ND	-	-
Xylenes (total) Total Volatile Organics	μg/L μg/L	27	37	39	28	36	30	39	21.2	30.2	28,4	25.8	81	77	63	31
					000000000000000000000000000000000000000									P. 20000-0000-0000-0		
METALS	7-0													37.4	**************************************	6020.00
Aluminum Antimony	mg/L mg/L	_	_	_	-	_	_	_	_	-	_	_	_	ND	_	20.40
Arsenic	mg/L	-			_	_	ND			-	ND	-	_	ND	-	ND
Barium Beryllium	mg/L mg/L	_	_	_	_	_	0.16	_	_	_	0.091	_	_	0.229	_	72.10 0.33
Cadmium	mg/L	-	-	_	-	_	ND		-	_	ND	_		ND	_	ND
Calcium	mg/L	_	- "	_	-	_		-	-	-	ND -	-	-	188	-	124000.00
Chromium Cobalt	mg/L mg/L		_		_		0.03	_		_	ND	_		0.0506		8,200 ND
Copper	mg/L			_	-	_	-	_	_	_	-		-	0.043	-	166.00
Iron	mg/L	-	-	-	-	-	53.9	_		-	16.6	-	_	59.7	-	7540.00
Lead Magnesium	mg/L mg/L						ND -				ND			0.0137 27		1,800 13900.00
Manganese	mg/L	_	_	_	_	_	_	_	_	_	_	_	_	1.59	_	217.00
Mercury	mg/L		-			_	ND				ND			ND 0.0739	_	ND 9.40
Nickel Potassium	mg/L mg/L	_	_	_	_	_	4.67	_	_	_	2.72	_	_	6.53	_	2780.00
Selenium	mg/L	-	-	-		_	ND		_		ND		_	ND		ND
Silver	mg/L	-	-	-		_	ND 8.19	_	_	_	ND 8.26	_		ND 8.95	_	ND 11000.00
Sodium Thallium	mg/L mg/L	_		_	_		6.19	_	_		8-20	_	_	ND	_	ND
Vanadium	mg/L	-	-	-	_	_	_	_	-		-	-	Silles -	0.048	_	9.50
Zinc	mg/L	_	_	-	-	_	_	_	_	_	_	_	_	0.168 ND	_	113.00 ND
Cyanide	mg/L	-			33			strainer recogg		00 00 00 00 00 00 00 00 00 00 00 00 00		word makes against				ND
MISCELLANBOUS	- 11 Jan 11 11 11 11 11 11 11 11 11 11 11 11 11	1996			Section 1						****	- 54		**************************************		
Total Organic Halogens/Halides (TOX)	mg/L	_	_	_	_	_	0.057 23.6	_	_	_	0.04 22.5	-	_	0.04 16.5	0.03 23	0.06 17.0
Chloride Conductivity (field)	mg/L amhos/cm	400	360	560	460	520	390	712	740	670	710	650	_	405	390	500
Conductivity (lab) µ	mhos/cm		-	_		-		_	-	-	635		_	635	600	620.00
Nitrite Nitrogen	mg/L		-	-			0.07		_	_	4.85		_	ND 0.05	0.13	0.10
Nitrate/Nitrite Nitrogen Nitrate as N - Calculation	mg/L mg/L		=				0.07				4.83			0.05	0.13	0.10
pH (Lab) s	std. units	-	_	-	-	_	7.2	_	_	-	7.3	-	_	7.11	7.17	7.03
pH (field) s	std. units	6.9	6.9	7.2	7.35	6.7	7.95 109.6	6.65	7.22	7.34	7.19 73.4	7.07		6.74	7.17 27.0	7.03 7.52 24.0
Sulfate Total Organic Carbon (TOC)		_	_	_	-	_		-	_	_		_				27.01
Temperature (field) Turbidity	mg/L mg/L		_	_	_	_	63	-		-	6	_	_	1.8	ND	3.0

HISTORICAL DATA FOR MONITORING WELL MW-29 ASH LANDFILL

	Source:	NET	NET	NET	NET	NET	NET	NET	NET	NET	NET	NET	GTC	ES	ES	BS
Param eters	Units	Jan 1990	Mar 1990	June 1990	Sept 1990 DRY	Dec 1990	Mar 1991	Jane 1991	Sept 1991 DRY	Det 1991	Mar 1992	June 1992	Dec 1992	Jan 1993	April 1993	June 1993
VOLATILE ORGANICS	ll and	ND	ND	ND		ND	ND	ND		ND	ND	ND	ND	ND	ND	NI
romomethane	μg/L μg/L	ND	ND	ND	_	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NE
inyl Chloride	μg/L	ND	ND	ND	-	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NE
hloroethane	μg/L	ND	ND	ND	_	ND	ND	ND	_	ND	ND	ND	ND ND	ND ND	ND ND	NE NE
lethylene Chloride 1-Dichloroethene	µg/L	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	ND	ND	ND	ND
1-Dichloroethane	µg/L µg/L	ND	ND	ND		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND
hloroform	μg/L	ND	ND	ND	-	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	ND
2-Dichloroethane	μg/L	ND	ND	ND		ND	ND	1	-	ND	ND	ND	ND	ND	ND	NE
1,1-Trichloroethane	µg/L	ND	ND	ND ND	_	ND	ND ND	ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
arbon Tetrachloride romodichloromethane	µg/L	ND ND	ND ND	ND	_	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NE
,2-Dichloroprop ane	μg/L μg/L	ND	ND	ND	_	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	NE
is-1,3-Dirch loropropene	µg/L	ND	ND	ND	_	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NE
richloroetheae	µg/L	ND	ND	ND	-	ND	ND	1	-	1.2	ND	ND	ND	2	ND	NI
Dibramoc hloromethane	Hg/L	ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
,1,2 – Trichloroethane lenzene	μg/L μg/L	ND ND	ND	ND	_	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NI
rans-1,3-Dichloropropene	μg/L	ND	ND	ND	-	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NI NI
rom of orm	μg/L	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	NI
etrachloroethene	MEL	ND	ND	ND	_	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	NI NI
,1,2,2 - Tetrachloroethane	μg/L	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI
Coluene Chlorobenzene	μg/L μg/L	ND	ND	ND	_	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NI
Sthylbenzen e	µg/L	ND	ND	ND	-	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NI
2-Chloroethylvinyl Ether	µg/L	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	-	-	
1,3-Dichlorobenzene	MEL	ND	ND	ND	_	ND	ND	ND	-	ND	ND	ND			-	-
1,2-Dichlorobenzene	μg/L	ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	==	ND ND	ND ND	ND ND		_	_	
1,4—Dichlorobenzene 1,2—Dichloroethene	μg/L μg/L	ND	ND -	ND -	_	ND -	ND -	ND -			ND	ND		70	76	9
cis-1,2-Dichloroethene	ueff.	-	-	-	-	-		_	_	-	-	-	67	-	-	-
trans - 1,2-Dichloroeth ene	μg/L	ND	ND	ND	_	ND	ND	ND		ND	ND	ND	ND	-	-	-
Trichlorofluoromethane	HE/L	ND	ND	ND		ND	ND	· ND	_	ND	ND	ND	ND	ND	ND.	MT
Acetone	μg/L μg/L	_	_		_	_	_	_	_	_	_	_	_	ND	ND	NI
Carbon Disulfide 4-Methyl-2 Pentanone	µg/L	_	_	_	_	_	_	_		-	-		-	ND	ND	NI
2-Hemnone	μg/L			_	-	_	-	-	-	_	-	-	-	ND	ND	NI NI
Styrene	µg/L	-	_	-	-	-	-	-	_	-	-	-	-	ND	ND	NI
Kylenes (total)	µg/L	0	0	- 0			- 0		0	1.2	0	- 0	67	ND 72	ND 76	NI
Total Volatile Organics	µg/L.		***************************************					(2000)								
METALS						****										
Aluminum	mg/L	-	-	-	-	-	-	-	-	~	-	-	-	59.6		76000.0
Antimony	mg/L		-	_	_		ND			-	ND	_		0.0015	_	NI 3.1
Arsenic Barium	mg/L mg/L		_		-	_	0.227			-	0.327	_		0.427	_	420.0
Beryllium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.0032	-	4.4
Cadmium	mg/L	_	-	-		_	ND			-	ND			ND	-	2.4
Cakium	mg/L	-	-		-	-	0.043	-	-	-	0.088	-	_	278 0.0809	_	274000.0
Chromium	mg/L	_					0.043	_	_	_	0.066	_	_	0.0636		116.0 82.4
Cobalt	mg/L mg/L						_	_	_	_	_	_		0.0851	-	172.0
Copper	mg/L	_	_	_	_	-	69.5	_	-	-	101	-	-	92.4	-	162000.0
Lead	mg/L	_		_	_	_	ND	_	-	-	0.028	-	-	0.0267	-	63700.0
Magnesium	mg/L	-	_	-	_	-	-		-	_	_	_		58 3.7	-	4030.0
Manganese	mg/L	_			_	_	ND	_	_	_	ND	_	_	0.00018	_	NI
Mercury Nickel	mg/L mg/L					_	-	_	_	-	-		_	0.132	_	191.0
Potassium	mg/L	_	-	-	_	-	5	_	_	-	8,42	-	-	9.06	-	8740.0
Seleaium	mg/L		_				ND		-	_	ND	_		ND		NI
Silver	mg/L	-	_	-	-	-	ND	_	-	-	ND 18.3	-	-	ND 21.9	_	NE 26900.0
Sodium	mg/L	_	_		_	_	16.1	_	_	_	1823	_	_	ND	_	NI NI
Thallium Vanadium	mg/L mg/L				_	-	-		_	_	-	_	-	0.0753	_	102.0
Zinc	mg/L	_	_	_	_	_	-	_	_	-	-	_	_	0.325	-	498.0
Cyanide	mg/L		_	-		_	_		_	_	_		_	ND		
MESCELLANEOUS					200000000		0.037	_			0.03		***************************************	0.04	0.06	0.10
otal Organic Halogens/Halides (TOX)	mg/L mg/L	_	177	_	_	_	18.7	-	_	_	21	_	_	15.2	14	23.0
Conductivity (field)	μmhos/cm	440	420	580	_	550	520	830	_	860	810	770	-	492	480	580
Conductivity (lab)	µmhos/cm	-	- 420	_	_	_	620	-	-	-	725	-		761	770	750.00
Nitrite Nitrogen	mg/L	-	-	-	_	-	-	_	-	-	-	-	-	ND	-	
Nitrate/Nàrite Nitrogen	mg/L	-	_		-	-	0.46	-			0.31	-		0.24	0.38	0.17
Nitrate as N - Calculation	mg/L	-	_	_	-	_	7.2	_	-	_	7.2	_	_	0.24 7.13	7.11	7.13
H (Lab)	std. units	6.85	6.94	7.25	_	6.2	7.9	6.65	_	7.17	7.08	7	-	7.13	7.4	7.63
H (field)	std. units mg/L	0.83	0.34	1.12			65	-	_	-	93.6	-		87	71	66.0
Total Organic Carbon (TOC)	mg/L mg/L	_	_	_	_	-	75	-	-	_	5	_	-	2.1	ND	2.0
Comperature (field)	Cekius	8	7	15	_	9	7	13	_	10	5	10	-	6	5	13.5
	NTUs													>200		

						HISTORICAL I	ASH LANI	DFILL								
Paramoters	Source: Units	NET Jan 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NET D⊯ 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NET Mar 1992	NET June 1992	GTC Dec 1992	.ES Jan 1993	ES April 1993	June 199
VOLATILE ORGANICS			nn ebopygoun i nig				and the second second	DRY	DRY					Age for the second		\$1000 M
Chloromethane	µg/L	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND
Bromomethane	µg/L	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND			ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
Chloroethane Methylene Chloride	μg/L μg/L	ND	ND	ND	ND	ND	ND	_	_	ND	ND	ND	ND	ND	ND	ND
l,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	_	_	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	μg/L	ND	ND	ND	ND	ND	ND	-	_	ND	ND	ND	ND	ND	ND	ND
Chloroform	μg/L	ND	ND	ND ND	ND	ND	ND ND	_	_	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane 1,1,1-Trichloroethane	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND			ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
Carbon Tetrachloride	μg/L	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/L	ND	ND	ND	ND	ND	ND	_		ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	μg/L	ND	ND	ND	ND	ND	ND	-	_	ND	ND	ND	ND	ND	ND	NE
cis – 1,3 – Dirch loropropene Trich loroethene	μg/L	ND ND	ND ND	ND ND	ND	ND ND	ND ND	_	_	ND 24	ND ND	ND ND	ND ND	ND ND	ND ND	NE
Dibromochloromethane	μg/L μg/L	ND ND	ND	ND	ND	ND	ND	<u>-</u> -		ND	ND ND	ND	ND	ND	ND	NE NE
1,1,2-Trishloroethane	μg/L	ND	ND	ND	ND	ND	ND	_	_	ND	ND	ND	ND	ND	ND	NE
Benzene	µg/L	ND	ND	ND	ND	ND	ND	_	_	ND	ND	ND	ND	ND	ND	NE NE NE
trans-1,3-Dichloropropene	µg/L	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	NE
Bromoform Tetrachloroethene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NL
1,1,2,2 - Tetrachloroethane	μg/L μg/L	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	NE NE
Toluene	µg/L	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	NE
Chlorobenzene	MR/L	ND	ND	ND	ND	ND	ND		-	ND	ND	ND	ND	ND	ND	NE
Ethylbenzene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	-	_	ND ND	ND ND	ND ND	ND ND	ND	ND	NE
2-Chloroethylvinyl Ether 1,3-Dichlorobenzene	µg/L µg/L	ND	ND	ND	ND	ND	ND		-	ND	ND	ND	ND	_	_	
1,2-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	_	-	ND	ND	ND		_	-	-
1,4-Dichloroben zene	µg/L	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-		_	
1,2-Dichloroethene (total)	μg/L				_								ND	ND _	ND	NE
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	μg/L μg/L	ND	ND	ND	ND	ND	ND	_	_	ND	ND	ND	ND	_	_	
Trich lorofluoromethane	μg/L	ND	ND	ND	ND	ND	ND	_		ND	ND	ND	ND	-	-	-
Acetone	µg/L	-	_	-	-	_		-	-	_	-	-	-	ND	ND	NE
Carbon Disuifide	µg/L	-	_	-	_	_	-	_	_	-	_	_	-	ND ND	ND	NE
4-Methyl-2 Pentanone 2-Hexanone	μg/L													ND	ND ND	NE NE
Styrene	μg/L μg/L		_	_	_	_	_	_	-	-	_	_	_	ND	ND	NI
Xylenes (total)	μg/L		_	-	_	_	-	-		_		_	_	ND	ND	NE
Total Volatile Organics	μg/L.	0	0	Ö	1	0	0	0	0	2.4	0	0	0	0	0	
METALS																
Aluminum	mg/L	-	-	_	-	-	-	_	_	_	-	-	_	1.06	-	-
Antimony	mg/L	-	-	_	_	-	-	_	-	-		-	_	ND	-	-
Arsenic	mg/L				-		ND	ND			ND			0.0019		
Barium	mg/L mg/L	_	_	_	_	_	0.054	ND			0.049	_		0.0678	_	
Beryllium Cadmium	mg/L	_	_	_	-	_	ND	ND	_	_	ND	_	_	ND	-	-
Cakium	mg/L	-	-	-	-		_	-	_	-	-	_	-	119	-	-
Chromium	mg/L	-	_	-	_	_	ND	ND	-	-	ND	-	-	ND	-	-
Cobalt	mg/L				_		-							ND 0.0041		
Copper	mg/L mg/L	_	_	_	_	_	7.08	ND	_	_	3.92	_	_	0.682	_	
Lead	mg/L	_	_	_	_	_	ND	ND	_	_	ND	_	-	0.0025	_	_
Magnesium	mg/L		_	_	-	-	-	-		_	_	-	-	17	-	-
Manganese	mg/L	_	_	_	-	_	ND	ND	-	-	ND	_	_	0.356	_	3
Mercury Nickel	mg/L mg/L			_			- 40	ND -			ND -			ND		
Potassium	mg/L	_	_	_	-	_	2.38	ND	_	_	2.36	_	-	1.67	_	-
Selenium	mg/L	_			_	-	ND	ND		_	ND	_		ND	_	-
Silver	mg/L	-	-	-		-	ND	ND	-	_	ND	-	-	ND	_	-
Sodium	mg/L	-	_	-	_	_	15.8	ND	_	_	16.5	_	_	18.2 ND		1
Thallium Vanadium	mg/L mg/L						<u>-</u>							ND		
Zinc	mg/L	_	_	_	-	_	_	-	-	_	_	-	_	0.0189	_	_
Cyanide	mg/L	-	_	-	_	_	_		-	_				ND	_	
						lododddoudysys i'r i'r										
MISCELLANEOUS		700000		565655.,			ND			5.650 550 550 550 550 550 550 550 550 550	ND			ND	ND	gnas pa duddikinu:
Total Organic Halogens/Halides (TOX) Chloride	mg/L mg/L	_	_	_			26.6	_	_	_	32.5			28		
Chloride Conductivity (field)	µmhos/cm	420	390		660	620	420	_	_	850	720	760	-	410	28 365	600
Conductivity (lab)	µmhos/cm	_	-	-	_	-	_	-	-		645	-	-	689	630	-
Nitrite Nitrogen	mg/L	-	-	_	_	-	_	-	-		-	-	-	ND	-	-
Nitrate/Nitrite Nitrogen	mg/L		_				0.05				ND	-	-	0.13	0.35	
Nitrate as N - Calculation	atd, units	_	_	_	_		7.3	_	_	_	7,4	_	_	7.29	7.24	
pH (Lab) pH (field)	std, units	6.9	7.11	7.27	7.3	7.15	8.03		_	7.25	7.14	7.12	_	7.14	7.4	7.81
Sulfate	mg/L		-		_	_	35.7	_		-	88.4	-	-	57	39	
Total Organic Carbon (TOC)	mg/L	-	-	_		_	13.6	-	-		2	_	-	1.9	2	
W 115	Celcius	6	4	16	15	6	5	-	-	10	5	12	_	>200	5 90	14.4
Temperature (field) Turbidity	NTUs				_		_	_								

						HISTORICA	ASH LAN	TORING WELL DFILL	, MW -31							
Parameters	Source: Units	NET Jan 1990	NET Mar 1990	NEST June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET Dec 1991	NET Mar 1992	NET Juse 1992	GTC Des 1992	ES Jan 1993	ES April 1993	June 1993
VOLATILE ORGANICS									DRY							
Chloromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NE
Bromomethane Vinyl Chloride	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
Chloroethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	NE
Methylene Chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	NE
1,1-Dichloroethene 1,1-Dichloroethane	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND		ND ND	ND	ND	ND	ND	ND ND	NE NE
Chloroform	µg/L µg/L	ND	ND	ND	ND	ND	ND	ND	_	ND	ND ND	ND ND	ND ND	ND ND	ND	NE
1,2-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	NE
1,1,1 - Trichloroethane	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	-	ND ND	ND	ND ND	ND ND	ND	ND ND	NI NI
Carbon Tetrachloride Bromodichloromethane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND		ND	ND ND	ND	ND	ND ND	ND	NE
1,2-Dichloropropane	μg/L	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	NI
cis-1,3-Dirch loropropene	µg/L	ND	ND	ND	ND ND	ND ND	ND ND	ND	-	ND	ND	ND	ND	ND	ND	NE
Trichloroethene Dibromochloromethane	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
1,1,2-Tri-hloroethane	μg/L	ND	ND	ND	ND	ND	ND	ND	_	ND	ND	ND	ND	ND	ND	NI
Benzene	µg/L	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	NE
trans-1,3-Dichloropropene	μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE NE
Bromoform Tetrachloroethene	μg/L μg/L	ND	ND	ND ND	ND	ND	ND	ND ND		ND	ND	ND	ND	ND	ND	NI.
1,1,2,2 - Tetrachioroethane	μg/L	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	NE NE
Toluene	µg/L	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	-	ND	ND	ND	ND	ND	ND	NE
Chlorobenzene Ethylbenzene	μg/L μg/L	ND ND	ND	ND	ND	ND	ND	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
2-Chloroethylvinyl Ether	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	_	-	NL.
1,3-Dichlorobenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	_	ND	ND	ND	_		-	-
1,2-Dichlorobenzene 1,4-Dichlorobenzene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	_	ND ND	ND ND	ND ND	_	_	_	-
1,2-Dichloroethene (total)	μg/L	ND -	ND	ND	ND -	ND -	- ND	ND -	_	ND	-	ND	-	ND	ND	NE
cis-1,2-Dichloroethene	μg/L	-	-	-	_	-		_	_	_	-	_	ND	-	-	-
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND ND	ND	_	ND	ND	ND	ND	=	_	-
Trich lorofluoromethane Acetone	µg/L µg/L	ND	ND _	ND	ND -	ND -	ND -	ND -		ND -	ND -	ND_	ND	ND ND	ND	NE
Carbon Disulfide	µg/L	_	-	-	_	_	-	-	-	-	-	-	-	ND	ND	NE
4-Methyl-2 Pentanone	µg/L	-										-		ND	ND	NI
2-Hemnone	μg/L μg/L	_		_	_	Ξ.	_	_	_	_	_	_	_	ND ND	ND ND	NE NE
Styrene Xylenes (total)	μg/L	_	-	-	_		_	-	_	_	-	_	_	ND	ND	NE
Total Volatile Organics	μg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	- (
METALS																
Aluminum	mg/L	_	-	_	-	-	_	-	-	-	-	_	_	29.9	-	13900.0
Antimony	mg/L	-	-	-	-	-	****	_	_	-	-	-	-	ND	-	NE
Arsenic Barium	mg/L mg/L						ND 0.159				ND 0.26			0.0026		1.3
Beryllium	mg/L	_	_	-	-	_	-	-	_	-	-	-	-	0.0014	_	0.7
Cadmium	mg/L	-	_	_			ND				ND	-		ND	-	NE
Cakium	mg/L	-	_	_	_	_	0.037	_	_	_	0.072	_	_	136 0,0385		129000.0 19.4
Chromium Cobalt	mg/L mg/L	_	_	_	_	_	0.057	_	_	_	0.072	_	_	0.0216		12.6
Copper	mg/L		_	_	-	-	-	-	-	-		_	_	0.0404		20.6
Iron	mg/L	-	-	-	_		59.6	-	-	_	77.4	-	-	46.5	-	23000.0
Lead Magnesium	mg/L mg/L						ND				0.02			0.008 26.8		20100.0
Manganese	mg/L	_	_	_		-	-	-	-	-	-	_	_	0.967	_	532.0
Mercury	mg/L		_	-		_	ND	_	_	_	ND		_	ND	_	NE
Nickel	mg/L	_	_	_	_	_	4,87	_	_	_	7.1	_	_	0.056 5.86	_	35.7 4230.0
Potassium Selenium	mg/L mg/L	_		_			ND		_	_	ND	_	_	ND	_	NI NI
Silver	mg/L		-	_		-	ND	-	-	-	ND	-	-	ND		NE
Sodium	mg/L	-	-	_	-	-	8.7	-	-	-	7.93	_	_	10.9	-	16600.0
Thallium	mg/L			-										0.0381		6.2 22.5
Vanadium Zinc	mg/L mg/L	_	_	_	_	_	_	_	_	_	_	-	_	0.151	_	83.3
Cyanide	mg/L				_	_	_					_		ND	_	2.4
MISCRLLANHOUS Total Organic Halogens/Halides (TOX)	mg/L			_		- 1000	ND			-	ND	_	<u> </u>	ND	ND	0.03
Chloride	mg/L	_	-	-	_	-	19.7	_	-	-	17.2	-	_	1L3	28	0.03 32.0 500 580
Conductivity (field)	µmhos/cm	325	350	520	480	520	400	750	-	660	520	490	_	382	360	500
Conductivity (lab)	µmhos/cm	_	_	_	_	_	_	_		_	477	_		605 ND	630	580
Nitrite Nitrogen Nitrate/Nitrite Nitrogen	mg/L mg/L	_		_		_	0.15	_	_	_	ND		_	0.2	0.35	0.66
Nitrate as N - Calculation	mg/L		_	_	_	-	_	-	-	-	-		_	0.2	-	_
pH (Lab)	std. units	-	215	7.10	7.4	-	7.3	677	_	731	7.4	7 10	_	7.33	7.24	7.09
pH (field)	std. units	6.9	7.15	7.19	7.4	6.5	8.06 62.6	6,72		7.31	7,25 47,5	7.18		7.16	7.3	6.94 37.0
Sulfate Total Organic Carbon (TOC)	mg/L mg/L	_	•••	_		_	52	_	-	_	2	_	_	1.1	2	2.0
Temperature (field)	Cekius	6.5	4	15	16	8	7	13	_	10	5	11	-	5.8	5.5	12.7
Turbidity	NTUs			_	-	_	-	_	_	_	-	-		>200	147	

HISTORICAL DATA MONITORING WELL MW -32 ASH LANDPILL

Paremoters	Source: Units	NET Jan 1990	Mar 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NET Sept 1991	NET D∞ 1991	Mar 1992	NET June 1992	GTC Dec 1992	Jan 1993	April 1993	June 1991
VOLATILE ORGANICS		200000														
hloromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
romomethane	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	NI
inyl Chloride hloroethane	μg/L μg/L	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	NI NI
fethylene Chloride	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
hloroform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
,2-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
,1,1-Trichloroethane	µg/L	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NE NE
arbon Tetrachloride	µg/L	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
2-Dichloropropane	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
is – 1,3 – Direk loropropene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
richloroethene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Dibromoc bloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
,1,2-Trichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
enzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
rans-1,3-Dichloropropene	µg/L	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
romoform	µg/L	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
etrachloroethene 1,2,2 - Tetrachloroethane	μg/L 49/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
oluene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Chlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Sthylbenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
-Chloroethylvinyl Ether	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		-	
3-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
,2-Dichlorobenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	_	-	
4-Dichlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	ND	ND	NI
,2-Dichloroethene (total) cis-1,2-Dichloroethene	μg/L μg/L											-	ND	ND -	ND -	- NA
trans-1.2-Dichloroethene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	_	
Trichlorofluoromethane	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-		
Acetone	µg/L	-	_	_	-	-	_	_	_	_	_		-	ND	ND	NI
Carbon Disulfide	µg/L	-	-		-	_	-	-	_	-	-	-	-	ND	ND	NI
-Metyl-2 Pentanone	μg/L								-			_	-	ND	ND	NI
-Hexanone	μg/L	-		_	_	_	_	_	~	_	-	_	-	ND ND	ND ND	NI NI
Styrene	µg/L			_	-			_	_	_	_	_	_	ND	ND	NI
Kylenes (total) Fotal Volatile Organics	μg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
Control Of Same	µg/L									300000000000000000000000000000000000000						
MHTALS		-000000000														
Aluminum	mg/L	_	-	-	-	-	-	-	-		-	-	-	1.07		1680.0
Antimony	mg/L	-	_	-	_	-		-	_	-	ND	_	-	ND	-	NI
Arsenic	mg/L						0.071				0.099			ND 0.084		NI 55.5
Barium Beryllium	mg/L			_	_	_	0.071	_		_	0.099	_	_	ND	_	0.3
Cadmium	mg/L mg/L		_	-	_	_	ND	-	_	_	ND	_	_	ND	_	NI
Cakium	mg/L	-			_	-	-		-	-	_	_	_	133		136000.0
Chromium	mg/L	_	_	-	_	_	ND	-	-	-	ND	-	-	ND	-	NI
Cobalt	mg/L	-		-	-		_		-		un	-		0.0058	-	NI
Copper	mg/L	-	-	_	-	-	-	-	-	-		-	-	0.0027	-	3.4
fron	mg/L	-	-	_	-	_	18.5	_	_	_	25.1	-	-	1.15	_	1940.0
Lead	mg/L						ND				ND			0.0031		17700.0
Magnesium	mg/L	_	_	_	_	_	_	_	_	-	_	-	_	0.591	-	99.7
Manganese Mercury	mg/L mg/L	_	_	_	_	-	ND	-	-	-	ND	_	_	ND	_	NI
Nickel	mg/L		-	-	_	-	_	-	-	_	_	_	_	ND	_	NI
Potassium	mg/L	_	_	_	-	_	3.05	_	-	_	4.09	-	-	1.76	-	3070.0
Selenium	mg/L	-	_		-		ND	-	-		ND	-	-	ND_		NI
ilver	mg/L	_	_	_	-	-	ND	-	-	_	ND	-	-	ND	-	NI
Sodium	mg/L	-	_	-	-	~	13.9	_	-	-	16.4	_	-	18.5	_	26000.0
Thallium	mg/L			-					_	-				ND ND		NI 4.9
Vanadium	mg/L	_	_	_	_	_	_	_	_	_	_	_	_	0.019	_	16.5
Zinc	mg/L		_	_	_	_	_		_	_	_	_	_	ND	_	NI
Cyanide	mg/L	-	,			200,000,000,000,000	8888888888888	SEC. 25.25.25.	***********		. A. or selektrians se				2000	
MECELLANBOUS	1															
Total Organic Halogens/Halides (TOX)	mg/L	-	_	_	_	_	ND	-	_	-	ND	-	_	ND	ND	NI
Chloride	mg/L	_	-	_	_	_	24.6	_	_	-	28.7	-	-	25	20	55.0
Conductivity (field)	µmhos/cm	380	410	690	560	600	450	_	900	830	700	740	_	435	370	550.0
Conductivity (lab)	µmhos/cm	-	_	_	_	-	-	_	-	-	639	-	-	706	620	840.0
Vitrite Nitrogen	mg/L	-	-	-	-	-		-	-	_		-	-	ND	-	
litrate/Närite Nitrogen	mg/L					_	0.47				ND			0.76	5	0.82
litrate as N - Calculation	mg/L	_	_	-	_	_	7.3	-	-	_	7.2	_	_	0.76	7.02	-
H (Lab)	std. units	6.85	7.14	7.13	7,35	6.8	7,2 8.03	_	7.13	7.24	7.2 7.14	7	_	7.6 7.02	7.02	6.9
77 68 .145	std. units	6,83	7.14	7.13	7,33	0.8	52		7.13	1.24	74.2		-	59	38	58.0
H (field)	71.00								_	_						20.0
oH (field)	mg/L	_	_	_	_	_	13.3	_	_	_		_	_		2	4 (
H (field)	mg/L mg/L Celcius	7	- 6	14	15	- 8	13.3	13	18	- 6	2.3	10	_	1.9 5.5	2 5	4.0

						HISTORICA	L DATA MONI ASH LAN	TORING WELL NDFIL	L MW -33							
Paramotor)	Source: Units	NET Jan 1990	NET Mar 1990	NET June 1990	NET Sept 1990	NET Dec 1990	NET Mar 1991	NET June 1991	NBT Sopt 1991	NET Dec 1991	NET Mar 1992	NET June 1992	GTC Dec 1992	ES Jan 1993	ES April 1993	.B June 199
VOLATILE ORGANICS								B000 0000 1	deservation of the second					1-200-141		
Chloromethane	µg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Bromomethane Vinyl Chloride	μg/L μg/L	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI
Chloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI NI
Methylene Chloride 1,1-Dichloroethene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	ND	ND	NI
1,1-Dichloroethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
Chloroform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,2-Dichloroethane 1,1,1-Trichloroethane	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	NI
Carbon Tetrachloride	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	NI NI
Bromodichlorometha ne	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND.	ND	ND	ND	ND	ND	NI NI
1,2-Dichloropropane cis-1,3-Dirchloropropene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI NI NI
Trich loroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Dibromoc hloromethane	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
1,1,2-Trichloroethane Benzene	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NI NI
trans-1,3-Dichloropropene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Bromoform	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Tetrachloroethene 1,1,2,2 - Tetrachloroethane	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	NI
Toluene	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND ND	NI NI
Chlorobenzene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NI
Ethylbenzene 2-Chloroethylvinyl Ether	μg/L μg/L	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	NI
1,3-Dichlorobenzene	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND -	_		
1,3 – Dichloroben zene 1,2 – Dichloroben zene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	_	-	-	
1,4-Dichlorobenzene 1,2-Dichloroethene (total)	μg/L μg/L	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND_	_	ND	ND	NI
cis-1,2-Dishloroethene	μg/L	-	_	_	-	_	_	-		_			ND	ND -	- ND	NI
trans-1,2-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	
Trichlorofluoromethane Acetone	μg/L μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND -	ND _	ND	ND	3/1
Carbon Disulfide	μg/L	-	_	_	-	-	_	_	_	-	_	_	_	ND	ND	NI NI
4-Methyl-2 Pentanone	μg/L	_			-			-		_	-			ND	ND	NI
2—Hexanone Styrene	μg/L μg/L	_	_	-	_	_	_		_	_	_		_	ND ND	ND ND	NI NI
Xylenes (total)	μg/L	-	-	-	-	_		_	_	_	_	_	_	ND	ND	NI
Total Volatile Organics	µg/L	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
METALS																
Aluminum	mg/L	-	-	-	_	_	-	-	-	-	-	-	_	2.92	_	•
Antimony Arsenic	mg/L	_	_	_	_	_	ND	_	_	_	ND	_	_	ND ND	_	-
Barium	mg/L mg/L				_	_	0.112	_	_	-	0.133			0.174		
Beryllium	mg/L	_	_	-	-	-	-	_	_	-	-	-	-	0.0007	-	
Cadmium Cabium	mg/L			-			ND				ND			ND 143		
Chromium	mg/L mg/L	_	_	_	_	_	ND	_	_	_	0.033	_	_	ND		
Cobalt	mg/L		_			_					_			0.0095		
Copper	mg/L mg/L	_	_	_	_	_	38.8	_	_	_	32.7	_	_	0.0065	-	
Iron Lead	mg/L	_	_	_	-	-	ND	_	_	-	ND	_	-	0.0027	_	
Magnesium	mg/L	-	_	-		-	_	_	-	-	-	_	-	15.2	-	-
Manganese Mercury	mg/L mg/L	_	_	_	_	_	ND	_	_	_	ND	_	_	0.881 ND	_	
Nickel	mg/L	_	_	-	_		-	_	_	_	-			0.0062		
Potassium	mg/L	-	-	-	-	-	3.34	_	-	-	3.82	-	-	0.872	-	
Selenium Silver	mg/L						ND ND				ND ND			ND ND		
Sodium	mg/L mg/L	_	_	_	_	_	12.5	_	-	_	14.4	_	_	16.8	_	
Thallium	mg/L	_	_		_	_		-	-	_		-		ND.	_	
Vanadium	mg/L			_	_	_	_	_	_	_	-	_	=	ND 0.0347	_	
Zinc Cyanide	mg/L mg/L			_	_		_	_	_			_		ND		
															Miles et e 1980 (C	Naidy Wo
MISCELLANEOUS	/					288	0.017	_			MIS		h w 10.00 (0.000) (0.000)	NIP	N. C.	
Total Organic Halogens/Halides (TOX) Chloride	mg/L mg/L			_	_	_	18.7	_	_	_	23	_	_	ND 24	ND 10	
Conductivity (field)	μmhos/cm	385	380	600	580	440	500	715	_	650	650	610	-	447	330	620.0
Conductivity (lab)	μmhos/cm		-	-	_	-	-	-	-	_	587	_	_	728	480	-
Nitrite Nitrogen Nitrate/Nitite Nitrogen	mg/L mg/L	_	_	_		_	0.81	_	_	_	ND	_		ND 0.41	1.1	
Nitrate as N - Calculation	mg/L		_	_	_		_	-	_	_	~			0.41	-	
pH (Lab)	std. units	.=			_	_	7.2	_	-		7.3	-	-	7.42	6.89	
pH (field)	std. units mg/L	6.7	7.14	7.19	7.25	6.8	8,03 101,5	7.27		7.36	7.13 62.6	7		7.1	7.1	7.10
Sulfate total Organic Carbon (TOC)	mg/L mg/L	-	_	_		_	17.6	_	-	_	4	_	_	54 1.9	29 2	
Temperature (field)	Celcius	7	4	14	14	9	6	13	16	10	4	11	_	5	7	18.50
Turbidity	NTUs	_	_	-	-	_	_	-	-	-	_	_	-	>200	6.9	

HISTORICAL DATA FOR MONTORING WELL MW-34 ASH LANDFILL

Parameters	Source: Units	RS Jan 1993	ES Apr. 1993	E: Jun 199
VOLATILE ORGANICS				
Chloromethane	μg/L	ND	ND	N
Bromomethane	µg/L	ND	ND	NI
Vinyl Chloride	μg/L	ND	ND	NI
Chloroethane Methylene Chloride	μg/L μg/L	ND ND	ND ND	NI NI
1,1-Dichloroethene	11.9/	ND	ND	NI
1,1-Dichloroethane	µg/L	ND	ND	NI
Chloroform 1,2-Dichloroethane	µg/L	ND ND	ND ND	NI NI
1,1,1-Trichloroethane	μg/L μg/L	ND	ND	NI
Carbon Tetrachloride	μg/L	ND	ND	NI
Bromodichloromethane	µg/L	ND	ND	NI
1,2-Dichloropropane cis-1,3-Dirchloropropene	μg/L μg/L	ND ND	ND ND	NI NI
Trichloroethene	μg/L	ND	ND	NI
Dibromochloromethane	µg/L	ND	ND	NI
1,1,2-Trichloroethane	μg/L	ND	ND	NI
Benzene trans-1,3-Dichloropropene	μg/L μg/L	ND ND	ND ND	NI NI
Bromoform	µg/L	ND	ND	NI
Tetrachloroethene	μg/L	ND	ND	NI
1,1,2,2-Tetrachloroethane Toluene	µg/L	ND ND	ND ND	NI NI
Toluene Chlorobenzene	μg/L μg/L	ND ND	ND ND	NI NI
Ethylbenzene	μg/L	ND	ND	NI
2-Chloroethylvinyl Ether	µg/L	-	-	
1,3 - Dichlorobenzene 1,2 - Dichlorobenzene	μg/L μg/L	ND	ND	NI
1,4 - Dichloro benzene	μg/L			
1.2-Dichloroethene (total)	μg/L	ND	ND	NI
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	μg/L	-	-	
Trichlorofluoromethane	μg/L μg/L	_		
Acetone	μg/L	ND	ND	NI
Carbon Disulfide	μg/L	ND	ND	NI
4-Methyl-2 Pentanone	μg/L	ND	ND	NI
2-Hemnone Stwene	μg/L μg/L	ND ND	ND ND	NI NI
Xylenes (total)	HR/L	ND	ND	NI
Total Volatile Organics	μg/L	0	0	
MHTALS				
Aluminum	mg/L	2,66	_	1590.
Antimony	mg/L	ND	_	NI
Arsenic	mg/L	ND 0.138		NI
Barium Beryllium	mg/L mg/L	0.0003	_	81. NI
Cadmium	mg/L	ND	-	NI
Calcium	mg/L	167	-	122000.
Chromium Cobalt	mg/L	0.0031 0.0087	_	NI
Copper	mg/L mg/L	0.0078		4.
Iron	mg/L	4.03	_	2140.
Lead	mg/L	0.0028	-	NI
Magnesium Manganese	mg/L mg/L	22.8 0.689	_	17600. 136.
Manganese Mercury	mg/L mg/L	0.689 ND	_	NI
Nickel	mg/L	0.0081	-	NI
Potassium	mg/L	2.93	_	2240.
Seleniu m Silver	mg/L mg/L	ND ND		NI NI
Sodium	mg/L	15.5	_	18300.
Thallium	mg/L	ND	-	NI
Vanadium	mg/L	0.0052	-	508
Zinc Cyanide	mg/L	0.0239 ND	-	15. NI
Cyanide	mg/L	ND		
MISCELLANHOUS				
Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	NI
Chloride	mg/L μmhos/cm	23 472	21 440	19. 510.
Conductivity (field) Conductivity (lab)	μmhos/cm	721	700	680.
Nitrite Nitrogen	mg/L	ND	-	080
Nitrate/Nitrite Nitrogen	mg/L	0.14	0.14	0.
Nitrate as N - Calculation	mg/L	0.14	-	
pH (Lab) pH (field)	std. units	7.55 7.06	7.14 7.08	7. 7.
Sulfate	mg/L	41	36	30.
Total Organic Carbon (TOC)	mg/L	1.1	ND	1.
Temperature (field)	Celcius	8	5	10.
Turbidity	NTUs	>200	18.9	>10

HISTORICAL DATA PO	R	MONTORING	WELL:	MW-35D
AC	H	ANDELL		

Parameters	Source: Units	BS Jan 1993	ES Apr. 1993	Dec 1993
VOLATILE ORGANICS				
Chloro methane	μg/L	ND	ND	NI
Bromomethane	µg/L	ND	ND	NI
Vinyl Chloride	μg/L	ND	ND	NI
Chloroethane	µg/L	ND	ND	NI
Methylene Chloride 1,1 – Dichloro ethene	μg/L	ND ND	ND ND	NI NI
1,1 - Dichloroethane	μg/L μg/L	ND	ND	NI
Chloroform	μg/L	ND	ND	NI
1,2-Dichloroethane	µg/L	ND	ND	NI
1,1,1-Trichloroethane	42/L	ND	ND	NI
Carbon Tetrachloride Bromodichloromethane	μg/L	ND ND	ND ND	NI NI
1,2-Dichloropropane	μg/L μg/L	ND ND	ND	NI
cis - 1,3 - Dirchloropropene	MB/L	ND	ND	NI
Trichloroethene	μg/L	ND	ND	NI
Dibromochloromethane	μg/L	ND	ND	NI
1,1,2—Trichloroethane Benzene	μg/L	ND	ND	NI
trans-1,3-Dichloropropene	μ <u>ε/</u> L μ <u>ε</u> /L	ND ND	ND ND	NI NI
Bro moform	μg/L	ND	ND	NE
Tetrachloroethene	µg/L	ND	ND	NE
1,1,2,2-Tetrachloroethane	µg/L	ND	ND	NL
Toluene	μg/L	ND	ND	NE
Chloro benzene Ethylbenzene	μg/L	ND ND	ND ND	NE NE
2-Chloroethylvinyl Ether	μg/L μg/L	- 40	ND -	NL
1.3 - Dichlorobenzene	µg/L	_	_	-
1,2-Dichlorobenzene	µg/L	-	-	-
1,4-Dichlorobenzene	μg/L	_		-
1,2-Dichloroethene (total)	μg/L	ND	ND	NE
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	μg/L	_		
Trichlorofluoromethane	μg/L μg/L		_	
Acetone	μg/L	ND	ND	NI
Carbon Disulfide	μg/L	ND	ND	NI
4-Methyl-2 Pentanone	μg/L	ND	ND	NE
2-Hemnone Styrene	μg/L	ND ND	ND ND	NI NI
Styrene Xylenes (total)	μg/L μg/L	ND ND	ND	NE
Total Volatile Organics	μg/L	0	0	(
METALS Aluminum	mg/L	4.29	<u> </u>	46.0
Antimony	mg/L	ND	_	NE
Arsenic	mg/L	0.01	-	NI
Barium	mg/L	0.17	_	103.0
Beryllium	mg/L	0.0003	-	NE
Cadmium Calcium	mg/L mg/L	ND 12.7	<u>-</u>	NI 2.4
Chromium	mg/L	0.0068	-	133000.0
Cobalt	mg/L	ND	-	NI
Copper	mg/L	0.0021	-	NE
Iron	mg/L	5.96	-	4.8
Lead Magnesium	mg/L	0.0023 2.97	-	1690.0
Manganese	mg/L mg/L	0.217	_	127.0
Mercury	mg/L	ND	_	NE
Nickel	mg/L	0.0092	-	NE
Potassium	mg/L	2.46	-	21 10.0
Selenium Silver	mg/L	ND ND		3.3 ND
Sodium	mg/L mg/L	159	_	22100.0
Thallium	mg/L	ND	_	NE NE
Vanadium	mg/L	0.0072	-	4.0
Zinc	mg/L	0.0153	-	18.
Cyanide	mg/L	ND		NE
MISCELLANEOUS				
Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	NE
Chloride	mg/L	21	24	22.0
Conductivity(field)	µmhos/cm	470	415.00	475.0
Conductivity (lab)	µmhos/cm	639	530	530.0
Nitrite Nitrogen	mg/L	0.191	_	
Nitrate/Nitrite Nitrogen	mg/L	3.8 3.6	ND	NE
Nitrate as N — Calculation pH (Lab)	mg/L std. units	8,34	7.85	7.79
bu (reo)	std. units	8.28	8,68	9.04
nH (field)		0.20		
pH (field) Sulfate	me/L	36	26	30.0
pH (field) Sulfate Total Organic Carbon (TOC)	mg/L mg/L	1	5	30.0
pH (field) Sulfate Total Organic Carbon (TOC) Temperature (field) Turbidity	mg/L mg/L Celcius NTUs			

HISTORICAL DATA FOR MONTORING WELL MW-36 ASH LANDFILL

Parameters	Source: Units	ES Jan 1993	ES Apr 1993	E Jun 199
VOLATILE ORGANICS				
Chloromethane	μg/L	ND	ND	N
Bromomethane	μg/L	ND	ND	N)
Vinyl Chloride	μg/L	ND	ND	N
Chloroethane Methylene Chloride	μg/L	ND ND	ND ND	NI NI
1,1-Dichloroethene	μg/L μg/L	ND ND	ND	NI NI
1.1 – Dichloroethane	μg/L	ND	ND	N
Chloroform	up/L	ND	ND	N
1,2-Dichloroethane	μg/L	ND	ND	N
1,1,1-Trichloroethane	<i>μ</i> g/L	ND	ND	N.
Carbon Tetrachloride	μg/L	ND	ND	N.
Bromodichloromethane	μg/L	ND	ND	N.
1,2-Dichloropropane	μg/L	ND ND	ND ND	N.
cis-1,3-Dirch loropropene Trich loroethene	μg/L μg/L	ND ND	ND	N.
Dibromochloromethane	μg/L μg/L	ND ND	ND	N.
1,1,2-Trichloroethane	µg/L	ND	ND	N
Benzene	μg/L	ND	ND	N.
trans-1,3-Dichloropropene	πa/[-	ND	ND	N
Bromoform	µg/L	ND	ND	N.
Tetrachloroethene	HE/L	ND	ND	N.
1,1,2,2 - Tetrachloroethane	µg/L	ND	ND	N
Toluene	HR/L	ND ND	ND ND	N
Chlorobenzene Ethylbenzene	μg/L	ND ND	ND ND	N N
2-Chloroethylvinyl Ether	μg/L μg/L	-	70	N.
1,3 - Dichlorobenzene	μg/L	_	_	
1,2-Dichlorobenzene	µg/L	-	-	
1,4-Dichloroben zene	µg/L	-	_	
1,2-Dichloroethene (total)	μg/L	ND	ND	N.
cis-1,2-Dichloroethene	µg/L	-	_	
trans-1,2-Dichloroethene	μg/L	_	_	
Trichlorofluoromethane Acetone	µg/L	ND ND	ND ND	N.
Acetone Carbon Disulfide	μg/L μg/L	ND	ND	N.
4-Methyl-2 Pentanone	μg/L	ND	ND	N.
2-Hexanone	µg/L	ND	ND	N
Styrene	μg/L	ND	ND	N.
Xylenes (total)	μg/L	ND	ND	N.
Total Volatile Organics	μg/L	0	0	
Aluminum	mg/L	0.836		1250.0
Agtimony	mg/L	ND	-	N.
Arsenic	mg/L	ND	-	N.
Barium	mg/L	0.107		78.3
Beryllium	mg/L	ND	***	0.3
Cadmium	mg/L	ND	-	N.
Cabium	mg/L	163	-	133000
Chromium	mg/L	ND	_	N.
Cobalt	mg/L	0.0076		N.
Copper Iron	mg/L me/L	0.772		1690.
Lead	mg/L mg/L	0.0019		1090.
Magnesium	mg/L	23.5	-	18300
Manganese	mg/L	0.517	_	127.
Mercury	mg/L	ND	-	N.
Nickel	mg/L	ND	_	N.
Potassium	mg/L	1.79	_	2110.
Seleniam	mg/L	ND		3.
Silver	mg/L	ND 21.3	_	N.
Sodium Thallium	mg/L mg/L	21.3 ND	_	22100 N
Vanadium	mg/L	ND ND		4.
Zinc	mg/L mg/L	0.0137	_	18.
Cyanide	mg/L	ND	_	N.
	Santa Militari (g.)			
MISCHLIANEOUS			weeks a sure control (1981)	
Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	N
Chloride	mg/L	35	29	29.0
Conductivity (field)	μmhos/cm	500	470	525.0
Conductivity (lab)	μmhos/cm	8070	760	750.0
Nitrite Nitrogen	mg/L	ND	26	
Nitrate/Nitrite Nitrogen	mg/L	3.4	2.5	1.7
Nitrate as N - Calculation	mg/L std. units	7.3	7,7	7.0
pH (Lab) pH (field)	std. units	7.3	7.30	7.4
Sulfate	mg/L	63	78	68.0
Total Organic Carbon (TOC)	mg/L	1.1	1.0	2.0
Panes Aurage (: An)	Celcius	7	7.50	12.7
Temperature (field)	Certus		/.30	1/-1

HISTORICAL DATA FOR MONTORING WELL MW-37	
ASH I ANDRII I	

Paramotore	Source: Units	ES Jan 1993	ES Apr 1993	Jun 1990
VOLATILE ORGANICS Chloromethane	μg/L	ND	ND	NI
Bromomethane	μg/L	ND	ND	NI
Vinyl Chloride	μg/L	ND	ND	NI
Chloroethane	µg/L	ND	ND	NI
Methylene Chloride	µg/L	ND	ND	NI
1,1-Dichloroethene 1,1-Dichloroethane	μg/L μg/L	ND ND	ND ND	NI NI
Chloroform	µg/L	ND	ND	NI
1,2-Dichloroethane	μg/L	ND	ND	NI
1,1,1-Trichloroethane	µg/L	ND	ND	NI
Carbon Tetrachloride	μg/L	ND	ND	NI
Bromodichloromethane	д	ND	ND	NI NI
1,2-Dichloropropane cis-1,3-Dirchloropropene	μg/L μg/L	ND ND	ND ND	NI
Trichloroethene	µg/L	ND	ND	NI
Dibromoc hloromethane	μg/L	ND	ND	NI
1,1,2-Trichloroethane	H2/L	ND	ND	NI
Benzene	HR/L	ND	ND	NI
trans-1,3-Dichloropropene	µg/L	ND	ND	NI
Bromoform Tetrachloroethene	μg/L μg/L	ND ND	ND ND	NI
1,1,2,2—Tetrachloroethane	ue/L	ND	ND	NI
Toluene	μg/L	ND	ND	N
Chlorobenzene	HE/L	ND	ND	N.
Ethylbenzene	μg/L	ND	ND	N
2-Chloroethylvinyl Ether	μg/L	-	-	
1,3-Dichloroben zene 1,2-Dichloroben zene	μg/L μg/L			
1,4-Dichlorobenzene	μg/L	_	_	
1,2-Dichloroethene (total)	μg/L	ND	ND	N
cis-1,2-Dichloroethene	μg/L	-	-	
trans-1,2-Dichloroethene	μ8√Γ	-	-	
Trichlorofluoromethane	MEL	-	-	
Acetone Carbon Disulfide	µg/L	ND ND	ND ND	NI NI
4-Methyl-2 Pentanone	μg/L	ND	ND	NI
2-Hexanone	μg/L μg/L	ND	ND	N1
Styrene	μg/L	ND	ND	N1
Xvienes (total)	μg/L	ND	ND	NI
total Volatile Organics	μg/L	0	0	
Aluminum	mg/L	3.44	_	4470.
Antimony	mg/L	ND	-	NI
Arsenic	mg/L	0.0017	-	1.
Barium	mg/L	0.156	-	90.
Beryllium	mg/L	0.00048	_	NI
Cadmium Cakium	mg/L	ND 151		116000.
Chromium	mg/L mg/L	0.0022	_	7.
Cobalt	mg/L	0.0137	_	5.
Copper	mg/L	0.0103		4.
iron	mg/L	4.17	_	5550.
Lead	mg/L	0.0015		N.
Magnesium	mg/L	19.3	- 11.11	17000.
Manganese Mercury	mg/L mg/L	0.767 ND	_	N1
Nickel	mg/L	0.0074	_	10.
Potassium	mg/L	1.26	-	2290.
Selenium	mg/L	ND		NI NI
Silver	mg/L	ND	-	N.
Sodium	mg/L	14.3	_	15000. N
Thallium Vanadium	mg/L	ND ND		10.
Vanadium Zinc	mg/L mg/L	0.0175	_	16.
Cyanide	mg/L	ND	-	N
			************	7000000
MISCHLLANBOUS		***************************************		
Total Organic Halogens/Halides (TOX)	mg/L	ND	0.04	0.0
Chloride	mg/L	22	52 500	29. 500.
Conductivity (field)	μmhos/cm μmhos/cm	415 641	750	650.
Conductivity (lab) Nitrite Nitrogen	mg/L	ND	730	630.
Nitrate/Nitrite Nitrogen	mg/L	0.08	0.10	NI
Nitrate as N - Calculation	mg/L	0.08	_	
pH (Lab)	std. units	7.64	7.13	7.1
pH (field)	std. units	6,9	7.15	7.0
Sulfate	mg/L	37	42	27.
Total Organic Carbon (TOC) Temperature (field)	mg/L Celcius	1.1	1 5.42	2.
			3.76	

HISTORICAL DATA FOR MONTORING WELL MW-38D ASH LANDFILL

Parameters	Source: Units	ES Jan 1993	BS Apr 1993	ES June 1993
VOLATILE ORGANICS				
Chloromethane	µg/L	ND	ND	NI
Bromomethane	μg/L	ND	ND	NI
Vinyl Chloride Chloroethane	μg/L	ND ND	ND ND	NE NE
Methylene Chloride	μg/L μg/L	ND	9	NI NI
1,1-Dichloroethene	μg/L	ND	ND	NE
1,1-Dichloroethane	49/	ND	ND	NE
Chloroform	µg/L	ND	ND	NE
1,2-Dichloroethane	µg/L	ND	ND	NE
1,1,1-Trichloroethane Carbon Tetrachloride	μg/L	ND ND	ND ND	NE NE
Bromodichloromethane	μg/L μg/L	ND	ND	NE
1,2-Dichloropropane	μg/L	ND	ND	NE
cis-1,3-Dirchloropropene	µg/L	ND	ND	NE
Trichloroethene	μg/L	ND	ND	NE
Dibromochloromethane	µg/L	ND	ND	NI
1,1,2-Trichloroethane	μg/L	ND	ND	NI
Benzene trans-1,3-Dichloropropene	μg/L μg/L	ND ND	ND ND	NI NI
Bromoform	μg/L	ND	ND	NI
Tetrachloroethene	µg/L	ND	ND	NI
1,1,2,2 - Tetrachloroethane	MR/L	ND	ND	NI
Toluene	Mg/L	ND	ND	NI
Chlorobenzene	μg/L	ND	ND	NI
Ethylbenzene 2-Chloroethylvinyl Ether	μg/L	ND	ND	NE
1,3 - Dichlorobenzene	μg/L μg/L	-		
1,2-Dichlorobenzene	µg/L	<u>-</u>	<u>-</u>	
1,4-Dichlorobenzene	µg/L	_	_	_
1,2-Dichloroethene (total)	µg/L	ND	ND	NE
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	μg/L	-		-
trans-1,2-Dichloroethene	H2/L	-	-	-
Trich lorofluoromethane Acetone	μg/L	ND ND	ND.	NE
Acetone Carbon Disulfide	μg/L	ND	ND	NL NE
4-Methyl-2 Pentanone	μg/L μg/L	ND	ND	NE
2-Hexanone	µg/L	ND	ND	NE
Styrene	µg/L	ND	ND	NE
Xylenes (total)	MR/L	ND	ND	NE
Total Volatile Organics	μg/L	0	9.00	0.00
METALS				
Aluminum	mg/L	1.117	-	262.00
Antimony	mg/L	ND	_	NE
Arsenic	mg/L	0.0019	-	NE
Barium	mg/L	0.203	-	117.00
Beryllium	mg/L	ND	-	NE
Cadmium Cakium	mg/L mg/L	ND 120		92400.00
Chromium	mg/L	ND	_	92400.00 NE
Cobalt	mg/L	ND	_	NE
Copper	me/L	0.0061	_	3.00
Iron	mg/L	1.94	-	601.00
Lead	mg/L	0,0036		NE
Magnesium	mg/L	16.8 0.652	_	15900.00 202.00
Manganese Mercury	mg/L mg/L	0.00007	_	202.00 NE
Nickel	mg/L	0.0038		NE
Potassium	mg/L	3.81	_	2920.00
Selenium	mg/L	ND	-	NE
Silver	mg/L	ND	-	NE
Sodium	mg/L	5.21	-	4750.00
Thallium	mg/L	ND	-	NE 310
Vanadium Zine	mg/L	ND 0.0129	_	3.10 15.60
Zinc Cyanide	mg/L mg/L	ND ND	_	2.00
	myr	ND	or exclusional and all and	200
MISCRILLANEOUS		200000		
Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	NE
Chloride	mg/L	9,9	10.0	10.00
Conductivity (field)	μmhos/cm	360	350	375.00
Conductivity (lab)	µmhos/cm	517 0.004	540	540.00
Nitrite Nitrogen	mg/L		-	-
Nitrate/Nitrite Nitrogen Nitrate as N — Calculation	mg/L mg/L	0,03	ND	NE
pH (Lab)	std. units	7.39	7.4	7.29
pH (field)	std. units	7.36	7.29	7.57
Sulfate	mg/L	38	36	35.00
Total Organic Carbon (TOC)	mg/L	1.4	ND	3.00
Temperature (field)	Cekius	9	9.00	9.90
Turbidity	NTUs	>200	4.00	>65

HISTORICAL DATA FOR MONTORING WELL MW -39 ASH LANDFILL

Parameters .	Source: Units	ES Jan 1993	ES Apr 1993	ES June 1993
VOLATILE ORGANICS				
Chloromethane	μg/L	ND	ND	NE
Bromomethane	µg/L	ND	ND	NE
Vinyl Chloride	HZ/L	ND	ND	NE
Chloroethane	μg/L	ND	ND	NE
Methylene Chloride 1,1-Dichloroethene	µg/L	ND ND	ND ND	NE NE
1,1-Dichloroethane	μg/L μg/L	ND	ND	NE
Chloroform	μg/L	ND	ND	NE
1,2-Dichloroethane	µe/L	ND	ND	NE
1,1,1-Trichloroethane	µg/L	ND	ND	ND
Carbon Tetrachloride	μg/L.	ND	ND	NE
Bromodichloromethane 1,2-Dichloropropane	μg/L	ND ND	ND ND	NE NE
cis -1,3 -Dich loropropene	μg/L μg/L	ND	ND	NE
Trich loroethene	μg/L	ND	ND	NE
Dibromoc hloromethane	HE/L	ND	ND	NE
1,1,2-Trichloroeth ane	µg/L	ND	ND	NE
Benzene trans - 1,3 - Dichloropropene	μg/L	ND ND	ND ND	NE NE
Bromoform	μg/L μg/L	ND	ND	NE
Tetrachloroethene	μg/L	ND	ND	NE
1,1,2,2 - Tetrachloroethane	µg/L	ND	ND	NE
Toluene	MR/L	ND	ND	NE
Chlorobenzene	µg/L	ND	ND	NE
Ethylbenzene 2-Chloroethylvinyl Ether	μg/L ug/l	ND	ND	NE
1,3-Dichlorobenzene	μg/L μg/L			
1,2-Dichloroben zene	µg/L	-		
1,4-Dichlorobenzene	µg/L	_	-	_
1,2-Dichloroethene (total)	µg/L	ND	ND	ND
cis-1,2-Dichloroethene	μg/L	-	-	-
trans-1,2-Dichloroethene Trichlorofluoromethane	μg/L	_	_	-
Acetone	µg/L µg/L	ND	ND	ND
Carbon Disulfide	μg/L	ND	ND	ND
4-Methyl-2 Pentanone	μg/L	ND	ND	NE
2-Hexanone	μg/L	ND	ND	ND
Styrene	µg/L	ND ND	ND	NE
Xylenes (total) total Volatile Organics	μg/L μg/L	ND 0	ND 0.0	ND 0.0
Iola, Voiatic Organio				
MBTALS				
Aluminum	mg/L	1.39	_	37,90
Antimony Arsenic	mg/L mg/L	ND ND	_	NE NE
Barium	mg/L	0.0721		39,30
Beryllium	mg/L	ND	-	NE
Cadmium	mg/L	ND		NE
Cabium	mg/L	102	-	106000.00
Chromium Cobalt	mg/L	ND ND	_	NE NE
Copper	mg/L mg/L	0.0057		NE
Iron	mg/L	2.09	_	31.10
Lead	mg/L	0.002	-	NE
Magnesium	mg/L	13.8	_	14300.00
Manganese	mg/L	0.199 ND	-	25.20
Mercury Nickel	mg/L mg/L	ND ND		9.20
	mg/L mg/L	2.02	_	2200.00
Potassium				
Selenium	mg/L	ND	_	NI
Selenium Silver	mg/L mg/L	ND ND		ND
Selenium Silver Sodium	mg/L mg/L mg/L	ND ND 10.9	= =	NE 10800.00
Selenium Silver Sodium Thallium	mg/L mg/L mg/L mg/L	ND ND 10.9 ND	-	NE 10800.00 NE
Selenium Silver Sodium Thallium Vanadium	mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034	-	NE 10800.00 NE NE
Selenium Silver Sodium Thallium Vanadium Zine	mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.003 4 0.015 1	= = = = = = = = = = = = = = = = = = = =	NE 10800.00 NE NE 9.00
Selenium Silver Sodium Thallium Vanadium Zine Cyanide	mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034	- - - - -	NE 10800.00 NE NE 9.00
Selenium Silver Sodium Thallium Vanadium Zine Cyanide MISCHLANEOUS	mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND		NE 10800.00 NE NE 9.00 7.00
Selenium Silver Sodium Thallium Vanadium Zinc Cyanide MISCHLLANEOUS Total Organic Halogens/Halides (TOX)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND		NE 10800.00 NE NE 9.00 7.00
Selenium Silver Sodium Thallium Vanadium Zine Cyanide MISCHLIANEOUS Total Organic Halogens/Halides (TOX) Chloride	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0334 0.0151 ND		NE 10800.00 NE NE 9.00 7.00
Selenium Silver Sodium Thallium Vanadium Zinc Cyanide MISCHILANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND ND 23 340		NE 10800.00 NE NE 9.00 7.00 0.05 21.00 440.00
Selenium Silver Sodium Thallium Vanadium Zinc Cyanide MISCHLANEOUS: Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (lab)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND ND 23 340		NE 10800.00 NE NE 9.00 7.00 21.00 440.00
Sclenium Silver Sodium Thallium Vanadium Zine Cyanide MISCHILANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (lab) Nitrite Nitrogen	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND ND 23 340		NE 10800.00 NE NE 9.00 7.00 0.03 21.00 440.00 590.00
Selenium Silver Sodium Thallium Vanadium Zine Cyanide MISCHLANEOUS Total Organic Halogena/Halides (TOX) Chloride Conductivity (field) Conductivity (lab) Nitrite Nitrogen Nitrate/Nitrie Nitrogen Nitrate as N — Calculation	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.034 0.0151 ND 23 340 551 ND 0.08	ND 18 405 520	NE 10800.00 NE NE NE 9.00 9.00 9.00 9.00 9.00 9.00 9.00 9.0
Selenium Silver Sodium Thallium Vanadium Zinc Cyanide MISCHILANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (lab) Nitrie Nitrogen Nitriate/Nitrie Nitrogen Nitrate/Nitrie Nitrogen Nitrate as N — Calculation pH (Lab)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND 23 340 551 ND 0.08 0.08	ND 18 405 520	NE 10800.00 NE NE NE NE 9.00 7.00 21.00 440.00 590.00 7.18
Selenium Silver Sodium Thallium Vanadium Zinc Cyanide Cyanide MISCHLLANEOUS: Total Organic Halogens/Halides (TOX) Caloride Conductivity (field) Conductivity (lab) Nitrite Nitrogen Nitrate/Nirite Nitrogen Nitrate/Nirite Nitrogen Nitrate as N — Calculation pH (Lab) pH (field)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND 23 340 551 ND 0.08 7.66 7.05	ND 18 405 520 - 0.12 - 7.21 7.35	NE 10800.00 NE 10800.00 NE 9.00 7.00 7.00 7.00 7.00 7.00 7.00 7.00
Selenium Silver Slover Slover Slover Thallium Zinc Cyanide MISCHILANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (field) Nitrate/Nirrie Nitrogen Nitrates an N - Calculation pH (Lab) pH (field) Sulfate	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND 23 340 551 ND 0.08 0.08 7.66 7.05	ND 18 405 520 0.12 7.21 7.35 18	NE 10800.000 NE 10800.000 NE 10800.000 NE 10800.000 NE 10800 NE 10
Potassium Selenium Silver Sodium Thallium Vanadium Zinc Cyanide MISCHLLANEOUS Total Organic Halogens/Halides (TOX) Chloride Conductivity (field) Conductivity (field) Nitrite Nitrogen Nitrate/Nitrite Nitrogen Nitrate an Halogens/Halides PH (field) Sulfate Total Organic Carbon (TOC) Temperature (field)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ND ND 10.9 ND 0.0034 0.0151 ND 23 340 551 ND 0.08 7.66 7.05	ND 18 405 520 - 0.12 - 7.21 7.35	NE 10800.00 NE

HISTORICAL DATA FOR MONTORING WELL MW-40 ASH LANDFILL

Parameteri	Source: Units	PS Jan 1993	ES Apr 1993	ES Jun 1993
VOLATILE ORGANICS				
Chloromethane	µg/L	ND	ND	ND
Bromomethane	µg/L	ND	ND	ND
Vinyl Chloride	Mg/L	ND	ND	ND
Chloroethane	μg/L	ND	ND	ND
Methylene Chloride	μg/L	ND	2	ND
1,1-Dichloroethene	µg/L	ND	ND	ND
1,1-Dichloroethane Chloroform	µg/L	ND ND	ND ND	ND ND
1,2-Dichloroethane	μg/L μg/L	ND	ND	ND
1,1,1-Trichloroethane	μg/L	ND	ND	ND
Carbon Tetrachloride	HE/L	ND	ND	ND
Bromodichloromethane	µg/L	ND	ND	ND
1,2-Dichloropropane	1 42/L	ND	ND	ND
cis-1,3-Dirch loropropene	µg/L	ND	ND	ND
Trichloroethene	μg/L	ND	ND	ND
Dibromochloromethane	µg/L	ND	ND	ND
1,1,2-Trichloroethane	µg/L	ND	ND	ND
Benzene trans-1,3-Dichloropropene	µg/L	ND ND	ND	ND ND
	µg/L		ND	
Bromoform Tetrachloroethene	μg/L μg/L	ND ND	ND ND	ND ND
1,1,2,2 - Tetrachloroethane	μg/L μg/L	ND ND	ND	ND
Toluene	µg/L	ND	ND	ND
Chlorobenzene	µg/L	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND
2-Chloroethylvinyl Ether	μg/L	_	_	-
1,3-Dichlorobenzene	µg/L			-
1,2-Dichlorobenzene	µg/L		-	
1,4-Dichlorobenzene	Mg/L		-	-
1,2-Dichloroethene (total)	HELL	ND	ND	ND
cis-1,2-Dichloroethene	μg/L	_	-	_
trans-1,2-Dichloroethene	µg/L		_	-
Trichlorofluoromethane Acetone	µg/L	ND	ND ND	ND
Carbon Disulfide	μg/L μg/L	ND	ND	ND
4-Methyl-2 Pentanone	μg/L μg/L	ND	ND	ND
2-Hexanone	μg/L	ND	ND	ND
Styrene	µg/L	ND	ND	ND
Xylenes (total)	μg/L	ND	ND	ND
Total Volatile Organics	μg/L	0	2.00	0.00
METALS		40.0		
Aluminum	mg/L	13.5	-	747.00
Antimony Arsenic	mg/L	ND 0.0021	_	ND ND
Barium	mg/L mg/L	0.153		58.20
Beryllium	mg/L	0.00077	_	ND
Cadmium	mg/L	ND	-	ND
Cakium	mg/L	160	-	104000.00
Chromium	mg/L	0.0347	_	4,40
Cobalt	mg/L	0.0099	-	ND
Copper	mg/L	0.009	_	ND
Iron	mg/L	19.8		1140.00
Lead	me/L	0.005	-	1.00
Magnesium	mg/L	19	-	11500.00
Manganese	mg/L	0.905	_	40.80
Mercury Nickel	mg/L	0.00009		ND ND
Nickel Potassium	mg/L mg/L	4.54	_	1740.00
Selenium	mg/L	ND		ND
Silver	mg/L	ND		ND
Sodium	mg/L	23	_	15100.00
Thallium	mg/L	ND	_	1,20
Vanadium	mg/L	0.0184	_	5.00
Zinc	mg/L	0.309	-	10.90
Cyanide	mg/L	ND		ND
MISCHLIANBOUS				
Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	0.02
Chloride	mg/L	5.9	4	6.00
Conductivity (field)	μmhos/cm	435	390	450.00
Conductivity (lab)	μmhos/cm	643	610	570,00
Nitrite Nitrogen	mg/L	0.004 0.11	ND	-
Nitrate/Nitrite Nitrogen	mg/L	0.106	NU	0.25
Nitrate as N - Calculation	mg/L std. units	7.49	7.29	7.21
pH (Lab) pH (field)	std. units	6.82	7.24	7.21
Sulfate	mg/L	93	95	100.00
Total Organic Carbon (TOC)	mg/L	1.3	ND	2.00
The state of the s	Cekius	7.3	6.00	11.80
Temperature (field)				

HISTORICAL DATA FOR MONTORING WELL MW-41D ASH LANDFILL

Parametera	Source: Units	PS Jan 1993	ES Apr 1993	E! Jun 199
VOLATILE ORGANICS				
Chloromethane	μg/L	ND	ND	NI
Bromomethane	μg/L	ND	ND	NI
Vinyl Chloride	μg/L	ND	ND	NI
Chloroethane Methylene Chloride	μg/L μg/L	ND ND	ND ND	NI NI
1,1-Dichloroethene	μg/L	ND	ND	NI
1,1-Dichloroethane	µg/L	ND	ND	NI
Chloroform	49/	ND	ND	NI
1,2-Dichloroethane	μg/L	ND	ND	NI
1,1,1 - Trichloroethane Carbon Tetrachloride	μg/L	ND ND	ND ND	NI NI
Bromodichloromethane	μg/L μg/L	ND	ND	NI
1,2-Dichloropropane	HE/L	ND	ND	NI
cis-1,3-Dirch loropropene	μg/L	ND	ND	NI
Trichloroethene	μg/L	ND	ND	NI
Dibromochloromethane	µg/L	ND ND	ND ND	NI
1,1,2 – Trichloroethane Benzene	μg/L μg/L	ND	ND	NI NI
trans-1,3-Dichloropropene	μg/L	ND	ND	NI
Bromoform	μg/L	ND	ND	NI
Tetrachloroethene	HE/L	ND	ND	NI
1,1,2,2 - Tetrachloroethane	up/L	ND	ND	NI
Toluene	μg/L	ND	ND	NI
Chlorobenzene Ethylbenzene	µg/L µg/L	ND ND	ND ND	NI NI
2-Chloroethylvinyl Ether	HE/L	- ND	ND -	NI
1,3-Dichlorobenzene	µg/L	-	_	
1,2-Dichlorobenzene	μg/L	-	-	
1,4-Dichlorobenzene	MO/L			
1,2-Dichloroethene (total)	μg/L	ND	ND	NI
cis-1,2-Dichloroethene trans-1,2-Dichloroethene	μg/L μg/L		_	
Trich lorofluoromethane	μg/L	_	_	
Acetone	us/L	ND	ND	NI
Carbon Disulfide	μg/L	ND	ND	NI
4-Methyl-2 Pentanone	HE/L	ND	ND	NI
2-Hexanone	μg/L	ND	ND	NI
Styrene Xylenes (total)	μg/L μg/L	ND ND	ND ND	NI NI
Total Volatile Organics	µg/L µg/L	0	0.00	0.00
MBTALS		0.219		45.70
Aluminum Antimony	mg/L mg/L	0.219 ND	_	45.70 NI
Arsenic	mg/L mg/L	ND	_	NI
Barium	mg/L	0.111		98.4
Beryllium	mg/L	ND	-	0.3
Cadmium	mg/L	ND	-	NI
Cakium	mg/L	30.3	-	94000.00
Chromium	mg/L	ND ND		NI 2.80
Cobalt Copper	mg/L mg/L	0.0022		9.0
Iron	mg/L	0.696	_	NI
Lead	mg/L	0.00099		1.4
Magnesium	mg/L	10.4		20600.0
Manganese	mg/L	0.163	_	11.20
Mercury	mg/L	0.00063 ND		NI NI
Nickel Potassium	mg/L mg/L	ND 2.44	_	9240.0
Pocassium Selenium	mg/L mg/L	ND	_	9240.0 NI
Silver	mg/L	ND	-	NI
Sodium	mg/L	113	-	36000.0
Thallium	mg/L	ND	-	NI
Vanadium	mg/L	ND	-	NI
Zinc	mg/L	0.0087	***	501,0
Cyanide	mg/L	ND		NI
MISCELLANBOUS		46.000		
Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	NI
Chloride	mg/L	9.2	9	10.00
Conductivity (field)	μmhos/cm	462	575	520.0
Conductivity (lab)	μmhos/cm	611	670	660.0
Nitrite Nitrogen	mg/L	0.019	0.14	0.13
Nitrate/Narite Nitrogen Nitrate as N - Calculation	mg/L mg/L	0.131	0.14	0.1
pH (Lab)	std. units	7.4	7,51	7.5
pH (field)	std. units	7.33	7.58	7.65
Sulfate	mg/L	40	42	53.00
Total Organic Carbon (TOC)	mg/L	1.2	ND	1.0
Temperature (field) Turbidity	Celcius	-	10.50	10.50
	NTUs	67	8,70	

HISTORICAL DATA FOR MONTORING WELL MW-42D ASH LANDFILL

Parametera	Source: Units	ES Jan 1993	ES Apr 1993	ES Jun 1993
VOLATILE ORGANICS Chloromethane	μg/L	ND	ND	ND
Bromomethane	µg/L	ND	ND	ND
Vinyl Chloride	µg/L	ND	ND	ND
Chloroethane	μg/L	ND	ND	ND
Methylene Chloride	µg/L	ND	ND	ND
1,1-Dichloroethene 1,1-Dichloroethane	μg/L μg/L	ND ND	ND ND	ND ND
Chloroform	µg/L	ND	ND	ND
1,2-Dichloroethane	µg/L	ND	ND	ND
1,1,1-Trichloroethane	μg/L	ND	ND	ND
Carbon Tetrachloride	µg/L	ND	ND	ND
Bromodichloromethane	µg/L	ND	ND	ND
1,2-Dichloropropane cis-1,3-Dirchloropropene	μg/L μg/L	ND ND	ND ND	ND ND
Trichloroethene	µg/L	ND	ND	ND
Dibromochloromethane	µg/L	ND	ND	ND
1,1,2-Trichloroeth ane	µg/L	ND	ND	ND
Benzene	µg/L	ND ND	ND	ND
trans-1,3-Dichloropropene Bromoform	µg/L	ND	ND ND	ND ND
Tetrachloroethene	µg/L µg/L	ND	ND	ND
1,1,2,2 - Tetrachloroethane	µg/L	ND	ND	ND
Toluene	µg/L	ND	ND	ND
Chlorobenzene	μg/L	ND	ND	ND
Ethylbenzen e	μg/L	ND	ND	ND
2-Chloroethylvinyl Ether 1,3-Dichlorobenzene	μg/L	_	_	_
1,2-Dichlorobenzene	μg/L μg/L			
1,4-Dichlorobenzene	µg/L	_	~	
1,2-Dichloroethene (total)	μg/L	ND	ND	ND
cis-1,2-Dichloroethene	µg/L	-	_	_
trans-1,2-Dichloroethene	µg/L	-	-	-
Trichlorofluoromethane Acetone	µg/L	ND		ND.
Carbon Disulfide	µg/L µg/L	ND	ND ND	ND ND
4-Methyl-2 Pentanone	µg/L	ND	ND	ND
2-Нешвове	Hell	ND	ND	ND
Styrene	µg/L	ND	ND	ND
Xylenes (total)	µg/L	ND	ND	ND
Total Volatile Organics	μg/L	0	0.00	0.00
METALS				
Aluminum	mg/L	0.264	-	38.60
Antimony	mg/L	ND	-	ND
Arsenic	mg/L	ND		ND
Barium Beryllium	mg/L	0,121 ND	-	98.40
Cadmium	mg/L mg/L	ND	_	ND
Cakium	mg/L	81.4	_	94000.00
Chromium	mg/L	ND	_	ND
Cobalt	mg/L	ND	_	2.80
Copper	mg/L	ND	-	9.00
Iron	mg/L	0.846 0.0013	-	ND
Lead Magnesium	mg/L	31		20600.00
Manganese	mg/L	0.349	_	11.20
Mercury	mg/L	ND	-	ND
Nickel	mg/L	ND	-	ND
Potassium	mg/L	7.26	_	9240.00
Selenium	mg/L mg/L	ND ND		ND ND
Sodium	mg/L	18.6	_	36000.00
Thallium	mg/L	ND		ND
Vanadium	mg/L	ND	-	ND
Zinc	mg/L	0.008	-	501.00
Cyanide	mg/L	ND	-	ND
MANAGETT A MIDWATE				
MISCRELANBOUS Total Organic Halogens/Halides (TOX)	mg/L	ND	ND	ND
Chloride	mg/L	2.3	3	10.00
Conductivity (field)	µmhos/cm	430	405	420.00
Conductivity (lab)	μmhos/cm	589	570	660,00
Nitrite Nitrogen	mg/L	0.195	-	-
Nitrate/Nitrite Nitrogen	mg/L	1.24	0.05	0.12
Nitrate as N - Calculation	mg/L	1.05	7.44	-
pH (Lab) pH (field)	std. units	7.76 7.15	7.44 7.53	7.55
Sulfate	mg/L	32	7.33	53.00
Total Organic Carbon (TOC)	mg/L	1.5	1.00	1.00
Temperature (field)	Celcius	9.9	11.50	10.40
Turbidity	NTUs	149	2.40	>90

SENISCA ASH LANDFILL DRAFT RI REPORT

APPENDIX B

GEOPHYSICAL REPORT: BLASLAND & BOUCK ENGINEERS, P.C.

DRAFT GEOPHYSICAL SURVEY REPORT FOR SENECA ARMY DEPOT ASH LANDFILL SITE

Chas. T. Main, Inc.

Boston, Massachusetts

April 1992

BLASLAND & BOUCK ENGINEERS, P.C.
BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

DRAFT GEOPHYSICAL SURVEY REPORT

FOR

SENECA ARMY DEPOT, ASH LANDFILL SITE

CHAS. T. MAIN, INC. BOSTON, MASSACHUSETTS

APRIL 1992

BLASLAND & BOUCK ENGINEERS, P.C. 6723 TOWPATH ROAD SYRACUSE, NEW YORK 13214

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Appendix B EM-31 Surv Appendix C EM-31 Surv	ork for Geophysical Surveys ey Data for Areas 1 and 2 ey Line Plots ic Profiles for Pipe or Drum Signatures	

EXECUTIVE SUMMARY

During October 1991, two geophysical surveys were performed by Blasland & Bouck Engineers, P.C. for Chas, T. Main, Inc., at the Seneca Army Depot Ash The geophysical surveys, consisting of an electromagnetic Landfill area. induction (EM-31) terrain conductivity survey and a ground penetrating radar (GPR) survey, were conducted to identify anomalous areas, and to provide characterization as to the nature of these anomalies. The geophysical survey areas and survey lines are shown on Figure 1. Thirty-six anomalous areas were delineated during the EM-31 terrain conductivity survey. Twelve of the 36 anomalies identified by the EM-31 survey were determined to be due to a buried 6-inch pipeline that traverses Area 1. Table 1 provides a summary of all EM-31 anomalies, including the 24 EM-31 anomaly locations that were further defined using GPR. Contour maps prepared of the EM-31 conductivity and in-phase data defined the locations and extent of the anomalies. Conductivity anomalies within Area 1 were typically small in amplitude and located along the southern and western perimeter of the survey area. A large magnitude anomaly associated with the construction and demolition debris landfill dominates the eastern one-third of Area 2. Also in the lower one-third of Area 2, an area containing several smaller, but relatively high amplitude anomalies were present. Based on these data, this area also appears to have received fill associated with the incinerator and/or ash landfill disposal operations.

A GPR survey was performed over the 24 EM-31 anomalies identified in Table 1 to define the lateral extent of these anomalies and to characterize their nature. GPR survey over the 24 EM-31 anomalies delineated 40 areas that were characterized using this geophysical method. Of the 40 areas characterized by GPR profiling, 31 or about 78 percent were interpreted to be shallow fill areas containing small volumes of metallic and non-metallic debris. Ten anomalies

showed the characteristic hyperbolic signature typical of a buried metallic object.

All but three of these signatures were found to be located within the construction and demolition debris landfill. A summary of the GPR characterization of the EM-31 anomaly locations is presented in Table 2.

SECTION 1 - INTRODUCTION

1.1 Purpose and Scope of Work

Blasland & Bouck Engineers, P.C., (Blasland & Bouck) was subcontracted by Chas. T. Main, Inc. (MAIN) to perform two geophysical surveys at the Seneca Army Depot (SEAD) Ash Landfill area. The two geophysical surveys included:

- an Electromagnetic Induction (EM-31) Survey; and
- a Ground Penetrating Radar (GPR) Survey.

The areas investigated are shown on the Geophysical Survey location map, Figure 1. Area 1, located north of the limits of the abandoned ash landfill, was 1,500 feet from north to south and approximately 1,600 feet from west to east. Area 2, located south of the limits of the abandoned ash landfill, was 500 feet from north to south and approximately 1,650 feet from west to east.

The geophysical surveys were completed in accordance with the Scope of Work presented in Appendix A. Section 2 of this report discusses the procedures and methodologies used during the geophysical surveys. Section 3 presents the results of the surveys.

SECTION 2 - PROCEDURES AND METHODOLOGY

2.1 Preparation of Geophysical Survey Lines and Stations

The geophysical survey lines were established by Blasland & Bouck using a grid system based on measurements taken from physical features at the site, and cleared of vegetation to permit access for the geophysical equipment. The geophysical survey lines in Area 1 were established every 100 feet perpendicular to West Patrol Road, beginning 100 feet south of Cemetery Road, and proceeded 1,500 feet south. Endpoints for these 15 geophysical lines were established along the railroad bed located approximately 1,600 feet east of West Patrol Road. The Area 1 geophysical survey lines were numbered 1 through 15, incrementing from north to south. The geophysical survey lines in Area 2 were established in a similar fashion, beginning 100 feet south of the W. Smith Farm Road, spaced every 100 feet, and continuing 400 feet south along West Patrol Road. Endpoints for these five geophysical lines were established along the railroad bed located approximately 1,600 feet east of West Patrol Road. The Area 2 geophysical lines were numbered 16 through 20, incrementing from north to south.

The 20 geophysical survey lines were cleared of standing vegetation to ground level by SEAD personnel from the Roads and Grounds Department. Following clearing of the geophysical lines, EM-31 data measurements were collected every 50 feet along each survey line, as described in Section 2.2.

2.2 EM-31 Survey Procedures

The EM-31 Survey was performed using a Geonics model EM-31 terrain conductivity meter and a digital data logger, Model DL55, to record the readings. Prior to daily data collection, the following instrument functional checks and calibration procedures were performed:

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- Internal battery condition;
- Instrument zero reading;
- Instrument phasing; and
- Instrument sensitivity.

Instrument sensitivity was performed in an area considered to represent background site conditions. This background area was located just east and upgradient of the eastern limit of the abandoned ash landfill, about 20 feet south of monitoring well PT-10. This is the same background area used during the previous geophysical surveys performed by ICF, Inc. (1988) and Hunter (1989). No variation in instrument sensitivity was observed in the background area.

The EM-31 survey of Area 1 was performed on October 14 and 16, 1991. Readings were collected every 50 feet along each survey line. A total of 23,650 feet of EM-31 survey was completed with 473 measurements collected for both the quadrature-phase and in-phase components. The quadrature-phase response to the induced magnetic field is linearly proportional to the terrain conductivity. The in-phase response to the induced magnetic field is the ratio of the primary and secondary magnetic fields, providing increased sensitivity to buried metallic objects.

The EM-31 survey of Area 2 was performed on October 17, 1991.

Readings were collected every 50 feet along each survey line. A total of 8,050 feet of EM-31 survey was completed with 161 measurements collected for both the quadrature-phase and in-phase components.

The quadrature-phase and in-phase measurements collected from lines 1 through 20, as digitally recorded by the data logger, are presented in Appendix B.

2.3 EM-31 Data Reduction

Graphical plots of the EM-31 data were completed for each survey line for both quadrature-phase (conductivity) and in-phase data measurements. Conductivity and in-phase plots for survey lines 1 through 20 are presented in Appendix C. Values for conductivity are represented in milli-Siemens per meter, (mS/m) while values for in-phase are represented in parts per thousand (ppt). EM-31 survey line plots of conductivity and in-phase measurements were used to identify potential anomalies to be further investigated using the GPR method. Anomalies identified by the EM-31 survey are summarized in Table 1. Each anomaly location is described by the survey line number and station position. Twelve anomalies were obviously caused by an underground utility crossing the site. GPR characterization was not performed at these 12 locations (see Table 1). The other 24 anomalies identified by the EM-31 survey were further characterized using the GPR method.

2.4 GPR Survey Methodology

Anomalies defined by the EM-31 survey line plots were investigated using a Geophysical Survey Systems, Inc. (GSSI) subsurface interfacing radar (SIR), System-3, consisting of a PR-8300 profiling recorder and a 300 megahertz (MHz) transducer.

Equipment calibration was performed prior to GPR profiling across potential anomaly areas. Equipment calibration was completed in the same areas as the EM-31 calibration described above. GPR equipment calibration included the following:

- Adjustment of range setting;
- Adjustment of high and low pass filters;
- Setting of the transmitting rate; number of scans per second and print polarity; and

Adjustment of range gains.

Once equipment calibration was complete, the GPR data were collected by hand pulling the 300 MHz transducer over the anomaly location. Horizontal control was accomplished by measuring with an engineer's tape between marked station locations and encoding the data with a station reference mark every 10 feet along each profile.

The graphical output from the profiling recorder was continuously reviewed by the survey personnel to adjust equipment settings, if necessary, to maximize the resolution of subsurface anomalies. Each profile was annotated in the field with the profile line number, station interval, and anomaly location. The annotated GPR data for seven profiles containing possible pipe or drum signatures are presented in Appendix D.

During the GPR survey, routine adjustments and maintenance of the profiling recorder were completed in accordance with the manufacturer's operation manual for the SIR System-3.

SECTION 3 - FINDINGS OF THE GEOPHYSICAL INVESTIGATION

3.1 EM-31 Terrain Conductivity Survey

The EM-31 terrain conductivity survey identified 36 anomalies within both Area 1 and Area 2 at the Ash Landfill site as indicated by anomalous conductivity and/or in-phase measurements. This included 12 anomalies within Area 1 that are associated with the 6-inch water main traversing this area from north to south. In general, good correlation was observed between conductivity and in-phase measurements along each survey line profile. Anomalies were readily identified by the unusually high or low conductivity and/or in-phase measurements. Conductivity anomalies were considered to represent readings above or below the typical background measurements ranging from 10.5 to 13.5 milli-Siemens/meter. In-phase anomalies were compared to conductivity anomalies to determine potential locations for buried metallic material along each survey line.

As shown on Figure 2, the linear north-south trending anomaly in Area 1 at Station 550 east of West Patrol Road was interpreted to be caused by a buried 6-inch water main. The linear north-south trending anomaly at Station 1650 in Area 2 was also considered to be caused by the same 6-inch water main.

In Area 2, several anomalies are evident in both the eastern and western sections. The two large anomalies present along survey lines 17, 18, and 19, from Stations 1150 to 1450 in Area 2, are caused by the construction and demolition (C & D) debris landfill. Several smaller conductivity anomalies are present on survey lines 3, 4, 5, 10, 13, 14, and 15 in Area 1. Conductivity anomalies are also present along survey lines 16, 17, and 18 from about stations 450 to 650. The nature of these anomalies were further characterized by GPR profiling.

3.2 GPR Survey - Anomaly Characterization

The graphic GPR data from traverses across EM-31 anomalies were reviewed to determine the nature (i.e., potential source and length) of EM-31 anomalies. About 78 percent of the anomalies defined by GPR, and summarized on Table 2, were characteristic of fill areas containing small debris (see Table 2). Ten anomalies had GPR signatures similar to signatures produced by a buried metallic object. These included anomalies located on survey lines 5, 13, 16, 17, and 18.

The GPR graphic profiles for the ten anomalies thought to represent possible pipes or drums are presented in Appendix D. The graphic profiles show the characteristic hyperbolic signature typical of a buried metallic object. A second characteristic of these signatures is the radar reflection reverberation or echo, downward through the profile caused by a resonance feature associated with metallic objects. The presence of these two characteristics were evaluated to determine the likelihood of an anomaly containing a buried pipe or drum. Anomalies present on the graphic profiles in Appendix D were considered to have these characteristics and have been annotated to show the location and station of the anomaly.

REFERENCES

- Hunter Services, Inc. (Hunter/ESE), 1989. Geophysical Investigation Letter Report, Seneca Army Depot, Romulus, New York. Gainsville, Florida.
- Geonics Limited, 1984. Operating Manual for EM31-D Non-Contacting Terrain Conductivity Meter. Mississauga, Ontario.
- Geonics Limited, 1991. DL55/31 Data Logging System, Operating Instructions for EM-31 Ground Conductivity Meter with Polycorder, Series 516C. Mississauga, Ontario.
- Geophysical Survey Systems, Inc., 1987. Operations Manual, Subsurface Interface Radar SIR System-3. North Salem, New Hampshire.

TABLE 1

SUMMARY OF EM-31 ANOMALIES CHAS. T. MAIN, INC. SENECA ARMY DEPOT ASH LANDFILL

EM-31		GPR	
ine	Anomaly Location (ft)	Line	Area Covered (ft)
3	100-250	3	100-250
3	500-600	3	*
3	1,050-1,150	3	1,050-1,150
4	90-250	4	90-250
4	550-600	4	•
5	100-300	5 .	100-300
5	550-600	5	*
5	1,100-1,170	5	1,100-1,170
6	550-600	6	*
7	550-600	7	*
8	550-600	8	*
9	550-600	9	*
10	500-600	10	*
10	700-900	10	700-900
10	930-1,100	10	930-1,100
11	500-550	11	*
12	500-550	12	*
12	800-1,100	12	800-1,100
13	500-550	13	*
13	800-1,100	13	800-1,100
14	360-550	14	360-550
14	700-800	14	700-800
14	1,350-1,450	14	1,350-1,450
15	450-500	15	*
15	750-950	15	750-950
15	1,000-1,100	15	1,000-1,100
16	250-850	16	250-850
16	1,000-1,150	16	1,000-1,150
16	1,200-1,650	16	1,200-1,650
17	250-850	17	250-850
17	1,130-1,550	17	1,130-1,550
18	400-500	18	400-500
18	1,150-1,600	18	1,150-1,600
19	700-850	19	700-850
19	1,150-1,635	19	1,150-1,635
20	450-850	20	450-850

Notes:

^{*}Anomaly location represents a buried pipeline (6-inch water main), no GPR profile performed.

TABLE 2

GPR CHARACTERIZATION OF EM-31 ANOMALIES CHAS. T. MAIN, INC. SENECA ARMY DEPOT ASH LANDFILL

ine	Anomaly Location (It)	Characterization
3	100-200	Fill Area - Small Debris
3	200-250	Fill Area - Small Debris
4	150-250	Fill Area - Small Debris
5	150-200	Fill Area - Small Debris
5	200-250	Fill Area - (1) Possible Pipe or Drum Signature
10	760-780	Fill Area - Small Debris
10	840-860	Fill Area - Small Debris
10	980-1,000	Fill Area - Small Debris
12	910-960	Fill Area - Small Debris
12	980-1,000	Fill Area - Small Debris
13	830-890	Fill Area - Small Debris
13	905-925	Fill Area - Small Debris (1) Possible Pipe Signature
13	945-975	Fill Area - Small Debris (1) Possible Pipe Signature
13	1,000-1,020	Fill Area - Small Debris
14	1,350-1,380	Fill Area - Small Debris
16	350-400	Fill Area with (1) Possible Pipe/Drum @ 374
16	460-500	Fill Area - Small Debris
16	580-590	Fill Area - Small Debris
16	600-625	Fill Area - Small Debris
16	625-640	Fill Area - Small Debris
16	665	Fill Area - Small Debris
16	740-780	Fill Area - Small Debris
16	1,200-1,270	Fill Area - (1) Possible Drum @ 1,252
16	1,350-1,500	(2) Possible Drums @ 1,432 & 1,446
16	1,350-1,500	(1) Possible Drums @ 1,482
17	300-370	(4) Small Fill Areas - Small Debris
17	500-515	Small Fill Area @ 510
17	590-640	Fill Area - Small Debris
17	690-720	Fill Area - Small Debris
17	740-760	Fill Area - Small Debris
17	1,180-1,210	Fill Area - Fill Area with (1) Possible Drum @ 1,188
17	1,270-1,300	Fill Area - Small Debris
17	1,460-1,520	Fill Area - Possible Concrete Debris
18	440-450	Small Fill Area - Debris
18	1,250-1,290	Fill Area with Possible Concrete with Rebar
18	1,350-1,380	Fill Area - Small Debris
18	1,480-1,510	Fill Area with (2) Possible Pipes
19	750-800	Fill Area - Small Debris
19	1,240-1,250	Fill Area - Small Debris
19	1,330-1,350	Fill Area - Small Debris

EM-31 SURVEY CONTOUR MAPS

APPENDIX A SCOPE OF WORK FOR GEOPHYSICAL SURVEYS

Geophysical Survey Field Sampling and Analysis Plan

Electromagnetic Induction Survey (EM)

An EM Survey will be performed to delineate areas of high ground conductivity and buried metal wastes. The EM survey will be completed across the area designated No. 1 shown on Figure 4.2-2 located to the north of the geophysical surveyed area completed by ICF (1989) and Hunter/ESE (1989). Also, a smaller area designated No. 2 will be surveyed at the former construction debris landfill, located southeast of the completed geophysical survey area completed by ICF (1989) and Hunter ESE (1989).

The EM survey will be performed using a Geonics EM31 terrain conductivity meter equipped with an EM31DL data logger. The EM survey will be completed along survey lines spaced every 100 feet, as shown on Figure 4.2-2. Readings will be taken every 50 feet along each survey line. Field calibration of the EM instrument's sensitivity will be performed prior to the start of the survey in an area considered to represent background readings. This area will be the same area used to calibrate the EM instrument during the previous EM surveys performed by ICF (1989) and Hunter ESE (1989).

Both the quadrature component and in-phase component of the electromagnetic field will be recorded by the data logger at each station. The quadrature component of the electromagnetic field is linearly proportional to the apparent ground conductivity, and is used to delineate areas of past waste disposal. The in-phase component of the electromagnetic field is sensitive to electrically conductive materials, such as metals, and will be used to delineate areas of buried metals or drums. All work will be performed in accordance with the manufacturer's operation manual for the EM31.

The quadrature and in-phase readings will be downloaded daily from the digital data logger to a laptop computer for further processing and contouring. Contour maps of both the quadrature and in-phase component readings will be prepared for the survey areas.

Ground Penetrating Radar (GPR) Survey

A Ground Penetrating Radar (GPR) survey will be performed to identify the boundaries of any EM anomaly and to characterize the nature of subsurface materials. Any anomalies detected during the EM survey will be further investigated by continuous GPR profiling. Data will be recorded along the entire length of anomalies delineated by the EM survey in the two proposed geophysical survey areas shown on Figure 4.2-2.

A GPR System operates by generating low power electromagnetic energy (80 Mhz to 1,000 Mhz) into the subsurface from a transducer. Differences in the electrical properties of the subsurface materials cause some of the electromagnetic energy to be reflected back to the surface. This reflected energy is detected by the transducer, recorded and displayed by the system.

The GPR survey will be completed using a Geophysical Survey Systems, Inc. (GSSI) subsurface interface radar (SIR) system 3. The SIR-3 consists of a control unit, graphic recorder, and transducer (antenna). The survey procedure will consist of towing a transducer, either by vehicle or by hand over EM anomalies located along the survey lines. The control unit and graphic recorder are

operated from the survey vehicle. The survey lines will have to be cleared of all vegetation to ground level so the transducer can maintain constant contact with the ground to provide the best radar imaging. Vehicle or walking speed averages from 1 to 3 miles per hour (mph) while the SIR system scans at a rate of 25.6 or 32 scans per second. At these survey speeds and scan rates, reflections are received every 0.7 inches (at 1 mph) to every 2.1 inches (at 3 mph) of ground travel along the survey lines. The data is displayed on the graphic recorder in the survey vehicle.

Based on the subsurface conditions identified during previous surveys performed by ICF (1989) and Hunter/ESE (1989), characterization of subsurface anomalies will be performed using a 300 megahertz (Mhz) transducer. The maximum depth of subsurface penetration with a 300 Mhz transducer is about 30 feet, under ideal conditions. Attenuation of the transmitted electromagnetic pulse in the glacial till soils at the site is anticipated to reduce the maximum penetration depth to about 8 to 10 feet. For this reason, a second transducer (100 Mhz) will be available for use at the site if deeper radar profiling is required.

Field adjustment and initial background profiling will be performed in the same area used for background measurements for the EM survey. Field adjustments will consist of setting the instruments range; setting the low and high pass filters; and adjusting the upper, middle and lower gain controls to achieve the best resolution of subsurface data. The graphical output will be checked by the system operator throughout the GPR survey and system adjustments will be made, if necessary, to provide the best possible resolution of subsurface anomalies. All work will be performed in accordance with the manufacturer's operation manual for the SIR System 3.

EM-31 SURVEY LINE DATA

APPENDIX B EM-31 SURVEY DATA FOR AREAS 1 AND 2

```
LINE: 1
               Direction: E
Date: 16-10-91
                   Time: 10: 2
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 0
                       Final station: 1550
              Cond.[mS/m]
   Station
                            Inphase [ppt]
      0.000
                 14.520
                              4.034
     50.000
                 12.660
                              4.106
    100.000
                 11.580
                              4.178
    150.000
                 12,000
                              3.829
    200.000
                 11.460
                              3.985
    250.000
                 11.460
                              4.094
    300.000
                 12,000
                              3.997
    350.000
                 12.660
                              3.997
    400.000
                 13.260
                              3.949
                 13.320
    450.000
                              3.612
    500.000
                 12.840
                              4.118
    550.000
                 31.140
                              7.610
    600.000
                 16.320
                              4.310
                              3.757
    650.000
                 13.980
    700.000
                 13,020
                              3.624
    750.000
                 12.960
                              3.335
    800.000
                 12.960
                              3.022
    850.000
                 12,600
                              2.805
    900.000
                 12.540
                              2.709
    950.000
                 12.420
                              4.792
   1000.000
                 12,060
                              4.744
   1050.000
                 12.720
                              4.876
   1100.000
                 12.240
                              4.804
   1150.000
                 12.720
                              4.455
   1200.000
                 12.600
                              4.142
   1250.000
                 12.600
                              3.660
   1300.000
                 11.940
                              5.238
   1350.000
                 11.700
                              5.141
   1400.000
                 11.940
                              4.828
   1450.000
                 11.760
                              4.937
   1500.000
                 11.400
                              4.624
   1550.000
                 12.600
                              4.118
```

11 17 12 1

Comment : END1

```
LINE: 2
               Direction: W
Date: 16-10-91
                    Time: 10:45
Component: Both
                    Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1550
                          Final station: 0
   Station
              Cond.[mS/m]
                             Inphase [ppt]
   1550.000
                  12.720
                               2.745
   1500.000
                  14.100
                               3.034
   1450.000
                  12.420
                               2.974
   1400.000
                  12.120
                               2.805
                  11.220
                               2.757
   1350.000
   1300.000
                  11.220
                               2.312
   1250.000
                  11.400
                               2.444
                  13.320
                               2.528
   1200.000
   1150.000
                  12.300
                               2.179
   1100.000
                  12.660
                               1.914
                  12.480
   1050.000
                               1.553
   1000.000
                  12.660
                               2.131
                  12.540
    950.000
                               2.023
                               2.083
    900.000
                  12.660
    850.000
                  13.320
                               2.119
    800.000
                  13.140
                               1.926
    750.000
                  12.720
                               2.119
    700.000
                  12.780
                               2.131
                  13.020
    650.000
                               2.167
    600.000
                  15.360
                               2.336
    550.000
                  27.180
                               4.876
    500.000
                  13.080
                               1.926
    450.000
                  12.840
                               1.457
    400.000
                  13.080
                               3.287
    350.000
                  13.260
                               3.648
                  12.420
                               3.949
    300.000
                  12.240
    250.000
                               3.407
    200.000
                  11.220
                               3.179
    150.000
                  11.340
                               3.251
    100.000
                  14.460
                               2.817
     50.000
                  12,780
                               2.589
      0.000
                  14.100
                               2.926
```

```
LINE: 3
               Direction: E
Date: 16-10-91
                    Time: 10:59
                    Dipole mode: Vertical
Component: Both
                                               Instrument Orientation: 1
Start station: 0
                       Final station: 1550
   Station
              Cond.[mS/m]
                             Inphase [ppt]
      0.000
                  14.760
                               2.878
     50.000
                 12.300
                               2.733
    100.000
                  11.400
                               2.709
    150,000
                  9.840
                               2.504
    200.000
                  12.600
                               3.793
    250.000
                  9.059
                               3.817
    300.000
                  13.200
                               3.672
    350.000
                 13.080
                               3.684
    400.000
                 12.840
                               3.588
                 12.900
    450.000
                               3.299
    500.000
                 13.200
                               3.576
    550.000
                 21.780
                               5.057
    600.000
                 14.040
                               3.757
    650.000
                  13.140
                               3.118
    700.000
                 12.900
                               3.142
    750.000
                 12.840
                               2.685
    800.000
                 13.320
                               2.601
    850.000
                 12.360
                               2.625
    900.000
                  11.940
                               2.227
    950.000
                  0.600
                             -32.790
                                      Error in reading due to equipment malfunction.
   1000.000
                  12.420
                               2.504
   1050.000
                 11.940
                               2.420
   1100.000
                 11.820
                               4.058
                 11.940
   1150.000
                               3.034
   1200.000
                  12.060
                               3.431
   1250.000
                 11.940
                               3.407
   1300.000
                  12.180
                               3.431
   1350.000
                  11.700
                               3.395
   1400.000
                 11.940
                               3.347
   1450.000
                 11.880
                               3.275
   1500.000
                  12.840
                               3.311
```

1550.000

--->

11.340

Comment : END3

3.179

```
LINE: 4
               Direction: W
Date: 16-10-91
                    Time: 11:17
Component: Both
                    Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1550
                          Final station: 0
              Cond.[mS/m]
   Station
                             Inphase [ppt]
   1550.000
                  11.220
                               2.986
   1500.000
                  12.360
                               3.022
                  11.580
   1450.000
                               2.601
   1400.000
                  11.460
                               2.769
                  11.700
   1350.000
                               2.492
   1300.000
                 11.580
                               2.504
   1250.000
                  12.240
                               1.878
   1200.000
                 12.540
                               0.975
                               1.360
   1150.000
                  12.300
   1100.000
                 12.300
                               1.228
   1050.000
                  12,180
                               1.011
   1000.000
                 11.760
                               1.204
    950.000
                  11.520
                               1.288
    900.000
                 11.280
                               1.505
    850.000
                 11.700
                               1.517
    800.000
                  12.480
                               1.565
    750.000
                  12.840
                               1.625
    700.000
                 12,900
                               1.264
                  12.540
    650,000
                               1.384
    600.000
                 13.740
                               1.842
                              -1.481
    550.000
                   1.080
    500.000
                 14.100
                               2.300
    450.000
                  13.140
                               1.962
    400.000
                 12.660
                               1.950
    350.000
                  12.720
                               1.890
    300.000
                 12.960
                               1.529
    250.000
                   5.280
                               2.035
    200.000
                 12.480
                               2.360
    150.000
                 22.440
                               2.372
    100.000
                 13.260
                               2.155
     50.000
                  12.420
                               2.348
                 14.340
      0.000
                               2.793
```

```
LINE: 5
               Direction: E
Date: 16-10-91
                   Time: 11:35
                   Dipole mode: Vertical
Component: Both
                                              Instrument Orientation: 1
Start station: 0
                       Final station: 1550
              Cond.[mS/m]
   Station
                            Inphase [ppt]
      0.000
                 14.220
                               2.733
     50.000
                 12.660
                              2.829
    100.000
                  9.720
                               2.239
    150.000
                 15.180
                              2.384
    200.000
                 18.000
                               2.348
    250.000
                 11.700
                              2.576
    300.000
                 13.500
                               2.673
    350.000
                 12.060
                              2.312
    400.000
                 11.940
                               2.336
    450.000
                 12.660
                               1.541
    500.000
                 14.520
                              2.312
    550.000
                 -6.840
                             -1.613
    600.000
                 13.740
                               2.263
    650.000
                 12.840
                               2.107
    700.000
                 12.480
                               2.095
    750.000
                 12.360
                               1.697
    800.000
                 11.700
                               1.842
    850.000
                 11.520
                               1.842
    900.000
                 11.520
                               1.842
    950.000
                 11.820
                               1.709
   1000.000
                 12.000
                               1.589
   1050.000
                 12,420
                               1.457
   1100.000
                 12.000
                               1.481
   1150.000
                 11.580
                               0.180
   1200.000
                 11.880
                               1.204
   1250.000
                 11.880
                               0.987
   1300.000
                 11.460
                               1.240
   1350.000
                 12.240
                               0.770
   1400.000
                 12.060
                               1.192
   1450.000
                 11.760
                              0.975
   1500.000
                               0.975
                 12.180
   1550.000
                 12.120
                               1.071
```

```
Direction: W
Date: 16-10-91
                   Time: 11:52
                                              Instrument Orientation: 1
Component: Both
                   Dipole mode: Vertical
Start station: 1550
                          Final station: 0
   Station
              Cond.[mS/m]
                             Inphase [ppt]
   1550.000
                               0.578
                 11.820
   1500.000
                 11.400
                              -0.746
   1450.000
                 11.040
                              -0.770
                 11.220
   1400.000
                              -0.650
   1350.000
                 11.040
                              -0.553
                 11.520
   1300.000
                              -0.120
   1250.000
                 11.700
                              -0.457
                              -0.433
   1200.000
                 11.220
   1150.000
                 11.220
                              -0.493
   1100.000
                 12,000
                              -0.578
   1050.000
                 11.640
                              -0.686
   1000.000
                 11.580
                              -0.529
    950.000
                 11.580
                              -0.867
    900,000
                 11.220
                              -0.529
    850.000
                 10.740
                              -0.614
    800.000
                 11.040
                               0.096
    750.000
                 11.340
                               0.048
    700.000
                 11.580
                               0.240
    650.000
                 11.580
                               0.578
    600.000
                 12.540
                               0.891
    550.000
                 23.820
                               2.817
    500,000
                 13.920
                               0.674
    450.000
                 12.540
                               0.469
    400.000
                 12.300
                              -0.024
    350.000
                 12.480
                               0.325
    300,000
                               0.325
                 12.660
    250.000
                 10.500
                               0.084
    200.000
                 12.600
                               1.697
    150,000
                 12.120
                               2.287
    100.000
                 11.760
                               2.697
                               2.396
     50.000
                  11.460
      0.000
                 13.920
                               2.685
```

Comment : END6

```
LINE: 7
               Direction: E
Date: 16-10-91
                   Time: 12: 9
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 0
                       Final station: 1550
   Station
              Cond.[mS/m]
                            Inphase [ppt]
                 14.520
      0.000
                              2.661
     50.000
                 12.180
                              2.841
    100.000
                 12.780
                              2.697
    150.000
                 12,600
                              2.348
    200.000
                 12.120
                              2.312
    250.000
                 13.020
                              2.576
    300.000
                 13.140
                              2.432
    350.000
                 11.160
                              2.564
    400.000
                 12.420
                              2.179
    450.000
                 12.360
                              3.829
    500.000
                 14.400
                               4.648
                 28.140
    550.000
                               7.357
    600.000
                 12.900
                               3.949
    650.000
                 11.640
                              3.877
    700.000
                 11.280
                              3.889
    750.000
                 11.040
                              3.660
    800.000
                 10.740
                               3.395
    850.000
                 10.860
                              2.998
    900.000
                 11.400
                               2.300
                 11.580
    950.000
                               2.203
   1000.000
                 11.700
                               2.239
   1050.000
                 11.520
                              2.203
   1100.000
                 11.700
                               1.866
                 11.700
   1150.000
                               1.842
   1200.000
                 11.580
                               1.637
   1250.000
                 11.940
                               1.721
   1300.000
                 12.120
                               1.866
   1350.000
                 12,600
                               1.782
   1400.000
                 11.940
                               1.408
   1450.000
                 10.980
                               2.143
   1500.000
                  11.700
                               2.709
   1550.000
                 12.900
                               2.613
```

```
LINE: 8
               Direction: W
Date: 16-10-91
                    Time: 12:28
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1600
                          Final station: 0
   Station
              Cond.[mS/m]
                             Inphase [ppt]
                               2.793
   1600.000
                  10.680
   1550.000
                  11.400
                               2.564
   1500.000
                  12.180
                               2.251
   1450.000
                 12.420
                               2.516
   1400.000
                  12.300
                               2.179
   1350.000
                  12.420
                               2.155
   1300.000
                  12.000
                               1.505
   1250.000
                 11.640
                               2.083
   1200.000
                  11.280
                               1.854
   1150.000
                 11.340
                               1.950
                               1.878
   1100.000
                  10.860
   1050.000
                 10.980
                               1.601
   1000.000
                  10.800
                               1.517
    950.000
                  10.860
                               1.613
    900.000
                  10.440
                               1.204
    850.000
                  10.620
                               2.576
    800.000
                  10.560
                               2.986
    750,000
                 10.920
                               2.962
    700.000
                 10.740
                               2.962
    650.000
                 10.500
                               2.902
    600.000
                 12.540
                               2.938
    550.000
                 21.960
                               5.202
    500.000
                 13.800
                               3.528
    450.000
                 11.520
                               2.492
    400.000
                 11.460
                               2.649
    350.000
                 11.100
                               2.324
    300.000
                  11.940
                               2.733
    250,000
                  12.360
                               2.348
    200.000
                  12.300
                               3.480
    150.000
                 12.780
                               3.070
    100.000
                  12.540
                               3.407
     50.000
                 12.060
                               3.672
```

6.225

0.000

15.420

```
Direction: E
LINE: 9
Date: 16-10-91
                    Time: 13:26
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 0
                       Final station: 1600
   Station
              Cond.[mS/m]
                            Inphase [ppt]
      0.000
                 13.860
                               2.878
     50,000
                  11.640
                               2.709
    100.000
                  14.760
                               2.589
    150.000
                  9.480
                               2.540
    200.000
                  13.440
                               2.408
    250.000
                  15.480
                               2.215
    300.000
                  10.920
                               2.637
    350.000
                 11.340
                               2.191
    400.000
                  11.940
                               2.131
    450.000
                 12.120
                               2.601
    500.000
                  15.720
                               3.480
    550.000
                 19.320
                               3.949
                               2.396
    600.000
                  11.820
    650.000
                 12.120
                               2.745
    700.000
                  10.920
                               2.733
    750.000
                  10.560
                               2.709
    800.000
                  11.400
                               2.251
                 11.580
    850.000
                               3.106
    900,000
                  11.220
                               2.444
    950.000
                  11.820
                               2.155
   1000.000
                  11.880
                               2.564
   1050.000
                 11.760
                               2.613
   1100.000
                  12.300
                               2.661
   1150.000
                 12,060
                               2.420
   1200.000
                  12.360
                               2.673
   1250.000
                  12.660
                               2.420
   1300.000
                  12.840
                               2.010
   1350.000
                  12.360
                               2.444
                  10.980
   1400.000
                               2.191
   1450.000
                  9.720
                               0.108
                  9.599
   1500.000
                               0.758
   1550.000
                  9.540
                               0.915
   1600.000
                   7.560
                               1.047
```

```
LINE: 10
                Direction: W
Date: 16-10-91
                   Time: 13:51
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1600
                          Final station: 0
   Station
              Cond.[mS/m]
                            Inphase [ppt]
   1600.000
                  9.059
                               1.059
   1550.000
                  8.940
                               1.119
   1500.000
                  9.180
                              0.770
   1450.000
                  9.780
                              0.999
   1400.000
                  9.660
                              0.915
   1350.000
                 10.140
                              0.854
   1300.000
                 10.560
                              0.842
   1250.000
                 11.460
                              0.842
   1200.000
                 12.180
                              0.975
   1150.000
                 12.960
                              0.927
   1100.000
                 12.840
                              0.674
   1050.000
                 12,000
                             -0.674
   1000.000
                 11.100
                              0.060
    950.000
                 12.180
                             -0.638
    900.000
                 11.760
                             -0.156
    850.000
                  6.480
                              2.480
    800.000
                 11.520
                             -0.313
    750.000
                 10.980
                             -0.024
    700.000
                 10.920
                             -0.108
    650.000
                 11.040
                             -0.156
    600.000
                 11.460
                              0.000
    550.000
                 17.400
                               1.047
    500,000
                 17.400
                               1.384
    450.000
                 11.640
                              0.252
    400.000
                 11.220
                              0.000
    350.000
                 11.460
                             -0.096
    300.000
                 10.140
                               0.156
    250.000
                  9.900
                              0.072
    200.000
                 10.620
                             -0.301
    150.000
                 10.860
                             -0.072
    100.000
                 11.400
                             -0.108
     50.000
                 11.940
                              0.289
```

0.409

0.000

13.680

Comment : END10

```
LINE: 11
                Direction: E
Date: 16-10-91
                    Time: 14:14
Component: Both
                    Dipole mode: Vertical
                                              Instrument Orientation: 1
                       Final station: 1600
Start station: 0
   Station
              Cond.[mS/m]
                            Inphase [ppt]
      0.000
                  13.860
                               0.999
     50.000
                  12.360
                               1.420
    100.000
                  11.700
                               1.420
    150.000
                  11.340
                               1.204
    200.000
                  11.640
                               1.276
    250.000
                  11.040
                               1.324
    300.000
                  10.680
                               1.107
    350.000
                  10.860
                               1.252
    400.000
                  11.100
                               1.240
    450.000
                  11.940
                               1.637
    500.000
                  23.460
                               3.793
    550.000
                  14.940
                               2.336
    600.000
                  11.460
                               1.372
    650.000
                  11.400
                               1.517
    700.000
                  12.780
                               1.517
    750,000
                  11.880
                               1.011
    800.000
                  12.420
                               1.071
    850.000
                  12.240
                               1.168
    900.000
                  12.300
                               0.951
    950.000
                  12,600
                              -0.590
   1000.000
                  12.780
                              -0.541
                  12.480
   1050.000
                              -0.240
   1100.000
                  11.340
                              -0.457
                  10.260
   1150.000
                              -0.252
   1200.000
                   9.840
                              -0.240
   1250.000
                   9.540
                               0.012
                   9.180
   1300.000
                              -0.108
   1350.000
                   9.420
                              -0.216
   1400.000
                   9.120
                              -0.240
                   8.760
   1450.000
                               0.120
   1500.000
                   8.940
                               0.204
   1550.000
                   8.940
                               0.084
                   9.000
   1600.000
                              -0.036
```

```
LINE: 12
                Direction: W
Date: 16-10-91
                    Time: 14:31
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1600
                          Final station: 0
   Station
              Cond.[mS/m]
                            Inphase [ppt]
   1600.000
                   9.540
                             -0.770
   1550.000
                  9.480
                             -0.216
   1500.000
                   9.420
                               0.096
   1450.000
                  9.420
                               0.156
   1400.000
                   9.360
                               0.012
   1350.000
                  9.059
                              -0.132
   1300.000
                   8.940
                               0.024
   1250.000
                  9.300
                             -0.048
   1200.000
                  9.240
                              0.012
   1150.000
                  8.880
                             -0.168
   1100.000
                  10.200
                              -0.276
   1050.000
                 11.340
                             -1.023
   1000.000
                  9.900
                               3.263
    950.000
                 14.460
                              -0.289
    900.000
                 11.280
                               2.107
    850.000
                 14.220
                             -0.180
    800.000
                 13.920
                               0.276
    750.000
                 14.100
                               0.000
    700.000
                 13.140
                               0.072
    650,000
                 12.720
                               0.228
    600.000
                 12.660
                               0.349
    550.000
                 15.180
                               0.927
    500.000
                 30.060
                               3.973
    450,000
                 12.780
                               0.529
    400.000
                 12.300
                               0.481
    350,000
                 11.580
                               0.590
    300.000
                 11.700
                               0.252
    250.000
                 11.520
                               0.301
    200,000
                 12.480
                               0.337
    150.000
                 12,600
                               0.469
    100.000
                 13.260
                               0.264
     50.000
                 13.860
                               0.084
      0.000
                 14.340
                               0.529
```

Comment : END12

```
LINE: 13
                Direction: E
Date: 16-10-91
                    Time: 15: 1
Component: Both
                    Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 0
                       Final station: 1600
   Station
              Cond.[mS/m]
                             Inphase [ppt]
      0.000
                 14.040
                              -1.902
     50.000
                 11.880
                              -1.420
    100.000
                 11.700
                              -1.721
    150.000
                 11.700
                              -1.408
    200.000
                 11.340
                              -1.372
    250.000
                 11.340
                              -1.685
    300.000
                 11.400
                              -1.216
    350.000
                 11.700
                              -1.143
    400.000
                 12.000
                              -0.975
    450.000
                 12.540
                              -0.638
    500,000
                 15.060
                              -0.216
    550.000
                 13.140
                              -0.493
    600,000
                 11.640
                              -1.384
    650.000
                 12.180
                              -1.180
    700,000
                 12.360
                              -1.095
    750.000
                 13.740
                              -1.481
    800.000
                 13.380
                              -0.975
    850.000
                  8.880
                               1.023
    900.000
                 13.800
                              -1.360
    950.000
                 13.500
                              -1.300
   1000.000
                   9.000
                               1.252
   1050.000
                 10.980
                              -0.927
   1100.000
                 10.560
                               0.024
   1150.000
                 10.980
                               1.011
   1200.000
                 11.820
                               1.408
   1250,000
                 11.160
                               1.300
   1300.000
                 11.220
                               1.300
                 11.400
   1350.000
                               1.324
   1400.000
                 11.700
                               1.276
   1450.000
                 11.340
                               0.782
                 11.520
   1500.000
                               1.156
   1550,000
                 11.340
                               1.601
   1600.000
                 10.800
                               1.288
```

```
LINE: 14
                Direction: W
Date: 16-10-91
                    Time: 15:20
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1600
                          Final station: 0
   Station
              Cond.[mS/m]
                             Inphase [ppt]
   1600.000
                  11.700
                               1.107
                               1.192
   1550.000
                 12.480
   1500.000
                 11.700
                               0.662
   1450.000
                 11.940
                               0.891
   1400.000
                 17.880
                               0.481
   1350.000
                 -0.120
                               3.540
   1300.000
                 12.720
                               0.854
   1250.000
                 12.300
                               0.493
   1200.000
                 12,060
                              -1.685
   1150.000
                 12.240
                              -1.529
   1100.000
                 12.720
                              -1.240
   1050.000
                 12.600
                              -1.071
   1000.000
                 12.660
                              -1.059
    950.000
                 13.740
                              -1.288
    900.000
                 13.320
                              -0.891
    850.000
                 10.680
                              0.806
    800.000
                 13.740
                              -1.541
    750.000
                 13.560
                              -1.288
    700.000
                 13.320
                              -1.336
    650.000
                 13.260
                              -1.180
    600.000
                 12.600
                              -1.360
    550.000
                 13.560
                              -1.577
    500.000
                   3.960
                              -3.154
    450.000
                 14.100
                              -0.385
    400.000
                 12.000
                              -0.867
    350.000
                 12.060
                              -0.879
    300.000
                 12.060
                              -0.638
    250,000
                 12,000
                              -0.758
    200.000
                 12.960
                              -0.505
    150.000
                 12.960
                              -0.830
    100.000
                 13.740
                              -0.602
     50,000
                 14.700
                              -0.698
      0.000
                 15.720
```

-0.433

```
LINE: 15
                Direction: E
Date: 16-10-91
                   Time: 15:40
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 0
                       Final station: 1600
   Station
              Cond.[mS/m]
                            Inphase [ppt]
      0.000
                 15.420
                              -0.361
     50.000
                 14.760
                             -0.638
    100.000
                 11.820
                              -0.433
    150.000
                 12.180
                              -0.216
    200.000
                 12.120
                              -0.409
    250.000
                 11.640
                              -0.445
    300.000
                 11.520
                             -0.373
    350.000
                 12.180
                             -0.457
    400.000
                 12.300
                              -0.698
    450.000
                 14.400
                              -0.120
    500.000
                  2.820
                              -2.504
    550.000
                 13.680
                              -0.433
    600.000
                 12.960
                              -0.614
    650.000
                 12.960
                               1.517
    700.000
                 13.800
                               2.480
    750.000
                 13.320
                               2.263
    800.000
                 11.460
                               3.431
    850,000
                 11.460
                               2.589
                 11.940
    900.000
                               2.637
    950.000
                 13.200
                               2.492
   1000.000
                 11.880
                               2.685
   1050.000
                 12.240
                               2.119
   1100.000
                 12.300
                               2.119
   1150.000
                 11.640
                               1.866
                  9.780
   1200.000
                               1.553
   1250.000
                 13.560
                               1.794
   1300.000
                 13.380
                               1.529
   1350,000
                 13.200
                               1.770
   1400.000
                 13.740
                               1.276
   1450.000
                 12.060
                               1.589
   1500.000
                 11.160
                               1.589
   1550.000
                 12.300
                               1.770
   1600.000
                 12.240
                               1.481
```

```
LINE: 16
                Direction: W
Date: 17-10-91
                   Time: 10:27
Component: Both
                                              Instrument Orientation: 1
                   Dipole mode: Vertical
Start station: 1700
                          Final station: 50
   Station
              Cond.[mS/m]
                            Inphase [ppt]
   1700.000
                 10.080
                               0.445
  --->
        Comment : S
   1650.000
                 16.380
                               3.745
   1600.000
                 10.440
                              2.396
   1550.000
                  7.440
                               2.336
   1500.000
                  5.280
                              2.203
   1450.000
                  5.940
                             -1.649
   1400.000
                 15.360
                              2.420
   1350.000
                 18.660
                               5.719
   1300.000
                 16.140
                               5.587
   1250.000
                 15.360
                               5.515
   1200.000
                 10.380
                               4.034
   1150.000
                 12.540
                               5.093
   1100.000
                               5.370
                 12.360
   1050.000
                 12.060
                               5.081
   1000.000
                 12.540
                               4.792
    950.000
                 10.260
                               4.539
    900,000
                 11.640
                               4.419
    850.000
                  6.660
                               2.432
    800.000
                 12.300
                               2.769
    750.000
                 11.940
                               2.781
    700.000
                  6.960
                               2.817
    650.000
                  12.360
                               2.781
    600,000
                 17.520
                               2.673
    550.000
                  11.820
                               2.890
    500.000
                 23.880
                               2.865
    450,000
                 11.580
                               2.841
                 14.940
    400.000
                               2.914
    350.000
                  10.440
                               2.974
    300.000
                 11.400
                               2.853
    250.000
                  10.560
                               2.841
    200,000
                 12.720
                               3.022
    150.000
                  12.960
                               2.902
    100.000
                  12.240
                               2.564
```

2.986

50.000

---> Comment : END16

12.060

```
LINE: 17
                Direction: E
Date: 17-10-91
                   Time: 11: 3
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 50
                        Final station: 1700
   Station
              Cond.[mS/m]
                            Inphase [ppt]
                               5.683
     50,000
                 11.400
    100.000
                 12.480
                              5.780
    150.000
                 12.060
                              5.479
    200.000
                 11.220
                              5.454
    250.000
                  9.840
                               5.358
    300.000
                 10.380
                               4.768
    350.000
                 22.380
                               0.770
    400.000
                 13.680
                               1.264
    450.000
                 15.060
                               1.336
    500.000
                 -2.520
                               1.613
    550,000
                 11.400
                               1.613
    600.000
                  0.300
                               1.914
    650.000
                 17.100
                               1.673
    700.000
                  7.440
                               1.938
    750.000
                 12.540
                               1.493
    800.000
                 12.000
                               5.021
    850.000
                 14.880
                               4.768
    900.000
                 12,000
                               4.467
    950.000
                 12.120
                               4.575
   1000.000
                 12.240
                               4.094
                  12.900
   1050.000
                               3.961
   1100.000
                 16.440
                               4.021
   1150.000
                 11.160
                               2.974
   1200.000
                121.000
                               5.021
   1250.000
                 37.600
                               5.948
   1300.000
                 21.960
                               7.526
   1350.000
                  4.200
                               6.719
                -31.200
   1400.000
                              11.403
   1450.000
                  12.840
                               5.274
   1500.000
                  9.240
                               5.190
   1550.000
                               5.105
                  10.680
   1600.000
                  11.220
                               4.624
   1650.000
                  14.880
                               5.900
   1700.000
                               3.395
                  9.180
```

```
Direction: W
LINE: 18
Date: 17-10-91
                   Time: 11:30
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1700
                          Final station: 100
   Station
              Cond.[mS/m]
                            Inphase [ppt]
   1700.000
                  9.240
                              0.421
   1650.000
                 15,000
                              4.371
                              3.215
   1600.000
                 12.180
                  7.500
                              3.251
   1550.000
                  2.760
   1500.000
                            -32.958
   1450.000
                  5.880
                              5.141
   1400.000
                 -6.900
                              6.671
   1350.000
                 18.060
                              3.540
                              2.251
   1300.000
                 16.200
                              3.263
   1250.000
                 36.600
   1200.000
                 17.040
                              3.022
   1150.000
                 11.520
                              2.516
   1100.000
                 12.900
                              3.745
   1050.000
                 12.660
                              3.118
   1000.000
                 11.880
                              3.082
    950.000
                 10.920
                              3.082
    900,000
                 11.340
                              3.154
    850.000
                 11.160
                              3.395
    800.000
                 10.500
                              3.227
    750.000
                 11.400
                              3.034
    700.000
                 11.640
                              2.962
    650.000
                 11.880
                              3.142
                 15.360
                              3.179
    600.000
    550,000
                 12,000
                              3.311
    500.000
                  9.840
                               3.468
    450.000
                 24.360
                              3.082
    400.000
                  12.540
                               3.323
    350.000
                 13.380
                              6.309
    300.000
                 11.040
                              6.346
    250.000
                 10.920
                              6.346
    200.000
                  11.400
                              6.153
    150.000
                 13.200
                              6.165
    100.000
                              6.117
                 12.840
```

---> Comment : END18

```
LINE: 19
                Direction: E
Date: 17-10-91
                    Time: 11:50
Component: Both
                   Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 50
                        Final station: 1650
   Station
              Cond.[mS/m]
                            Inphase [ppt]
     50.000
                 13.080
                              6.406
    100.000
                 11.760
                              6.321
    150.000
                 11.280
                              5.659
    200.000
                 10.680
                              5.864
    250.000
                 11.820
                              5.948
    300.000
                 13.260
                              5.731
    350.000
                 12.180
                              5.756
    400.000
                 12.960
                              5.816
    450.000
                 10.860
                              5.816
    500.000
                 12.120
                              5.551
    550.000
                 11.640
                              5.683
    600.000
                 12.720
                              5.587
    650.000
                  8.040
                              5.756
                 11.700
    700.000
                              3.118
    750.000
                 12.240
                              3.407
    800.000
                 15.900
                              3.287
    850.000
                 12.480
                              3.528
    900.000
                 12.540
                              3.660
    950.000
                 13.440
                              3.708
   1000.000
                 13.500
                              3.648
   1050.000
                 13.980
                              3.540
   1100.000
                 10.920
                              3.769
   1150.000
                 11.940
                              3.046
   1200.000
                 16.500
                              1.746
   1250.000
                 19.200
                               1.914
                 17.460
   1300.000
                              5.503
   1350.000
                 22.980
                              2.035
   1400.000
                 20.220
                              2.890
   1450.000
                 11.880
                              2.408
   1500.000
                 10.680
                              1.902
   1550.000
                 11.280
                              2.324
   1600.000
                 17.340
                              3.865
   1650.000
                  9.720
                              0.204
```

---> Comment : END19

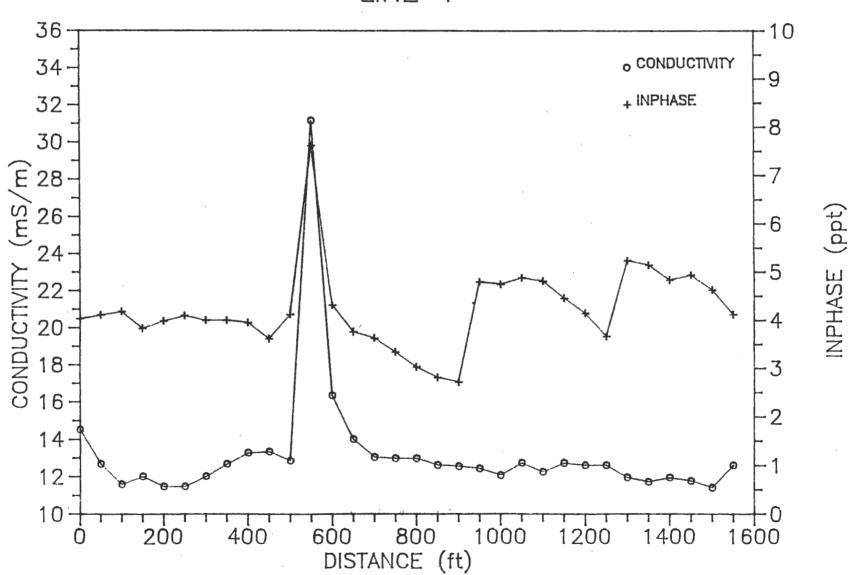
```
LINE: 20
                Direction: W
Date: 17-10-91
                    Time: 12: 6
Component: Both
                    Dipole mode: Vertical
                                              Instrument Orientation: 1
Start station: 1700
                          Final station: 100
   Station
              Cond.[mS/m]
                            Inphase [oot]
   1700.000
                   9.900
                              -0.457
   1650.000
                  16.920
                               3.720
   1600.000
                  10.620
                               2.878
   1550.000
                  10.260
                               2.721
   1500.000
                  11.040
                               2.613
   1450.000
                  11.700
                               2.576
   1400.000
                  11.640
                               2.733
   1350.000
                  11.040
                               2.516
   1300.000
                  11.460
                               2.637
   1250.000
                  11.400
                               2.914
                   9.599
   1200.000
                               2.853
   1150.000
                  10.440
                               2.432
   1100.000
                  12.600
                               2.697
   1050.000
                  13.860
                               3.817
   1000.000
                  13.680
                               3.997
    950.000
                  12.600
                               3.757
    900.000
                  12.480
                               3.973
    850.000
                  10.020
                               4.202
    800.000
                  11.640
                               4.082
    750.000
                  11.340
                               4.058
    700.000
                  17.040
                               3.720
    650,000
                  12.240
                               3.853
    600.000
                  17.400
                               4.491
    550.000
                  13.080
                               4.250
    500.000
                  13.080
                               3.961
    450.000
                  13.560
                               3.841
    400.000
                  13.680
                               3.865
    350.000
                  14.040
                               3.865
    300.000
                  11.580
                               3.901
    250.000
                  11.400
                               2.384
    200.000
                  10.620
                               2.998
    150.000
                  12.660
                               3.154
    100.000
                  12.900
                               2.974
```

---> Comment : END20

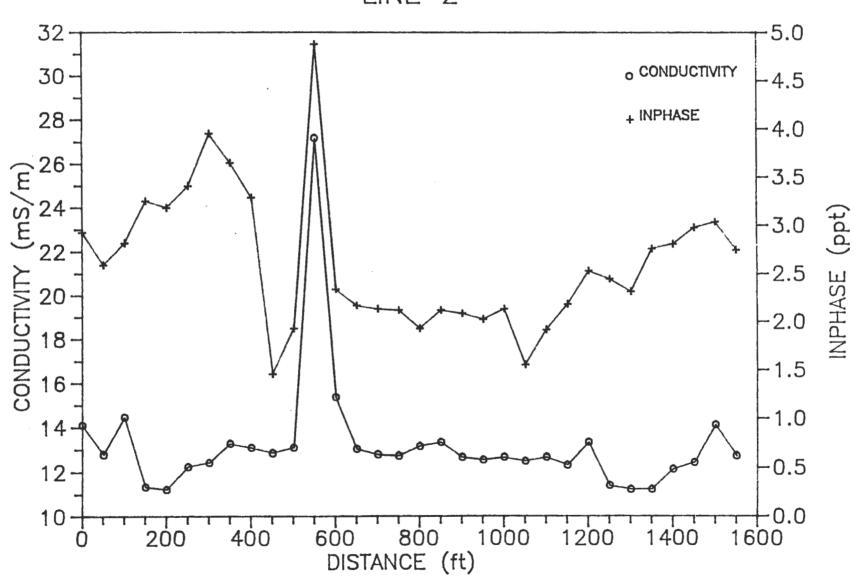
EM-31 SURVEY LINE PLOTS

APPENDIX C EM-31 SURVEY LINE PLOTS

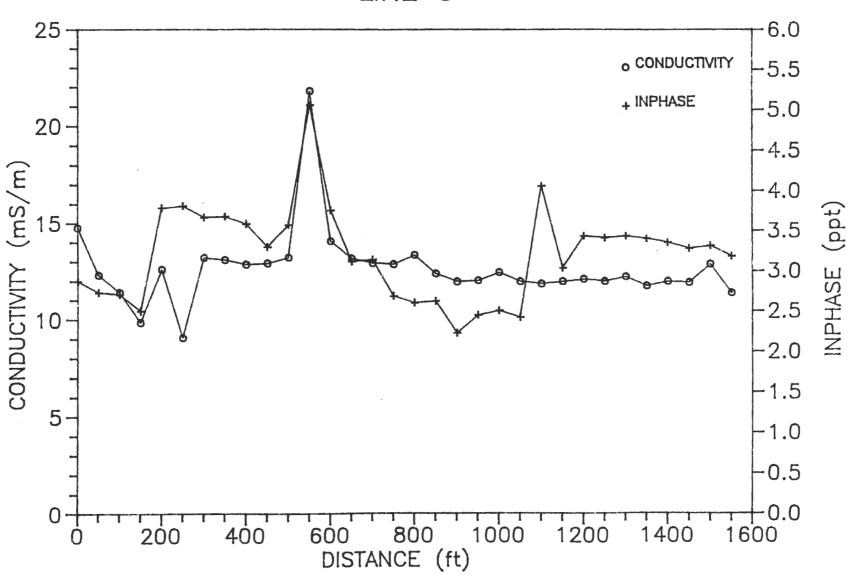
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 1



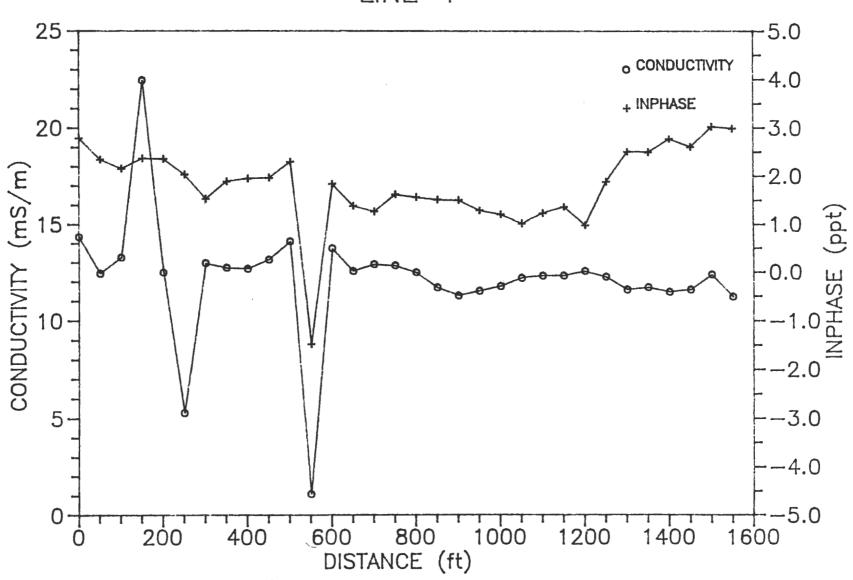
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 2



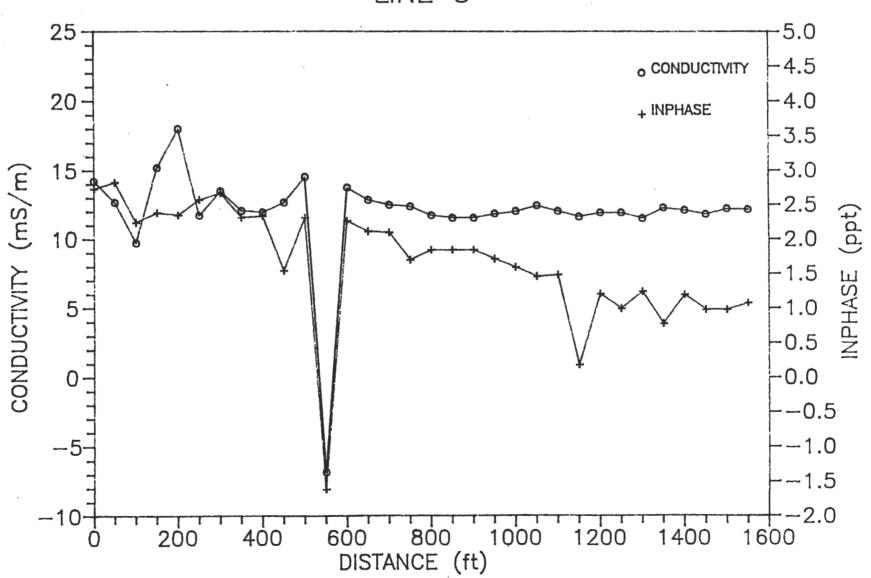
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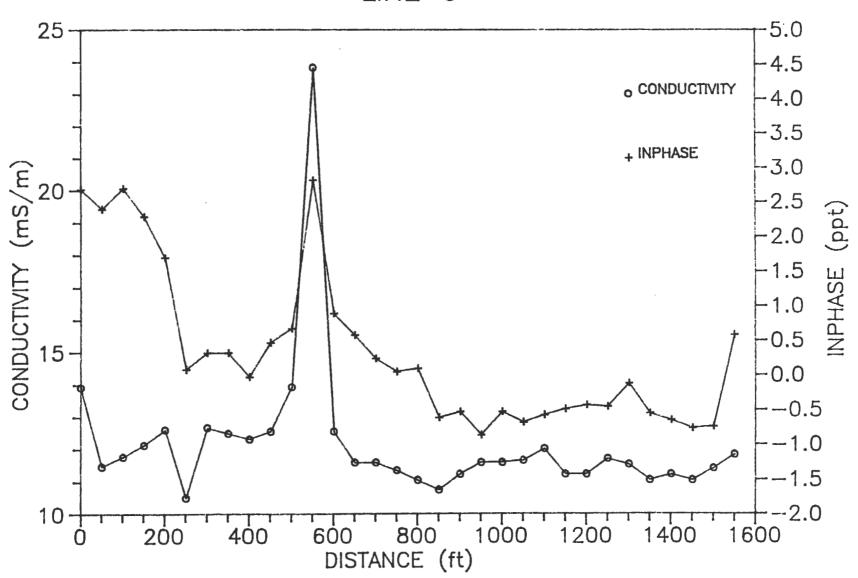
SEAD - ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 4



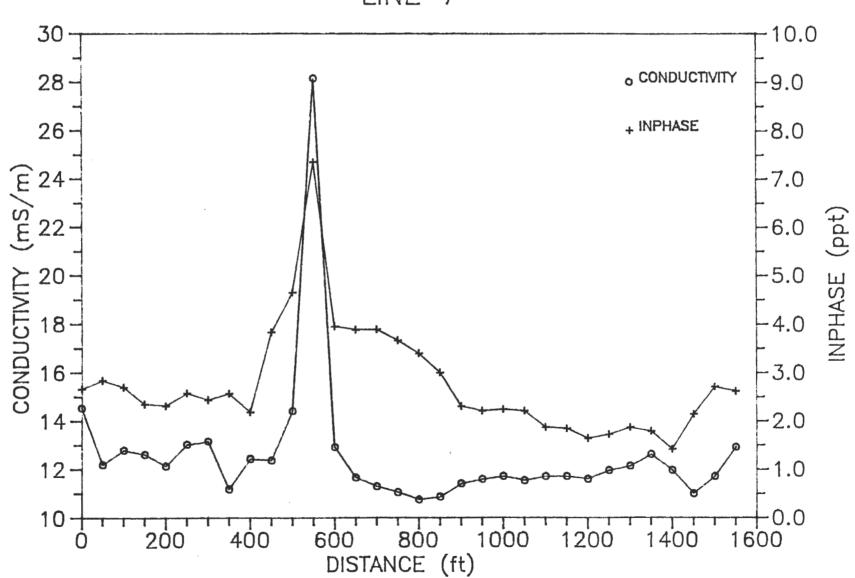
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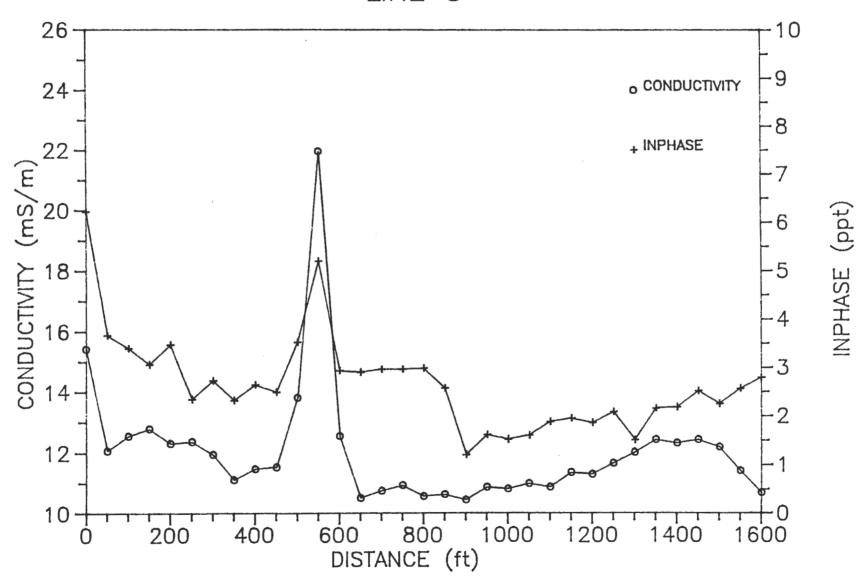
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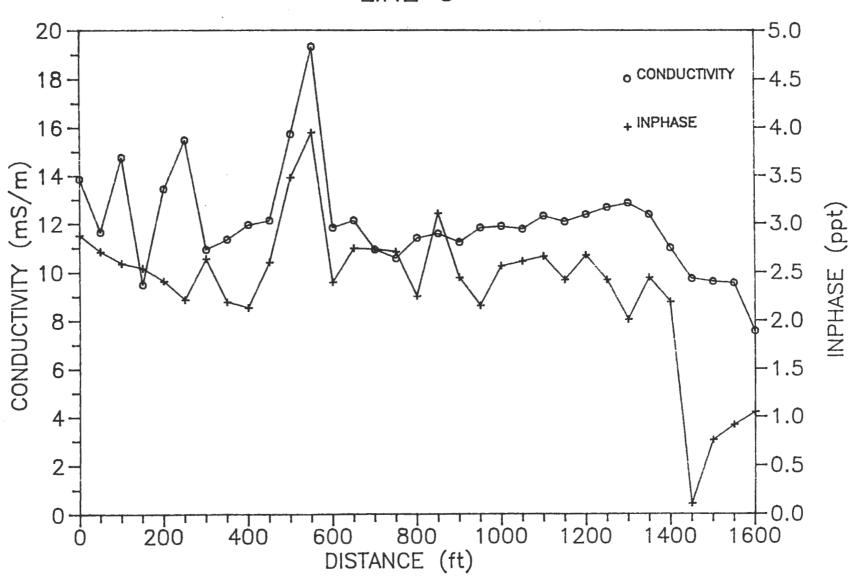
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 7



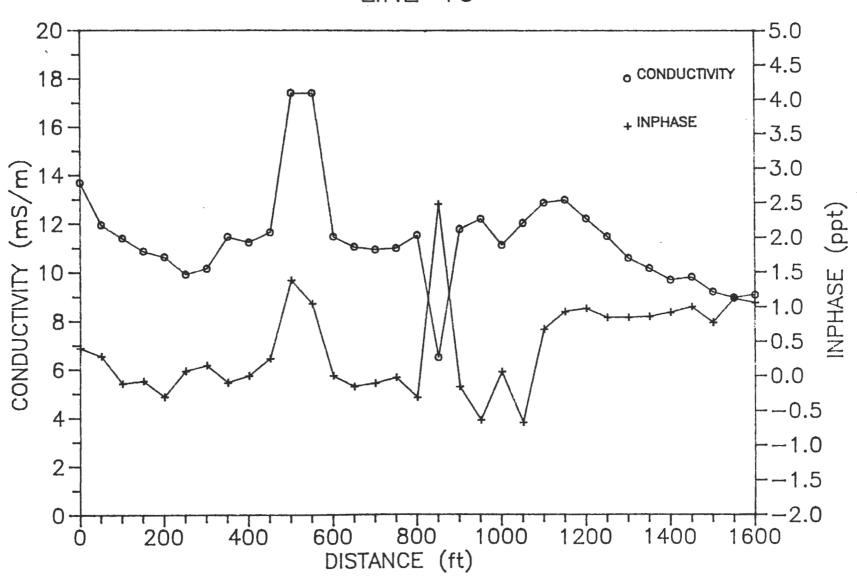
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 8



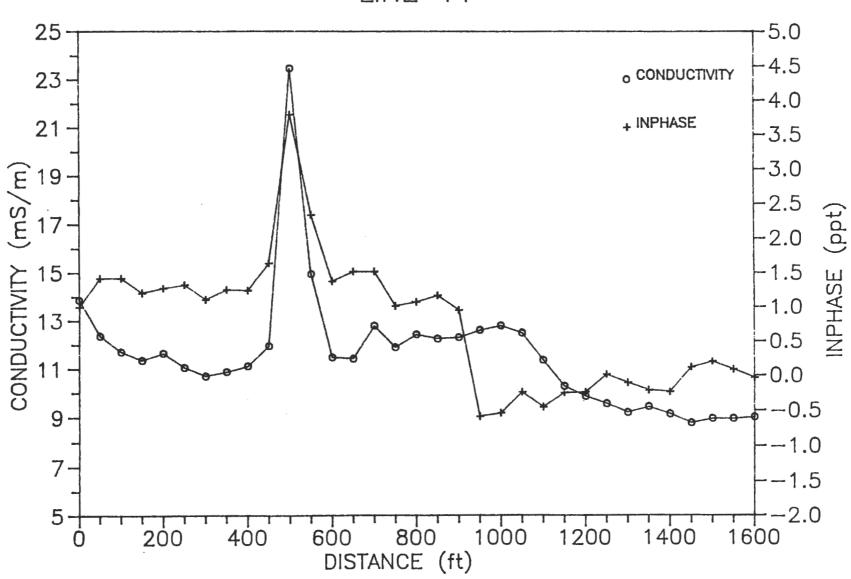
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 9



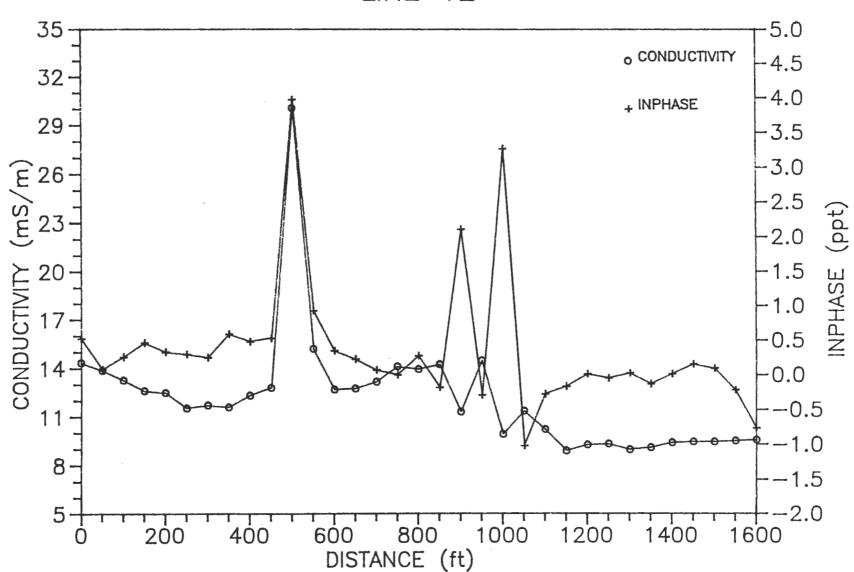
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 10



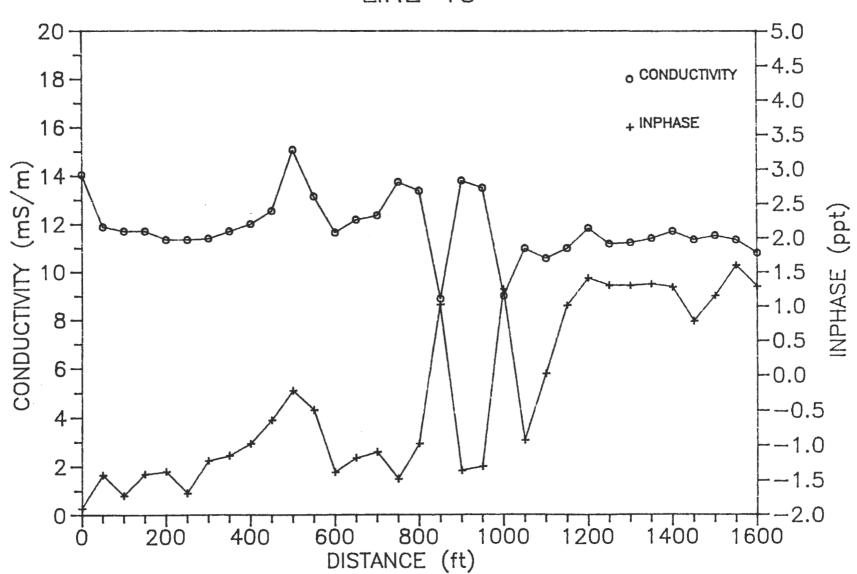
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 11



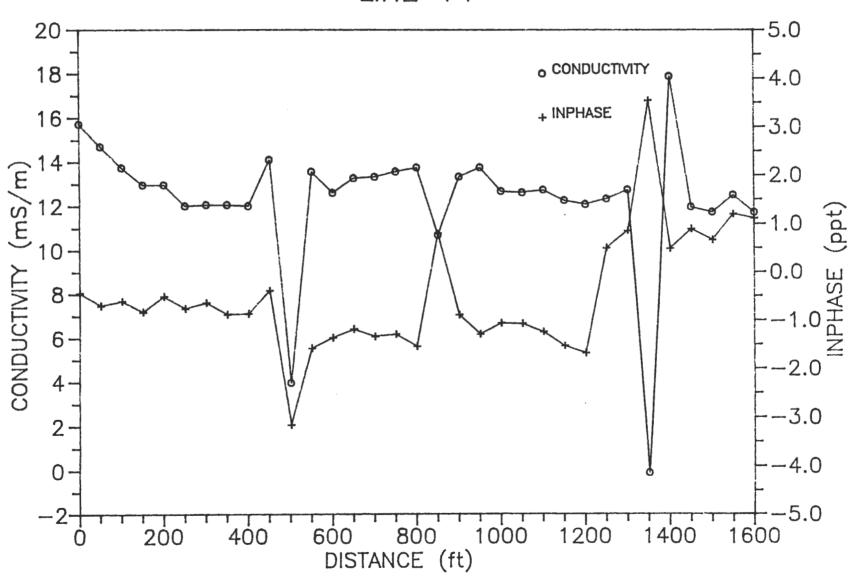
SEAD — ASH LANDFILL EM—31 SURVEY LINE PLOTS LINE 12



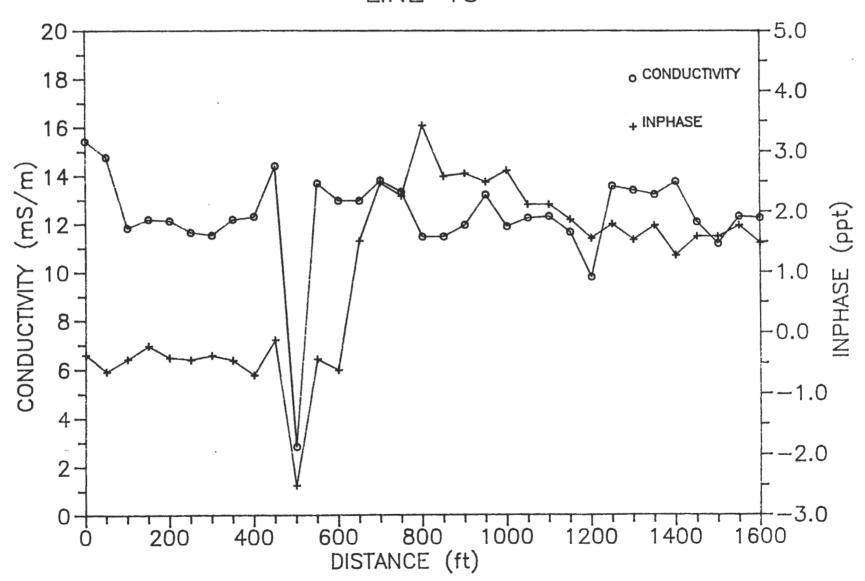
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 13



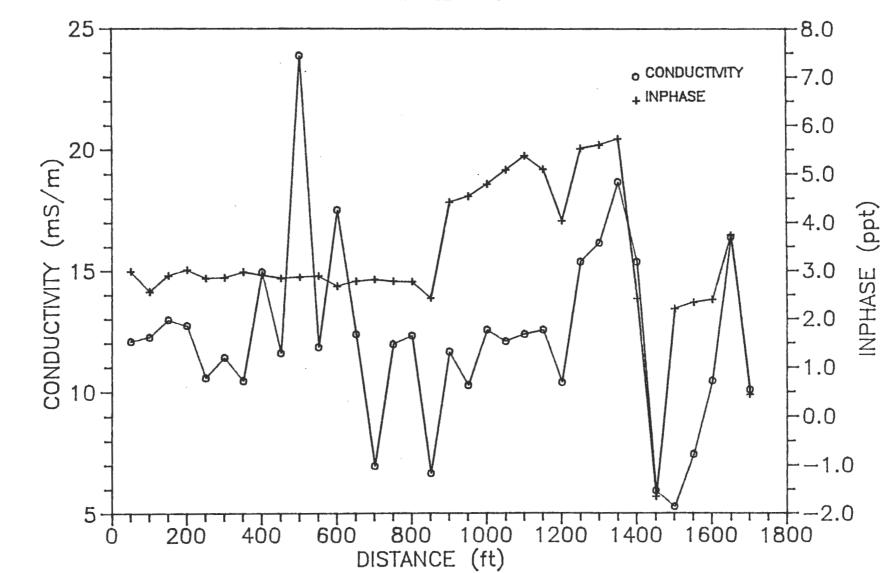
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 14



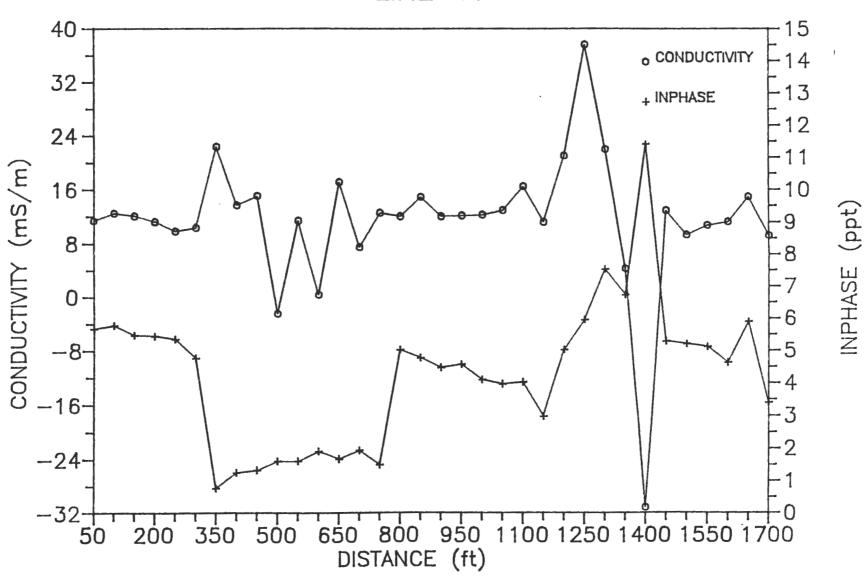
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 15



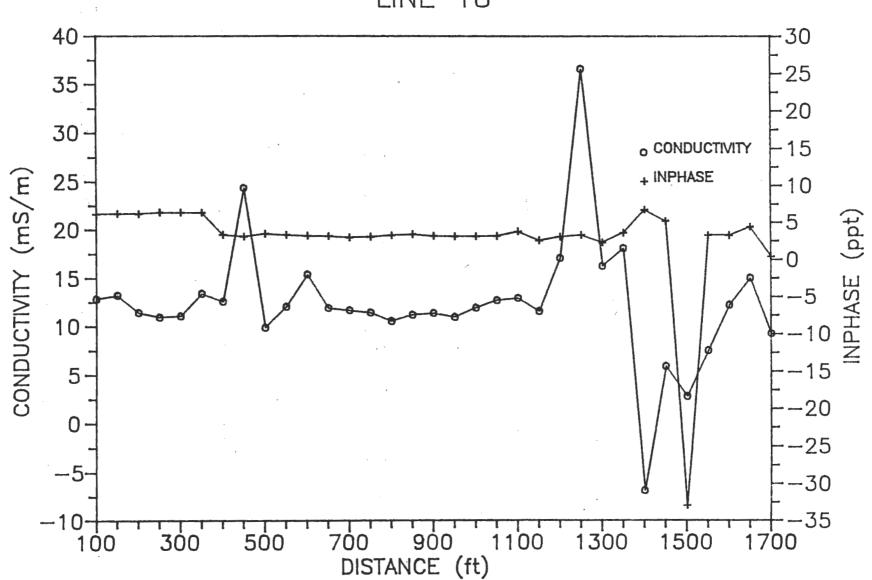
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 16



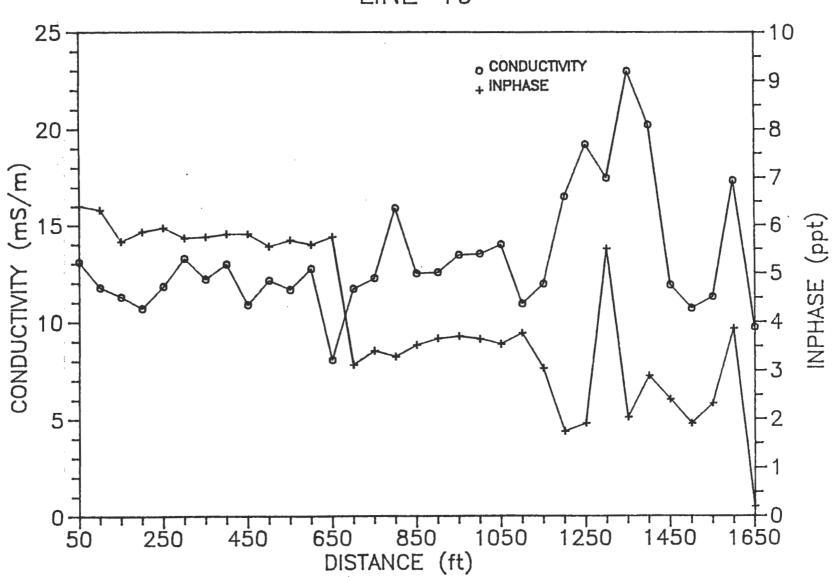
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 17



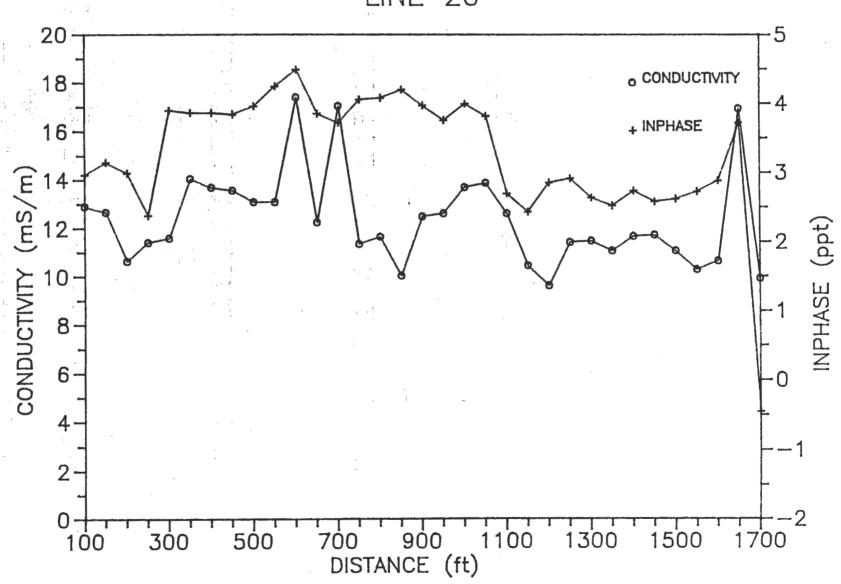
SEAD - ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 18



SEAD - ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 19



SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 20

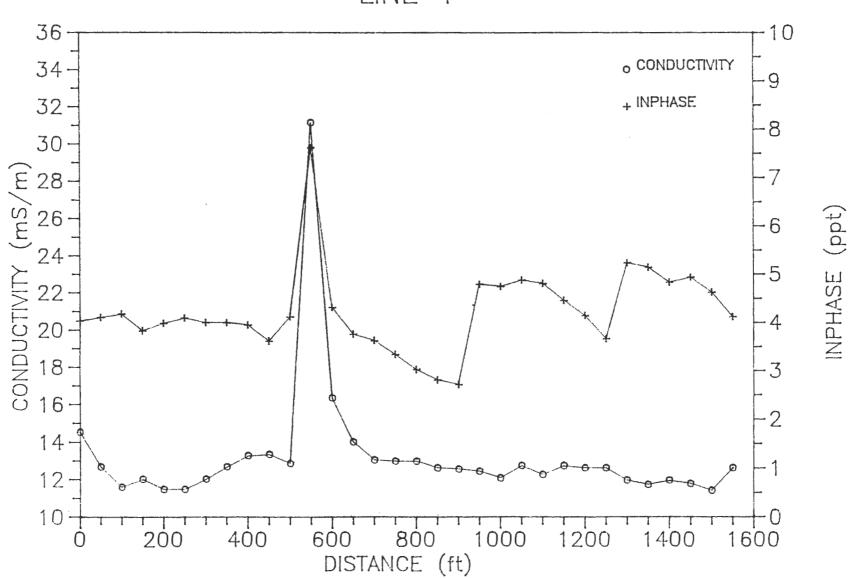


GPR SURVEY GRAPHIC RECORDS

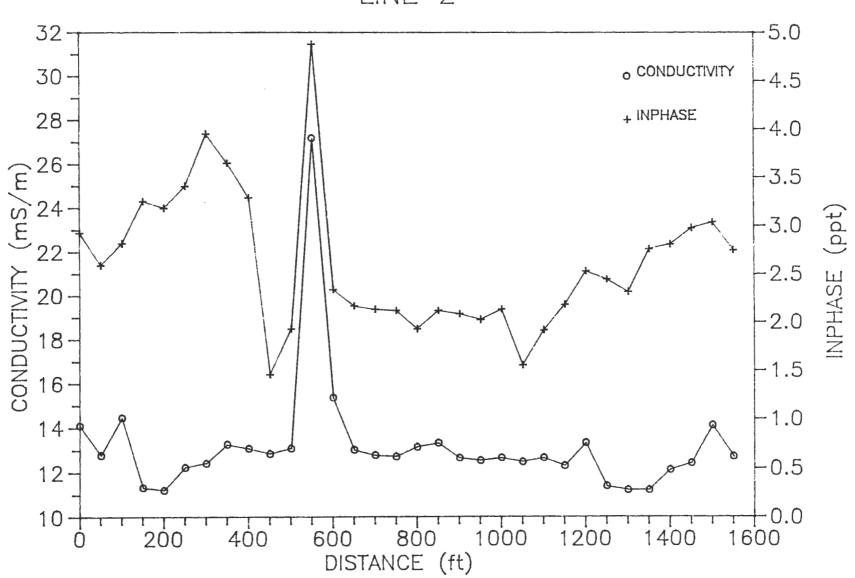
APPENDIX D

GPR GRAPHIC PROFILES FOR PIPE OR DRUM SIGNATURES

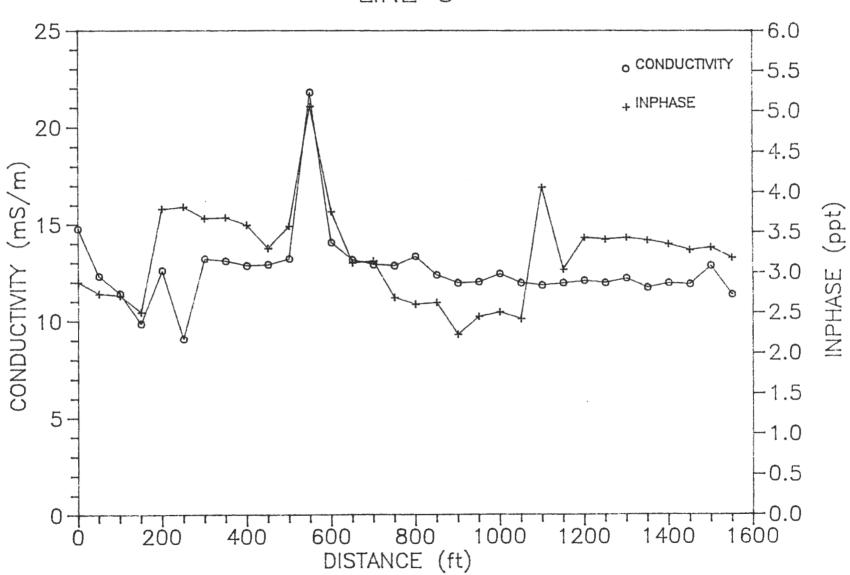
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 1



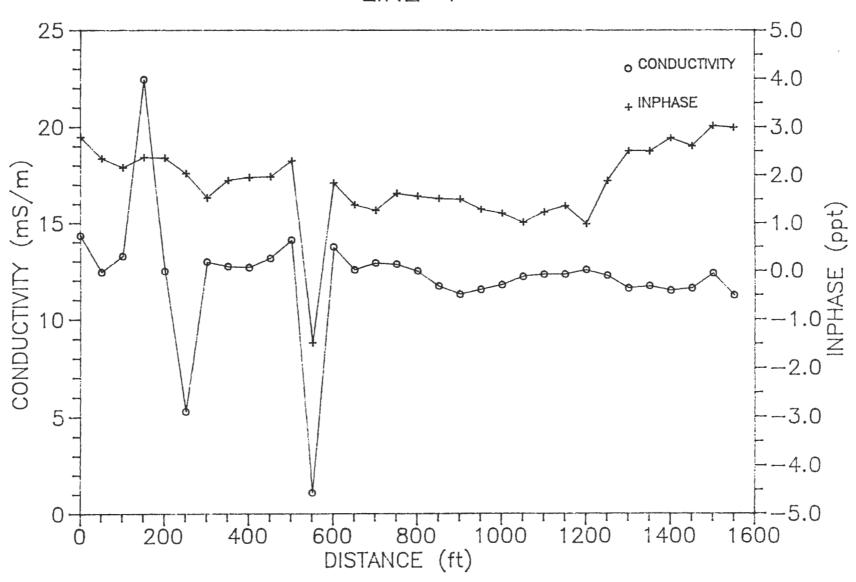
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 2



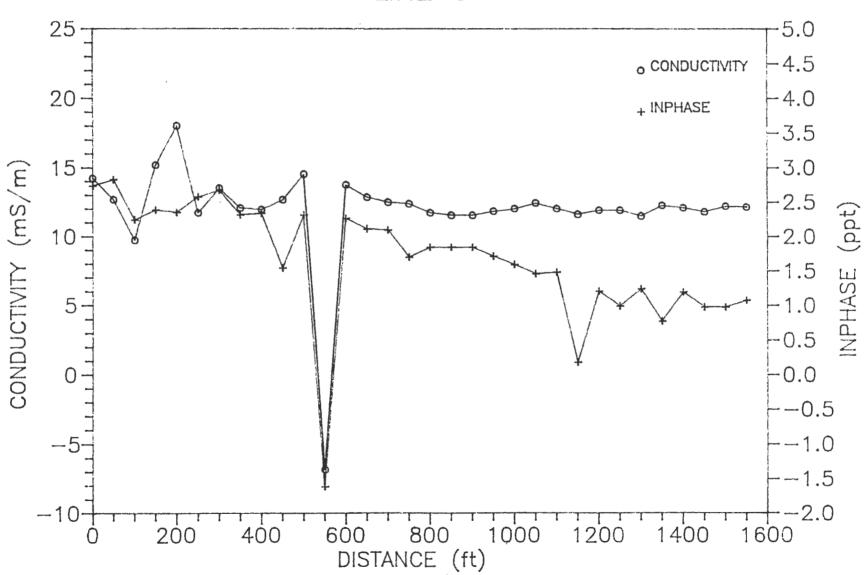
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 3



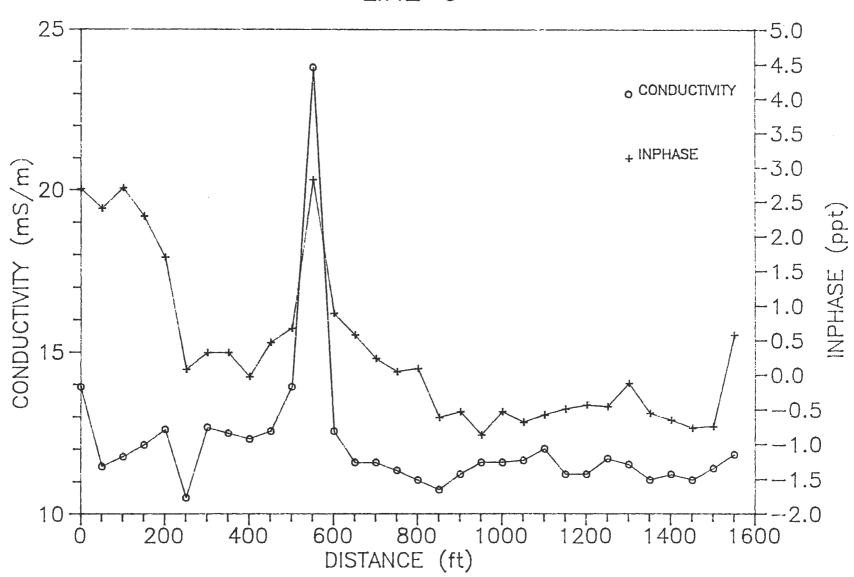
SEAD - ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 4



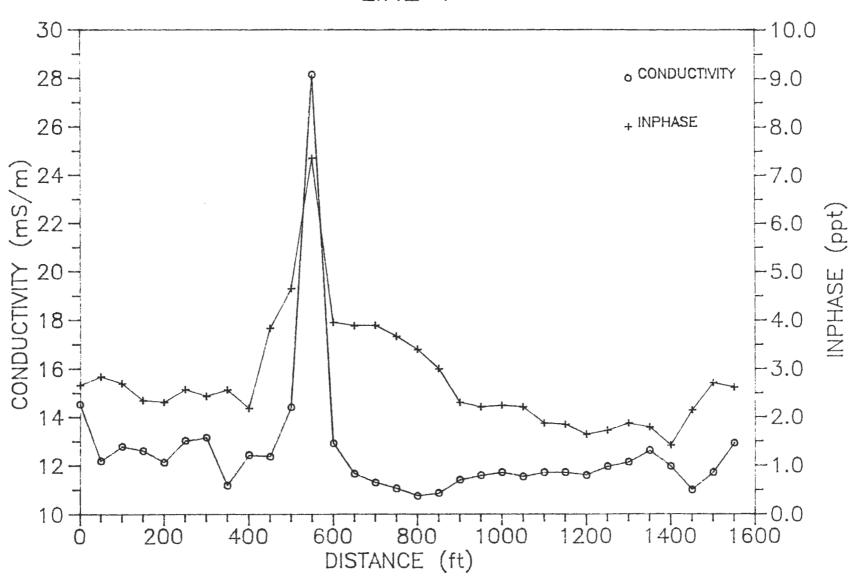
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 5



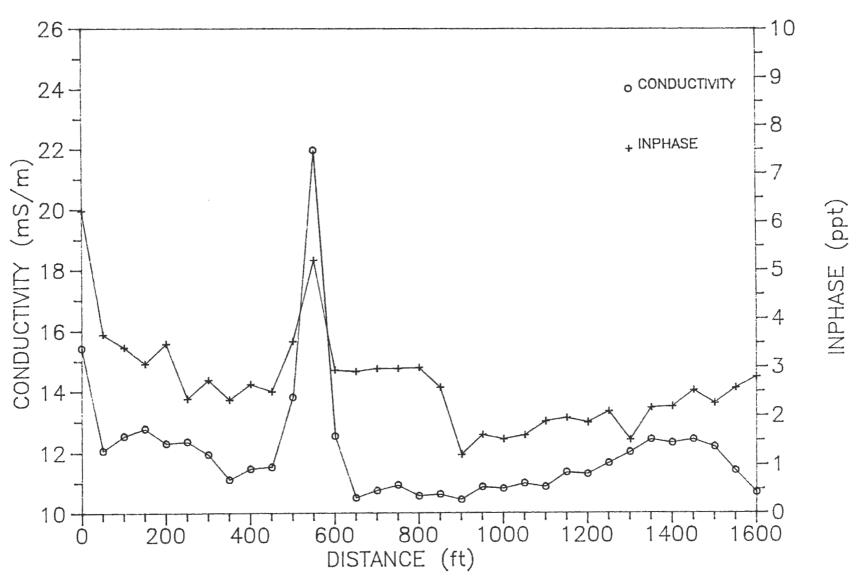
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 6



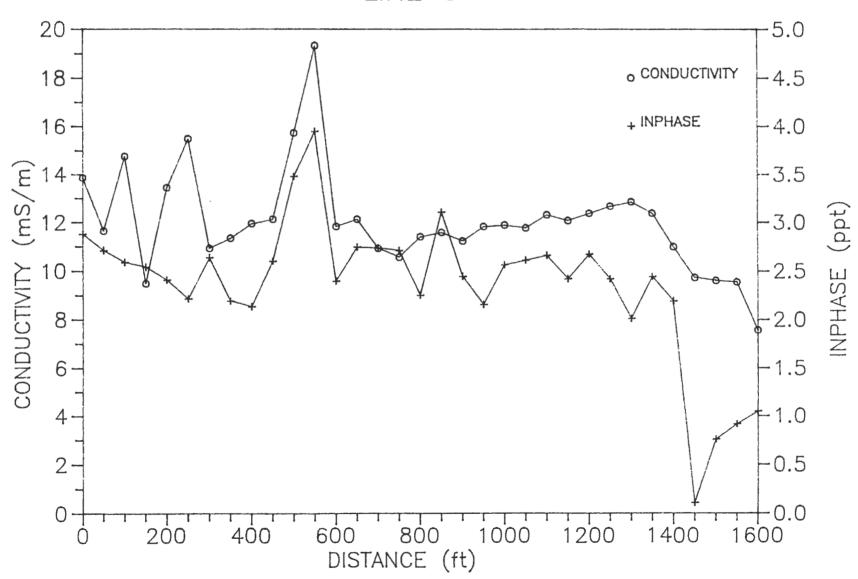
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 7



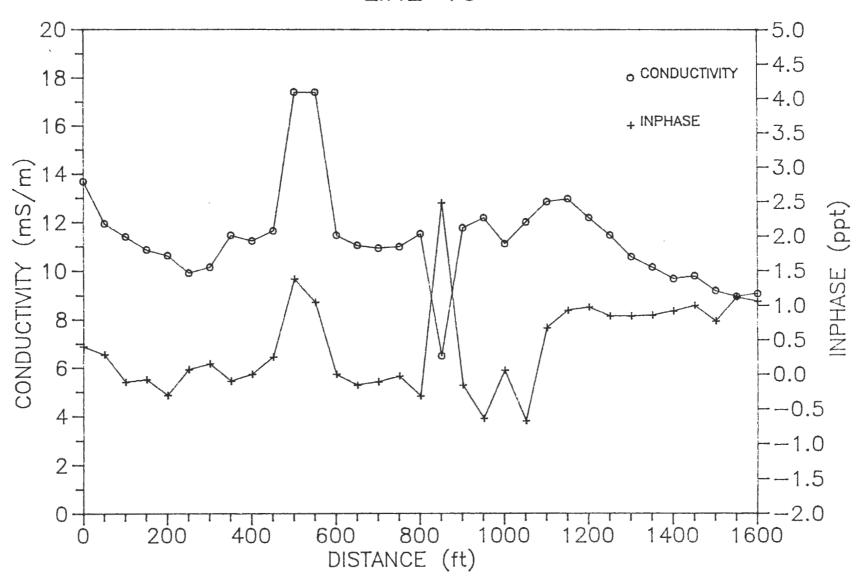
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 8



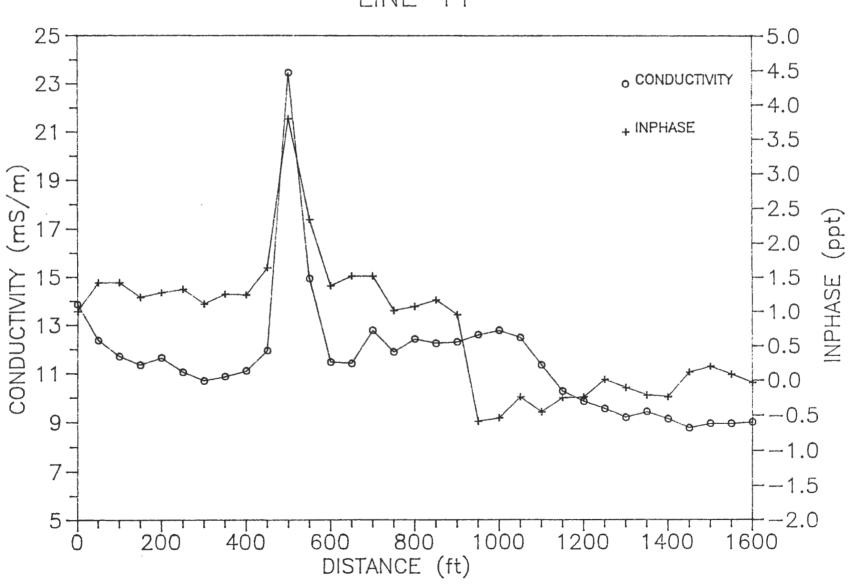
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 9



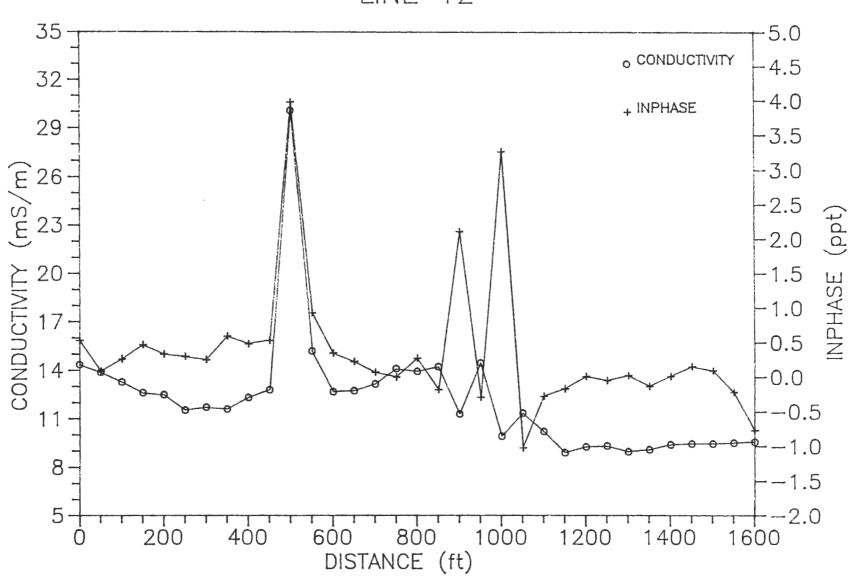
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 10



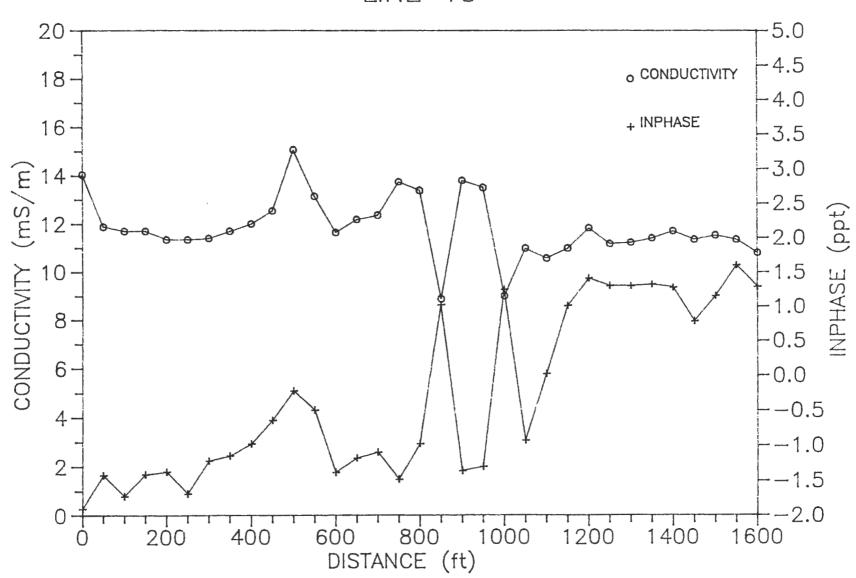
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 11



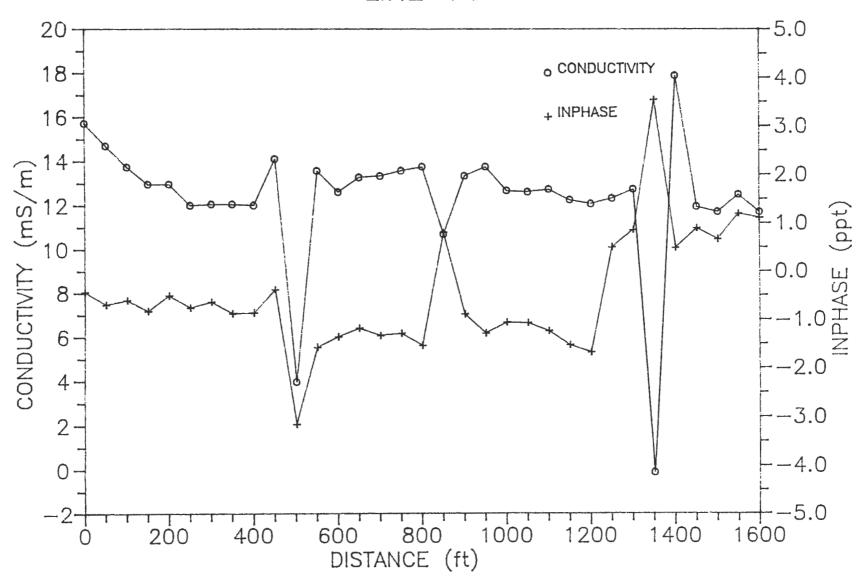
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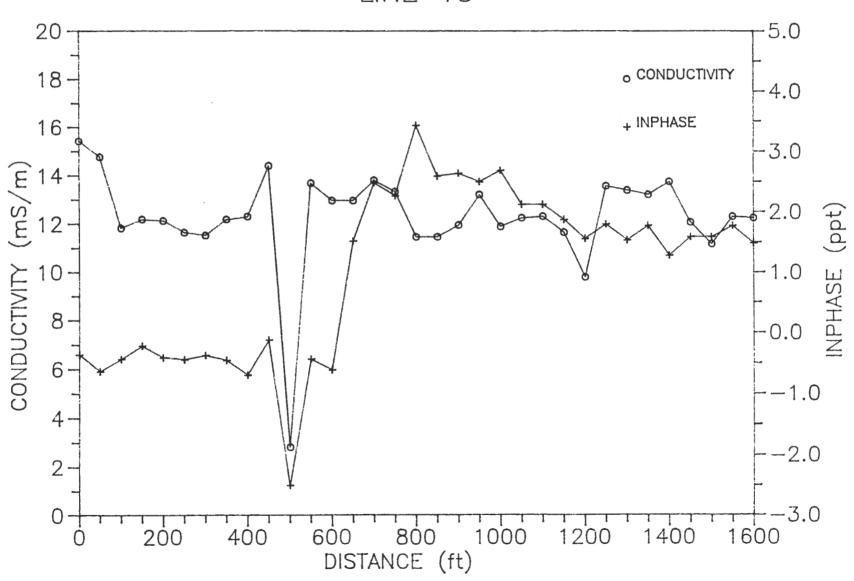
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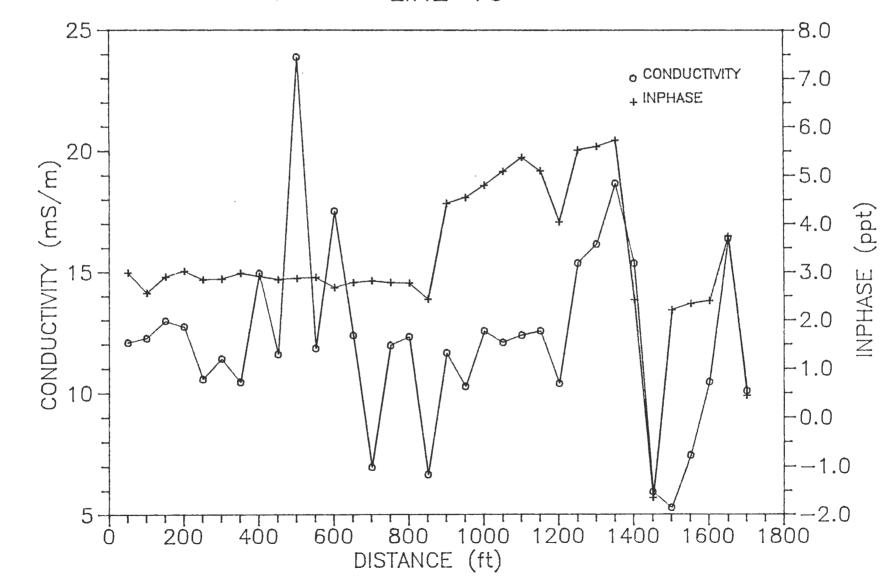
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 14



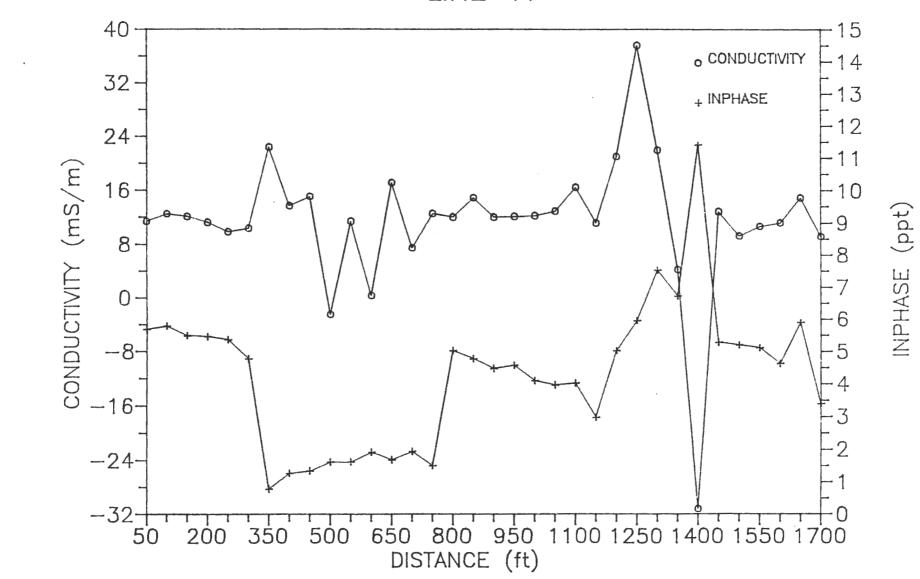
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 15



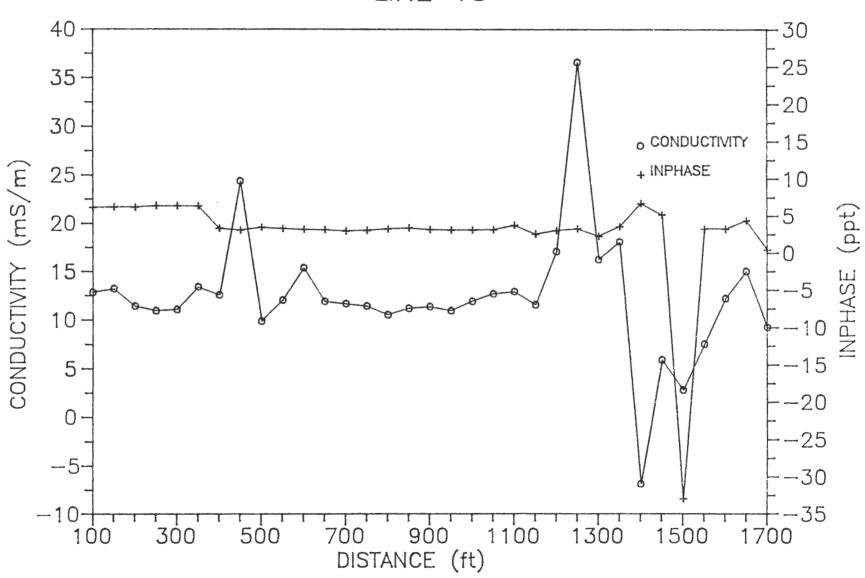
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 16



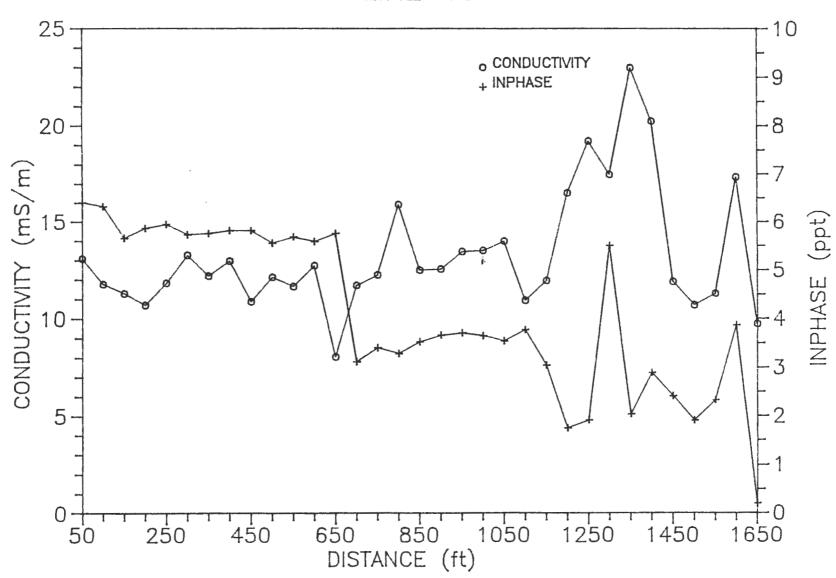
SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 17



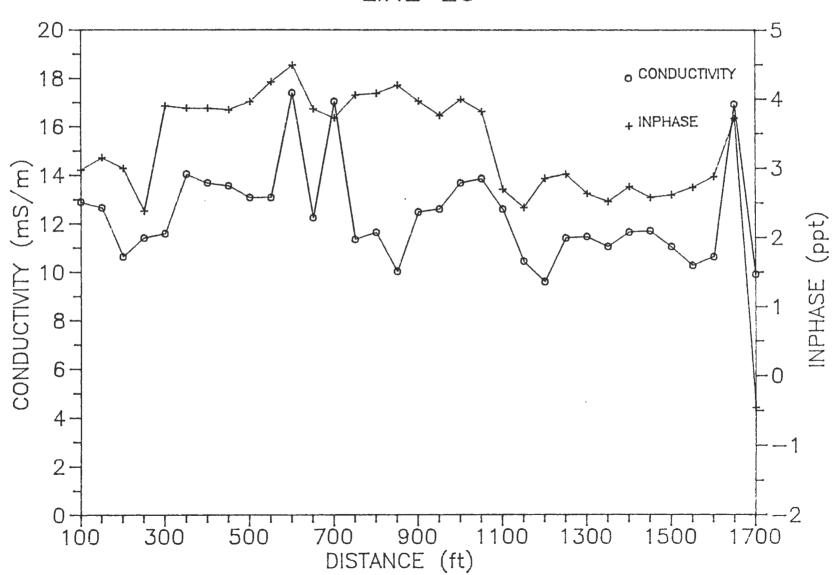
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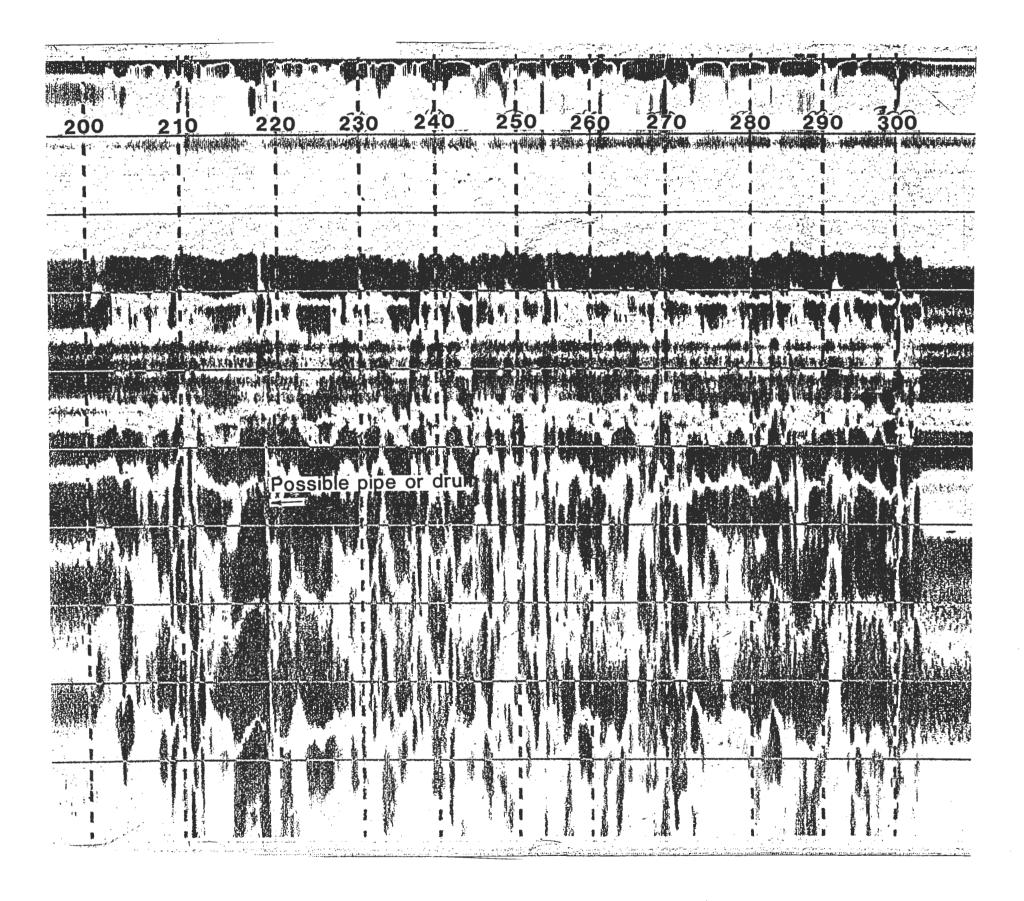


SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 19



SEAD — ASH LANDFILL EM-31 SURVEY LINE PLOTS LINE 20





SENECA ARMY DEPOT

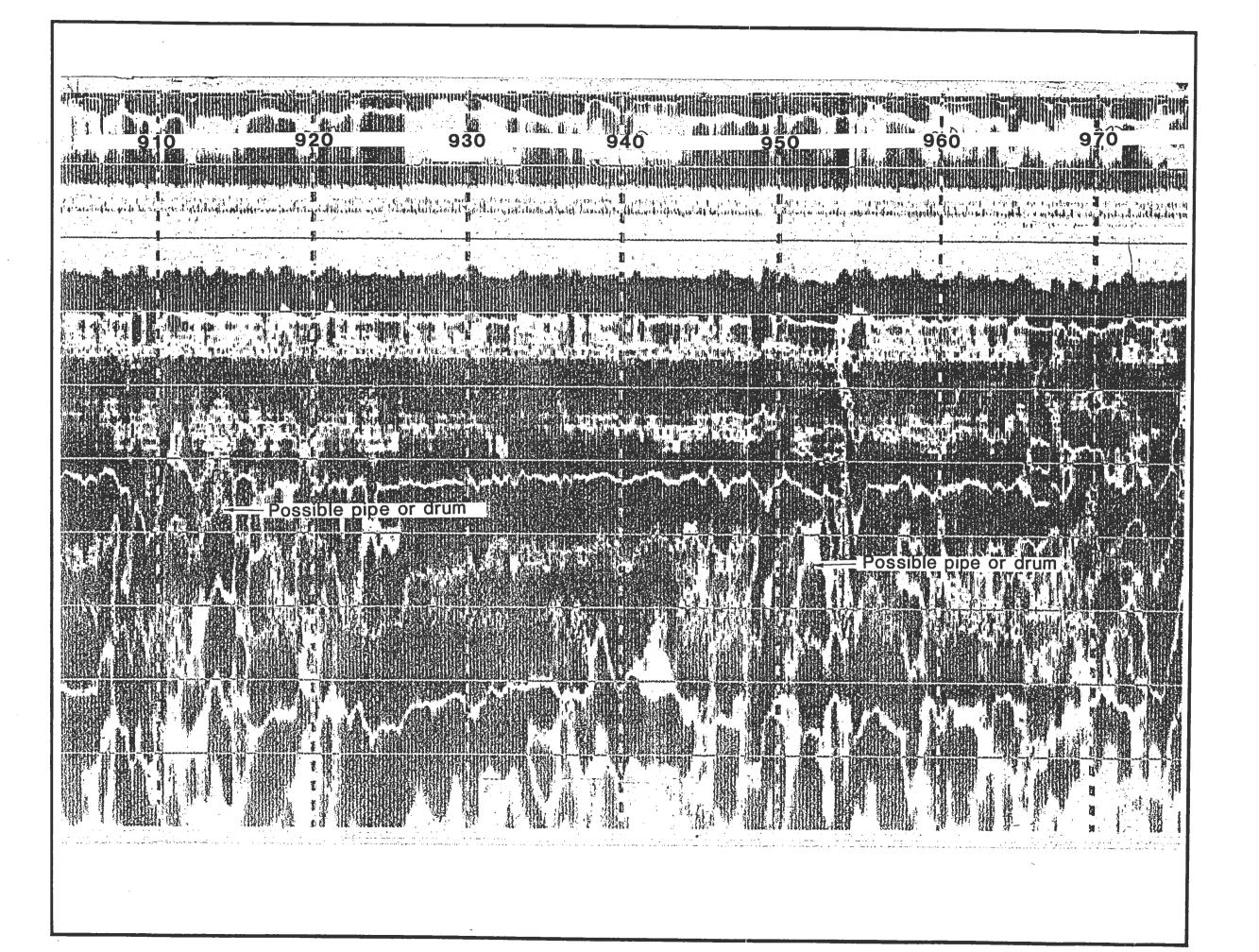
ASH LANDFILL

EM-31 SURVEY

GPR PROFILE

AREA 1
LINE 5
STATION 200-300 ft.





SENECA ARMY DEPOT

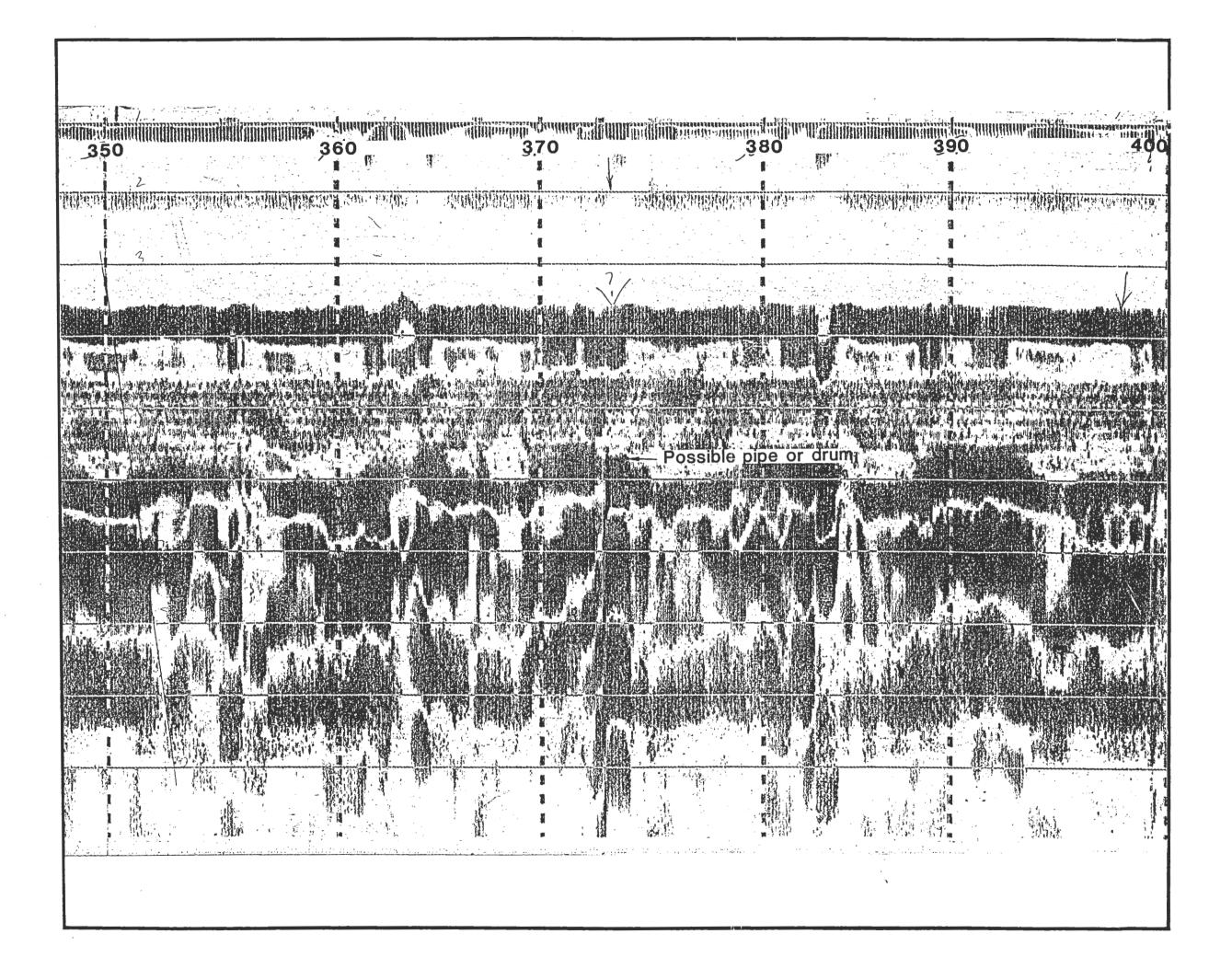
ASH LANDFILL

EM-31 SURVEY

GPR PROFILE

AREA 1 LINE 13 STATION 905-975 ft.





SENECA ARMY DEPOT

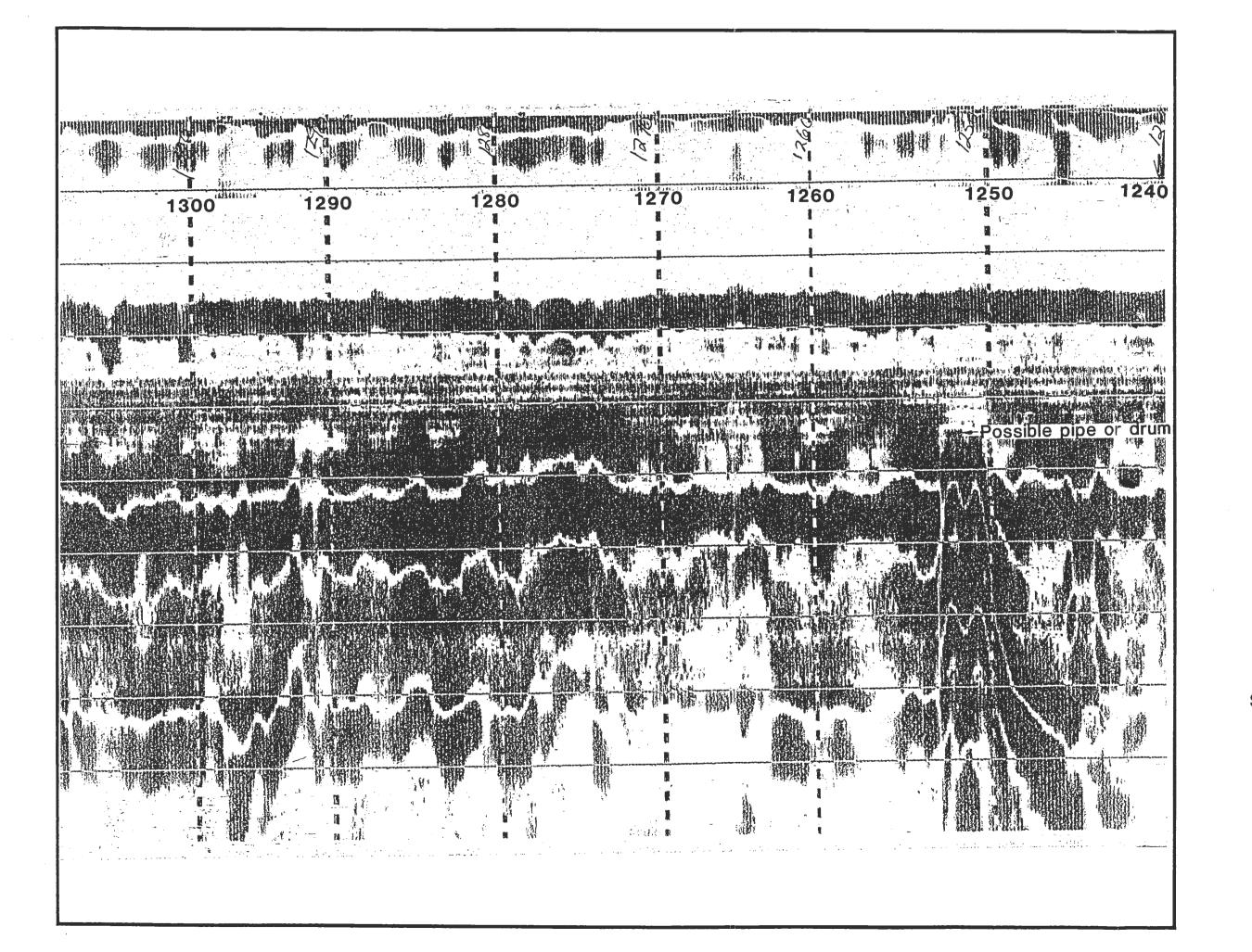
ASH LANDFILL

EM-31 SURVEY

GPR PROFILE

AREA 2 LINE 16 STATION 348-400 ft.





SENECA ARMY DEPOT

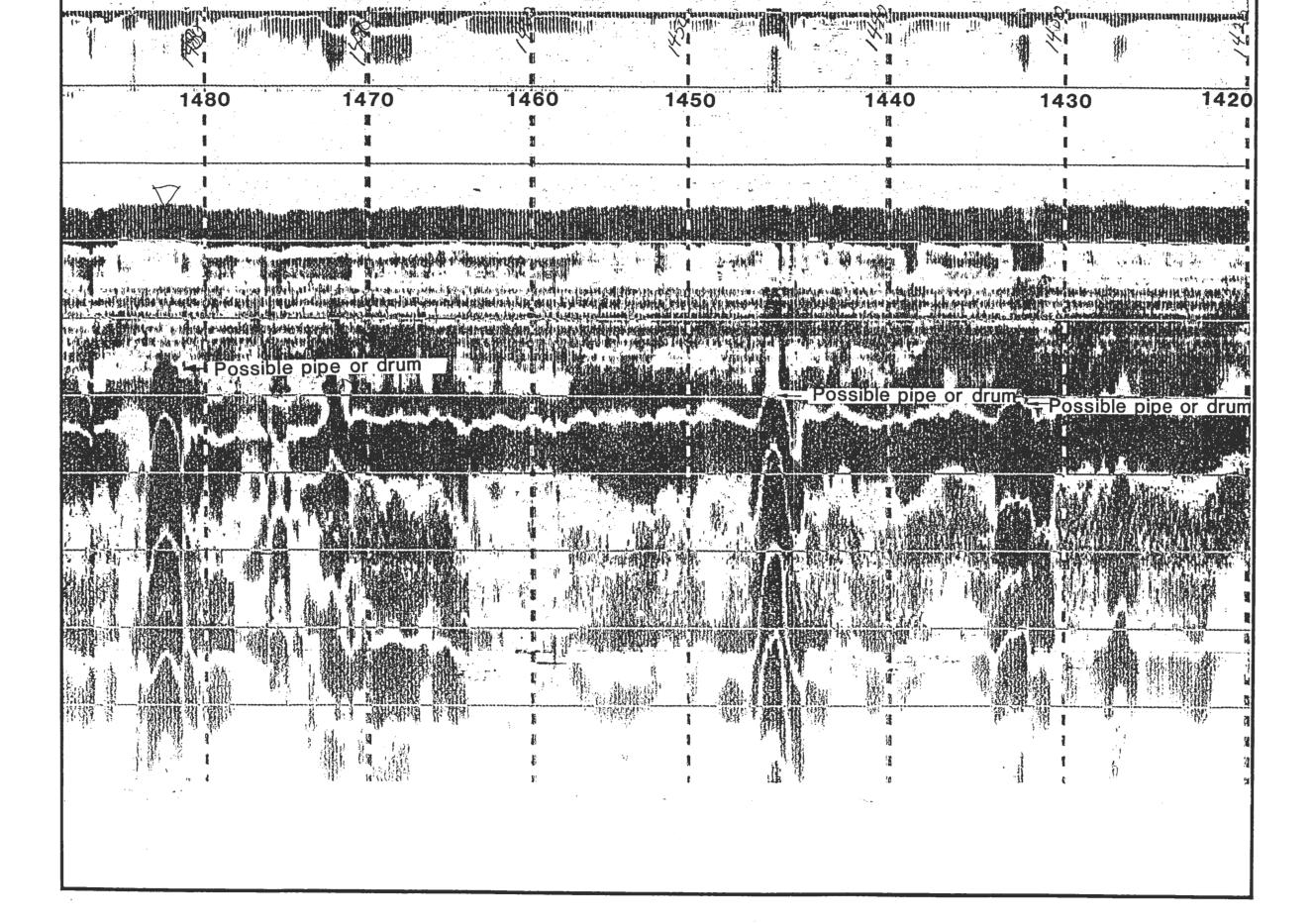
ASH LANDFILL

EM-31 SURVEY

GPR PROFILE

AREA 2 LINE 16 STATION 1240-1308 ft.





SENECA ARMY DEPOT

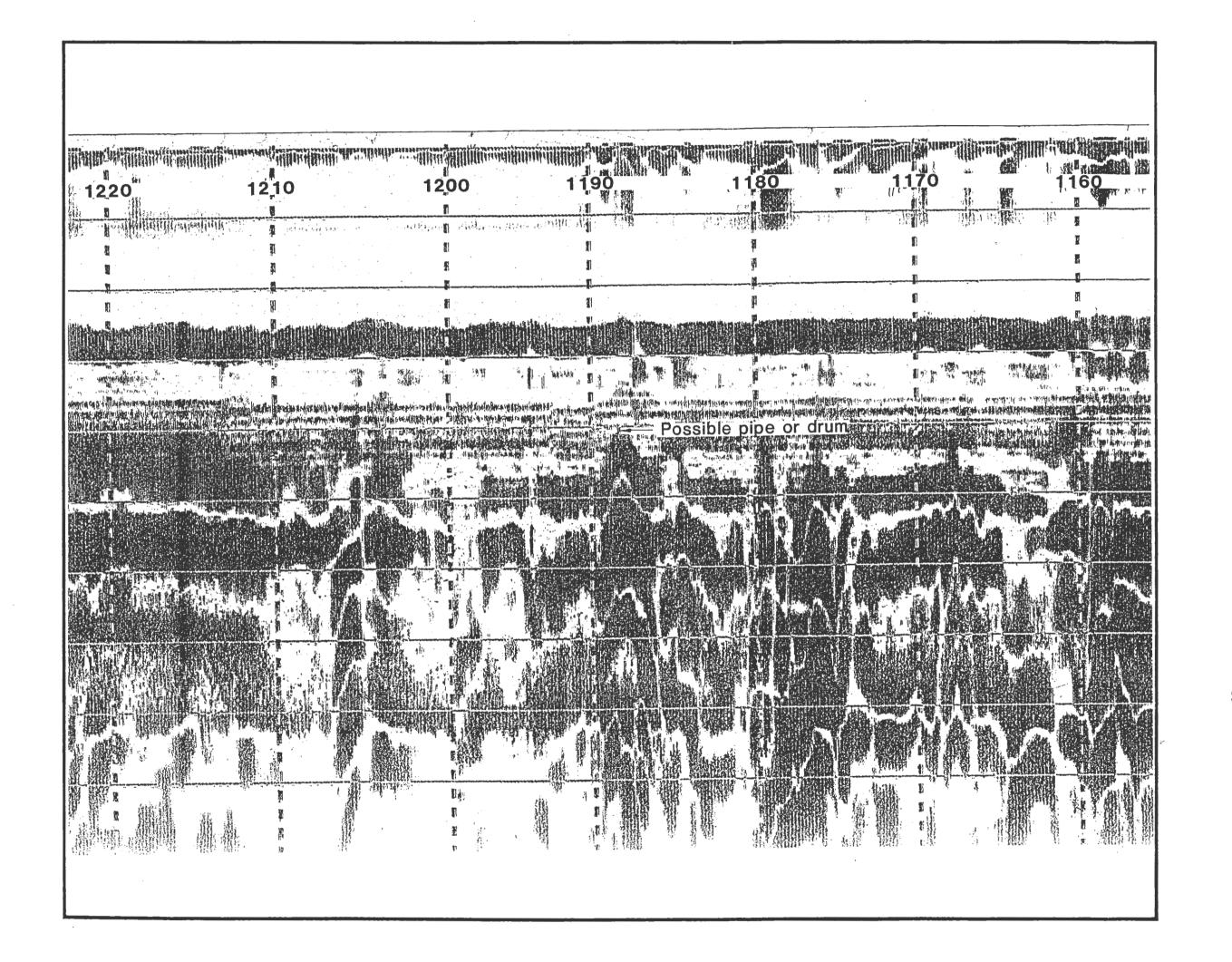
ASH LANDFILL

EM-31 SURVEY

GPR PROFILE

AREA 2 LINE 16 STATION 1420-1490 ft.





SENECA ARMY DEPOT

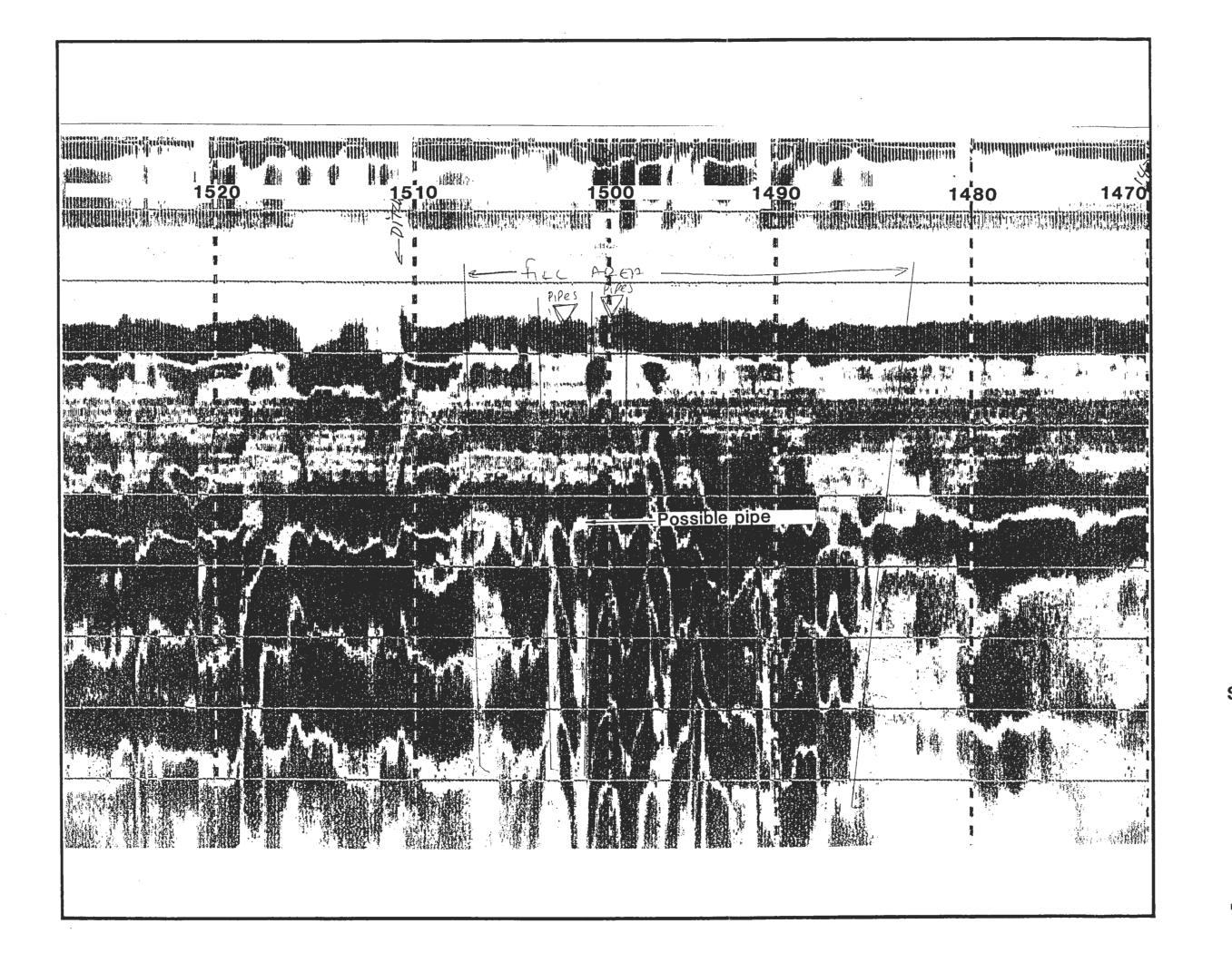
ASH LANDFILL

EM-31 SURVEY

GPR PROFILE

AREA 2 LINE 17 STATION 1155-1222 ft.





SENECA ARMY DEPOT

ASH LANDFILL

EM-31 SURVEY

GPR PROFILE

AREA 2 LINE 18 STATION 1470-1528 ft.



FARMHOUSE

BLASLAND & BOUCK

ENGINEERS, P.C.





LEGEND

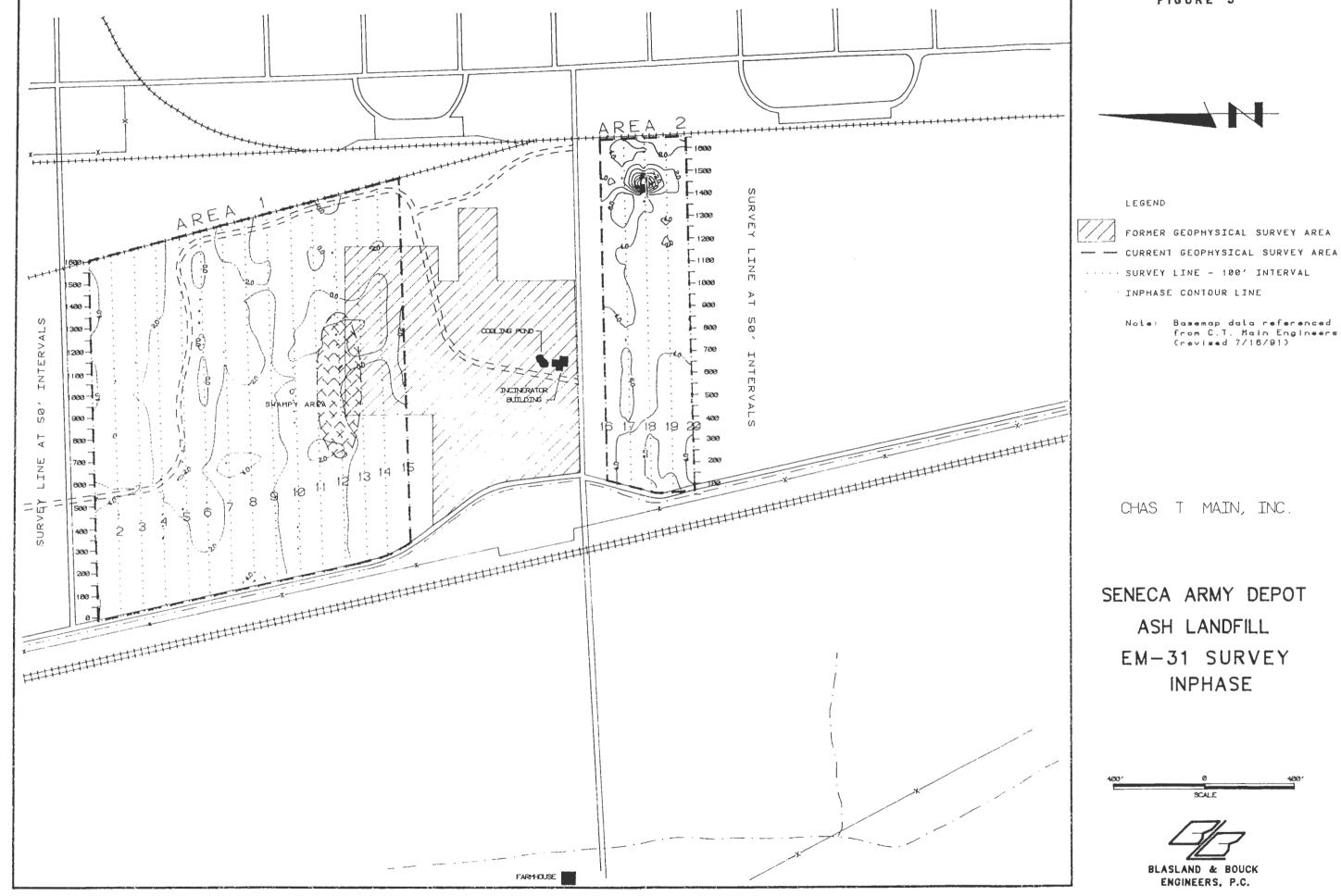
> Note: Basemap data referenced from C.T. Main Engineers (revised 7/16/91)

CHAS. T. MAIN, INC.

SENECA ARMY DEPOT
ASH LANDFILL
EM-31 SURVEY
CONDUCTIVITY







LEGEND

FORMER GEOPHYSICAL SURVEY AREA

.... SURVEY LINE - 100' INTERVAL

INPHASE CONTOUR LINE

Note: Basemap data referenced from C.T. Main Engineers (revised 7/16/91)

CHAS T MAIN, INC.

SENECA ARMY DEPOT ASH LANDFILL EM-31 SURVEY **INPHASE**





APPENDIX C SOIL BORING LOGS

October 20, 1993

		OVE	RBURI	DEN	BOR	ING R	EPOI	RT	
ENGIN	EERIN	G-SCIENCE,	INC. CLIE	NT:	ACOE		BORI	NG NO.:	B32
PROJECT LOCATIO		Seneca Arm					JOB NO.:	OUND ELEV.:	72044701004
DRILLING SU	IMMARY.						START D		4-27-93
DRILLING	HOLE	DEPTH	SAMPLER			HAMMER	FINISH D		4-27-93
METHOD	DIA	INT.	SIZE	түре	ТҮРЕ	WT/FALL	CONTRA		Amer Auger & Ditch
HSA	4 1/4" ID	INI.	3"	SS	Hammer	140#	DRILLER		J. Pietruch
ПОД	4 1/4 1D			- 55	пашше	140#	INSPECTO		JWC/SFF
	-						CHECKE		JWCJSFF
							CHECK I	JAIL:	
MRSLC CA	HOLLOW- DRIVE-AI	TARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL	_	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS S. 5 FT INTERVAL: NO SAMPLING SHELBY TUBE 3 INCH SPLIT SP	SAMPLING
MONITORING	EQUPME	NT SUMMARY							
INSTRUM	MENT	DETECTOR	RANGE		BACKGROU	ND	CALI	BRATION	
TYPI	3	TYPE/ENERGY	(PPM)	READING	TIME	DATE	TIME	DATE	WEATHER
OVM-580B		10eV	0-2,000				10:00 am	4-27-93	Sunny, Cool
Victoreen 190	1	Pancake BB					Hazco	Calibrated	Sunny, Cool
Particulate me	eter	Miniram-PDM3							Sunny, Cool
OVM-580		10.0EV	0-2,000				10:00 am	4-27-93	Sunny, Cool
FID GMD	PHOTO – I FLAME – I GEIGER M	MS ONIZATION DETECT ONIZATION DETECT IUELLER DETECTOR TION DETECTOR	OR CPM	1 (BACKGROUND COUNTS PER M PARTS PER MIL RADIATION		DGRT PPB MDL	DRAEGER TUB PARTS PER BILI METHOD DETE	LION
COMMENTS					OTHER REP WELL DEVELOR SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TE GEOPHYSICAL	PMENT ATION DETAILS ESTING	PENDING	3	X X X X X

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING NO.: B32

			C)VI	$\Xi \mathbf{F}$	B	U	RDEN BORING REP	PORT		
ENC	INEE	RING-	-SCIEI					BNT: ACOE	BORING	#: B32	
INSTR	UMENT	M INTE	ONITORI RVAL	NG BGE)	TI	νŒ.	COMMENTS: See page one for instrument and background readings	DRILLER:	J. Pietrich	
									INSPECTOR:	JWC/SFF	
_									DATE:	4-27-93	
D E		AMPLING		ļ	SAMP	E	T	SAMPLE DESCRIPTION		USCS	STRATUM
P T H (FT)	BLOWS PER 6 INCHES	PENE- TRATION RANGE (FEET)	RECOV- ERY RANGE (FEET)	DEPTH INT (FEET)	NO.	voc	RAD SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification	linor Companents, wetness, etc.)	CLASS	CLASS
	6	0-		0-		0		0-4" Topsoil			_
-	11 18" 2 2 2						_	4"-10" Intermittent broken shale - background V	OC = 0		-
								dark gray			-
2 -	5	2-		2-	-	0	-	10–18" It gray fines with broken shale 24–30" med gray stiff silty clay			-
		2-	21"								-
-	9 21" 0 30-45" lt brown stiff silt										=
4	12 11 4'0" 4 6 4'0" 4-					0	-]
_	6		4-				48'60 lt brown silty clay. Water table = 4'0"		_		
5	5				2.1	-				4	
	13 24"							60-72 It gray clay, till 68-72 - shale (competent)			_
6 -	13 24" 6							(26,77,97, 160 ppm) 72–86" weathered and fractured shale			
	17 17	6'0"		6-				A gray, It oil sheen on spoon and on shale			-
-	56		14"			103	-	Background OVM = 0 ppm			-
8		(3")7'9"		7'9"				Auger refusal at 8'0"			
-		,									
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #: B32

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B33													
ENGIN	EERIN	G-SCIENCE,	INC. CLIE	NT:	ACOE		BOR	ING NO.:	B33					
PROJECT LOCATIO		Ash Landfill	– Soil Borings				JOB NO	.: OUND ELEV.:	720447 – 1004					
DRILLING SU	MMARY.						START		12-14-92					
DRILLING	HOLE	DEPTH	SAMPLER			HAMMER	FINISH		12-14-92					
METHOD	DIA.	INT.	SIZE	TYPE	ТҮРЕ	WT/FALL	CONTR		Amer Auger & Ditch					
HSA	8"	0-4'	3"x2'	SS	DHR	140#/30"	DRILLE	R:	Lee Penrod					
							INSPEC	TOR:	PFM/CRL					
							CHECK	ED BY:	CRL					
							CHECK	DATE:	1-29-93					
DW MRSLC CA	HOLLOW- DRIVE-A	CARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL		C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVAL S NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	AMPLING					
MONITORING	EQUPME	NT SUMMARY												
INSTRUM	ENT	DETECTOR	RANGE		BACKGROUN	D	CAL	IBRATION						
ТУРЕ	3	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER					
Thermo 580(R	(g) PID	10eV	0-4	0	3:40	12-14-92		12-14-92	Sunny					
Thermo 580(R	(g) PID	10eV	0-4	0	3:40	12-14-92		12-14-92	Sunny					
Aerosol (Rg)		PDH-3	0-4	0.04	3:40	12-14-92		12-14-92	Sunny					
Aerosol (Rg)		PDH-3	0-4	0.04	3:40	12-14-92		12-14-92	Sunny					
Victoreen 190	Red	GMD	0-4	10-21	3:40	12-14-92		12-14-92	Sunny					
FID GMD	PHOTO – I FLAME – I GEIGER M SCINTILLA	AS ONIZATION DETECT ONIZATION DETECT UELLER DETECTOR TION DETECTOR		P R	ACKGROUND COUNTS PER MILL ACTS PER MILL ADIATION OTHER REPC WELL DEVELOPE SURVEYOR CORE LOG	ORTS	DGRT PPB MDL DATE/PENDIN PENDING	DRAEGER TUBE PARTS PER BILL METHOD DETEC	ION					
				1	WELL INSTALLA HYDRAULIC TES GEOPHYSICAL L	TING			X X X					

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING NO.: B33

Γ	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING #: B33													
EN	GINEE	RING-				1				В3	3			
INIC	TRUMENT	M	ONITORI	ING BGI		TI	ME	COMMENTS See page 1 for instruments and background readings	DRILLER:	Penrod				
INS	RUMENI	INTE	KVAL	BOL		11	VIE	Dust Rig/DW						
									INSPECTOR:	PFM/CRL				
-	I S	AMPLING	3		SAMP	LE		SAMPLE	DATE:	12-14-9	92			
E	BLOWS	PENE-	RECOV-	DEPTH			RAD	DESCRIPTION		USCS	STRATUM			
H	6	TRATION	RANGE	INT (FEET)	NO.	voc	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, Mi with amount modifiers and grain-size, density, stratification,	nor Components	CLASS	CLASS			
(F)	7	(FEET)	(FEET)	0-			<u> </u>	m brn – olive green CLAY and SILT, trace shale fra						
1	8		1.9		1	0/0	bgd							
	11	2		2						CL	Till _			
2	30				-	-		Wet at 2'	0.1/0.09		377 - 45 - 3			
3	62	2-	1.1	2-	2	0/0	bgd	weathered gray SHALE		BRK	Weathered			
'	100	3.5	1.1	3.5	~	0,0	Ogu_			BICK	BRK			
4					†			split spoon refusal at 3.5'			Shale			
L								Auger refusal at 4.0'			_			
5 _							-				-			
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #: B33

		OVE	RBURI	DEN	BORI	NG R	EP	ORT	
ENGIN	EERIN	G-SCIENCE,	INC. CLIE	NT:	ACOE		В	ORING NO.:	B34
PROJECT LOCATION		Ash Landfill	– Soil Borings				-	B NO.: I. GROUND ELEV.:	720447-01004
DRILLING SU	MMADV.							ART DATE:	12-14-92
	T	DEPTH	SAMPLER			HAMMER		NISH DATE:	12-14-92
DRILLING	HOLE			ТУРЕ	TYPE	WT/FALL		NTRACTOR:	Amer Auger & Ditch
METHOD	DIA	INT.	SIZE						
HSA	8"	'0-6'	3" X 2'	SS	DHR	140#/30"		ILLER:	Lee Penrod
								SPECTOR:	PFM/CRL
							СН	ECKED BY:	CRL
							CH	ECK DATE:	1-29-93
DW MRSLC CA	HOLLOW- DRIVE-A	TARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL		C HAMMER DLE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS S. 5 FT INTERVAL: NO SAMPLING SHELBY TUBE 3 INCH SPLIT SP	SAMPLING
MONITORING	ЕОПЪМЕ	NT SUMMARY							
INSTRUM	IENT	DETECTOR	RANGE		BACKGROUN	D		CALIBRATION	
TYPE	3	TYPE/ENERGY	(PPM)	READING	TIME	DATE	TIN	ME DATE	WEATHER
Thermo 580(R	Rg)	10eV	0-6	0	2:30	12-14-92		12-14-92	Sunny
Thermo 580(E	OW)	10eV	0-6	0	2:30	12-14-92		12-14-92	Sunny
Aerosol Mon	(Rg)	Miniram-PDM-3	0-6	0.04	2:30	12-14-92		12-14-92	Sunny
VIctoreen 190	Red	GMD	0-6	10-21	2:30	12-14-92		12-14-92	Sunny
Aerosol Mon	(DW)	Miniram-PDM-3	0-6	0.07	2:30	12-14-92		12-14-92	Sunny
FID GMD	PHOTO – I FLAME – I GEIGER M SCINTILLA	MS ONIZATION DETECT ONIZATION DETECT (UELLER DETECTOR TION DETECTOR	OR CPM	·. 1	BACKGROUND COUNTS PER MILE PARTS PER MILE RADIATION OTHER REPO WELL DEVELOP SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TES	DRTS MENT TION DETAILS	DGRT PPB MDL DATE/PE Pending	DRAEGER TUB PARTS PER BILI METHOD DETE	lon
					GEOPHYSICAL L				X

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING NO.: B34

	OVERBURDEN BORING REPORT NGINEERING-SCIENCE, INC. CLIENT: ACOE BORING #: B34												
ENC	GINEE	RING-	-SCIE	NCE,	INC		CLI	ENT: ACOE	BORING #	B3	4		
			ONITOR	ING		_		COMMENTS:					
INSTE	RUMENT	INTE	0-6	BGE)	TI	ME_	For monitoring see page 1 Dust (RG/DW)	DRILLER:	Penrod			
			0-0					Dist (NOIDW)	INSPECTOR:	PFM/CRL			
\vdash									DATE:	12-14-9	92		
D E	S	AMPLING	3		SAMP	LE I	1	SAMPLE DESCRIPTION					
P	BLOWS PER	PENE- TRATION	RECOV- BRY	DEPTH	NO.	voc	RAD			USCS CLASS	STRATUM CLASS		
H (FT)	6	RANGE (FEET)	RANGE (FEET)	(FEET)			SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification,	inor Components wetness, etc.)		0.2.2.0		
	5	0-		0-		0		brn-olive green CLAY, tr shale fragments		CL	_		
	19		1.9'		1	/	bgd				_		
	22	2		2		0					Till		
_	32						_	AA, + little shale fragments		ļ			
	70	2-	0.75	2-	2	0/	bgd	Weathered shale - m-dk gray			Weathered		
_	100/.25	2.75		2.75		0	_	_			Shale		
							_	_					
_										BRK	_		
	L								•		_		
5_							_	_					
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_						İ	_	7.2					
								Auger refusal at 6'			Competent		
_								_			Bedrock		
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #:

B34

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B35													
ENGINE	ERING	-SCIENCE, IN	IC. CLIE	NT: A	COE		BOR	ING NO.:	B35					
PROJECT LOCATIO		Ash Landfill	- Soil Borings				JOB NO.	: DUND ELEV.;	720447-01004					
DRILLING SU	JMMARY:						START I		12-15-92					
DRILLING	HOLE	DEPTH	SAMPLE	BR BR		HAMMER	FINISH I	DATE:	12-15-92					
METHOD	DIA	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	CTOR:	Amer. Auger					
HSA	8"	0-5.1	3"x2'	SS	DHR	140#/30"	DRILLER	₹:	Period					
							INSPECT	OR:	CRL/KKS					
	_						CHECKE	D BY:	CRL					
							CHECK	DATE:	1-29-93					
DRILLING ACI HSA DW MRSLC CA SPC	HOLLOW- DRIVE-AN	TARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULIC DOWN-HOI WIRE-LINE	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVAL S NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	SAMPLING					
MONITORING	EQUPME	NT SUMMARY				-								
INSTRU	MENT	DETECTOR	RANGE		BACKGROUN	ID	CAL	BRATION						
TYP	E	TYPEÆNERGY		READING	TIME	DATE	TIME	DATE	WEATHER					
Thermo 580(1	rig)OVM	10eV	0-5.1	4	10:30	12-15-92	AM	12-15-92	Sunny					
Thermo 580(1	DW)OVM	10eV	0-5.1	0	10:30	12-15-92	AM	12-15-92	Sunny					
Aerosol (Rig))	PDM-3	0-5.1	0.17	10:30	12-15-92	AM	12-15-92	Sunny					
Aerosol (DW)	PDM-3	0-5.1	0.08	10:30	12-15-92	AM	12-15-92	Sunny					
Radiation		GAD/Pancake	0-5.1	12-18	10:30	12-15-92	AM	12-15-92	Sunny					
MONITORING ACRONYMS PID PHOTO - IONIZATION DETECTOR BGD BACKGROUND DGRT DRAEGER TUBES FID FLAME - IONIZATION DETECTOR CPM COUNTS PER MINUTE PPB PARTS PER BILLION GMD GEIGER MUELLER DETECTOR PPM PARTS PER MILLION MDL METHOD DETECTION LIMIT SCT SCINTILLATION DETECTOR RAD RADIATION														
COMMENTS				5	OTHER REPO WELL DEVELOPI SURVEYOR CORE LOG WELL INSTALLA' HYDRAULIC TES GEOPHYSICALL	MENT TION DETAILS	DATE/PENDING Pending	G	X X X X X					

PAGE 1 OF 2 SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B35

		OVERBURDEN BORING REPORT INEERING-SCIENCE, INC. CLIENT: ACOE BORING #: B35												
EN	GINEE	RING-	-SCIEN	ICE, II	NC.		CLII	ENT: ACOE	BORING #	:: B35				
INSTR	UMENT		ONITORI RVAL	ING BGE)	TI	ME	COMMENTS	DRILLER:	Penrod				
PID	(2) (2)	0-	51	4/0 0.17/0)	10		Background Instrument Readings on Page 1 (RIG/DOWNWIND)	INSPECTOR:	CRL/KKS				
Rad	(1)	0-	51	12-	18	10	:30	Dust (Rig/DW)	DATE	12-15-	m			
D E P	S	AMPLING	3		SAMP	Œ	1	SAMPLE DESCRIPTION	DATE	12-13-	92			
T H	BLOWS PER 6	PENE- TRATION RANGE	RECOV- ERY RANGE	DEPTH INT (FEET)	NO.	voc	RAD	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification,	inor Components	USCS CLASS	STRATUM CLASS			
(FT)	inches 6	(FEET)	(FEET)	<u> </u>	+	 		with amount modifiers and grain-size, density, stratification, m-dk brn SILT and CLAY, -tr Sand	wetness, etc.)					
	11	0-		0-				in-dk om sier and cent, -n sand			Top soil			
-	23	2	1.6		1	4/0	bgd	mbm-black ASH FILL and CLAY and SILT-little	sand,	_	Top son _			
	17			2				abund black ash, fiberous material (0.14/0.08)	,	ML	Fill			
-	7	2-						dk gry CLAY and SILT, -tr Shale fragments,						
_	62 33	4	1.1	2-	2	4/0	bgd	Fill material includes plastic, paint chips, fiberous ma	aterial	CL	_			
	21	1		4	2	4/0	ogu	olive grn-rusty brn CLAY and SHALE Fragments	(0.14/0.08)	CL	Till			
-	21	4-		4-				olive grn-lt gry WEATHERED SHALE	(0.2.1/0.00)	UL .	Weathered			
5 _	60	5.1	1.0	5.1	3	4/0	bgd		(.18/.08)		Bedrock			
	100/0.1							split spoon refusal 5.1'						
_							_	Auger Refusal 5.5			Competent			
											Bedrock _			
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #:

B35

		OVER	BUI	RDE	1 BOR	RING	REPC	ORT	
ENGINE	ERING	-SCIENCE, II	NC. CLI	ENT:	ACOE		BOR	ING NO.:	B36
PROJECT LOCATIO		Seneca Army Ash Landfill					JOB NO EST. GR	.: .OUND ELEV.:	720447-01004
DRILLING SU	MMARY:						START	DATE:	4/27/93
DRILLING	HOLE	DEPTH	SAM	IPLER		HAMMER	FINISH	DATE:	
METHOD	DIA	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTR	ACTOR:	American Auger
HSA	4 1/4" ID		3"	Split Spoon	Hammer	140lb/	DRILLE	R:	J. Pietruch
							INSPEC	TOR:	JWC/SFF
							СНЕСК	ED BY:	
							СНЕСК	DATE:	
						<u> </u>			
MRSLC CA	MUD-RO	ND-WASH FARY SOIL-CORING DVANCER NG	HMR SHR HHR DHR WL		IC HAMMER DLE HAMMER		SS CS SI NS ST 3S	SPLIT SPOON CONTINUOUS S 5 FT INTERVAL NO SAMPLING SHELBY TUBE 3 INCH SPLIT SP	SAMPLING
MONITORING	EQUPME	NT SUMMARY							
INSTRUM	ENT	DETECTOR	RANGE (PPN	M)	BACKGROU	ND	CAL	IBRATION	
TYPE	3	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER
OVM-580B		10.0 EV	0-2,000						
Victoreen 190		Pancake XBX							
Particulate Me	eter	Miniram-PDM3							
OVM-580S		10.0 EV	0-2,000						
FID GMD	PHOTO - I FLAME - I GEIGER M	MS ONIZATION DETECT ONIZATION DETECT IUELLER DETECTOR ITION DETECTOR	OR CI	PM PM	BACKGROUND COUNTS PER MILI PARTS PER MILI RADIATION		DGRT PPB MDL	DRAEGER TUE PARTS PER BILL METHOD DETE	LION
COMMENTS:					OTHER REPOSITION OF THE PROPERTY OF THE PROPER	MENT TION DETAILS STING	Pending	lG	N/A x x x x x

PAGE 1 OF 2 SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B36

				IVC	ΞF	BI	JF	RDEN BORING REP	ORT		
EN	IGINEE			NCE, II	NC.	C	LIE	NT: ACOE	BORING #	: B36	
INSTI	RUMENT		MONITO RVAL	DRING BGE		TIM	E	COMMENTS	DRILLER:		
									INSPECTOR:	JWC/SFF	
									DATE:	3 11 0/01	
D E	S	AMPLING	G		SAM	PLE		SAMPLE DESCRIPTION	JUAIE:		
P T	BLOWS PER	PENE- TRATION	RECOV- ERY	DEPTH INT	NO.	VOC	RAD			USCS CLASS	STRATUM CLASS
H (FT)		(FEET)	RANGE (FEET)	(FEET)	<u> </u>	<u> </u>	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, Newth amount modifiers and grain-size, density, stratification			
	8	0'0"	12"	0'-12"		0		0'-4" Topsoil and turf 4"-8" dark grey fractured shale and sand	0.0 Background		_
-	5	-	12			0	-	8"-12" med gray silty clay and fractured shale	OVM		_
_		2'-0"									_
	4	-				0		24"-26" Refuse - plastic, glass			_
-	5	-	14"			0	-	26"-36" med gry silty clay w/wood frgmts @ 30-32	" 0.0		_
		4'-0"						_			_
_	3							48"-64" olive gray till (stiff)	0.0		
5 _	6	1									_
	9	6'-0"	16"			34ppm					
-	8	0 -0		-	-			72"-78" olive gray med till			
	11							78"-88" gray weathered shale	0.0		-
	14		16"	į.		24ppm					_
-	50/4"	7'-10"			<u> </u>		-	P. C. 10 0) (II			
								Auger Refusal @ 8'-6"			
-				İ		İ	_	_		:	-
10 _											
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #: B36

		OVER	BUR	DEN	BOR	ING 1	REPO	RT				
ENGINE	ERING	-SCIENCE, IN	CLIE	NT: A	ACOE		BORI	ING NO.:	B37			
PROJECT LOCATIO		Seneca Army					JOB NO. :		720447-01004			
							EST. GRO	OUND ELEV.:				
DRILLING SU	MMARY:	T					START D	OATE:	4/28/93			
DRILLING	HOLE	DEPTH	SAMPLE	R.		HAMMER	FINISH D	DATE:	4/28/93			
METHOD	DIA	INT.	SIZE	ТҮРЕ	ТУРЕ	WT/FALL	CONTRA	CTOR:	American Auger			
HSA	4 1/4" ID		3" S _I	olit Spoon	Hammer	140lb/ft	DRILLER	t:	J. Pietruoh			
	<u> </u>						INSPECT	OR:	JWC/SFF			
					· · · · · · · · · · · · · · · · · · ·		CHECKE	D BY:				
							снеск і	DATE:				
DRILLING ACR DW MRSLC CA SPC	DRIVE-A	FARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULK DOWN-HOI WIRE-LINE	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS S. 5 FT INTERVAL: NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	SAMPLING			
MONITORING	EQUPME	NT SUMMARY										
INSTRUM	ÆNT	DETECTOR	RANGE (PPM)		BACKGROU	ND	CALI	BRATION				
TYPE	3	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER			
OVM-580B		10.0 eV	0-2,000	0 ppm	0950		9:30 AM	4/28/93	Sunny, Cool			
Victoreen 190)	Pancake XBX		31 c/min	0950		Factory	7/02/92	Sunny, Cool			
Particulate Me	eter	Miniram-PDM3	0-10 UM	0.05	0950		8:15 AM	4/28/93	Sunny, Cool			
OVM-5805		10.0 EV	0-2,000				9:30 AM	4/28/93	Sunny, Cool			
PID FID GMD	PID FLAME - IONIZATION DETECTOR CPM COUNTS PER MINUTE PPB PARTS PER BILLION GMD GEIGER MUEILER DETECTOR PPM PARTS PER MILLION MDL METHOD DETECTION LIMIT											
COMMENTS	COMMENTS: OTHER REPORTS DATE/PENDING N/A											
	WELL DEVELOPMENT X SURVEYOR Pending											
				-	CORELOG				x			
				ll l	WELL INSTALLA HYDRAULIC TE				x			
				- 1	GEOPHYSICALI				x			

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B37

			(V	ΞF	₹B	BU	RDEN BORING REP	ORT		
E	GINEE	RING-				7		ENT: ACOE	BORING #:	B37	
INST	RUMENT		IONITORI RVAL	ING BGI)	TII	ME	COMMENTS:	DRILLER:	J. Pietruch	
4			_					See page 1 for instrument and background readings	INSPECTOR:	JWC/SFF	
						-			DATE:	4/28/93	
D E	S	AMPLING	G		SAMP	LE .	1	SAMPLE DESCRIPTION	271112	1/20/25	
P	BLOWS PER	PENE- TRATION	RECOV- ERY	DEPTH	NO.	voc	RAD			USCS CLASS	STRATUM CLASS
H (FT)	6	RANGE (FEET)	RANGE (FEET)	(FEET)			SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification.	mor Components wetness, etc.)		
	1					0		Topsoil, very wet 0-12"	Background		_
-	2	0-2'	18"			0	66_				_
	6					0		Lt brown, silty clay, med stiffness 12"-18"			_
-	9					0		29'-33" It brown silty clay			-
	6	2-4'	18"			0	52	29 – 33 It brown sitty clay	0		-
-	8	2-4	10			0	J2_	33'-42' It brown silt with some fractured shale	· ·		_
	11					0					_
	7	4-'						48"-60" fractured shale with gray clay in the voids.			_
5 _	19	5'6"	12"		t .		56	Bottom 3" is very competent.	0		-
	7-5/6"					-		D 10510			
-							-	Auger Regusal @ 5'6"		l i	-
											-
-							-	_			-
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #:

B37

OVERBURDEN BORING REPORT											
ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B38											
		Seneca Army						JOB NO. :			
						-	EST. GROUND ELEV.:				
DRILLING SU	MMARY:		START		4/28/93						
DRILLING	DRILLING HOLE DEPTH			LER		HAMMER	FINISH	DATE:	4/28/93		
METHOD	DIA	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	ACTOR:	American Auger		
HSA	4 1/4" ID		3"	Split Spoon	Hammer	140lb/ft	DRILLER:		J. Pietruch		
							INSPEC	ΓOR:	JWC/SFF		
							СНЕСК	ED BY:			
							СНЕСК	DATE:			
MRSLC CA	HOLLOW- DRIVE-A	TARY SOIL-CORING DVANCER	HMR HAMMER SS SHR SAFETY HAMMER CS HHR HYDRAULIC HAMMER 51 DHR DOWN-HOLE HAMMER NS WL WIRE-LINE ST 38				CS 51 NS ST	SPLIT SPOON CONTINUOUS SAMPLING 5 FT INTERVAL SAMPLING NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPOON			
MONITORING	EQUPME	NT SUMMARY									
INSTRUMENT		DETECTOR	RANGE (PPM	1)	BACKGROUND			CALIBRATION			
TYPE		TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER		
OVM-580B		10.0 eV	0-2,000					4/28/93	Sunny, Cool		
Victoreen 190		Pancake XBX						7/02/93	Sunny, Cool		
Particulate Meter		Miniram-PDM3	0-10 UM					4/28/93	Sunny, Cool		
OVM-5805		10.0 eV	0-2,000	_			-	4/28/93	Sunny, Cool		
FID GMID	PHOTO - I FLAME - I GEIGER M	MS IONIZATION DETECT IONIZATION DETECT MUELLER DETECTOR ATION DETECTOR	OR CP	M C	COUNTS PER MINUTE PP		DGRT PPB MDL	PARTS PER BILLION			
COMMENTS							DATE/PENDIN	TE/PENDING N/			
					WELL DEVELOPMENT SURVEYOR Pe		Pending	Pending			
				ll l	CORE LOG WELL INSTALLATION DETAILS HYDRAULIC TESTING						
				- 11							
					GEOPHYSICALI	OGGING			x		

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B38

OVERBURDEN BORING REPORT													
						1		ENT: ACOE	BORING #: B38				
MONITORING													
INSTRUMENT INTERVAL BGD)	TIME			DRILLER:	J. Pietruch					
						INSPECTOR:		JWC/SFF					
						DATE		4/28/93					
D SAMPLING			SAMPI		LE		SAMPLE	SAMPLE DESCRIPTION					
E P T	BLOWS	PENB- RECOV-		DEPTH NO.		VOC RAD		DESCRI TION	DESCRITION				
H (FT)	6 INCHES	RANGE RANGE (FEET) (FEET)		(FEET)		Voc	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain—size, density, stratification	inor Components, wetness, etc.)	CLASS	CLASS		
1	5	0"				0		_0-4" Topsoil and turf	Backgrou	nd	_		
_	8					0	69_		0.0		_		
l	13		22"			0	92	10"-16" organics (ash) dary gray w/refuse, fractured			_		
-	18	2.0"				0	-	4"-22" organics (ash) dark gray w/refuse, fractured shale, silty clay					
	4	2.0"				0		24"-30" (back flow from #1 sample)			_		
-	14		030"-38" (dark gray silt w/green spots near 38")					0.0		_			
	15		14"			0	52	-			_		
-	17	4.0"		 		0 67							
ء ا	4					0	60	48"-52" Back flow from previous samples			_		
5 _	8		24"			0	84	52" – 58" Gray – brown silt			_		
	12 17	6.0"	24"		0	60 62	58"-78" Med brown silt with mixed fill (gravel) 70"-72" Fractured shale						
-	13	0.0	_	ļ		0	86	72"-78" Fractured shale	 	-			
1	24	8.0"				0	82	78"-92" Gray fractured shale			_		
-	50					0 64		78 – 92 Gray fractured shale			_		
1	77				0								
-		0.0			-		_ Auger Refusal @ 8'4"			-			
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #: E

		OVER	BUR	DEN	BOR	ING I	REPO	RT	
ENGINE	ERING	-science, in	IC. CLIE	NT: A	ACOE		BOR	ING NO.:	B39
PROJECT LOCATIO		Ash Landfill	– Soil Borin gs				JOB NO.	DUND ELEV.:	720447-01004
DRILLING SU	JMMARY:	}					START D		12-15-92
DRILLING	HOLE	DBPTH	SAMPLI	ER		HAMMER	FINISH I	DATE:	12-15-92
METHOD	DIA.	INT.	SIZB	ТҮРЕ	TYPE	WT/FALL	CONTRA	CTOR:	Amer. Auger
HSA	8 ^{rt}	0-6.5	3"x2'	SS	DHR	140#/30"	DRILLER	! :	Period
							INSPECT	OR:	CRL/KKS/PFM
							СНЕСКЕ	D BY:	CRL
							снеск і	DATE:	1-29-93
					<u>-</u>			·	
DRILLING ACI HSA DW MRSLC CA SPC	HOLLOW- DRIVE-AN	CARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULIO DOWN-HO WIRE-LINE	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVALS NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	AMPLING
MONITORING	EQUPME	NT SUMMARY							
INSTRU	MENT	DETECTOR	RANGE		BACKGROUN	ND	CALI	BRATION	
TYP	E	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER
Thermo 580(1	ig)OVM	10eV	0-4.0	4	11:35	12-15-92		12-15-92	Sunny
Thermo 580(1	DW)OVM	10eV	0-4.0	0	11:35	12-15-92		12-15-92	Sunny
Aerosol (Rig)		PDM-3	0-4.0	0.18	11:35	12-15-92		12-15-92	Sunny
Aerosol (DW)	PDM-3	0-4.0	0.08	11:35	12-15-92		12-15-92	Sunny
Radiation		GMD/Pancake	0-4.0	4-15Ur/M	11:35	12-15-92		12-15-92	Sunny
(VICTOREE	N 190)			<u> </u>					<u></u>
MONITORING PID FID GMD SCT	PHOTO - I FLAME - I GEIGER M	MS ONIZATION DETECTO ONIZATION DETECTO IUELLER DETECTOR TION DETECTOR	OR CPM	I C	ACKGROUND COUNTS PER MI PARTS PER MILL RADIATION		DGRT PPB MDL	DRAEGER TUBE PARTS PER BILLI METHOD DETEC	ON
COMMENTS Rig/DW values for		olatile org.			OTHER REPO WELL DEVELOP SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TES GEOPHYSICALL	MENT TION DETAILS STING	DATE/PENDING Pending	3	N/A x x x x x

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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B39

	OVERBURDEN BORING REPORT GINEERING-SCIENCE, INC. CLIENT: ACOE BORING #: B39											
EN	GINEE				IC.		CLI	BNT: ACOE	BORING #:	B39		
INSTR PID	UMENT	INTER		NG BGD 4/0)	TII	ME 15	COMMENTS	DRILLER:	Penrod		
Aero	sol	4-	6.5	0.14/0.	.06	1:	15		INSPECTOR:	CRL/KKS/P	FM	
Rad		4-		6–15ul			15	Dust (Rig/DW)	DATE:	12-15-9	92	
D E		AMPLING			AMP	LE	T	SAMPLE DESCRIPTION		1,000		
P T H (FT)	BLOWS PER 6 INCHES	PENE - TRATION RANGE (FEET)	RECOV- ERY RANGE (FEET)	DEPTH INT (FBET)	NO.	voc	RAD	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification.	inor Components, wetness, etc.)	USCS CLASS	STRATUM CLASS	
	16	0-	2	0-	1	4/0	had	med brn GRAVEL and SHALE, -trace Clay and Si		GP	Fill _	
-	18	2	2	2	1	4/0	bgd	blk SHALE, with rust on join faces, wet	0.18/0.06	-		
_	20							loose to compact blk-dk gry SHALE fill		GP	Fili _	
	25	2-									_	
-	43	4	1.4	3-	2	4/0	bgd	dk olive green CLAY and SILT, tr shale frog	.16/.08	CL	Till	
	25 70	4		4				uk onve green CLA1 and SiL1, it shale nog	.10/.06	CL	'''' -	
_	30	4-		4-				med olive green CLAY, tr. shale, spotty rusty brn		CL	Till _	
5 _	27		1.3		3	4/0	bgd				_	
	41	6		6					44406			
-	100	6.65	.4	6.65	4	4/0	bgd	Weathered limey SHALE	.14/.06		Weathered	
	100	0.05		0.03	-	7,0	Ugu		.14/.00		Shale	
_							-	Auger Refusal 6.9'			Competent	
_							_	SHALE with Limestone interbeds			Bedrock _	
								_			_	
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B40													
ENGINE	ERING	-science, in	CLIE	NT: A	COE		BOR	ING NO.:	B40					
PROJECT	`:	Seneca Army	Depot				_							
LOCATIO	N:	Ash Landfill					JOB NO.	:	720447-01005					
							EST. GRO	OUND ELEV.:						
DRILLING ST	JMMARY:						START I	DATE:	12/8/92					
DRILLING	HOLE	DEPTH	SAMPLE	R		HAMMER	FINISH I	DATE:	12/8/92					
METHOD	DIA	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	CTOR:	American Auger					
HSA	4 1/4" ID		3" Sp	olit Spoon	Hammer	140lb/30"	DRILLER	₹:	J. Pietruch					
					DHR		INSPECT	OR:	CRL/SJF					
							CHECKE	D BY:	CRL					
							CHECK 1	DATE:	1-29-93					
					•									
DW MRSLC CA SPC	DRIVE-AN	FARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULIO DOWN-HOI WIRE-LINE	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVAL: NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	SAMPLING					
MONITORING	G EQUPME	NT SUMMARY												
INSTRU	MENT	DETECTOR	RANGE (PPM)		BACKGROUN	ID .	CALI	BRATION						
TYP	E	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER					
GMD		Pancake	At Rig	7ur/h	12:45	12-8-92	9:00 AM	12-8-92	PT. Cloudy 30oF					
Particulate		Miniram	At Rig	0.15	12:45	12-8-92	9:00 AM	12-8-92						
PID		Thermo 5805	AT Rig	0	12:45	12-8-92	9:00 AM	12-8-92						
Particulate		Miniram	Downwind	0.12	12:45	12-8-92	9:00 AM	12-8-92						
PID		Thermo 580B	Downwind	0	12:45	12-8-92	9:00 AM	12-8-92						
MONITORING PID FID GMD SCT	PHOTO - I FLAME - I GEIGER M	MS CONIZATION DETECT CONIZATION DETECT CUELLER DETECTOR ATION DETECTOR	OR CPM	.C P	ACKGROUND COUNTS PER MIL ARTS PER MILL ADIATION		DGRT PPB MDL	DRAEGER TUB PARTS PER BILL METHOD DETE	ION					
COMMENTS	<u>.</u>				OTHER REPO		DATE/PENDIN	G	N/A					
				ll l	WELL DEVELOP SURVEYOR	MENT	Pending		<u>x</u>					
				li li	CORELOG		renounk		x					
				- 1	WELL INSTALLA				x					
					HYDRAULIC TE: GEOPHYSICAL L				x					
		<u>-</u>				OFFING OF ARR			7.40					

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B40

			()VI	ΞF	RB	U	RDEN BORING REPORT	PAGE 2	OF Z
EN	GINEE	RING-	-SCIEN	ICE, IN	IC.		CLII	ENT: ACOE BORING #:	B40	
INSTR	UMENT	INTER	ONITORI RVAL	ING BGD)	TI	ME	COMMENTS: DRILLER:	J. Pietruch	
								INSPECTOR:	CRL/SJF	
-						-		DATE:	12/8/92	
D E	S	AMPLING	3	5	SAMP	Œ	_	SAMPLE DESCRIPTION		
P T H	BLOWS PER 6	PENE - TRATION RANGE	RECOV- ERY RANGE	DEPTH INT (FEET)	NO.	voc	RAD	(As per Burmeister: color, grain size, MAJOR COMPONENT, Minor Components	USCS	STRATUM CLASS
(FT)	INCHES 10	(FEET)	(FEET)	JL	<u> </u>	ļ	13	with amount modifiers and grain—size, density, stratification, wetness, etc.) Dark brown CLAY, —trace gravel	CL	
	24	0/2	14"	0/2	1	0		Med. brown silty CLAY Downwind		
-	36						bkgd	.06 part	ML	CLAY]
	50						12	1ppm VOC		
	26						20.1	Downwind		_
1 _	35	2/3.4	14"	2/3.4	2	0	bkgc	AA .04part 1ppm VOC		
ı	50/5"						12	Olive green GRAVEL & CLAY		
_					<u> </u>	_		Downwind		
	40	4/6	24"	4/6	3	0	1	AA .08 Dust		_
5 _	64						bkgc	1 ppm VOC	GC	TILL _
	76						12/5			
-	63					-		Water table at 6.5 ft.		-
	17	6/8	20"	6/8	4	0	22.1	Downwind		-
-	7						_	AA .08 Dust		-
	4						9.8	AA, and some sand Downwind		-
-	12	8/10	22"	8/10		0	15 0	AA, and some sand Downwind (sand is weathered bedrock) .06 Dust		-
1	2	0/10	22	0/10		U	15.0	1ppm VOC		
1 -	4				5		-	(Weathered Bedrock)	Shale	WR.
10	53							Friable Shale with Clay	Dilaio	Shale
10 -		10/10.5	6"		<u> </u>	0	11	Auger Refusal at 10.5 ft.		Competer
		20,200								Shale
-							-			
										7
_							-			
-							-			
							_			
										_
15 _							_			
1 _							_			
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B41													
ENGINE	ERING	-SCIENCE, II	NC. CLIE	NT: A	COE		BOR	NG NO.:	B41					
PROJECT LOCATIO		Seneca Arm	y Depot ustible Fill Area				JOB NO.		720447-01005					
							EST. GRO	OUND ELEV.:						
DRILLING SU	MMARY:						START D	DATE:	12/8/92					
DRILLING	HOLE	DEPTH	SAMPLE	R		HAMMER	FINISH I	DATE:	12/9/92					
METHOD	DIA	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	CTOR:	American Auger					
HSA	4 1/4" ID		3" Sp	lit Spoon	DHR	1401b/30"	DRILLER	! :	J. Pietruch					
							INSPECT	OR:	CRL/SJF					
							CHECKE	D BY:	CRL					
							СНЕСК 1	DATE:	1-29-93					
DRILLING ACE HSA DW MRSLC CA SPC MONITORING INSTRUM TYPP Rig Miniram DW Miniram Rig Victoreen Rig Thermo 5	HOLLOW-DRIVE-AN MUD-ROTE CASING AI SPIN CASIN CASIN EQUPMENT	ARY SOIL-CORING	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULIC DOWN-HOI WIRE-LINE READING 0.08 0.08 6uR/h 0 ppm	C HAMMER LE HAMMER	DATE 12-9-92 12-9-92 12-9-92 12-9-92	SS CS 51 NS ST 3S CALI	SPLIT SPOON CONTINUOUS S. 5 FT INTERVAL: NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO BRATION DATE 12-8-92 12-8-92 Factory 12-8-92	SAMPLING					
Tog Thermo 5	50D	110		Оррш	3.40	12-3-32		12-0-32	GIOW III AIM					
MONITORING PID FID GMD SCT COMMENTS: No downwind mo	PHOTO - IOF FLAME - IOF GEIGER M SCINTILLA	ONIZATION DETECTIONIZATION DETECTOR THOM DETECTOR THE STATE OF THE STA	OR CPM	P. R	ACKGROUND OUNTS PER MI ARTS PER MILL ADIATION OTHER REPO WELL DEVELOP SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TE	ORTS MENT TION DETAILS	DGRT PPB MDL DATE/PENDING	DRAEGER TUB PARTS PER BILL METHOD DETE	LION					

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B41

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING #: B41											
EN	GINEE	RING-	-SCIEN	NCE, IN	IC.		CLII	ENT: ACOE	BORING #:	B41		
INCTO	UMENT	M	ONITOR	ING BGD	`	TI	VIE:	COMMENTS:	DRILLER:	J. Pietruch		
INSTR	OMENT	INTE		BOL		711	VIL	Measurements: Rig/Downwind, or Reading/Background				
									INSPECTOR:	CRL/SJF		
D	I 8	AMPLING	3	1 9	SAMP	T.E.		SAMPLE	DATE:	12/8 & 9/	92	
E P	BLOWS	PENE-	RECOV-	DEPTH		Ī	RAD	DESCRIPTION	Dust	USCS	STRATUM	
T H	PER 6	TRATION RANGE	ERY RANGE	INT (FEET)	NO.	VOC	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification	linor Components	CLASS	CLASS	
(FT)	inches 40	(FEET)	(FEET)	<u> </u>			15.7	with amount modifiers and grain-size, density, stratification Dark brn-blk CLAY & SHALE, -trace glass	, wetness, etc.)			
	36	0/2	1.3	0/2	1	1.9/	13.7	Dark offi-bik CLAT & STALE, -trace glass			FILL -	
-	33	0,2	1.5	0,2	1	1.0	7 -	Olive brn Clay	.08			
	40											
-	17					1.9/	14	AA with rusty modules	.08	CL		
	12	2/4	1.2	2/4	2	1.0	/_					
12/8	_14						9					
-	16				_	1.04			00104			
12/9 5	18 26	4/6	2.0		3	1.0/	NR	Olive brn to rusty brn CLAY, trace shale	.08/.06			
	36					1.0		_			_	
	53			5.5/	3	-		Olive green CLAY & SHALE		GC	TILL	
-	29			6.5			20.7					
	50	6/8	2.0	6.5/8.0	4	0/0	/_	Olive green weathered SHALE,	.06/.06		Bedrock	
	78						10	some iron oxide coating			(WR)	
4	86											
								(Augered only – no samples)			_	
, –							-			BRK		
10								<u></u>			_	
10 –												
								<u> </u>			_	
							-					
							_					
								_			_	
-			ļ					Water table not encountered	, .			
								Auger Refusal at 13.0 ft.			BRK	
_							-				(fresh)	
15								_			-	
15 -								-			-	
							_					
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B42													
ENGINE	ERING	-SCIENCE, I	NC. CLIE	NT:	ACOE		BOR	ING NO.:	B42					
PROJECT LOCATIO	-	Scheca Arm Non-Comb	y Depot ustible Fill Area				JOB NO.	DUND ELEV.:	720447-01005					
DRILLING SI	JMMARY:					 .	START D		12/9/92					
DRILLING	HOLE	DEPTH	SAMPLE	3R	·-	HAMMER	FINISH I		12/9/92					
METHOD	DIA.	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	CTOR:	American Auger					
HSA	4 1/4" ID		3" S ₁	plit Spoon	DHR	140lb/30"	DRILLER	k:	J. Pietruch					
							INSPECT	OR:	CRL/SJF					
							СНЕСКЕ	D BY:	CRL					
					-		СНЕСК І	DATE:	1-29-93					
	-													
DRILLING AC HSA DW MRSLC CA SPC	HOLLOW- DRIVE-A	FARY SOIL-CORING DVANCER	HMR SHR G HHR DHR WL		C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS S. 5 FT INTERVAL: NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	SAMPLING					
MONITORING	EQUPME	NT SUMMARY	T	1										
INSTRU	MENT	DETECTOR	RANGE (PPM)		BACKGROUN	ND	CALI	_						
TYP	E	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER					
Rig Miniram		Dust		0.10	10:30	12-9-92	ļ	12-8-92	25 degrees F					
DW Miniram		Dust		0.06	10:30	12-9-92		12-8-92	Pt. Cloudy					
Rig Victorees		Pancake PID		13uR/h	10:30	12-9-92		12-8-92	Lt. Snow					
Rig Thermo :	DOUD	FID		2 ppm	10.30	12-9-92		12-8-92						
MONITORING PID FID GMD SCT	PHOTO - I FLAME - I GEIGER M	MS ONIZATION DETECT ONIZATION DETECT IUELLER DETECTOR ITION DETECTOR	TOR CPM	C P	BACKGROUND COUNTS PER MI PARTS PER MILL RADIATION		DGRT PPB MDL	DRAEGER TUB PARTS PER BILL METHOD DETE	ION					
COMMENTS Dust monitoring Water Table Not	only at down				OTHER REPO WELL DEVELOP SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TE GEOPHYSICALL	MENT TION DETAILS STING	DATE/PENDING Pending	3	N/A x x x x x					

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B42

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING #: B42												
EN	GINEE	RING-	-SCIEN	ICE, II	NC.		CLII	ENT: ACOE	BORING #	: B42			
INICIPO	UMENT	M	ONITOR	ING BGE		TI	ME	COMMENTS:	DRILLER:	J. Pietruch			
INSTR	UMENI	INTER	CVAL	BGL		111	VIE.	Measurements: Rig/Downwind, or Reading/Background					
-									INSPECTOR:	CRL/SJF			
D	I S	AMPLING	3		SAMP	LE		SAMPLE	DATE:	12/9/92			
E P	BLOWS	PENE-	RECOV-	DEPTH			RAD	DESCRIPTION	Dust	USCS	STRATUM		
H	PER 6	TRATION RANGE	ERY RANGE	INT (FEET)	NO.	VOC	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification.	inor Components	CLASS	CLASS		
(FT)	25	(FEET)	(FEET)	<u> </u>	 	 	16.7	Med brn CLAY, -trace shale	wettless, etc.)				
	35	0/2	1.0	0/2	1	0/0	/	Dk brn - blk SHALE & CLAY,	.08/.08	7			
-	31						13.5	- trace brick, glass, plastic		CL	FILL _		
-	14				_	_	-				_		
	5			011		0.00		Dk brn-blk SHALE & CLAY		GC	_		
-	1	2/4	0.3	2/4	2	0/0	12	(Little sample recovered)					
ĺ	1						12			4.3			
-	3	4/6	1.3	4/6	3	0/0	16.8	Olive Green CLAY, some shale, trace rusty brown st	ain	CL	TILL		
5 _	6						1				_		
	_10						12.5			6.1			
-	14				-	-	15.0	Olim and the set Citat E	M/06		Dadasalı		
	62 68	7.2	0.7	6/7.2	1	0/0	15.6	Olive green weathered SHALE 35 refusal on gate cobble & silty shale	.02/.06		Bedrock _		
-	100/0.2	1.2	0.7	0/1.2	-	1 '	11.6						
_											_		
-	100	8/8.5	0.2		NS			Fragments of silty Ls & Shale		BRK	(WR)		
_							_			BRK			
10											_		
10 _								Water table not encountered					
						<u> </u>		Water and his change and his					
-								_					
								_					
										İ	_		
-								Auger Refusal at 10.5			Comp		
								Auget Refusal at 10.5					
-								-			_		
15													
								<u>.</u>			_		
							-	 -			-		
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B43													
ENGINE	ERING	-SCIENCE, IN	CLIE	NT: A	COE		BORI	NG NO.:	B43					
PROJECT	:	Seneca Army	Depot				_							
LOCATIO	N :	Non-Combu	stible Fill Area				JOB NO. :		720447-01005					
							EST. GRO	OUND ELEV.:						
DRILLING SU	MMARY:						START D	ATE:	12/9/92					
DRILLING	HOLE	DEPTH	SAMPLE	BR		HAMMER	FINISH I	DATE:	12/9/92					
METHOD	DIA.	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	CTOR:	American Auger					
HSA	4 1/4" ID		3" Si	plit Spoon	DHR	140lb/30"	DRILLER	::	J. Pietruch					
							INSPECT	OR:	CRL/SJF					
							CHECKE	D BY:	CRL					
							CHECK I		1-29-93					
									i					
DRILLING ACE		-STEM AUGERS	HMR	HAMMER			SS	SPLIT SPOON						
DW	DRIVE-AN		SHR	SAFETY HA	MMER		CS	CONTINUOUS SA	AMPLING					
MRSLC	MUD-RO	TARY SOIL-CORING	HHR	HYDRAULIC	HAMMER		51	5 FT INTERVAL S	SAMPLING					
CA	CASING A	DVANCER	DHR	DOWN-HOL	N-HOLE HAMMER NS			NO SAMPLING						
SPC	SPIN CASI	NG	WL	WIRE-LINE			ST	SHELBY TUBE						
							3S	3 INCH SPLIT SPO	DON					
MONITORING	EQUPME	NT SUMMARY												
INSTRUM	MENT	DETECTOR	RANGE (PPM)		BACKGROUN	lD.	CALI	BRATION						
TYP	E	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER					
Rig Miniram		Dust		0.8MG/M3	1410	12-9-92		12-8-92	30 degrees F					
DW Miniram		Dust		.08 MG/M3	1410	12-9-92		12-8-92	Pt. Cloudy					
Rig Victoreen	190	Pancake		7-15uR/h	1410	12-9-92		12-8-92						
Rig Thermo 5	80B	PID		0 ppm	1410	12-9-92		12-8-92						
MONITORING	ACRONY!	MS	<u> </u>		<u> </u>	·								
PID		ONIZATION DETECT	OR BGI) В.	ACKGROUND		DGRT	DRAEGER TUB	ES					
FID	FLAME - I	ONIZATION DETECT	OR CPM	1 0	OUNTS PER MI	NUTE	PPB	PARTS PER BILL	ION					
GMID	GEIGER M	IUELLER DETECTOR	PPM.	I P.	ARTS PER MILI	JON	MDL	METHOD DETE	CTION LIMIT					
SCT	SCINTILLA	ATION DETECTOR	RAI) R	ADIATION									
COMMENTS	:				OTHER REP	ORTS	DATE/PENDIN	G	N/A					
				- 1	WELL DEVELOP	MENT	n - 1'		x					
Dust monitoring	only at down	wind location		1	SURVEYOR CORELOG		Pending							
				li li	CORE LOG WELL INSTALLATION DETAILS				x					
				ll l	HYDRAULIC TESTING				x					
					GEOPHYSICALI	OGGING			x					

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B43

	OVERBURDEN BORING REPORT NGINEERING-SCIENCE, INC. CLIENT: ACOE BORING #: B43												
EN	GINEE	RING-S	SCIEN	ICE, IN	c.		CLII	ENT: ACOE	BORING #	: B43			
INICITY	RUMENT	MO	NITOR	NG BGD		TIP	ME	COMMENTS	DRILLER:	J. Pietruch			
INSTE	COMENT	INTER	AL	ВОГ		111	AIE	Measurements: Rig/Downwind, or Reading/Background					
1									INSPECTOR:	CRL/SJF			
		A MILINIC		CA.	MP			SAMPLE	DATE:	12/9/92			
D E	BLOWS	AMPLING PENE-	RECOV-	DEPTH	IVIP		RAD	DESCRIPTION	Dust	USCS	STRATUM		
P T H	PER 6	TRATION RANGE	ERY RANGE	INT (FEET)	NO.	voc	SCRN	(As per Burmeister: color grain size, MAJOR COMPONENT, M	linor Components	CLASS	CLASS		
(FT)	INCHES	(FEET)	(FEET)	(1221)	+		<u> </u>	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification	, wetness, etc.)				
	37	0.0	1.7	0.0	1	000	١.	Med brn CLAY,	.1/.1	 			
-	46	0/2	1.7	0/2	1	0/0	122	Med brn-olive green CLAY, SHALE and Fill Debris, trace glass & brick	.1/.1	CL/	-		
	20						12.2	and I'm Deoris, trace glass & oriek		GC	_		
-	7						21.5	Rusty brn-olive green CLAY, some shale frags.,			_		
	6	2/4	1.8	2/4	2	0/0	/	little glass, plastic, paper, and wood	.08/.08		FILL -		
-	4	_,.		_, .		-, -	7.13						
l .	8]		_									
-	14						16.3	AA		4.6	Water Tbl		
5 _	6	4/6	1.0	4/6	3	0/0	/	Olive green CLAY, trace wood (saturated)	.08/.1	CL			
	8					ĺ	13						
-	17				\vdash					_			
	20						١.	Olive green CLAY, -trace rock frags. (wet)	.16/.10	CL	Fill/Till		
-	19	6/8	0.1		İ	0/0							
	16						7.5				_		
-	14						17	Olive green-brn CLAY and SHREDDED WOOD	16/08	CL			
	—	8/10	0.8	8/10	4	9.0/0	1	Olive green our CEAT and STACEDED WOOD	.10,.00		_		
-	23	5,10	0.0	0,10	.		13						
10	20										_		
_	45	10/10.75	.6	10/10.75	5	%	NR	Olive green CLAY and blocky grey LIMESTONE		BRK	Bedrock		
_	100/.25						_	Auger Refusal at 11.5 ft.			_		
											_		
_							_				_		
											_		
-					-								
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

	OVERBURDEN BORING REPORT ENGINEERING-SCIENCE, INC. CLIENT: ACOE BORING NO.: B44A											
ENGINEERIN	G-SCIENCE, IN	CLIE	NT:	ACOE		BORI	NG NO.:	B44A				
PROJECT:	Seneca Army	Depot										
LOCATION:	Non-Combi	utible Fill Area				JOB NO. :		720447-01005				
						EST. GRO	OUND ELEV.:					
DRILLING SUMMARY	:					START D	ATE:	12/10/92				
DRILLING HOLE	DEPTH	SAMPLE	R		HAMMER	FINISH D	ATE:	12/10/92				
METHOD DIA.	INT.	SIZE	TYPE	ТҮРЕ	WT/FALL	CONTRA	CTOR:	American Auger				
HSA 4 1/4" ID		3" Sp	olit Spoon	DHR	140lb/30"	DRILLER	:	J. Pietruch				
						INSPECT	OR:	CRL/SJF				
						CHECKE	D BY:	CRL				
						СНЕСК І	DATE:	1-29-93				
DW DRIVE-	V-STEM AUGERS AND-WASH DTARY SOIL-CORING ADVANCER SING	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULK DOWN-HO WIRE-LINE	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVAL S NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	AMPLING				
MONITORING EQUPM	ENT SUMMARY											
INSTRUMENT	DETECTOR	RANGE (PPM)		BACKGROUN	D	CALI	BRATION					
TYPE	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER				
GMD	Victor. 190 pncake	0-10	7.0uR/hr	8:45	12-8-92	8:00	12-8-92	lt. snow				
PID (rig)	Therm 580 10 MeU	0-10	4	9:00	12-8-92	8:00	12-8-92	lt. anow				
PID (downwind)	Therm 580 10 MeU	0-10	0	9:00	12-8-92	8:00	12-8-92	lt. snow				
Particulate (rig)	Miniram	0-10	0.04	9:00	12-8-92	8:00	12-8-92	lt. mow				
Particulate (downwind	Miniram	0-10	0.06	9:00	12-8-92	8:00	12-8-92	lt. mow				
			<u> </u>				<u> </u>					
FID FLAME - GMD GEIGER	YMS IONIZATION DETECT IONIZATION DETECT MUELLER DETECTOR ATION DETECTOR	OR CPM	.C P	ACKGROUND COUNTS PER MIL ARTS PER MILL ADIATION		DGRT PPB MDL	DRAEGER TUBE PARTS PER BILLI METHOD DETEC	ON				
COMMENTS: Weather may affect monitor	ng		1	OTHER REPO WELL DEVELOPI SURVEYOR CORE LOG WELL INSTALLA' HYDRAULIC TES GEOPHYSICAL L	MENT TION DETAILS STING	DATE/PENDING Pending		N/A x x x x x				

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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B44A

			C	VE	F	B	U	RDEN BORING REP	PORT		
ENGI	NEERI	NG-S	CIEN	CE, INC	c.		CLII	ENT: ACOE	BORING #	: B44A	
INSTRUM	(ENT	MO	NITORI	NG BGD		TIN	/C	COMMENTS:	DRILLER:	7 Disassa	
Therm5	80(ES)	0-	10	4 (Rig		9:0	00	Bdg for Downwind 0.0%		J. Pietruch	
Victor.1	190 80(HZ)	0-		12-15 0(DW		9:0 9:0			INSPECTOR:	CRL/SJF	
Particul	ate	0-	10	0.04(Ri		9:0		SAMPLE	DATE:	12/10/92	
D E P		T			IVIP		RAD		Dust	USCS	0770 A 7713 f
TH	BLOWS PER 6	TRATION		DEPTH	NO.	voc	SCRN	(As per Burmairter, color amin size MAIOR COMPONENT M	linor Components	CLASS	STRATUM CLASS
(FT)	INCHES		RANGE (FEET)	(FEET)	<u> </u>	<u> </u>	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification		<u> </u>	
	9							Med. brn CLAY and SILT, some shale fragments	Dust 0.4/0.6	CL	FILL _
-	45	0/2	1.6	0/2	1	4/0	15_	_			-
	20	-						-			-
-	7				_			 			-
	11	2/4	1.8	2/4	2	4/0		Meddk olive green CLAY and SHALE, tr rusty by	rown	CL	FILL
-	15	_, .	2.0	_, .	_	,,-	-	,			
_	33										
	20										
5 _	24	4/6	1.9	_	-	4/0					_
	27	_									
-	32				\vdash			Olive grn-rusty brn CLAY and SILT, some constru	ction	- CT	
	18 7	6/8	<0.1	_		4/0		rubble (wood, plastic)		CL	-
-	4	0/0	V0.1	_		4,0	-	No recovery 6–8'			-
	7	1						110 1000 101 10			-
_	6			8-				Dk olive green CLAY and SILT, some wood fragme	ents		
•	1	8/10	0.2	8.2	3	8/0	_	& plastic, fleshy pink coatings on material penet	rating		7
1	1							the water table			_
10 _	2				_						
								* (Pink questionable explosive material)			
-							-	Light standard due to margible comission metarials			_
								Hole stopped due to possible explosive materials Sample 3 will be analyzed			-
-		-					-				_
		1						-			-
-					Γ						
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15 _											_
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #: B44A

		OVE	RBURI	DEN	BOR	ING R	REPO	RT	
ENG	INEER	ING-SCIENCE,	INC. CLII	ENT: S	eneca Army	y Depot	BOR	ING NO.:	B44B
PROJEC		Ash Landfill SEAD - Roi	– Non Combustable Fi	li Arca			JOB NO.	: OUND ELEV.:	720447 – 01005
DRILLING	SUMMAR	Y:					START		12-10-92
DRILLING	HOLE	DEPTH	SAMPLER			HAMMER	FINISH	DATE:	12-10-92
METHOD	DIA	INT.	SIZE	түре	ТҮРЕ	WT/FALL	CONTRA	CTOR:	Amer Auger
HSA	4 1/4 8"	0-15'	3"	SS	DHR	140#/30"	DRILLE	₹:	J. Pietruch
							INSPECT	OR:	CRL/SJF
							СНЕСКЕ	D BY:	CRL
							СНЕСК	DATE:	1-29-93
DW MRSLC CA	HOLLOW-	STEM AUGERS ND-WASH FARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULIO DOWN+HOI WIRE-LINE	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVALS NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	SAMPLING
MONITORI	NG EQUP	MENT SUMMARY							
INSTRU	JMENT	DETECTOR	RANGE		BACKGROUN	ND .	CAL	IBRATION	
TY	PE	TYPE/ENERGY	(PPM)	READING	TIME	DATE	TIME	DATE	WEATHER
GMD		Victoreen 190 Pancake	u Rem/hr	12-15	12:15	'12-10-92	Factory		Snow and Wind
PID(2)		Thermo 580 10.0MCV	0.1-500 ppm	0.0/4	12:15	'12-10-92	8:00 am	12-10-92	Snow and Wind
Particulate	(2)		mg/m3	0.06/0.04	12:15	12-10-92	8:15 am	12-10-92	Snow and Wind
PID FID GMD SCT	FLAME - I GEIGER M SCINTILLA	ONIZATION DETECTOR ONIZATION DETECTOR IUELLER DETECTOR TION DETECTOR	BGD CPM PPM RAD	P R	ACKGROUND COUNTS PER MILL ARTS PER MILL ADIATION	ORTS	DGRT PPB MDL DATE/PENDIN	DRAEGER TUB PARTS PER BILL METHOD DETE	CTION LIMIT
Weather may This hole was		oring west from B44A due to possit	ele combustable	ll l	WELL DEVELOP! SURVEYOR	MENI	Pending		X
material in B				ll l	CORE LOG	TION DETAILS			X
				ll l	WELL INSTALLA HYDRAULIC TES			-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	X
					GEOPHYSICAL L	OGGING			X

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B44B

				VI	EF	RE	U	RDEN BORING REPO	ORT		
ENC	INEE	RING-	-SCIE	NCE,	INC		CLI	ENT: Seneca Army Depot	BORING #:	B4	4B
			ONITOR			7		COMMENTS	D.U.I.ED.	7 D:	
INSTR	UMENT	INTE	RVAL	BGE)	TII	ME	Very windy Monitoring data on page 1	RILLER:	J. Pietrich	
								Downwind monitoring terminated due to weather IN	SPECTOR:	CRL/SJF	
									ATE:	12-10-9	22
D E P		AMPLING			SAMP	LE		SAMPLE DESCRIPTION	Dust	USCS	OTT 4 TS 13.4
T	BLOWS PER	PENE-	RECOV-	DEPTH	NO.	voc	RAD	(As not Purmeistan color grain size MAIOR COMPONENT Minor		CLASS	STRATUM CLASS
H (FT)	6 INCHES	(FEET)	(FEET)	(FEET)		<u> </u>	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, Minor with amount modifiers and grain-size, density, stratification, we	etness, etc.)		
	12	0-		0-		0		m-brn CLAY, some SILT, little shale frag.			-
-	10	1	1.2		1	0	bgd_		0.06/0.04	CI	_
2'0"	10 20	2		2		0		-	0.00/0.04	CL	Fill –
20-	7	2-		2-		0		AA			-
	12		1.9		2	-	bgd_				_
-	26		1.5			0		Olive grn, CLAY and SHALE, tr. rusty bm SILT as dis	stinct spots	CL/	
4'0"	33	4'0"		4		0	_		0.00/0.08	GC	
								Augered - See B44A			_
l _							_	25'			Fill _
											_
6'0"_		Ì					-	_			-
		ļ						_			-
-		1					-	-			-
8'0"											-
-		8-		8-9		*		olive grn, CLAY and SHALE, -tr rusty bm silt	0.06/0.00	CL/GC	
		i	1.9		3	0	NR	as blebs			_
				9.8-			-	Asphalt or cinder shale chips, locally glassy			
10'0"		10		10	<u> </u>			olive grn CLAY, saturated		CL	
	-				NS			Augered			Fill _
							-	_Wood in subsequent split spoon			
								_			_
12'0"	25			10/	-			Olive group weekler shale (dm)			Weathered
	25 62		0.6	12/ 13.5	4	٨	bgd_	Olive green, weather shale (dry)	0.06/0.00	Rock	BRK
-	100		0.0	13.3	7		Ugu_	_	0.00/0.00	ROOK	DICK _
14'0"	100							easy auger penetration			BRK
							_				_
								_			
								* Odor present not detected with PID			Competent
16'0"							_	_			BRK _
								_			_
							_	_			_
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+							-	_			_
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #:

		OVE	RBUI	RDE	N BOR	ING F	REPC	RT	
ENG	INEER	ING-SCIENCE,	INC. C	LIENT:	Seneca Arm	y Depot	BOI	RING NO.:	B45
PROJE(Seneca Arm Romulus, N	y Depot (Ash Land Y	(611)			_ JOB NO	D.: ROUND ELEV.:	720447-01005
DRILLING	SUMMAR	.Y:						DATE:	4-28-93
DRILLING	HOLE	DEPTH	SAM	PLER		HAMMER	FINISH	DATE:	4-28-93
METHOD	DIA.	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTE	LACTOR:	American Auger
HSA	4 1/4" ID		3"	Split Spoon	Hammer	140 lb/ft	DRILL	ER:	J.Pietruch
							INSPEC	CTOR:	JWC/SFF
							CHEC	KED BY:	
							CHEC	DATE:	
DRILLING A HSA DW MRSLC CA SPC	HOLLOW-	-STEM AUGERS ND-WASH TARY SOIL-CORING DVANCER	HMI SHR HHF DHF WL	SAFETY :	HAMMER LIC HAMMER HOLE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS S 5 FT INTERVAL NO SAMPLING SHELBY TUBE 3 INCH SPLIT SP	SAMPLING
MONITORI	ING EQUP	MENT SUMMARY						· · · · · · · · · · · · · · · · · · ·	
INSTRU	JMENT	DETECTOR	RANGE		BACKGROU	ND	CA	LIBRATION	
TY	PE	TYPE/ENERGY	(PPM)	READIN	G TIME	DATE	TIME	DATE	WEATHER
OVM-580	0B	10 eV	0-2,000			4/28/93			Sunny,Cool
Victoreen	190	Pancake XBX				7/02/92			
Particulate	Meter	Miniram-PDM3	0-10UM			4/28/93			
OVM-580	05	10 eV	0-2,000	-		4/28/93			
FID GMD	PHOTO - I FLAME - I GEIGER M SCINTILLA	NYMS ONIZATION DETECTOR ONIZATION DETECTOR IUELLER DETECTOR ITION DETECTOR	I	BGD CPM PPM RAD	BACKGROUND COUNTS PER MILE PARTS PER MILE RADIATION OTHER REPO WELL DEVELOP SURVEYOR CORE LOG	ORTS	DGRT PPB MDL DATE/PENDI Pending	DRAEGER TUB PARTS PER BILI METHOD DETE	LION
					CORE LOG WELL INSTALLA	TION DETAILS			X
					HYDRAULIC TE				X
		· · · · · · · · · · · · · · · · · · ·			16				

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING NO.: B45

			(VI	ΕF	R	BU	RDEN BORING REP	PORT		
ENC	SINEE	RING-	-SCIE	NCE,	INC		CLI	ENT: Seneca Army Depot	BORING #	: B4	5
INSTR	UMENT		IONITORI RVAL	ING BGE)	TI	ME_	COMMENTS: Background Rad = 29 counts/min Wet ground conditions	DRILLER:	J. Pietrich -	Amer Auger
								wet ground conditions	INSPECTOR:	SJF/JC	
									DATE:	4-28-9	3
D E	S	AMPLING	T-		SAMP	LE	T	SAMPLE DESCRIPTION			
P T	BLOWS PER	PENE- TRATION	RECOV- ERY	DEPTH	NO.	voc	RAD		Dust	USCS CLASS	STRATUM CLASS
H (FT)	6 INCHES	(FEET)	(FEET)	(FEET)	<u> </u>	<u> </u>	SCRN	with amount modifiers and grain-size, density, stratification	wetness, etc.)	ļ	
	4	0-				0	40	0-6" Turf and topsoil			_
-	13		18			0	46_	6-12" Stiff gray silty clay	0.0)	-
2'0"	17	2				0	52	12"-18" Silty clay with small gravel fragments			_
20-	5	2-	<u> </u>		-	0	40	24-30" Stiff gray silty clay			_
	9	-	14"			0	40	30-36" Shale and It. brown silty clay	0.0		_
-	12		SFF			0	54	36-38" Gray silty clay			_
4'0"_	13	4'0"				0					
	5	4-				0	81	48"-5 gray silty clay with intermittent layers	0.0		
_	8					0	57_	of broken shale			_
C1011	11		22"			0	48	_			-
6'0"_	13 55	6	6"			0	79	72-78 weathered shale			_
	50/1"	6'7"	0			"	13	Auger Refusal at 6'8"			-
-	50/1						-				
											_
								Due to sample spoon consisting of only shale there			_
_							_	was no sample taken on B-45(A)			_
											-
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #:

B45

	. <u>-</u>	OVE	RBUR	DEN	BOR	ING F	RE	PO]	RT	
ENG	INEER	ING-SCIENCE,	INC. CL	IENT:	Seneca Arm	y Depot		BORI	NG NO.:	B46
PROJE(Seneca Arm Romulus, N	y Depot (Ash Laudfil	1)				JOB NO. :		720447 – 01005
									OUND ELEV.:	
DRILLING	SUMMAR		Ţ					START D		4-29-93
DRILLING	HOLE	DEPTH	SAMPL			HAMMER		FINISH D		4-29-93
METHOD	DIA.	INT.	SIZE	TYPE	TYPE	WT/FALL		CONTRAC		Amer. Auger
HSA	4 1/4" ID		3" S	plit Spoon	Hammer	1401b/ft		DRILLER	:	J. Pietrich
						1		INSPECTO	OR:	Cupp/Fuller
								CHECKE	D BY:	
								CHECK I	DATE:	
	<u> </u>								 -	
DW MRSLC CA	DRIVE-A	CARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL		C HAMMER LE HAMMER		SS CS 51 NS ST 3S		SPLIT SPOON CONTINUOUS SA 5 FT INTERVALS NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	SAMPLING
MONITORI	NG EQUP	MENT SUMMARY					41			
INSTRU	JMENT	DETECTOR	RANGE		BACKGROUN	łD		CALI	BRATION	
TY	PE	TYPE/ENERGY	(PPM)	READING	TIME	DATE		TIME	DATE	WEATHER
OVM-580)B	10.0 eV	0-2,000					· - ·	4/29/93	65 degree F
Victoreen :	190	Pancake XBX							7/02/93	Sunny
Particulate	Meter	Miniram-PDM3	0-10 UM						4/29/93	Wind 10 (SW)
OVM-580)5	10.0 eV	0-2,000						4/29/93	
			,				1			
FID GMD	PHOTO – I FLAME – I GEIGER M	NYMS ONIZATION DETECTOR ONIZATION DETECTOR UELLER DETECTOR TION DETECTOR	CF PP	PM C	BACKGROUND COUNTS PER MI PARTS PER MILI RADIATION		DGRT PPB MDL	,	DRAEGER TUB PARTS PER BILL METHOD DETE	.ION
COMMEN	TTS:				OTHER REPO WELL DEVELOP SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TES GEOPHYSICAL L	MENT TION DETAILS	Pendin	/PENDING	3	N/A x x x x x

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

		· · ·		JVI	C K	1/		RDEN BORING REP	UKI		
ENC	INEE	RING-			INC.	<u> </u>	CLI	ENT: Seneca Army Depot	BORING	#: B46	
INSTR	UMENT	INTER	ONITORI RVAL	BGE)	TI	ME	COMMENTS: Background Rad = 45 counts/min Dry ground conditions	DRILLER:	J. Pietrich -	Amer Auge
						-			INSPECTOR:	SJF/JC	
									DATE:	4-29-93	
D E P T	BLOWS PER	PENE- TRATION	RECOV- ERY	DEPTH	NO.	voc	RAD	SAMPLE DESCRIPTION		USCS CLASS	STRATU
H (FT)	6 INCHES	RANGE (FEET)	RANGE (FEET)	(FEET)			SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification	mor Components, wetness, etc.)		
	9	0-				0		0-4" Turf and topsoil Background C	VM = 0 ppm		
_	11		16			0	120_	4-10" Fractured shale in silt (grey)			
	14	2				0	40	10-16" brown silt with fractured shale fill			
2'0"_	16				_	0		_			
	6	2-				0	55	<u> </u>	d OVM = 0 pp	m	
_	-8	_	22"			0	40 _	30-34" dark grey silt with gravel fill			
	8					0	55 _	34-42" Olive green. It. brn silty clay	Dust =	= 0	
4'0"_	26	4'0"		ļ		0	1	42-46" Ash with pieces of debris (glass)			
	14	4-				0	20	48-58" grey silt with gravel fill			
	16		20"			0	_		pund = 0 ppm		
	18					0	51	stained fine silty clay – stiff			
5'0"_	26	6			_	0	_				
	19	6'0"				0	51	_72-77 weathered shale with silt in voids - very stif	l backgrou	nd	
_	49		10"			0	144_	77-82" shale - competent	0 ppm		
	50/1.5"	7'1/2"									
_							_	Auger refusal 8'3"			
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

		OVE	RBU	RDE	N BOR	ING I	REPO	RT	
ENG	INEER	ING-SCIENCE,	INC.	CLIENT:	ACOE		BOR	ING NO.:	B47
PROJE(Seneca Arm Romulus, N	y Depot (Ash Lai Y	ndfill)			JOB NO.	: OUND ELEV.:	720447-01005
DRILLING	SUMMAR	Y:				<u></u>	START		4-29-93
DRILLING	HOLE	DEPTH	SA	MPLER		HAMMER	FINISH		4-29-93
METHOD	DIA	INT.	SIZE	ТҮРЕ	TYPE	WT/FALL	CONTRA	ACTOR:	Amer. Auger
HSA	4 1/4"ID		3"	Split Spoon	Hammer	140 lb/ft	DRILLE	R:	J. Pietrich
							INSPECT	TOR:	Cupp/Fuller
							СНЕСК	ED BY:	
							СНЕСК	DATE:	
	-								
DRILLING A HSA DW MRSLC CA SPC	HOLLOW- DRIVE-A	-STEM AUGERS ND-WASH TARY SOIL-CORING DVANCER	SH H	HR HYDRAU HR DOWN-H	HAMMER LIC HAMMER HOLE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS S 5 FT INTERVAL NO SAMPLING SHELBY TUBE 3 INCH SPLIT SP	SAMPLING
MONITOR	ING EQUP	MENT SUMMARY							
INSTRU	JMENT	DETECTOR	RANGE	,	BACKGROU	ND	CAL	IBRATION	_
TY	PE	TYPE/ENERGY	(PPM)	READIN	G TIME	DATE	TIME	DATE	WEATHER
OVM-58	0B	10.0 ev	0-2,000					4/29/93	Sunny, 70 degree F
Victoreen	190	Pancake XBX						7/02/92	Wind SW at 10
Particulate	Meter	Miniram-PDM3	0-10 UM			-		4/29/93	Wind 10 (SW)
OVM-58	05	10.0 ev	0-2,000			-	-	4/29/93	
PID FID GMD	FLAME -	NYMS IONIZATION DETECTOR IONIZATION DETECTOR IUELLER DETECTOR ATION DETECTOR		BGD CPM PPM RAD	BACKGROUND COUNTS PER M PARTS PER MIL RADIATION		DGRT PPB MDL	DRAEGER TUI PARTS PER BIL METHOD DETI	LION
COMMEN	NTS:				OTHER REP		DATE/PENDIN	G	N/A
					SURVEYOR	MENI	Pending		x
					CORE LOG WELL INSTALL	ATION DETAILS			x
					HYDRAULIC TE	STING			х
					GEOPHYSICAL	LOGGING			x

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING NO.: B47

			C	VI	ΞF	RE	BU	RDEN BORING REP	ORT		
ENG	GINEE	RING-	-SCIEI	NCE,	INC.		CLI	ENT: Seneca Army Depot	BORING #:	B47	7
INST	RUMENT	INTE	ONITORI	ING BGE)	TI	ME	COMMENTS Ground is dry	DRILLER:	Amer Auger	
								This boring is in road way	INSPECTOR:	SJF/JC	
											-
D	S	AMPLING	3	1	SAMP	LE		SAMPLE	DATE:	4-29-93	<u> </u>
E P	BLOWS	PENE-	RECOV-	DEPTH			RAD	DESCRIPTION		USCS CLASS	STRATUM CLASS
T H (FT)	PER 6 INCHES	TRATION RANGE (FEET)	RANGE (FEET)	(FEET)	NO.	VOC	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, Mi with amount modifiers and grain-size, density, stratification,	nor Components wetness, etc.)	CLASS	CLASS
	24	0-				0	52	0-5" Fractural shale Background OVM	= 0 ppm		_
-	41		18"			0	_	5-7" Ash plus silty sand			-
	52	2				0	L.	7-15" Broken shale			-
2'0"_	77					0	74 45	15-18" Broken shale and fine sand	around OVA		_
	18	2-	14"			0	45		ground OVM = 0 ppm		-
-	24		14			0	-		— Оррпп		-
4'0"	27	4'0"				0	110	-			_
-	7	4-				0	85	48-51" Weathered Shale Background	OVM = 0 ppm		-
	37		8"					51-56" Competent shale	• •		_
	100/3"	5'3"				0	45				
6'0"_							_				
								Auger refusal at 6'5"			_
_							_				_
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

		OVE	RBU	RDEN	BOR	ING F	REPO	RT	
ENG	INEER	ING-SCIENCE,	INC.	CLIENT:	ACOE		BOR	ING NO.:	B48
PROJE(Seneca Arm Romulus, N	ny Depot (Ash Lan	adfil)			ЈОВ ИО.	:	72044701005
							EST. GR	OUND ELEV.:	
DRILLING	SUMMAR	LY:					START	DATE:	4-29-93
DRILLING	HOLE	DEPTH	SA	MPLER		HAMMER	FINISH	DATE:	4-29-93
METHOD	DIA.	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	ACTOR:	Amer. Auger
HSA	4 1/4"ID		3"	Split Spoon	Hammer	140 lb/ft	DRILLE	R:	J. Pietrich
							INSPECT	TOR:	Cupp/Fuller
							СНЕСКІ	ED BY:	
							СНЕСК	DATE:	
						ļ			
DRILLING HSA DW MRSLC CA SPC	HOLLOW- DRIVE-A MUD-RO	-STEM AUGERS ND-WASH TARY SOIL-CORING DVANCER	HM SH HH DH WI	R SAFETY H HR HYDRAUL HR DOWN-H	IC HAMMER OLE HAMMER		SS CS 5I NS ST 3S	SPLIT SPOON CONTINUOUS S 5 FT INTERVAL NO SAMPLING SHELBY TUBE 3 INCH SPLIT SP	SAMPLING
MONITOR	ING EQUE	MENT SUMMARY							-
INSTRU	UMENT	DETECTOR	RANGE		BACKGROU	ND	CAL	IBRATION	
TY	PE	TYPE/ENERGY	(PPM)	READING	TIME	DATE	TIME	DATE	WEATHER
OVM-58	0В	10.0 ev	0-2,000					4/29/93	Sunny, 70 degree F
Victoreen	190	Pancake XBX						7/02/92	Wind SW at 10
Particulate	e Meter	Miniram-PDM3	0-10 UM					4/29/93	Wind 10 (SW)
OVM-580	05	10.0 ev	0-2,000					4/29/93	
PID FID GMD	FLAME - :	NYMS IONIZATION DETECTOR IONIZATION DETECTOR MUELLER DETECTOR ATION DETECTOR		BGD CPM PPM RAD	BACKGROUND COUNTS PER MI PARTS PER MILI RADIATION		DGRT PPB MDL	DRAEGER TUE PARTS PER BIL METHOD DETE	LION
COMMEN	NTS:				OTHER REPORTED SURVEYOR		DATE/PENDIN	G	N/A X
					CORE LOG WELL INSTALLA	TION DETAILS			x
					HYDRAULIC TE	STING			x
					GEOPHYSICAL I	OGGING			x

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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING NO.: B47

)VI	EF	RE	BU	RDEN BORING REP	ORT		
E	NGINEE	RING	-SCIEN	ICE, II	NC.		CLI	ENT: ACOE	BORING #	⊭: B48	
INICT	RUMENT		IONITOR RVAL	ING BGI		TI	ME	COMMENTS	DRILLER:	American A	1005
11/21	RUMENT	INTE	KVAL	BGI			IVIE	Ground is dry			ugei
\vdash						 			INSPECTOR:	Cupp/Fuller	
								Groundwater elevation 4'6'	DATE:	4-29-93	3
D		AMPLIN	T		SAMP	LE	T	SAMPLE DESCRIPTION		USCS	GTTD 4 TT 13 4
P	BLOWS PER	TRATION	RECOV- ERY	DEPTH	NO.	voc	RAD	(As any Burmainter, color conin size MAJOR COMPONENT M	inos Componente	CLASS	STRATUM CLASS
(FT) INCHES	(FEET)	(FEET)	(FEET)	<u> </u>	<u> </u>	SCRN	with amount modifiers and grain-size, density, stratification	wetness, etc.)		
1	2	0				0	40	0"-6" Topsoil and Turf – Moist			_
	5	-	18"			0		6"-12" Ground fill mixed w/ silty sand - dark gray	2.1		_
	9	2.				0	83	12"-18" Dark gray silty clay - moist, med stiffness v	vitn		_
	12 5	2'0"			-	0		small amounts of brown fine sand. 24"-29" Med gray silty clay			-
	7	20	18"			0	61	29"-36" Lt. brown silty clay, with fine sand			-
'	9	1	10			0	04-	36"-40 Lt. brown - gray silty clay with framented sl	hale and		_
	13	4'0"					68	trace gravel & debris fill			-
'	4	4'0"				0	39	48"-51" silty clay			
5	7	1	16"			0		51"-53" Floating shale			_
	4					0		53"-60" Silty fine sand - silty med. sand			
	8	6'0"				0	73_	60"-69" Competent shale			_
	13	6'0"				0	42	72"-86 Fractured competent shale			_
	37		14"			0	_				_
	17					0	76				_
	50/4"	7'0"				0		_			-
											-
-	-						-	All background VOC readings – 0 ppm			-
10								Auger refusal @ 8'0"			-
10 -							-	-			-
								_			-
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #:

		OVER	BUR	DEN	BOR	ING	REPO	RT	
ENGINE	ERING	-SCIENCE, IN	C. CLIE	NT: U	J.S. Army C	Corps	BOR	NG NO.:	B49
PROJECT	:	Seneca Army	Depot - Ash Lan	dfill					
LOCATIO	N:	Romulus, NY					JOB NO. :		720447-01004
		B-49 NO	T CONDUCI	TED			EST. GRO	OUND ELEV.:	
DRILLING SU	MMARY:						START D	DATE:	
DRILLING	HOLE	DEPTH	SAMPLE	ER		HAMMER	FINISH I	DATE:	
METHOD	DIA.	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	CTOR:	
WEITIOD	Dire		JAZZ				DRILLER		
							INSPECT		
							CHECKE		
							CHECK I	DATE:	
							·		
						<u> </u>			
DRILLING ACE									
HSA DW	DRIVE-A	STEM AUGERS	HMR SHR	HAMMER SAFETY HA	MMED		SS CS	SPLIT SPOON CONTINUOUS S.	AMPLING
MRSLC		TARY SOIL-CORING	HHR	HYDRAULI			51	5 FT INTERVAL	1
CA	CASING A		DHR	DOWN-HO	LE HAMMER		NS	NO SAMPLING	
SPC	SPIN CASI	NG	WL	WIRE-LINE	3		ST	SHELBY TUBE	
							3S	3 INCH SPLIT SP	OON
MONITORING	FOLIPME	NT SUMMARY							
INSTRUM		DETECTOR	RANGE		BACKGROUN	ND	CAL	BRATION	
TYP		TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER
		TTE/EREKOT		READING	THATS	DAIL	TIVAL	DATE	WEATIER
				ļ					-
		_							
MONITORING	ACRONY	MS							
PID	PHOTO - 1	IONIZATION DETECT	OR BGI) E	BACKGROUND		DGRT	DRAEGER TUE	ES
FID		IONIZATION DETECT			COUNTS PER MI		PPB	PARTS PER BILL	
GMD		MUELLER DETECTOR	PPM RAI		PARTS PER MILI RADIATION	LION	MDL	METHOD DETE	ECTION LIMIT
SCT	SCINIILLA	ATION DETECTOR							
COMMENTS					OTHER REP		DATE/PENDIN	G	N/A
				- 11	WELL DEVELOP SURVEYOR	MENT			
				ll l	CORELOG				
				II.	WELL INSTALLA	TION DETAILS			
				- 11	HYDRAULIC TE				
					GEOPHYSICALI	OGGING			

PAGE 1 OF

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: B49

		OVER	BUR	DEN	BOR	ING	REPO	RT	
ENGINE	ERING	-science, in	IC. CLIE	NT: A	COE		BOR	ING NO.:	Bk-1
PROJECT LOCATIO		Ash Landfill	– Soit Borings				JOB NO.	DUND ELEV.:	720447-01004
DRILLING SI	IMMARY.						START I		-
DRILLING	HOLE	DEPTH	SAMPLE	BR BR		HAMMER	FINISH I		
METHOD	DIA.	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA	CTOR:	_
SS		0-2'	3"x2'	SS	DHR	140#/30"	DRILLER	t :	
		(only)					INSPECT	OR:	
							СНЕСКЕ	D BY:	
	ļ						CHECK	DATE:	
	 								
HSA DW MRSLC CA SPC	DRIVE-A	TARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULIC DOWN-HOI WIRE-LINE	HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVALS NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	SAMPLING
MONITORING	EQUPME	NT SUMMARY		- 					
INSTRU	MENT	DETECTOR	RANGE		BACKGROUN	ND	CALI	BRATION	_
TYP		TYPEÆNERGY		READING	TIME	DATE	TIME	DATE	WEATHER
Thermo 580(rig)OVM	10eV	0-2	0	8:35	12-16-92	8:00 AM	12-16-92	Cloudy It. rain
Aerosol (rig)		PDM-3	0-2	.16	8:35	12-16-92	8:00 AM	12-16-92	Cloudy lt. rain
Radiation (ri	3)	GMD/Pancake	0-2	6.10	8:35	12-16-92	8:00 AM	12-16-92	Cloudy It. rain
	-								
MONITORING PID FID GMD SCT	PHOTO - I FLAME - I GEIGER M	MS ONIZATION DETECT ONIZATION DETECT IUELLER DETECTOR TION DETECTOR	OR CPM	I C	ACKGROUND OUNTS PER MI ARTS PER MILL ADIATION		DGRT PPB MDL	DRAEGER TUBI PARTS PER BILL METHOD DETE	ION
COMMENTS	ŧ			S () 1	OTHER REM WELL DEVELOP SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TE GEOPHYSICALL	MENT TION DETAILS STING	DATE/PENDING Pending	3	N/A x x x x x x

PAGE 1 OF

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: Bk-1

			()VI	ER	RB	U	RDEN BORING REP	ORT	(Background	
EN	GINEE	RING-	-SCIEN	ICE, II	NC.		CLII	ENT: ACOE	BORING	#: Bk-1	
		М	IONITORI	ING				COMMENTS:			
PID	UMENT	INTE	RVAL	BGI 0	<u> </u>	TIN 8:	ME_	Drust O	DRILLER:	Penrod	
Aero	sol			.16	<u>, </u>	8:	35	Dust O	INSPECTOR:	KKS/PFM	
Rad				6.1	0	8:	35			10 16 6	2
D E	S	AMPLING	3		SAMP	E		SAMPLE	DATE:	12-16-9	92
P	BLOWS	PENE-	RECOV-	DEPTH			RAD	DESCRIPTION		USCS CLASS	STRATUM
T H (FT)	PER 6 INCHES	TRATION RANGE (FEET)	ERY RANGE (FEET)	INT (FEET)	NO.	voc	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, Mi with amount modifiers and grain-size, density, stratification,	inor Components wetness, etc.)	CLASS	CLASS
	12							Grayish green, CLAY and SILT, few			Top Soil
l _	27	0-2	2	0-2	bk1	0	11.6	from Shale sized fragments			Till
	14							dry-damp	.14		_
_	23										
								End of Split Spooning			_
_					l		_		PFM		
								_			_
-								(No HSA on this hole)			
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

		OVER	BUR	DEN	BOR	ING	REPO	RT	
ENGINE	EERING	-SCIENCE, IN	IC. CLIE	NT: U	J.S. Army C	Corps	BORI	NG NO.:	Bk-2
PROJECT LOCATIO		Ash Loodfill	- Soil Borings				JOB NO.:		720447-01004
								UND ELEV.:	
DRILLING S	1						START D		
DRILLING	HOLE	DEPTH	SAMPLE			HAMMER	FINISH D		
METHGD	DIA	INT.	SIZE	TYPE	TYPE	WT/FALL	CONTRA		
SS		0-2'	3"-2'	SS	DHR	140#/30"	DRILLER		
		(only)					INSPECT		
-	-						CHECKE	O BY:	
							CHECK D	DATE:	
DRILLING AC HSA DW MRSLC CA SPC	HOLLOW- DRIVE-A MUD-RO	-STEM AUGERS ND-WASH TARY SOIL-CORING DVANCER ING	HMR SHR HHR DHR WL	HAMMER SAFETY HA HYDRAULIO DOWN-HO WIRE-LINE	C HAMMER LE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS SA 5 FT INTERVAL S NO SAMPLING SHELBY TUBE 3 INCH SPLIT SPO	AMPLING
MONITORING	G BQUPMB	NT SUMMARY							
INSTRU		DETECTOR	RANGE		BACKGROUN	ND	CALI	BRATION	
TYP	PE	TYPE/ENERGY		READING	TIME	DATE	TIME	DATE	WEATHER
Thermo 500 ((rig)	10eV	0-2'	0	9:10 am	10-16-92	8:00 am	12-16-92	Cloudy with
Aerosol (rig)		PDM-3	0-2'	.14	9:10 am	10-16-92	8:00 am	12-16-92	occasional rain
Radation (rig	3)	GMD/Pancake	0-2'	10.2	9:10 am	10-16-92	8:00 am	12-16-92	
MONITORING PID FID GMD	PHOTO - I	MS IONIZATION DETECT IONIZATION DETECT IUELLER DETECTOR	OR CPM	.с	ACKGROUND COUNTS PER MI PARTS PER MILL		DGRT PPB MDL	DRAEGER TUBE PARTS PER BILL METHOD DETEC	ION
SCT	SCINTILLA	ATION DETECTOR	RAD	R	ADIATION				
COMMENTS	ž.				OTHER REPOWELL DEVELOP SURVEYOR CORE LOG WELL INSTALLA HYDRAULIC TE	MENT TION DETAILS	DATE/PENDING Pending	3	N/A x x x x
					GEOPHYSICALL	OGGING			х

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS BORING NO.: Bk-2

			C	VI	ΞR	B	U	RDEN BORING REP	ORT	(Background	Sample)
EN	GINEE		-SCIEN		VC.		CLII	ENT: ACOE	BORING #	Bk-2	
IP/Cata	LIMENT	M	ONITORI		,	TIP	ATE:	COMMENTS	DRILLER:	Denged	
PID	UMENT	INTER	·2	BGE 0		9:		Dust O	DRILLER:	Penrod	
Aero	sol	0-	-2	.14		9:	10		INSPECTOR:	KKS/PFM	
Rad		0-	-2	10.2	2	9:	10		DATE	12-16-9	_n
D	S.	AMPLING	3		SAMPI	E		SAMPLE	DATE:	14-10->	
D E P T	BLOWS	PENE-	RECOV-	DEPTH			RAD	DESCRIPTION		USCS	STRATUM
Н	PER 6	TRATION RANGE	BRY RANGE	INT (FEET)	NO.	voc	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, Mi with amount modifiers and grain—size, density, stratification,	inor Components	CLASS	CLASS
(FT)	INCHES	(FEET)	(FEET)		1				wetness, etc.)		
	7						1	olive green, SILT and CLAY, F-M			Top Soil
_	6	0-2	2	0-2	bk2	0	17.5	Shale fragments, dry-damp			Till _
	15							_	1.8		_
2 _	21				-	-				-	
								End of Split Spooning			4
-							-	(No HSA on this hole)	PFM		-
								_			4
_											
_								_			
5 _								_			4
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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

PROJECT: 'LIENT: JONTRACTOR:	SEAD, ASH SENECA AF	LANDFILL R						ING REP		JOB NO: 720229-0600 SHEET NO: 1 OF 1 ELEV. DATU1929, NGD ELEV.(OS): 646.8			
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -			
	CASING	SAM	PLER	CORE	ARREL	DATE	TIME	DEPTH TO WATER	STABIL- IZATION TIME	DATE START 10- DATE FINISH10- DRILLER: Emp	30-91		
TYPE:	AUGER	SPLIT SPOON		_	-		-	WATER	TIME	INSPECTOR:	oire		
SIZE ID/OD:	6.24/9.63	3* O.D.		_			+			INSTRUCTOR.			
HAMMER WEIGHT:	-	140 LB		_									
HAMMER FALL:	-	30 INCH		-									
	11878		SAMPLE										
DEPTH (PT.)	CASING BLOWS	SAMPLE BLOWS PER	RECOVERY	SAMPLE DEPTH	VOC SCREEN		SAMPLE	DESCRIPTION	ON	STRATUM D	ESCRIPTION		
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)								
		4					SILT, Some +C						
1		5				-ORAVEL	, and trace fine t	o medium SAND					
		6								Till (ML)			
2		7		0-2	0.0								
3		7											
3		12 26											
-4		44		2-4'	0.0								
-		70			0.0								
5		100/.2											
						Gray Weath	ered Shale, Fissi	le, Some SILT		Weathered Shale			
6				4-6	0.0								
		100/.4											
7													
8													
9					-								
10	-				-								
44						Oray Shale				Competent Shale			
11					-								
12													
13			1										
	ANULAR S	DILS	С	OHESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELOPED	:		
BLOWS/FT		DENSITY	BLOWS/F	CO	NSISTENCY	VOC DE	TECTOR:	ORGANIC	VAPOR ME	TER			
)-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2	SLOT SIZE:	0.010"		
4-10		LOOSE	2-4		SOFT								
10-30		M.DENSE	4-8		M.STIFF	REMARI	(S:						
30-50		DENSE	8-15		STIFF								
>50		V.DENSE	15-30		V.STIFF								
			>30		HARD								

PROJECT: *LIENT: CONTRACTOR:	SEAD, ASH SENECA AF	RMY DEPOT	RIFS	<u>C.</u>		11	STBOR	ING REP	ORT	BORING NO: B JOB NO: 72022 SHEET NO: 1 OF ELEV. DATURI 929, ELEV. (GS): 651.2	29-0600 1 NOD
	T					G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -	
	CASING	SAM	PLER	COREB	ARREL	DATE	TIME	DEPTH TO WATER	STABIL- IZATION TIME	DATE START 10-3 DATE FINISH10-3 DRILLER: Jim/A	1-91
TYPE:	AUGER	SPLIT SPOON		-						INSPECTOR: PPM	
IZE ID/OD:	6.24/9.63	3" O.D.		_							
IAMMER WEIGHT:	-	140 LB		-							
HAMMER FALL:		30 INCH		-							
			SAMPLE								
ОЕРТН (РТ.)	CASING BLOWS	SAMPLE BLOWS PER	RECOVERY	SAMPLE DEPTH	VOC SCREEN		SAMPLE	DESCRIPTION	ON	STRATUM DE	SCRIPTION
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
		4				SILT, SHAL	E, Pill Materials			Fill	
11		8									
		7									
2		5		0-2	34.0						
		5					SILT, Some +C				
3		4				-GRAVEL	and Trace Pine	to Medium SANI)	Till (ML)	
		3			216						
4		7		2-4	216						
5		8									
		18				Grav Weath	ered Shale, Pissi	le Some SILT		Weathered Shale	
6		54		4-6	261	Olay means	erea sume, r na	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Westerness of the second	
	==-	61									
7		71									
		100/.2									
8				6-8	112						
9		100/.1		8-9	382						
10						Oray Shake				Competent Shale	
11											
12											
13 GR	ANULAR S	OU S	C	OHESIVE	SOILS	VOI WA	TER LOST:	GAI	DATE WE	LL DEVELOPED:	
BLOWS/FT	200 200 400 100	DENSITY	BLOWS/F	10,000,000	NSISTENCY		TECTOR:		VAPOR ME		
)-4		V. LOOSE	<2		V.SOFT	WELL PI				SLOT SIZE:	0.010"
1-10		LOOSE	2-4		SOFT						
10-30	4-8		M.STIFF	REMARK	(S:	No Equip	nent installe	d			
30-50		DENSE	8-15		STIFF						
>50 V.DENSE			15-30 >30		V.STIFF HARD	FF					

	SEAD, ASH SENECA AF	RMY DEPOT	IIFS	C.		TI	ST BOR	ING REP	ORT	BORING NO: B-G JOB NO: 720229- SHEET NO: 1 OF 1 ELEV. DATUH929, NO ELEV.(GS): 652.1	0600
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -	
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH TO WATER	STABIL- IZATION TIME	DATE START11-1-9 DATE FINISH11-1-9 DRILLER: Jim/Alan	1
ГҮРЕ:	AUGER	SPLIT SPOON		-						INSPECTOR: PPM/JC	
SIZE ID/OD:	6.24/9.63	3" O.D.		-							
HAMMER WEIGHT:	-	140 LB		-							
HAMMER FALL:	-	30 INCH		-							
			SAMPLE								
DEPTH (РТ.)	CASING	SAMPLE BLOWS PER	RECOVERY	SAMPLE DEPTH	VOC SCREEN		SAMPLE	DESCRIPTION	ON	STRATUM DES	CRIPTION
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
		4	-							PiU	
11		8									
		11		. ~		Olive C	OUT C	Y A V -			
2		13		0-2	3,5		SILT, Some +C			Till (MT.)	
3		34				- GRAVEL,	ING TRUE PIDE	o Medium SAND		Till (ML)	
<u> </u>		47									
4		52		2-4	271						
		18									
5		27								/	
		100/.4				5.75					
6			1	4-6	95	Gray Weath	red Shale, Fissi	k, Some SILT		Weathered Shale	
		100/.3*									
7				6-7.7	478						
8											
						Refusal @ 8	5'				
9						Gray Shale				Competent Shale	
10											
44											
11											
12			- 1								
12											
13											
	ANULAR S	OILS	C	HESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELOPED:	
LOWS/FT		DENSITY	BLOWS/F		SISTENCY	VOC DE	ECTOR:	ORGANIC	VAPOR ME	TER	
)-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZE:	0.010
4−10		LOOSE	2-4		SOFT						
10-30		M.DENSE	4-8	*	M.STIFF	REMARK	S:	No Equip	nent installe	d	
30-50		DENSE	8-15		STIFF						
>50		V.DENSE	15-30								
			>30								

77	CI	AP T M	ATM IN	C		TI	ST DOD	ING REP	OPT	BORING NO:	
PROJECT:	SEAD, ASH	IAS. T. M					OI BUK	ING KEI	UKI		229-0600
			iirs							SHEET NO: 10	
	SENECA AF										
CONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUM92	
										ELEV.(GS): 653	.0
							1	TER READI	T	ELEV.(TOC): -	
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE STARTII-	-1-91
								ТО	IZATION	DATE PINISHI1-	-1-9t
								WATER	TIME	DRILLER: Jim	/Alan
TYPE:	AUGER	SPLIT SPOON		-						INSPECTOR: PF	M
SIZE ID/OD:	6.24/9.63	3" O.D.		-							
HAMMER WEIGHT:	-	140 LB		_							
HAMMER FALL:	-	30 INCH		_							
			SAMPLE								
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM I	DESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER POOT	6 INCHES	(PT.)	RANGE	(PPM)						
		3				Black Ash, S	ILT, GRAVEL	and Wood, Glass,	Root	Pill	
1		5				and Brick Fr					
		7									
2		12	1/	0-2*							
		12				Olive - Ores	SILT, Some +C	LAY, trace		Till (ML)	
3		20						o Medium SAND		()	
		40				JAN VEL	Trace Pine t	- Medical SARD			
4				2-41							
•		17		2-4'							
5		28									
		30									
6		38		4-6							
		31									
7		27									
		100/.5									
8				6-8		8.0					
		100/.1				Gray Weath	ered Shale, Fissi	le, Some SILT		Weathered Shale	
9						Refusal @ 8.5	•				
						Gray Shale				Competent Shale	
10											
11				y II	:						
				13							
12											
		-2-2									
13											
GR	ANULAR S	OILS	C	OHESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELOPE):
BLOWS/FT		DENSITY	BLOWS/F	COL	ISISTENCY	VOC DE	TECTOR:	ORGANIC	VAPOR MET	TER	
)-4		V. LOOSE	<2		V.SOFT	WELL PI		C DIAM	. 2"	SLOT SIZE:	0.010"
I-10		LOOSE	2-4		SOFT						
10-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equips	ment installed	1	
30-50	DENSE	8-15		STIFF			-4-1				
>50		V.DENSE	15-30		V.STIFF						
- 30		V.DLIVSE									
			>30		HARD						

	Ot		LATE TAL	0		Terr	CT DOD	INC DED	OPT	PODING	
		IAS. T. M		C.		11	21 BOK	ING REP	OKI	BORING N	
		LANDFILL F								JOB NO:	720229-0600
LIENT:	SENECA AF	RMY DEPOT								SHEET NO:	
CONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATU	11929, NGD
										ELEV.(GS):	666.3
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC)	
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START10-31-91	
								ТО	IZATION	DATE FINIS	110-31-91
								WATER	TIME	DRILLER:	Jim/Alan
TYPE:	AUGER	SPLIT SPOON	1	-						INSPECTOR	PFM/JC
SIZE ID/OD:	6.24/9.63	3" O.D.		-							
LAMMER WEIGHT:	-	140 LB		-							
HAMMER PALL:	-	30 INCH		-							
	4-17	A COL	SAMPLE	100	100						
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATU	M DESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER POOT	6 INCHES	(FT.)	RANGE	(PPM)						
	LEKPOOT	4	(**.)	MINGE	()	Black Ash -	th Wood and Sh	ale Fraements		Pill	
1			1			Distr. (180 W	HOVE EDG 30	T. I. I I I I I I I I I I I I I I I I I		["	
		10									
0		14							-		
2		18		0-2*	15						
		7	-								
3		5									
		3									
4		5		2-4'	163		SILT, Some +C			Till (ML)	
		8				- GRAVEL	and Trace Pine	to Medium SANI)		
5		30	-								
		129									
6				4-6	3,5						
		100/.3*									
7				6-7.7	478	7.2					
						Gray Weath	ered Shale, Fissi	le, Some SILT		Weathered Sha	le
8						Refusal @ 7	.T			Competent Sha	le
						Gray Shale					
9											
10											
11										10	
						9					
12											
13											
	ANULAR S	OUE		OHESIVE	8011 8	VOI WA	TER LOST:	GAI	DATE WE	LL DEVELO	PED:
BLOWS/FT	ARULAN S	DENSITY	BLOWS/F		SISTENCY		TECTOR:		VAPOR ME		
			<2	001	V.SOFT	WELL PI				SLOT SIZE	: 0.010"
0-4		V. LOOSE				WELL PI		DIAM		SLOT SIZE	0.010
4-10		LOOSE	2-4		SOFT	DEMAS	re.	No Easter	mant Install	4	
10-30 M.DENSE			4-8		M.STIFF	REMARI	13:	No Equipi	ment installe	0	
30-50		DENSE	8-15		STIFF						
>50		V.DENSE	15-30		V.STIFF						
			>30		HARD	1					

						*	T DOD		0.000	FIGURE	
		IAS. T. M		L,		TE	I BOK	ING REP	OKI	BORING NO: I	
	SEAD, ASH										29-0600
	SENECA AF									SHEET NO: 1 OF	
ONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUM929	
										ELEV.(OS): 689.	
	-				3	GR	OUNDWA	TER READI	NGS	ELEV.(TOC): -	
	CASING	SAMI	PLER	COREB	ARREL	DATE	TIME	DEPTH	STABIL-	DATE STARTII-	1-91
								ТО	IZATION	DATE FINISH	
								WATER	TIME	DRILLER: Jim/	Alan
TYPE:	AUGER	SPLIT SPOON		_						INSPECTOR: CTN	(
SIZE ID/OD:	6.24/9.63	3" O.D.		-							
LAMMER WEIGHT:	-	140 LB		-							
HAMMER FALL:		30 INCH		-							
			SAMPLE								
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM D	ESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
		4				Olive - Gray S	ILT, Some +C	LAY, trace		Till (ML)	
1		10						to Medium SANI)		
•		16									
2		24		0-2	0.0						
		18			0.0						
3		33				3.2*					
		100/.2				Gray Weather	ed Shale Wissil	le. Some SII T		Weathered Shale	
4		100/.2		2-4'	0.0	Refusal @ 3.5		o, rome still			
				2-4	U.U	Gray Shale				Competent Shale	
5						Othy State				Competent Shale	
3											
6					+						
_											
7					-	-					
100											
8											
9											
10											
11					1						
12											
13											_
GR	ANULAR S	OILS	C	OHESIVE		VOL. WAT		GAL.	DATE WE	LL DEVELOPED	
LOWS/FT		DENSITY	BLOWS/F	CO	NSISTENCY	VOC DET			VAPOR ME	rer .	12
-4		V. LOOSE	<2		V.SOFT	WELL PIP	E PV	C DIAM	. 2	SLOT SIZE:	0.010
1-10		LOOSE	2-4		SOFT						
10-30		M.DENSE	4-8		M.STIFF	REMARKS	3:	No Equip	ment installe	d	
		DENSE	8-15		STIFF						
30-50						1					
30-50 >50		V.DENSE	15-30		V.STIFF						

	C.		THE	ST BOR	ING REP	ORT	BORING NO:				
PROJECT:	SEAD, ASH		IAIN, IN			***			the the table of the table of the table of the table of t		229-0600
	SENECA A									SHEET NO: 10	
ONTRACTOR:											
JON I RACTOR:	EMFINE DA	ILLING								ELEV. DATUN92	
										ELEV.(GS): 667.	4
						·		TER READI	1	ELEV.(TOC): -	
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	DATE STARTII-	4-91
							1	ТО	IZATION	DATE FINISHII-	4-91
								WATER	TIME	DRILLER: Jim	Alen
TYPE:	AUGER	SPLIT SPOON		-			-			INSPECTOR: CTI	И
SIZE ID/OD:	6.24/9.63	3" O.D.		_			4				
HAMMER WEIGHT:	-	140 LB		_							
HAMMER FALL:	-	30 INCH		_							
			SAMPLE								
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM D	ESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						AND DESCRIPTION OF THE PARTY OF
*** (* **)					Salta Daniel						
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
								TL, Few + GRAV	ELS and	Pill	
11							Limestone Angu	dar Gravel and			
		ļ	-			Metal Frage	ents				
2											
3	i.ciiiva										
4											
5											
6											
7			1								
-											
8											
0											
-			-								
9											
10											
				0		Olive - Gray	SILT, and Some	+CLAY, Trace			
11				ń –	•	-GRAVEL	and Trace Fine	to Medium SANI)	Till (ML)	
						Oray Weath	ered Shale, Fissi	le, Some SILT		Weathered Shale	
12											
13											
GR.	ANULAR S	OILS	C	OHESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WEL	L DEVELOPED	
BLOWS/FT		DENSITY	BLOWS/F		NSISTENCY	and the state of			VAPOR MET		
)-4		V. LOOSE	<2		V.SOFT	THE PARTY				SLOT SIZE:	0.010"
			2-4		SOFT						
The second secon											
			4-8		M.STIFF						
30-50		DENSE	8-15		STIFF						
50 V.DENSE 15-3			15-30		V.STIFF						
>30				0 HARD							

	CI	HAS. T. N	IAIN, IN	C.		TEST BORING REPORT	BORING NO: B-7
			SAMPLE				SHEET NO: 2 of 2
ертн (рт.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
14						Gray Weathered Shale, Pissile, Some SILT	Weathered Shale
14							2
15						Gray Shale	Competent Shale
16		-0					
17							
18							
19							
20							
21							
22							
23							
24							
26							
27							

	CI	IAS. T. N	IAIN, IN	C.		TI	ST BOR	ING REP	ORT	BORING NO:	B-8
PROJECT:	SEAD, ASH	LANDFILL F	RIFS						(CL-Lambert Hill)	JOB NO: 720	229-0600
LIENT:	SENECA AF	RMY DEPOT								SHEET NO: 10	F1
JONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUM92	, NOD
										ELEV.(GS): 676.	0
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -	
	CASING	SAM	PLER	CORE B	ARREI	DATE	TIME	DEPTH	STABIL-	DATE STARTII-	5-01
	OAGING	OH, MI	LEN	Johne	Annee	DAIL	111111	ТО	IZATION	_	
										DATE FINISH11-	
								WATER	TIME	DRILLER: JW/	
TYPE:	AUGER	SPLIT SPOON								INSPECTOR: PFN	A/JC
SIZE ID/OD:	6,24/9.63	3" O.D.		-						 	
HAMMER WEIGHT:	-	140 LB		-						-	
HAMMER FALL:	-	30 INCH		-					1		
			SAMPLE								
	CASINO	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM D	ESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(PT.)	RANGE	(PPM)						
		6				Brown-Gra	SILT, Some +	CLAY, trace GRA	VEL		
1		17				Trace Fine to	Medium SANI	D			
		21								Till (ML)	
2		26		0-2	0.0						
		19									
3		26									
		31									
4		46		2.4							
-				2-4	0.0						
		48									
5	-	78									
- 8		63									
6		92		4-6	0.0						
		82				8					
7		77									
		100/.1				Gray Weath	red Shale, Fissi	le, Some SILT		Weathered Shale	
8				6-7.1	0.0						
										-	
9						Gray Shale				Competent Shale	
10											
11											
12											
12						1					
13											
	NULAR SO	NII 6		OHESIVE :	2011.6	VOI 11/2	TED LOOT	041	DATE	DEVE: 2255	
							TER LOST:			LL DEVELOPED	
LOWS/FT		DENSITY	BLOWS/F	CON	ISISTENCY				VAPOR MET		
-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2	SLOT SIZE:	0.010
-10		LOOSE	2-4		SOFT						
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipm	ent installed	1	
30-50 DENSE 8-15					STIFF						
50 V.DENSE 15-30					V.STIFF	TIFF					
			1		HARD	I					

	SEAD, ASH SENECA A	LANDFILL		<u>C.</u>		Ti	ST BOR	ing Rep	ORT	JOB NO: 720 SHEET NO: 1 C	229-0600
ONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUM92	9, NGD
								•••••		ELEV.(GS): 674	.0
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -	
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE STARTII-	-5-91
								ТО	IZATION	DATE FINISHI1-	-5-91
								WATER	TIME	DRILLER: JW	/LB
TYPE:	AUGER	SPLIT SPOOP	V	-						INSPECTOR: PF	M/JC
SIZE ID/OD:	6.24/9.63	3ª O.D.		-							
HAMMER WEIGHT:	-	140 LB		~							
HAMMER FALL:	-	30 INCH		_							
			SAMPLE								
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTIO	N	STRATUM D	ESCRIPTION
DEPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER POOT	6 INCHES	(FT.)	RANGE	(PPM)						
	42-4	3				Black SILT,	CLAY, ROOTs			Fill	
1		12				Olive Gray S	ILT, Some +CL	AY, Trace - GRA	VEL	W The second	
		16				and Trace Pi	ne to Medium S	AND		Till (ML)	
2		23		0-2							
		13									
3		19									
		30									
4		44		2-4							
		44									
5		62									
		100									
6		100/.4		4-6							
		92									
7		81									
-		62									
8		107		6-8							
	***************************************	68									
9		100/.2									
-		1001.2									
10				8-10							
10		130		0-10							
-11		100/.4									
		-2417									
12				10-12							
12		106		10-12						ATT AND ADDRESS OF THE PARTY OF	
13		100/,7				Grav West	red Shale, Fissis	r Some SII T		Weathered Shale	
	NULAR SC		~/	HESIVE 8	OHS		TER LOST:		DATE WEI	L DEVELOPED	
LOWS/FT		DENSITY	BLOWS/F		SISTENCY				VAPOR MET		
-4		V. LOOSE	<2	201	V.SOFT	WELL PIF				SLOT SIZE:	0.010*
-10		LOOSE	2-4		SOFT			Davie.		311 THE L	5.010
		M.DENSE	4-8		M.STIFF	REMARK	g.	No Equipe	ent Installed		
0-30		DENSE	8-15		STIFF	HEMARK		reo Equipi	SIL HISTORIST		
0-50					V.STIFF						
-50		V.DENSE	15-30								
			>30		HARD						

	CI	HAS. T. M	IAIN, IN	C.		TEST BORING REPORT	BORING NO: B-9
			SAMPLE				SHEET NO: 2 of 2
EPTH (FT.)	CASINO BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES		SAMPLE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
				12-14.1		Refusal @ 14.6	Weathered Shale
14						Gray Shale	Competent Shale
	-	100/.1					
15		-				-	
16	1						
17							
18							
19							
20							
21							
22							
23							
24							
26							
27							

PROJECT:	CH SEAD, ASH		IAIN, IN	C.		TI	ST BOR	ING REP	ORT	BORING NO:	B-10 29-0600	
										100		
CLIENT:	SENECA AF									SHEET NO: 1 OF		
ONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATU 1929	NOD	
				1						ELEV.(OS): 653.1		
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -		
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START11-6-91		
								ТО	IZATION	DATE PINISHI1-	5-91	
								WATER	TIME	DRILLER: Jim/	Men	
TYPE:	AUGER	SPLIT SPOOM	1	-						INSPECTOR: PFM	ЛC	
IZE ID/OD:	6.24/9.63	3" O.D.		-						_		
HAMMER WEIGHT:	_	140 LB		-								
HAMMER FALL:	-	30 INCH		_						1		
		Jo III.	SAMPLE									
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM DI	SCRIPTION	
DEPTH (РТ.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN		5,					
	PER FOOT	6 INCHES		RANGE								
	PER POUT		(FT.)	KANUE	(PPM)	P	Pine 4- 34- 41.	CAND		2111		
		8	1				Fine to Medium			Fill		
1		12						and Glass, Wood, !	victal			
		12	-			and Stone Pr	agments					
2		8	2	0-2	0.0							
		7										
3		8										
		6										
4		18	2	2-4	0.0	Olive - Gray SILT, Some + CLAY, Trace - GRAVEL and Trace Fine to Medium SAND						
		14								Till (ML)		
5		13										
		15										
6		17	2	4-6	0.0							
		13				Olive-Oray	Fine SAND, so	me +SILT, and +0	CLAY,			
7		17	1			Trace - OR				Till (SM)		
		31										
8		100/.2	2	6-8	0.0							
		100/.1		8-9	1							
9		1007.1	1	0-9						7		
8						0 0: 1					-	
40						Gray Shale				Competent Shale		
10			12									
11					·							
12	-											
13				L	l							
GR	ANULAR S	DILS	C	OHESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELOPED:		
BLOWS/FT	DENSITY	BLOWS/F	COI	ISISTENCY	VOC DE	ECTOR:	ORGANIC	VAPOR MET	ER			
)-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZE:	0.010"	
I-10		LOOSE	2-4		SOFT							
10-30		M.DENSE	4-8		M.STIFF	M.STIFF REMARKS: No Equipment Installed						
30-50		DENSE	8-15		STIFF							
·50		V.DENSE	15-30		V.STIFF							
3.0			>30		HARD							
			200		HAND							

PROJECT: \LIENT: \CONTRACTOR:	SEAD, ASH SENECA AF EMPIRE DR	RMY DEPOT								JOB NO: SHEET NO: ELEV. DATUM ELEV.(GS):	1929, NGD
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC):	
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH TO WATER	STABIL- IZATION TIME	DATE START DATE FINISH DRILLER:	11-6-91 11-6-91
TYPE:	AUGER	SPLIT SPOON		-						INSPECTOR:	PFM/SWC
IZE ID/OD:	6.24/9.63	3° O.D.		-							
HAMMER WEIGHT:	_	140 LB		-							
HAMMER FALL:	_	30 INCH		_							
			SAMPLE								
ОЕРТН (РТ.)	CASING BLOWS	SAMPLE BLOWS PER	RECOVERY	SAMPLE DEPTH	VOC SCREEN		SAMPLE	DESCRIPTION	ON	STRATUM	DESCRIPTION
	PER POOT	6 INCHES	(FT.)	RANGE	(PPM)	_			-01	L	
		25				Brown-Bia	k SILT, and +Pi	ine SAND with Ro	oots	Fill	
1		26									
•		32									
2		52	1	0-2		Oli-	OH T C	. AV	ANTI		37 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3		38					SILT, Some +C	LAY, Trace - GR	AVEL	Till (B41)	
		70				and I race Fi	e to weding St	עיע		Till (ML)	
4		72	2	2-4							
		44	-								
5		30									
		36									
6		50	1.5	4-6							
		110	-								
7		100/.2									
		100/.1				Gray Weathe	red Shale, Pissil	e, Some SILT		Weathered Shale	
8				6-8							
9											
40		-				Refusal @ 9.	5'				
10						Gray Shale				Competent Shale	
11											
12											
13											
	ANULAR SC	DILS	C	HESIVE	BOILS	VOL. WA	TER LOST:	GAL.	DATE WEL	L DEVELOPI	ED:
LOWS/FT	of the same to	DENSITY	BLOWS/F		ISISTENCY				VAPOR MET		
-4		V. LOOSE	<2		V.SOFT	WELL PIF	E PV	C DIAM.	2	SLOT SIZE:	0.010*
-10		LOOSE	2-4		SOFT						
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipm	nent Installed		
0-50		DENSE	8-15		STIFF						
-50		V.DENSE	15-30 >30		V.STIFF HARD						

PROJECT: LIENT: JONTRACTOR:	SEAD, ASH SENECA AF	RMY DEPOT	RIFS					ING REP		JOB NO: 720229-0600 SHEET NO: 1 OF 1 ELEV. DATUT1929, NOD ELEV.(GS): 660.5		
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -		
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH TO WATER	STABIL - IZATION TIME	DATE STARTII- DATE FINISHII- DRILLER: Jim/	7-91	
ГҮРЕ:	AUGER	SPLIT SPOOM	ł	-						INSPECTOR: PFM	/JWC	
SIZE ID/OD:	6.24/9.63	3" O.D.		-								
HAMMER WEIGHT:	-	140 LB		-								
HAMMER FALL:	-	30 INCH										
			SAMPLE									
DEPTH (FT.)	CASING BLOWS	SAMPLE BLOWS PER	RECOVERY	SAMPLE DEPTH	VOC SCREEN		SAMPLE	DESCRIPTION	N	STRATUM D	ESCRIPTION	
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)							
		6						LAY, Trace - GR	AVEL,	Till (ML)		
1		12				and Trace Fi	ne to Medium S.	AND				
		18	-									
2		30			0.0							
		48										
3		58										
		54										
4		58			0.0							
		82										
5		100/.2										
6					0.0							
7		100/.4				Gray Weath	ered Shale, Fissii	e, Some SILT		Weathered Shale		
7		100/.2										
		100/.1				D / 100	~					
8				6-8		Refusal @ 8	<u> </u>			2		
9						Gray Shale				Competent Shale		
10												
11												
		-										
12												
13												
GR	ANULAR SO	DILS	C	HESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WEL	L DEVELOPED:		
BLOWS/FT		DENSITY	BLOWS/F	COI	ISISTENCY	VOC DE	ECTOR:	ORGANIC	VAPOR MET	ER		
)-4		V. LOOSE	<2		V.SOFT	WELL PII	PE PV	C DIAM.	2"	SLOT SIZE:	0.010	
4-10 LOOSE 2-4 SOFT 10-30 M.DENSE 4-8 M.STIFF R					SOFT							
				REMARK	S:	No Equipm	ent Installed					
30-50	0-50 DENSE 8-15 STIFF				STIFF							
·50		V.DENSE	15-30		V.STIFF							
			>30		HARD							

PROJECT: 'LIENT: ONTRACTOR:	SEAD, ASH SENECA AF EMPIRE DR	RMY DEPOT								JOB NO: 720229-0600 SHEET NO: 1 OF 1 ELEV. DATU 1929, NGD ELEV.(GS): 651.2
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): -
	CASING	SAM	PLER	CORE	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START11-8-91
								то	IZATION	DATE FINISHI1-8-91
				7				WATER	TIME	DRILLER: Jim/Alan
TYPE:	AUGER	SPLIT SPOON	,	-			+	10000		INSPECTOR: PFM/JWC
							-	-		INSERCION. FFM/JWC
IZE ID/OD:	6.24/9.63	3" O.D.		-			1	+	 	
IAMMER WEIGHT:	-	140 LB		-				-		
IAMMER FALL:	-	30 INCH	2000 S 2000 L	-						
			SAMPLE	T						
	CASINO	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTIO	N	STRATUM DESCRIPTION
DEPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN					
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)					
						Brown - Gra	ySILT, Some +	CLAY, Trace - GI	RAVEL,	Till (ML)
1						and Trace Fi	ne to Medium S	AND		
2				0-2	0.0					
3										
4			1	2-4	0.0					
				2-4	0.0	1				
-	-									
5										
6				4-6	0.0					
7										
8				68	0.0					
		201				Gray Shale				Competent Shale
9										
10										
X2.2										
- 11										
12										
12										
42				.0						
13	NIII AD C	W G		HESIVE	PAUG	VOL WA	TED LAST:	CAL	DATE WE	L DEVELOPED:
	NULAR SC	V . 34.000					TER LOST:			
LOWS/FT		DENSITY	BLOWS/F	COI	ISISTENCY				VAPOR MET	-
-4		V. LOOSE	<2		V.SOFT	WELL PIF	PE PV	C DIAM.	2*	SLOT SIZE: 0.010"
-10		LOOSE	2-4		SOFT					
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipm	ent installed	
0-50		DENSE	8-15		STIFF					
50	,	V.DENSE	15-30		V.STIFF					
			>30		HARD					

	CI	IAS. T. N	AAIN, IN	C.		TV	ST BOR	ING REP	ORT	BORING NO	
PROJECT:	SEAD, ASH					1					0229-0600
LIENT:	SENECA AL									SHEET NO: 10	
JONTRACTOR:										ELEV. DATU 19	
SONTRACTOR.	EMPINE DI	ILLING								ELEV.(GS): 65	
				T			- INDWA	TER OFARI	NOC	_	20
			10123	2002.0				TER READI	1	ELEV.(TOC): -	
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATESTARTII	
								ТО	IZATION	DATE PINISH11	-7-91
								WATER	TIME	DRILLER: Jit	n/Aien
TYPE:	AUGER	SPLIT SPOOM	4	-			-			INSPECTOR: PF	M/JWC
IZE ID/OD:	6.24/9.63	3" O.D.									
HAMMER WEIGHT:	-	140 LB		-							
HAMMER PALL:	-	30 INCH		_							
			SAMPLE								
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATUM	DESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
= = =	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
		2				Brown-Gray	SILT, Some +	CLAY, Trace - G	RAVEL	Till (ML)	
1		8	1			and Trace Fi	ne to Medium S	AND			
		12									
2		21		0-2	0.0						
		19									
3		33									
	-										
		52									
4		44		2-4	0.0						
_		85				Gray Weather	ed Shale, Fissile,	Some SILT		Weathered Shale	
5		90									
		100/.2									
6				4-6	0.0						
		100/.2									V
7				6-6.4	0.0	Gray Shale				Competent Shale	
8											
9											
10											
11											
12											
,-											
13											
	NULAR SC	NI S	6/	DHESIVE	2011	VOL WAT	TER LOST:	GAL.	DATE WEI	L DEVELOPE)•
		w 144 100			SISTENCY				VAPOR MET		
LOWS/FT		DENSITY	BLOWS/F	CUR	V.SOFT					SLOT SIZE:	0.010"
-4		V. LOOSE	<2			WELL PIP	E PV	UIAM.		SLUI SIZE:	0.010
-10		LOOSE	2-4		SOFT			N 5 .			
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipm	nent Installed		
0-50		DENSE	8-15		STIFF						
-50		V.DENSE	15-30		V.STIFF						
			>30		HARD						

PROJECT:		IAS. T. M		C.		TE	ST BOR	ING REP	ORT	BORING NO:	B-15 0229-0600	
		RMY DEPOT								SHEET NO: 10		
CONTRACTOR:										ELEV. DATU 197		
CONTRACTOR:	EMPIRE DR	ILLING										
										ELEV.(OS): 65	1,8	
							1	TER READI		ELEV.(TOC): -		
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	DATE START11-8-91		
								ТО	IZATION	DATE FINISHI1	-8-91	
							-	WATER	TIME	DRILLER: Jin	/Alan	
TYPE:	AUGER	SPLIT SPOOM	1	-						INSPECTOR: PF	M	
IZE ID/OD:	6.24/9.63	3* O.D.										
IAMMER WEIGHT:	-	140 LB		-								
IAMMER FALL:	-	30 INCH		-					-			
			SAMPLE) () () ()							
	CASINO	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM I	ESCRIPTION	
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)							
	PERFOUI		(+1.)	NAME .	(1.171)	Gray Weeth	and Chale P	nents, Black SILT,		Fill		
		18						redu, DIRCE SILT,		1111		
1		34		-		Fill Constitue	:DLS					
		34	-									
2		24										
		10						LAY, trace - GRA	AVEL			
3		8				and Trace Fi	ne to Medium S	AND		Till (ML)		
		12										
4		16										
		19										
5		21								1		
		21										
6		19										
		30				Gray Weather	ed Shale, Fimile,	Some SILT		Weathered Shale		
7		46										
		112										
8						Refusal @ 8.	1'					
		100/1								Competent Shale		
		100/.1	1			Gray Shale				Competent Share		
9												
	-											
10												
11												
12												
13												
GRA	NULAR SO	OILS	C	HESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELOPED):	
LOWS/FT		DENSITY	BLOWS/F	COI	NSISTENCY	VOC DET	ECTOR:	ORGANIC	VAPOR MET	ER		
-4		V. LOOSE	<2		V.SOFT	WELL PIF				SLOT SIZE:	0.010°	
		LOOSE	2-4		SOFT			2				
10-30 M.DENSE 4-8					M.STIFF	REMARK	c.	No Fault	nent Installed	4		
						NEMARK	.	140 Equipn	nent matemet			
0-50		DENSE	8-15		STIFF							
• 50		V.DENSE	15-30		V.STIFF							
			>30		HARD							

	CI	IAS. T. N	AIN, IN	C.		TI	ST BOR	ING REP	ORT	BORING NO:	B-16	
PROJECT:	SEAD, ASH										29-0600	
LIENT:	SENECA AI									SHEET NO: 10	-	
ONTRACTOR:										ELEV. DATUM929		
JON I HACTOR.	CMFIRE DR	ILLING								ELEV.(OS): 635.		
							DOUNDWA	TER READI	NGS		,	
					ABBEI	· · · · · · · · · · · · · · · · · · ·	1		1	ELEV.(TOC): -		
	CASING	SAM	PLER	CORE B	ARKEL	DATE	TIME	DEPTH	STABIL-	DATE STARTII-		
								то	IZATION	DATE FINISHI1-		
								WATER	TIME	DRILLER: MW		
TYPE:	AUGER	SPLIT SPOOP	1	-			-			INSPECTOR: PPN	1	
SIZE ID/OD:	6.24/9.63	3° O.D.		-				4		-		
HAMMER WEIGHT:	-	140 LB		-								
HAMMER PALL:	-	30 INCH										
			SAMPLE		******							
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATUM D	ESCRIPTION	
DEPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)							
		2				Brown - Gra	ySILT, some +	CLAY, Trace - O	RAVEL	Till (ML)		
11		6				and Trace Fi	ne to Medium S.	AND				
		11										
2		24	1.2	0.2°	0.0							
		11										
3		23										
		31		S. I								
4		44	1.3	2-4'	0.4	4.2						
		25					ed Shale, Fissile	, Some SILT		Weathered Shale		
5		100/.3			0.0							
6			0.8	4-6								
		200/.4	0.0	1	55	Refusal @ 6.7						
7		2001.4		6-6.7	,,,,	Oray Shale	_			Competent Shale		
-				6-6.7	-	Oray Shake				Competent Share		
			-									
8												
9					+	-						
46			-									
10												
11					-							
12				-	-							
13					1							
	ANULAR SC			HESIVE			TER LOST:			LL DEVELOPED:		
LOWS/FT		DENSITY	BLOWS/F	CON	ISISTENCY				VAPOR MET			
-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZE:	0.010"	
-10		LOOSE	2-4		SOFT							
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipm	nent Installed	1		
		DENSE	8-15		STIFF							
30-50												
0-50 -50		V.DENSE	15~30		V.STIFF							

	CF	IAS, T. N	IAIN, IN	C.		TI	ST BOR	ING REP	ORT	BORING NO	: B-17	
PROJECT: 'LIENT: JONTRACTOR:	SEAD, ASH SENECA AF EMPIRE DR	RMY DEPOT								SHEET NO: 1	929, NGD	
	1	I				G	ROLLNOWA	TER READI	NGS	ELEV.(TOC): -		
	CASING	SAM	PLER	CORE	ARREL	DATE	TIME	DEPTH	STABIL-	- DATE START11-13-91		
							1811	то	IZATION			
								WATER	TIME	DRILLER: M		
TYPE:	AUGER	SPLIT SPOOM	ł	-						INSPECTOR: P	FM	
SIZE ID/OD:	6.24/9.63	3" O.D.		-								
HAMMER WEIGHT:	-	140 LB		-								
HAMMER PALL:		30 INCH		-								
			SAMPLE		V.							
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATUM	DESCRIPTION	
DEPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)							
	9-1	10				Dark-brown	Pinc to Medius	n SAND, Some Cl	LAY	Fill		
1		13				Shale, concre	te, wood, and gr	ravel fragments				
		14										
2		13	.8	0.2*	0.0							
		7										
3		13										
		15				Olive-gray S	ILT, Some +CI	AY, Trace - GR.	AVEL			
4		17		2-4'	0.0	and Trace Fi	ne to Medium S.	AND		Till (ML)		
	e illin	5										
5		7										
		5										
6		10	1.6	4-6	0.0							
		90				Gray Weather	ed Shale, Fissile	, Some SILT		Weathered Shale		
7		100/.2										
8			.8	6-8	0.0							
		100/.3				Refusal @ 8.	3'				Excess II	
9						Gray Shale				Competent Shale		
	,											
10	0				-							
11					·.							
12												
13	LANCE AS A	20.6		OMESSIC	0000	1/01 11/1	TED ! AAT		DATE	1 00/01 000	D.	
	ANULAR S			OHESIVE			TER LOST:			L DEVELOPE	D:	
BLOWS/FT		DENSITY	BLOWS/F	COI	VECT				VAPOR MET		0.045	
)-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZE:	0.010	
1-10		LOOSE	2-4		SOFT	DEMARK	0.	No Ford				
0-30		M.DENSE	4-8		M.STIFF	REMARK	5:	No Equipa	nent installed			
30-50		DENSE	8-15		STIFF							
·50		V.DENSE	15-30		V.STIFF							
			>30		HARD							

	CH	IAS. T. N	IAIN, IN	C.		TI	ST BOR	ORT	BORING NO: B-18		
PROJECT: `LIENT: JONTRACTOR:	SEAD, ASH SENECA AF	LANDFILL F	RIFS							JOB NO: 77 SHEET NO: 1 ELEV. DATUM	
										ELEV.(OS): 66	5.7
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC):	
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE STARTII	-13-91
								то	IZATION	DATE PINISHII	-13-91
								WATER	TIME	DRILLER: E	mpire
TYPE:	AUGER	SPLIT SPOON	I	-						INSPECTOR: PI	
SIZE ID/OD:	6.24/9.63	3" O.D.		-						-	
HAMMER WEIGHT:		140 LB	77.55	_							
HAMMER FALL:	-	30 INCH		-				N .			
		130111011	SAMPLE								
	CASING	SAMPLE		SAMPLE	voc		SAMPI F	DESCRIPTION	ON	STRATUM	DESCRIPTION
DEPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN					J., J., J.	
	PER POOT	6 INCHES		RANGE							
	FERFOUT	o inches	(PT.)	RANGE	(PPM)	Olive C	DII T	I AV 4 05	A V/PI		
1								LAY, trace - OR	VACT	THE CAST	
•						and trace Pi	ne to Medium S	עעט		Till (ML)	
•											
2			2	0-2							
3											
3					-						
4			2	2-4							
_						Gray Weath	red Shale, Pissil	le, Some SILT		Weathered Shale	
5											
6		-	1.3	4-6							
7						Gray Shale				Competent Shale	
8											
9											
10											
11			3-1		1						
-											
12					117						
13											
	ANULAR S	Professional		OHESIVE			TER LOST:			L DEVELOPE	D:
BLOWS/FT		DENSITY	BLOWS/F	COP	ISISTENCY				VAPOR MET		
0-4		V. LOOSE	<2		V.SOFT	WELL PII	PE PV	C DIAM	. 2"	SLOT SIZE:	0.010
4-10		LOOSE	2-4		SOFT	La Vanna de la Carte	W.				
10-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipa	nent installed		
30-50		DENSE	815		STIFF						
00 00						1					
>50		V.DENSE	15-30		V.STIFF						

	CF	IAS. T. N	IAIN, IN	c.		TE	ST BOR	ING REP	ORT	BORING NO:	B-19
PROJECT:	SEAD, ASH									JOB NO: 720	229-0600
LIENT:	SENECA AF	MY DEPOT								SHEET NO: 10	F1
ONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUH92	9, NGD
										ELEV.(OS): 659	.5
						GI	ROUNDWA	TER READI	NGS	ELEV.(TOC):	
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	DATE STARTII-	-13-91
	0710			002				ТО	IZATION	DATE FINISHI1-	
								WATER	TIME	DRILLER: Em	
ГҮРЕ:	AUGER	SPLIT SPOON	,	_				11111111	1	INSPECTOR: CT	
SIZE ID/OD:	6.24/9.63	3" O.D.		_						1101001011	
AMMER WEIGHT:		140 LB		_			1	-			
										1	
HAMMER FALL:	-	30 INCH	044404		V		1				
		Ι	SAMPLE	1	T						
	CASING	SAMPLE	200000000000000000000000000000000000000	SAMPLE	VOC		SAMPLE	DESCRIPTION	74	SIKATUME	ESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER POOT	6 INCHES	(FT.)	RANGE	(PPM)						
		2						LAY, trace - GR	VEL		
1		5				and Trace Fi	ne to Medium S	AND		Till (ML)	
		.9									
2		13	2'		-						
		17									
3		21									
		\$0				Gray Weath	ered Shale, Pissi	le, Some SILT		Weathered Shale	
4		100	1.2'								
		38									
5		100/.4									
6			1'								
		100/.1				Refusal @ 6.	5'				
7						Gray Shale				Competent Shale	
8			0								
				-							
9											
10			1								
11											
12		8	1								
13											
	ANULAR S	OII S		DHESIVE	SOUS	VOI WA	TER LOST:	GAI	DATE WE	LL DEVELOPED	·
BLOWS/FT		DENSITY	BLOWS/F		NSISTENCY	VOC DE			VAPOR MET		
		V. LOOSE	-		V.SOFT	WELL PI				SLOT SIZE:	0.010"
)-4			<2			WELL PI	PV	O DIAM	. 2	SLUT SIZE:	0.010
1-10		LOOSE	2-4		SOFT	DEMARK	· ·	N- 5		,	
0-30		M.DENSE	4-8		M.STIFF	REMARK	. 5 :	No Equipi	nent installed		
30-50		DENSE	8-15		STIFF						
•50		V.DENSE	15-30		V.STIFF						
			>30		HARD						

	CI	IAS. T. N	IAIN, IN	C.		TI	ST BOR	ING REP	ORT	BORING NO: B-20
PROJECT:	SEAD, ASH									JOB NO: 720229-0600
	SENECA AF									SHEET NO: 1 OF 1
ONTRACTOR:										ELEV. DATUH929, NGD
ONTIDIOTO.	LINI IIIL DII	ILLING								ELEV.(GS): 652.8
		1		1			AWGINO	TER READI	NCC	
	0.400.0		S. 50	00050	4 D D C (2.55	1			ELEV.(TOC): -
	CASING	SAM	PLER	COREB	AHHEL	DATE	TIME	DEPTH	STABIL-	DATE START 11-14-91
								ТО	IZATION	DATE FINISHI1-14-91
						-		WATER	TIME	DRILLER: Empire
TYPE:	AUGER	SPLIT SPOON		-			-			INSPECTOR: CTM
IZE ID/OD:	6.24/9.63	3" O.D.		-			-			
HAMMER WEIGHT:	-	140 LB		-						
IAMMER FALL:	-	30 INCH								
			SAMPLE							
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM DESCRIPTION
ОЕРТН (РТ.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN					
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)					
		1				Brown - Gra	SILT, some +0	CLAY, trace - GR	AVEL	
1		4				and Trace Fi	ne to Medium S	AND		Till (ML)
		16								
2		21	1	0-2						
		18				1				
3		24								
		34								
4		40	1.3	2-4						
		43				4.3'				
5	7	75					red Shale, Fissil	le. Some SII T		Weathered Shale
-		100/.3				Gray Weath	IW JUEK, FIMI	r, some sili		residence park
6		100/.3	1.3	4 -						
		67	1.3	4-6						
7	4	57								
		100/.2								
8		Control de la co	0.4	6-8	1					
		100/.1								
9				8.8-8		Refusal @ 8.8				
						Gray Shale		-		Competent Shale
10										
11					1					
12										
		,								
13	V.7									
GRA	NULAR SC	DILS	C	OHESIVE !	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELOPED:
LOWS/FT		DENSITY	BLOWS/F	CON	ISISTENCY	VOC DET	ECTOR:	ORGANIC	VAPOR MET	TER
-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZE: 0.010"
-10	2-4		SOFT							
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipm	nent Installed	1
0-50		DENSE	8-15		STIFF					
·50		V.DENSE	15-30		V.STIFF					
			>30		HARD					
			200		IIAIID	1				

74100	CHAS. T. MAIN,	INC.				TEST S	ORING REPO	RT -		BORING	NO: B-21
PROJECT:	SEAD, ASH		RIFS							JOB NO:	720229-0600
LIENT:	SENECA AF									SHEET NO:	1 OF 1
ONTRACTOR										ELEV. DATUM:	1929, NGD
JOHN THAT OF THE	LIIII IIIL DI	ILLING								ETEA-(GW:	650.7
				1		0.5	OLINDWA	TER READI	NGS		630.7
	0401110	0444	חובה	CORER	ADDEL	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TIME	DEPTH	STABIL-	ELEV.(TOC):	
	CASING	SAM	PLER	CORE B	ARREL	DATE	IIME			DATE START:	11-14-91
								TO	IZATION	DATE FRESH:	11-14-91
		and the same for		-				WATER	TIME	ORILLER:	Empire
PE:	AUGER	SPLIT SPOON	-	+ -		-		-		IMIPECTOR:	СТМ
TE RVOO:	6.24/9.63	3° O.D.		-				+			
AMMER WEIGHT:	-	140 LB		-			+	_		-	
WAMER FALL:	-	30 INCH		-			J		1		
		ī	SAMPL	E T							
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATI	JM DESCRIPTION
EPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	ретн	SCREEN						
	PERFOCT	BINCHES	(FT)	RANGE	PPM					-	
		1				Brown-Gray	SILT, some +0	CLAY, trace - GR	AVEL		
1		10				and Trace Fi	ne to Medium S	MAND		TEI (ML)	
		17									
2		18	2'	0-2'							
		18									
3		35									
		88								VITANIA I	
4		100/.3	1.7'	2-4'		Gray Weathe	red Shale, Fiss	ile, Some SILT		Weathered 8	hale
		100/.4									
5											
6			0.3'	4-8.8							
7					1	Refusal @ 6.6	,				J. 5-07
						Gray Shale				Competent 8	halo
8			1								
						1					
9										1	
						1					
10			1								
11											
			1								
12			1								
						1					
13			1								
	ANULAR S	DILS	c	OHESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELO	PED:
GRANULAR SOILS LOWS/FT DENSITY			BLOWS/		ISISTENCY				VAPOR MET		772
-4		V. LOOSE	<2		V.SOFT	WELL PIR				SLOT SIZ	E: 0.010°
-10		LOOSE	2-4		SOFT		,	- Davim	-		- 0.010
0-30		M.DENSE	4-8		M.STIFF					4	
			8-15		STIFF	DEMARK		140 Equipi	mont motane		
0-50		DENSE									
EA		V.DENSE	15-30		V.STIFF						
-50			>30		HARD						

	CHAS. T. MAIN,	INC.		. T. 1. ()		TERT &	ORING REPO		BORING NO: B-22			
PROJECT:	SEAD, ASH									J08 NO:	720229-0800	
LIENT:	SENECA AF									BHEET NO:	1 OF 1	
ONTRACTOR												
CONTRACTOR	EMPINE DR	ILLING								ELEV. DATUM:	1929, NGD	
	1	F								ELEV.(GIS):	635.2	
		147.000			V LOUIL		1	TER READI	1	ETEA'LOC		
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START:	12-2-91	
								ТО	IZATION	DATE FRIENC	12-2-91	
								WATER	TIME	DALLER:	Empire	
TYPE:	AUGER	SPLIT SPOON							-	HISPECTOR:	СТМ	
RIZE DYOD:	6.84/8.63	3° 0.0.		-			- 25			F 8300-3		
HAMMER WEIGHT:	-	140LB		-								
HAMMER FALL:	-	30 MCH										
			SAMPL	E								
	CARING	BAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRAT	JM DESCRIPTION	
ОБРТИ (РТ)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
	PER FOOT	6 INCHES	ета	RANGE	PPM		441			<u> </u>		
		3				Olive - Gray 8	ILT, some +C	LAY, trace -GRA	VEL			
1		0				and Trace Fin	e to Medium 6	BAND		TIH (ML)		
		9										
2		14	1'	0-2'							<u> </u>	
		16				Gray Weather	red Shale Fissi	ile, Some SILT		Weathered S	halo	
3		36										
		42										
4		80	1.8'	2-4'								
5			1			Retusal @ 5.2	»					
		100/.3				Gray Shale				Competent S	hala	
6		100,.0	0.3'	4-5.2						Don poton C		
			0.5	4-5.2								
7	The first of		1									
8	-		1									
0			<u></u>									
•			-							1		
9												
40												
10	1			-								
			-	1								
11	-				-							
12				-								
			-									
13	1			1 7 2 2 2 2 2	1							
tare and taken are a con-	IANULAR SO		* ********* ***	OHESIVE			ER LOST:		DATE WE		PED:	
SLOWS/FT		DENSITY	BLOWS/	F CON	ISISTENCY			-	VAPOR ME	ER		
)-4		V. LOOSE	<2		V.SOFT	WELL PIP	E PV	C DIAM	. 2"	SLOT SIZ	E: 0.010"	
I-10		LOOSE	2-4		SOFT							
10-30		M.DENSE	4-8		M.STIFF	REMARKS	3:	No Equipr	nent Installe	i		
30-50		DENSE	8-15		STIFF							
		V.DENSE	15-30		V.STIFF							
-50		V.DLIISE	1.0									

	CHAB. T. MAIN	INC.		a federality for		TEST B	ORING REPO	RT		BORING	NO: B-23
PROJECT:	SEAD, ASH	LANDFILL F	RIFS							JOB 160:	720229-0600
'JENT:	SENECA AF	MY DEPOT								SHEET NO:	1 OF 1
ONTRACTOR	EMPIRE DR	ILLING								ELEV. DATUM:	1929, NGD
										ELEV.(GB):	635.P
						GI	ROUNDWA	TER READI	NGS	ELEV.(TOG):	-
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	DATE START:	12-2-91
	- Critical Co	G						то	IZATION	DATE FROSH:	12-2-91
								WATER	TIME	ORILER:	Emple
	AUGED			-				WATEN	1,	INSPECTOR:	СТМ
YPE:	AUGER	SPLIT SPOON		-						Marecion:	CIM
ZE 10/00:	6.24/9.63	3° O.D.		-			+				
WEIGHT:	-	140 LB		-						1	
AMMER FALL:	-	30 INCH				-					
		<u> </u>	SAMPL	E	1						
	CABING	BAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATE	JM DESCRIPTION
ұт у нтем	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(FT.)	RANGE	PFIG						
						Gray SILT, s	ome +CLAY, tr	ace - GRAVEL			
1						and Trace Fi	ne to Medium S	BAND		TH (ML)	
2			1.25	-	0.0						
3						<					
4			0.75		0.0					-	
						Gray Weathe	red Shale, Fies	ille, Some SILT		Weathered St	halo
5											
6			0.4		0.0						
7						e e					
			0.3		0.0	Refusal @ 7.	5'				
8			1			Gray Shale				Competent S	hale
9			1								
10		-									
11			1								
12			1								
12											
13											
	ANULAR S	011.6		OHESIVE	8011.6	VOI WA	TER LOST:	CAL	DATE WE	I DEVEL	PED:
		DENSITY	BLOWS/		NSISTENCY				VAPOR MET		LU.
BLOWS/FT		V. LOOSE	<2		V.SOFT	WELL PI				SLOT SIZ	E: 0.010"
)-4						WELL PI	_ PV	DIAM	. 2	3201 312	L. 0.010
1-10		LOOSE	2-4		SOFT	DEMARK	٥.	No Faul			
10-30		M.DENSE	4-8		M.STIFF	REMARK	5:	No Equipi	ment installed	,	
		DENSE	8-15		STIFF						
30-50 50		V.DENSE	15-30 >30		V.STIFF HARD						

	CHAS, T. MAIN,	INC.				TEST	ORING REPO	RT		BORING	NO: B-24
PROJECT:	SEAD, ASH	LANDFILL F	RIFS							J08 NO:	720229-0600
LIENT:	SENECA AF	MY DEPOT								SHEET NO:	1 OF 1
ONTRACTOR	: EMPIRE DR	ILLING								ELEV. DATUM:	1929, NGD
										ETEA-(G#):	643.6
						G	ROUNDWA	TER READI	NGS	ELEV.(TOG):	-
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	DATE START:	-
								то	IZATION	DATE FRESH:	-
		2						WATER	TIME	DRALER:	Empire
TYPE:	AUGER	SPLIT SPOOR		-						MISPECTOR:	СТМ
REZE NOVOO:	6.24/9.50	30.D.		-							
AMMER WEIGHT:	1			-			-				
	-	1401.8		-						1	
AMMER FALL:	-	30 INCH	041471	-							
			SAMPL	T			OAMBI E	DECORUDE	DAL	CTDATI	IM DESCRIPTION
	CASMG	BAMPLE		SAMPLE	VOC		SAMPLE	DESCRIPTION	JIA	SIMAIL	JM DESCRIPTION
LLA HLESC	eroms.	BLOWS PER	RECOVERY	DEPTH	BOREEN						
	PERFOOT	SNICHES	(FT)	RANGE	PFM					-	-
		2				Brown-Gra	y SILT, some +	CLAY, trace - GR	AVEL		
1		5				and Trace F	ine to Medium S	BAND		TH (ML)	
		8									
2		10									
		13									
3		40									
		84				3.5'					
4		100/.3				Gray Weath	ered Shale Fiss	ie, Some SILT		Weathered S	halo
		51									
5		100/.3	1								
6			1								
7			1			Bahari @ 7	n.				
		-	-	-		Refusal @ 7.				Competent S	to to
	1		1			Gray Shale				Competent	1900
8				-	_						
		-	-								
9				-							
10											
11					•						
12	- 5										
	1										
13											
G	RANULAR S	OILS		OHESIV	E SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELO	PED:
BLOWS/FT		DENSITY	BLOWS	F C	DNSISTENCY	VOC DE	TECTOR:	ORGANIC	VAPOR ME	TER	
0-4		V. LOOSE	<2		V.SOFT	WELL PI				SLOT SIZ	E: 0.010°
4-10		LOOSE	2-4		SOFT						
10-30		M.DENSE	4-8		M.STIFF						
		DENSE	8-15		STIFF	I LWAN		ito Edaibi	Jill motuno		
30-50			1								
•50		V.DENSE	15-30		V.STIFF						
			>30		HARD						

	CHAS. T. MAIN,	INC.				TEST	ORING REPO	RT		BORING	NO: B-25
PROJECT:	SEAD, ASH	LANDFILL	RIFS							J08 NO:	720229 - 0600
LIENT:	SENECA AF									SHEET NO:	1 OF 1
CONTRACTOR	: EMPIRE DR	ILLING								ELEV. DATUM:	1929, NGD
										ELEV.(GB):	645.5
						G	ROUNDWA	TER READI	NGS	ELEV.(TOQ:	-
	CASING	SAM	IPLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START:	12-3-91
				0020				ТО	IZATION	DATE FORSH:	12-3-91
						2		WATER	TIME	DRILLER:	Empire
TYPE:								WATEH	311112		СТМ
SIZE ID/00:	AUQUER	SPLIT SPOON	-	-						HISPECTOR:	СТМ
	6.34/9.63	3" 0.0.					-				
HAMMER WEIGHT:	-	140LB		-						-	
HAMMER FALL:	- 1	30 MCH	SAMPL				1		1	+	
			SAMIL				CAMPIE	DESCRIPTION	DM.	CTDATI	M DESCRIPTION
OFFICE OF THE STAT	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	-14	SINAIL	JM DESCRIPTION
DEPTH (FT.)	BLOWS	SLOWS PER	RECOVERY	DEPTH	SCREEN						
	PERFOOT	6 INCHES	(FT.)	RANGE	(PP LA)	0				 	-
4		1	1				ome +CLAY, tra				
1		4		-		and Trace F	ne to Medium S	SAND		TH (ML)	
•	M 1000 1	8	-								
2		9	1		0.0						
2		11	-								
3		33				3,					
4		55				Gray Weather	ed Shale, Fissii	e, Some SILT		Weathered St	nalo
4		100/.3	2		0.0						
		100/.4	-								
5			.5	4-4.4	0.0						
			-								
6					-						
_			-								
7	-										
	V	-				7.4'					
8					-	Gray Shale				Competent Si	naio
			-								
9	-			-							
			17.								
10											
11				-							
			-								
12											
13											
	RANULAR SC	480-1100-110-1		OHESIVE !			TER LOST:		DATE WEI		PED:
BLOWS/FT		DENSITY	BLOWS/	CON	ISISTENCY				VAPOR MET		
)-4		V. LOOSE	<2		V.SOFT	WELL PII	PE PV	C DIAM	. 2	SLOT SIZ	E: 0.010"
-10		LOOSE	2-4		SOFT						
10-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipa	nent installed	1	
30-50		DENSE	8-15		STIFF						
>50		V.DENSE	15-30		V.STIFF						
			>30		HARD	1					

	CHAS. T. MAIN,	INC.	·	1,2,43		TEST 8	ORING REPO	RT		1	NO: B-26
	SEAD, ASH		RIFS							JOS NO:	720229-0600
LIENT:	SENECA AF									SHEET NO:	1 OF 1
CONTRACTOR:										ELEV. DATUM:	1929, NGD
JOHN INGTON.	LMI IIIL DII	ILLING								ELEV-(GB):	650.6
	T	T		T		GI	ROUNDWA	TER READI	NGS	ELEV.(TOC):	-
	CASING	CAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	-	12-3-91
	CASING	SAM	PLEM	CORE	DARREL	DATE	TIME	то	IZATION	DATE START:	
										DATE FRESH:	12-3-91
				-			-	WATER	TIME	DALLER:	Empire
YPE:	AUGER	SPLIT SPOON		-			-	-		INSPECTOR:	CTM
SIZE ID/00:	6.24/8.53	3 O.D.		-			-	-			
HAMMER WEIGHT:	-	140LB		-			-	-		-	
CAMMER FALL:	-	36 INCH		-				J			-
		T T	SAMPLI	E T							
	CASHQ	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATE	JM DESCRIPTION
оертн (FT)	BLOWE	BLOWS PER	RECOVERY	DEPTH	SCHEEN						
	PERFOOT	8 NCHES	(FT)	RANGE	PPM						
			-					LAY, trace - GRA	VEL		
1	-		-	-		and Trace Fi	ne to Medium S	BAND		TH (ML)	
			-								
2											
			-								
3											
			-			3.5'					
4				-		Gray Weather	ed Shale, Fissil		Weathered Si	halo	
	100/.2					Rotusal @ 4.2					
5						Gray Shale				Competent 8	halo
6											
			-								
7	100000	0									
8											
9											
10											
11					- 1						
12											
13											
GR	ANULAR S	OILS	C	OHESIV	E SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELO	PED:
BLOWS/FT DENSITY			BLOWS/	F C	DNSISTENCY	VOC DE	TECTOR:	ORGANIC	VAPOR ME	TER	
0-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2	SLOT SIZ	E: 0.010*
4-10	-10 LOOSE 2-4 SOF				SOFT		-				
		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equip	ment Installe	d	
10-30			8-15		STIFF						
10-30 30-50		DENSE	0-10								
		V.DENSE	15-30		V.STIFF						

	CHAS. T. MAIN,	INC.		alligness for a		TERT O	ORING REPO	-		7	NO: B-27
PROJECT:	SEAD, ASH		RIFS							J08 NO:	720229-0600
LIENT:	SENECA AF									SHEET NO:	1 OF 1
	R: EMPIRE DR										1929, NGD
CONTRACTOR	N: EMPINE DR	ILLING								ELEV. DATUM:	
				1						ELEV/GB:	648.7
		1000				***	1	TER READI	114747-4-	ELEV.(TOC):	
	CASING	SAM	PLER	COREB	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START:	12-4-91
								ТО	IZATION	DATE FRESH:	12-4-81
								WATER	TIME	OPALLER:	Jim/Alan
TYPE:	AUGER	SPLIT SPOON		-						INSPECTOR:	PFM
B/2E ID/00:	0.24/0.53	3° 0.0.	11174	-							
MANNER WEIGHT:	-	140LB		-							
HAMMER FALL:	-	30 MCH		-							
			SAMPL	E WY .							
	CARMG	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	NC	STRAT	JM DESCRIPTION
נדק אויפס	IIL.OWS	BLOWS PER	RECOVERY	ретн	BCREEN						
	PERFOOT	6 INCHES	(FT)	RANGE	FFM						
						Olive - Grav !	SILT, some +C	LAY, trace - GRA	VEL		
1			1				ne to Medium S		_	TH (ML)	
· · · · · · · · · · · · · · · · · · ·				1			IA MARKELLE			- (me)	
2			2'	0-2'	0.0						
			-	0-2	0.0						
			-		4.1						
3											
			-								
4			1'	2-4'	0.0						
			-								
5			.1-								
6				4-6'	0.0	Retural @ 6.	0'				
						Gray Shale				Competent S	hale
7											
8											
9											
						1					
10			1								
						1					
11			1								
- 11						1					
46			1								
12						-					
		-	-								
45						1461			B. (= - · · · ·		
13		A 11 A		OHESIVE			TER LOST:		DATE WE		PPED:
G	RANULAR S	660, W. V. 1821			ISISTENCY	VOC DET			VAPOR MET		
G BLOWS/FT		DENSITY	BLOWS/	F COI							
G BLOWS/FT 0-4		DENSITY V. LOOSE	BLOWS/	F COI	V.SOFT	WELL PIF	PE PI	C DIAM	. 2"	SLOT SIZ	E: 0.010
G BLOWS/FT 0-4		DENSITY V. LOOSE LOOSE	BLOWS/	F COI	V.SOFT SOFT	WELL PIF	PE P\				Æ: 0.010
G BLOWS/FT 0-4 4-10		DENSITY V. LOOSE	BLOWS/	F COI	V.SOFT	REMARK			nent installed		E: 0.010*
GBLOWS/FT 0-4 4-10 10-30		DENSITY V. LOOSE LOOSE	BLOWS/ <2 2-4	F COI	V.SOFT SOFT						E: 0.010*
A CONTRACTOR OF THE PARTY OF TH		V. LOOSE LOOSE M.DENSE	8LOWS/ <2 2-4 4-8	F COI	V.SOFT SOFT M.STIFF						Æ: 0.010*

	CHAS, T. MAIN,	(MC	9000			TEST S	ORING REPO	RT		BORING	NO: B-28
PROJECT:	SEAD, ASH		RIFS							JOB NO:	720229-0600
LIENT:	SENECA AF									SHEET NO:	1 OF 1
CONTRACTOR:										ELEV. DATUM:	1929, NGD
	Limit III L DI									ELEV.(GB):	648.9
				1		GI	ROUNDWA	TER READI	NGS	ELEV.(foc):	_
	CASING	NAS	PLER	CORE B	ARREI	DATE	TIME	DEPTH	STABIL-	DATE START:	12-4-91
	OASIIVG	JA.III	LLII	O O III D		DATE	1	TO	IZATION	DATE FREEH:	12-4-91
								WATER	TIME	DRILLER:	Jim/Alen
TYPE:	ALIGER	SPLIT SPOON		-				1		BUTECTOR:	PFM
BIZE 10/00:	6.24/8.63	3°0.0.		-				100			
NAMER WEIGHT:	-	14018		-							
HAMMER FALL:		30 MCH		-							
			SAMPL	E					- Inches	1	
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	NC	STRATE	JM DESCRIPTION
DEPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	ОЕРТН	SCREEN						
	PERFOOT	S INCHES	(FT.)	RANGE	FFM						
						Olive-Gray	SILT, some +C	LAY, trace - GRA	VEL		
1							ne to Medium S			Till (ML)	
2				0-2'	0.0						
3											
		- 11									
4				2-4'	0.0						
5											
						Gray Weath	ored Shale, Fise	ille, Some SILT		Weathered S	hale
6			2	4-6'	5.0	Gray Shale				Competent 8	halo
7					- 5						
8										3	
9											
10											
			-								
11					·.						
		-								1	
12											
13		011.0		OUESONS	00110	WOL 1974	TER LOST:	GAL.	DATE WE	U DEVE	DED:
GRANULAR SOILS				OHESIVE					VAPOR ME		FEU.
BLOWS/FT		V. LOOSE	BLOWS/		V.SOFT	WELL PI				SLOT SIZ	E: 0.010"
0-4				SOFT	WELL PI		DIAM	. 2	3201 312	0.010	
4-10					M.STIFF				ment Installa	4	
10-30		M.DENSE	4-8								
30-50		DENSE	8-15		STIFF						
>50		V.DENSE	15-30		V.STIFF						
			>30		HARD	1					

	CHAS. T. MAIN,	INC.	it jair jair un			TEST I	ORING REPO	RT		BORING	NO: B-29
PROJECT:	SEAD, ASH	LANDFILL I	RIFS							JOS NO:	720229-0600
JENT:	SENECA AF	MY DEPOT								SHEET NO:	1 OF 1
ONTRACTOR	: EMPIRE DR	ILLING								ELEV. DATUM:	1929, NGD
										ELEV.(GS):	649.1
						GI	ROUNDWA	TER READI	NGS	ELEV.(TOG):	-
	CASING	SAM	PLER	COREB	ARREI	DATE	TIME	DEPTH	STABIL-	DATE START:	12-4-91
	- OAGIITO		LLIV	00112.5		Ditt. E		ТО	IZATION	DATE FINISH:	12-4-91
								WATER	TIME	DRILER:	Empire
								WAILE	Time		стм
TYPE:	AUGER	SPLIT SPOON		-						OUR ECTOR:	Cim
BIZE 10/00:	8.94/9.63	3 O.D.		-				-	-		
HAMMER WEIGHT:	-	140LB		-					-	-	
HAMMER FALL:	•	30 MCH		-						-	
		1	SAMPL	E	T						
	CARMO	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	אכ	STRATE	JM DESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(FT.)	RANGE	PPIN				-	-	
						Olive-Gray	SiLT, some +C	LAY, trace - GRA	VEL		
1						and Trace Fi	ne to Medium S	BAND		TH (ML)	
			-								
2			2	0-2'	0.0						
3											
4			2	2-4'	0.0						
	100-2-062	1,150									
5					i i	Gray Weath	red Shale, Fiss	ile, Some SILT		Weathered Si	nale
6			2	4-6'	109						
						Gray Shale				Competent S	halo
7			1								
8			1			li,					
9											
<u>_</u>											
10											
10											
11											
					· ·						
40											
12	-										
	-	-	-								
13								min.	40		
	RANULAR S		100000000000000000000000000000000000000	OHESIVE			TER LOST:		DATE WE		PED:
BLOWS/FT		DENSITY		F COI	ISISTENCY				VAPOR MET		
0-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZ	E: 0.010°
4-10		LOOSE	2-4		SOFT						
10-30		M.DENSE	4-8		M.STIFF	REMARK	S:	No Equipa	nent installed	d	
30-50		DENSE	8-15		STIFF						
		V.DENSE	15-30		V.STIFF						
>50											

	CHAS. T. MAIN,	INC.				TEBT	ORING REPO	RT .		BORING	NO: B-30
ROJECT:	SEAD, ASH									JOB NO:	720229-0600
LIENT:	SENECA AF									SHEET NO:	1 OF 1
	EMPIRE DR									ELEV. DATUM:	1929, NGD
ONTHACTOR	. LMITING DR	ILLING								SLEV.(GB):	648.P
	1			T		G	OHNOWA	TER READI	NGS	ELEV.(TOC):	-
	CACINIC	CAM	PLER	COREB	ADDEL	DATE	TIME	DEPTH	STABIL-		12-4-91
	CASING	SAM	PLEN	CORE B	ANNEL	DATE	IIME	ТО	IZATION	DATE START:	
										DATE FREEH:	12-4-91
				-			-	WATER	TIME	(PALLER:	Empire
YPE:	AUGER	SPLIT SPOON					4			INSPECTOR:	СТМ
10/00:	8.84/8.63	F0.0.	-	-				-			
MANGER WEIGHT:	-	14018		-					-		
WHITE FALL:	•	30 BICH		-		-	1				
			SAMPL	E							
	CARNO	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATI	IM DESCRIPTION
DEPTH (FT.)	SLOWS	BLOWS PER	RECOVERY	DEPTH .	SCREEN						
	PERFOOT	4 mcHES	ета	RANGE	FFM						
						Olive - Gray	BILT, some +C	LAY, trace - GRA	VEL		
11						and Trace F	ne to Medium S	BAND		TH (ML)	
2			2	0-2'	0.0						
3						¢.					
4			1.25	2-4'	21						
5						5.0'					
						Gray Weath	ered Shale, Fiss	ille, Some SILT		Weathered St	nale
6			2	4-6'	274	Rotusal @ 6.0)'				and the same of th
						Gray Shale				Competent S	nalo
7											
8											
9											
						1					
10			1								
11											
			1								
12											
						1					
13											
PROGRAMMA AND AND AND AND AND AND AND AND AND AN	RANULAR SO	DILS		OHESIVE	SOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELO	PED:
BLOWS/FT		DENSITY	BLOWS/		SISTENCY				VAPOR MET		
-4		V. LOOSE	<2		V.SOFT	WELL PI				SLOT SIZ	E: 0.010"
-10		LOOSE	2-4		SOFT						
The state of the s				M.STIFF	REMARK	S:	No Equipe	nent Installed	1		
30-50		DENSE	8-15		STIFF			Equipi	The state of the s		
>50		V.DENSE	15-30		V.STIFF						
-30		V.DENSE	>30		HARD						
			1 3 ALI								

	CHAB. T. MAIN,	INC.	Siller in	and the second		TEST S	ORING REPO	RT		BOHING	NO: B-31	
PROJECT:	SEAD, ASH	LANDFILL R	IIFS							JOB 90:	720229-0600	
LIENT:	SENECA AF	MY DEPOT								SHEET NO:	1 OF 1	
ONTRACTOR	R: EMPIRE DR	ILLING								ELEV. DATUM:	1929, NGD	
										ELEV.(GS):	654.3	
						G	ROUNDWA	TER READI	NGS	ELEV.(10G):	-	
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	DATE START:	12-5-91	
								ТО	IZATION	DATE FUESH:	12-5-91	
								WATER	TIME	DRELER:	Jim/Alen	
me:	AUGER	SPLIT SPOON		-						WIPECTOR:	PFM	
ZE ID/00:	6.24/680	700.										
MAKER WEIGHT:	-	14018		-								
	-			-			1			1		
NAMER FALL:		30 BICH	CAMPI	-	14.8 (2011)		_					
			SAMPL	1			CAMPIE	DESCRIPTION	ON.	CTDATE	IN DESCRIPTION	
	CARNO	SAMPLE	837 St. 3	BAMPLE	Voc		SAMPLE	DESCRIPTION	J.14	SINAI	JM DESCRIPTION	
ертн (РТ)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
	PER FOOT	& MICHES	(FT)	RANGE	PPM					26		
			1			SILT and CL	AY, Nalis, Glass	s, Wire, Fill Const	tuents	Fill		
1				-								
2			1.3		0.0	Olive - Gray	SILT, some +C	LAY, Trace - GRA	AVEL			
					9	and Trace Fir	e to Medium 8/	AND		TH (ML)		
3												
4			1.8		0.0							
5					1					0		
										10		
6					26							
	1				-							
7												
				-								
_			-			7.25'						
8				-	2			sile, Some SILT		Weathered S	hale	
			-			Retueal @ 6	.0'					
9					- 50	Gray Shale				Competent	Shale	
10												
						9						
11												
12												
13												
G	RANULAR S	OILS	(OHESIV	ESOILS	VOL. WA	TER LOST:	GAL.	DATE WE	LL DEVELO	PED:	
LOWS/FT		DENSITY	BLOWS/		NSISTENCY		TECTOR:		VAPOR ME			
-4		V. LOOSE	<2		V.SOFT	WELL PI		C DIAM		SLOT SIZ	E: 0.010"	
-10		LOOSE	2-4		SOFT			500	-		0.010	
						DEMAG	· · · · · · · · · · · · · · · · · · ·	No Ende	mant Install	4		
10-30		M.DENSE	4-8		M.STIFF	REMARI		No Equip	ment installe			
30-50		DENSE	8-15		STIFF							
>50		V.DENSE	15-30		V.STIFF							
			>30		HARD	1						

ADDITIONAL BORING LOGS TO BE INSERTED INTO APPENDIX C

N		IAS. T. N		C.		1E	SI BUK	ING REP	ORI	BORING NO:	-
	SEAD, ASH									-	229-0600
CLIENT:	SENECA AF	RMY DEPOT								SHEET NO: 1 O	
CONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATURI92	
						100000000000000000000000000000000000000				ELEV.(GS): 631.	0
						GF	1	TER READI	1	ELEV.(TOC): 362	89
	CASING	SAM	PLER	CORE B	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START 10-	23-91
								ТО	IZATION	DATE PINISHIO-	24-91
								WATER	TIME	DRILLER: Ed/	li m
гүре:	AUGER	SPLIT SPOOM	l	-		10/24	0800	15'	10	INSPECTOR: PFM	4
IZE ID/OD:	6.24/9.63	3ª O.D.				10/24	1315	3,6			
HAMMER WEIGHT:	-	140 LB		-							
HAMMER PALL:	-	30 INCH		-		- 177					
			SAMPLE								
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	NC	STRATUM D	ESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
		3				Olive - Gray S	ILT, some +CL	AY, trace			
1		4				-GRAVEL	trace line to med	ium SAND		Till (ML)	
		8									
2		12	2	0-2	0.0						
		16									
3		18									
		30									
4		33	2	2-4	0.0						
		29									
5		44								Stora .	
		47				Gray Weathe	red Shale, Fissile	Some SILT		Weathered Shale	
6		39	1.6	4-6	0.0						
		39									
7		39									
		54									
8		92	2	6-8	0.0						
		33									
9		100/.4									
10			.6	8-10	0.0						
		100/.3									
11											
12		100/. 1	.4	10-12	0.0						
										,	
13	- //	2007	9:		NOTE AND ADDRESS.						
GRANULAR SOILS			HESIVE :	A 400 10 1 1		ER LOST:			LL DEVELOPED:		
LOWS/FT		DENSITY	BLOWS/F	CON	ISISTENCY	VOC DET			VAPOR ME		
-4		V. LOOSE	<2		V.SOFT	WELL PIP	E PVC	DIAM.	. 2"	SLOT SIZE:	0.010"
-10		LOOSE	2-4		SOFT						
0-30		M.DENSE	4-8		M.STIFF	REMARKS	3:	Weathered	Bedrock M	onitoring Welf In:	stalled
80-50		DENSE	8-15		STIFF						
>50		V.DENSE	15-30		V.STIFF						
			>30		HARD						

	CI	HAS. T. N	IAIN, IN	C.		TEST BORING REPORT	BORING NO: MW-34
			SAMPLE				SHEET NO: 2 of 2
ОЕРТН (РТ.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
14						Gray Weathered Shale. Fissile, Some SILT	Weathered Shale
14	-						
15							
16							
17						GrayShale	Competent Shale
18							
19							
20							
21							
22							
23							
24							
26							
27							

	CI	IAS. T. N	FATN IN	7		TP	ST BOD	ING REP	ORT	BORING NO: MV		
ROJECT:	SEAD, ASH						OI DOK	ING KLI	<u> </u>	JOB NO: 720229-		
											0800	
	SENECA AI									SHEET NO: 1 OF 2		
CONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUM929, NO	JD	
				1						ELEV.(GS): 629.6		
								TER READI		ELEV.(TOC): 631.9		
	CASING	SAM	PLER	CORE	JARREL	DATE	TIME	DEPTH	STABIL-			
								ТО	IZATION	DATE FINISH 1-5-9	1	
								WATER	TIME	DRILLER: Empire		
YPE:	AUGER	SPLIT SPOON		-		11-5-91	1257	14.5	2 hrs	INSPECTOR: R. Griffi	ths	
IZE ID/OD:	6.24/9.63	3" O.D.		-					-			
IAMMER WEIGHT:	-	140 LB		-					-			
IAMMER FALL:	-	30 INCH	· · · · · · · · · · · · · · · · · · ·	-			1					
			SAMPLE		_					700745 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	CASINO	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATUM DESC	CRIPTION	
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)							
						Olive - Gray S	SILT, Some +CL	AY, Trace				
1						-ORAVEL	Trace Pine to Me	edium SAND		Till (ML)		
2												
3												
4												
5												
6												
7												
8												
9												
10												
11			-							0.50		
			-			Gray Weathe	red Shale. Fissile	Some SILT		Weathered Shale	1 2 4 4 4	
12						,						
13		-										
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		C	DHESIVE	SOILS	VOL. WAT	ER LOST:	GAL.	DATE WEL	L DEVELOPED:			
SLOWS/FT DENSITY BLOW			BLOWS/F		ISISTENCY				VAPOR MET			
-4		V. LOOSE	<2		V.SOFT	WELL PIP					0.010"	
-10		LOOSE	2-4		SOFT							
0-30		M.DENSE	4-8		M.STIFF	REMARKS	3:	Weathered	Bedrock Mc	onitoring Well Install	ed	
0-50		DENSE	8-15		STIFF							
50		V.DENSE	15-30		V.STIFF							
			>30		HARD							
			>30		UMUD							

	CI	HAS. T. N	IAIN, IN	C.		TEST BORING REPORT	BORING NO: MW-35D		
			SAMPLE				SHEET NO: 2 of 2		
рертн (гт.)	CASING BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
14						Gray Weathered Shale, Fissile, Some SILT	Weathered Shale		
					1	1			
15									
16									
17						Gray Shale	Competent Shale		
18									
19									
20									
21									
22									
23									
24	,								
26									
27									

PROJECT:	SEAD, ASH		IAIN, IN					ING REP			D: MW - 36
	SENECA AF									SHEET NO:	
CONTRACTOR:										ELEV. DATUM	
CONTRACTOR:	EMPIRE DR	ILLING									
			-				DOHNOWA	TEO DEADU	VCC .	ELEV.(OS):	
	CACINIC	0411	DLED	COREB	ADDEL	DATE	TIME	DEPTH	STABIL -	DATE START	
	CASING	SAM	PLER	COHEB	AHHEL	DATE	TIME	TO	IZATION	DATE PINISH	
								WATER	TIME	DRILLER: 1	
								WAIEN	TIME	-	
ГҮРЕ:	AUGER	SPLIT SPOON	1	-	_			-		INSPECTOR:	rm
SIZE ID/OD:	6.24/9.63	3" O.D.		-			-				
HAMMER WEIGHT:	-	140 LB		-			-		1	-	
HAMMER FALL:	-	30 INCH		-							-
	0.400:-		SAMPLE	T	l voo		CAMPIE	DESCRIPTION	iы	STRATUM	DESCRIPTION
	CASING	SAMPLE		SAMPLE	VOC		SAMPLE	DESCRIPTION	714	STRATUM	DESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)			-		1	
		2	-				Some +CLAY,				
1		4			-	-GRAVEL	Trace Pine to M	redium SAND			
		6		0.5							
2		14	2	0-2	0.0	1					
•		50/13	-								
3											
,			-							Till (MI)	
4			0.4	2-4	0.0					Till (ML)	
		19	-								
5		25			-						
		36									
6		45	2	4-6	0.0						
7	-	41									
7		45				-					
		36			-						
8		49	2	6-8	0.0	-					
		16									
9		62	-				101.1.			Washa 100 i	
40		74				Gray Weath	ered Shale. Fissi	e, Some SILT		Weathered Shale	
10		100/.2	1.8	8-10	0.0	-					
44	-	35									
11		100/.2									
40			0.0	10.10	0.0						
12			0.8	10-12	0.0						
40											
13	ANIMARIO) C		NECKE	SOILS	VOL WA	TER LOST:	CAL	DATEWE	L DEVELOPE	:D:
GRANULAR SOILS BLOWS/FT DENSITY BLOW				CON							.J.
BLOWS/FT			BLOWS/F	CUN	V SOFT	VOC DE			VAPOR MET	SLOT SIZE:	0.010"
)-4		V. LOOSE	<2		V.SOFT	WELL PII	PE PV	C DIAM	. 2"	SLUT SIZE:	0.010
4-10		LOOSE	2-4		SOFT	DEMARK	· C.	\A/41	Dad	nitoria a M. II	Installed
10-30		M.DENSE	4-8		M.STIFF	REMARK	.5:	weathered	pearock Mo	onitoring Well	installed
30-50		DENSE	8-15		STIFF						
>50		V.DENSE	15-30		V.STIFF						
			>30		HARD						

	CI	HAS. T. N	IAIN, IN	C.	44.5	TEST BORING REPORT	BORING NO: MW-36
			SAMPLE				SHEET NO: 2 of 2
ОЕРТН (РТ.)	CASING BLOWS PER POOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	SAMPLE DEPTH RANGE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
14						Gray Weathered Shale, Fissile, Some SILT	Weathered Shale
15						Refusal @ 14.8'	
16						Gray Shale	Competent Shale
17							
18							
19							
20							
21							
22							
23							
- 24							
26							
27							

	CH	IAS. T. N	IAIN, IN	C.		TI	ST BOR	ING REP	ORT	BORING NO:	MW-37
PROJECT:	SEAD, ASH									JOB NO: 720	229-0600
CLIENT:	SENECA AF	RMY DEPOT								SHEET NO: 10	F 1
CONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUM92	9, NOD
										ELEV.(OS): 631	.0
						GI	ROUNDWA	TER READI	NGS	ELEV.(TOC): 362	.89
	CASING	SAM	PLER	COREB	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START 10-	
							1	то	IZATION	DATE FINISHIO-	
								WATER	TIME	DRILLER: Ed/	
ТҮРЕ:	AUGER	SPLIT SPOOM	,	-						INSPECTOR: PF	
SIZE ID/OD:	6.24/9.63	3* O.D.		-						1	
HAMMER WEIGHT:		140 LB									
				-							
HAMMER FALL:	-	30 INCH		-							
			SAMPLE		T	5	OAMBI E	DECODINE	241	CTDATUM F	FOODINTION
	CASING	SAMPLE		SAMPLE	VOC	П	SAMPLE	DESCRIPTION	JN	SINATUML	ESCRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
		2					wa SILT, Some				
1		-11					trace fine SANI			-	
		6					SILT, Some +Cl				
2		15	1.2	0-2	0.0	-GRAVEL	trace fine to me	dium SAND		Till (ML)	
		16									
3		28									
		34									
4		44	1.0	2-4	0.0						
		21									
5		24									
		26									
6		17	1.2	4-6	0.0						
		24									`
7		25									
		100/.4									
8			0.6	6-8	0.0						
		100/.4				Gray Weath	ered Shale, Fissil	le, Some SILT		Weathered Shale	
9											
10			0.1	8-10	0.0						
		100/.3									
11											
						Gray Shale			- Andrew	Competent Shale	
12			1	10-12	0.0						
13											
V 800 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	ANULAR SO	DILS	C	HESIVE	SOILS	VOL. WA	TER LOST:	GAL	DATE WEL	L DEVELOPED	:
BLOWS/FT	A 100 CONTRACTOR 100	BLOWS/F		ISISTENCY	VOC DET			VAPOR MET			
)-4		DENSITY V. LOOSE	<2	301	V.SOFT	WELL PIF				SLOT SIZE:	0.010"
J-10		LOOSE	2-4		SOFT		-	50.10			3.0.0
10-30		M.DENSE	4-8		M.STIFF	REMARK	s.	Weathered	Bedrock Mc	onitoring Well In	stalled
		DENSE	8-15		STIFF	HEMANN		TT Galliot Bu	SOUTOUR IVIC		
30-50		V.DENSE	15-30		V.STIFF						
> 50		V.DENSE									
			>30		HARD						

PROJECT: CLIENT: CONTRACTOR:	SEAD, ASH SENECA AF	MY DEPOT	IIFS	C.			STIDOR	ING REP	OKI.	BORING NO: MY JOB NO: 720229 SHEET NO: 1 OF 1 ELEV. DATURI929, N ELEV.(GS): 657.8	-0600
						GI	ROUNDWA	TER READI	NGS	ELEV.(TOC): 659,76	
	CASING	SAM	PLER	CORE	ARREL	DATE	TIME	DEPTH	STABIL-	DATE START 10-28	-91
							1	то	IZATION	DATE PINISHI0-28-91	
								WATER	TIME	DRILLER: Empire	
TYPE:	AUGER	SPLIT SPOON		_						INSPECTOR: PFM	
SIZE ID/OD:	6.24/9.63	3" O.D.		_							
HAMMER WEIGHT:	_	140 LB		-							
HAMMER PALL:	_	30 INCH		_							
			SAMPLE						-		
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM DES	CRIPTION
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
		1			()	Olive - Grav	SILT, Some +C	CLAY, trace			
1		2					trace fine to me			Till (ML)	
		6			1	S.G. T.D.L.	to to the				
2		14	2								
		14									
3	-	14									
		9									
4		6	0.8								
-		9	0.6								
5		8									
		36									
6		100/.3	0.8								
		7	0.0								
7		8									
		36			-	Con Weath	ered Shale, Fissi	ile Same SII T		Weathered Shale	
8		100/.3				Olay Weath	ore Start, Fran	in, some size		Weathered Share	
				-							
9		100/.4									
9											
10											
10		-									
- 11											
12						Gray Shale				Competent Shale	
12						Gray State				Supercial State	
13											
A TOUR CORPER !	ANUIADO	OH S		OHESIVE	90119	VOL WA	TER LOST:	GAL.	DATEWE	LL DEVELOPED:	
BLOWS/FT	RANULAR SOILS COHESIVE SOIL DENSITY BLOWS/F CONSIS					VOC DET			VAPOR ME		
)-4		V. LOOSE	<2		V.SOFT	WELL PI				SLOT SIZE:	0.010"
1-10		LOOSE	2-4		SOFT	WLLL PI	L PV	JIAM	. 2	JEOT SIZE.	0.010
		M.DENSE	4-8		M.STIFF	REMARK	· ·	Waathara	1 Redrock M	onitoring Well Inst	alled
10-30		DENSE				DEMARK		** earliele	J Dealock M	omtoting well itist	aned
30-50		V.DENSE	8-15 15-30		STIFF						
>50		V.DENSE	1		V.STIFF						
			>30		HARD	1					

	CF	IAS. T. M	TATN IN	C **		Tris	ST ROP	ING REP	ORT	BORING NO: MW-38D		
PROJECT:		LANDFILL R		<u></u>			OI DOK		OKI	JOB NO: 720229-0600		
		RMY DEPOT	0							SHEET NO: 1 OF 2		
CONTRACTOR:										ELEV. DATUH929, NGD		
ONTHACTOR.	EMILINE DI	ILLING										
						- 0/	TO LIN DIMA	TER REARI	100	ELEV.(OS): 635.4		
	0.40010	0444	DI ED		1005		1	TER READI	T	ELEV.(TOC): 637,93		
	CASING	SAM	PLER	COREB	ARREL	DATE	TIME	DEPTH	STABIL-			
								ТО	IZATION	DATE FINISHI1-6-91		
								WATER	TIME	DRILLER: Empire		
TYPE:	AUGER	SPLIT SPOON		-						INSPECTOR: -		
IZE ID/OD:	6,24/9.63	3" O.D.		-								
HAMMER WEIGHT:	-	140 LB		-								
HAMMER FALL:	-	30 INCH	HIV IA.AAA									
		•	SAMPLE	2 4 4 1								
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATUM DESCRIPTION		
DEPTH (FT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)							
						Olive-gray S	SILT, Some +Cl	LAY, trace				
1						-GRAVEL	trace fine to me	dium SAND		Till (ML)		
2												
3												
4												
- 5												
						Gray weathe	red shale, fissile,	, some SILT		Weathered Shale		
6		-										
7												
8			1									
9												
10												
11												
12												
12												
13			1									
,,	ANIII AD C	OUS	C	OHESIVE	SUI 6/3	VOL WA	TER LOST:	GAL	DATEWE	L DEVELOPED:		
					. 25/04							
			BLOWS/F	COI	NSISTENCY	VOC DE			VAPOR MET			
1-4		V. LOOSE	<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZE: 0.010"		
l-10		LOOSE	2-4		SOFT	951115	· · · · · · · · · · · · · · · · · · ·	147		- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10		
10-30		M.DENSE	4-8		M.STIFF	REMARK	.5:	Weathered	Bedrock Mo	onitoring Well Installed		
30-50		DENSE	8-15		STIFF							
>50		V.DENSE	15-30		V.STIFF							
			>30		HARD	1						

	CI	HAS. T. M				TEST BORING REPORT	BORING NO: MW-38D		
			SAMPLE	T			SHEET NO: 2 of 2		
рертн (рт.)	BLOWS PER FOOT	SAMPLE BLOWS PER 6 INCHES	RECOVERY (FT.)	DEPTH RANGE	VOC SCREEN (PPM)	SAMPLE DESCRIPTION	STRATUM DESCRIPTION		
14						Gray Weathered Shale, Fissile, Some SILT	Weathered Shale		
15									
16									
17						Oray Shale	Competent Shale		
18									
19									
20									
21			-						
22									
23									
24									
26									
27									

	CH	IAS. T. M	IAIN, IN	C.		TI	ST BOR	ING REP	ORT	BORING NO:	MW-40
PROJECT:	SEAD, ASH	LANDFILL F	IIFS							JOB NO: 7202	229-0600
CLIENT:	SENECA AF	MY DEPOT								SHEET NO: 1 O	FI
CONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUM929	, NGD
	•									ELEV.(OS): 657.	0
						G	ROUNDWA	TER READI	NGS	ELEV.(TOC): 659.	32
	CASING	SAM	PLER	CORE	ARREL	DATE	TIME	DEPTH	STABIL-	DATE STARTIO-	29-91
								то	IZATION	DATE FINISHIO-	29-91
								WATER	TIME	DRILLER: Ed/	
TYPE:	AUGER	SPLIT SPOON		_						INSPECTOR: PPA	1
SIZE ID/OD:	6.24/9.63	3" O.D.		_							
IAMMER WEIGHT:		140 LB		_							
IAMMER FALL:	_	30 INCH		_						1	
			SAMPLE	A 60 2 2 2 1							
	CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	ON	STRATUM D	ESCRIPTION
DEPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN						
III (E I.)	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)						
	FERFOOT		(*1.)	IONGE	(LLM)	Dark Bourn	fine SAND and	+SILT, ash coal f	raements		
1		1 4				and brick fra		. 5151, 881 60811	incas,	Fill	
		6				and once in	g are use			["	
2	7	7	1.6	0-2	0.0	Olive	SILT, some +CL	AV trace			
2		9	1.0	0-2	0.0		trace line to me			Till (ML)	
3			1		'	-UKAVEL	trace time to me	dium SAND		IIII (ML)	
3		17									
		37		_						-	2.19 14
4		100	2	2-4	0.0	Gray Weath	ered Shale, Fissil	e, some SILT			
		58	-								
5		100/.1			-						
6				4-6	0.0					Weathered Shale	
_			1								
7			,								
8											
9					-						
		-									
10					-						
11											
12											200
						Gray Shale				Competent Shale	
13			L.,	1 .							
GRANULAR SOILS				DHESIVE			TER LOST:			LL DEVELOPED	:
		BLOWS/F	COL	ISISTENCY	VOC DE			VAPOR MET			
0-4 V. LOOSE <2		<2		V.SOFT	WELL PI	PE PV	C DIAM	. 2"	SLOT SIZE:	0.010"	
1-10		LOOSE	2-4		SOFT						
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:	Weathered	Bedrock Me	onitoring Well In	stalled
0-50		DENSE	8-15		STIFF	((
>50		V.DENSE	15-30		V.STIFF						
			>30		HARD						

FIGURE NO.

CF	IAS. T. N	AIN, IN	C.		TE	ST BOR	ING REP	ORT	BORING N	O: MW-41D	
SEAD, ASH	LANDFILL F	RIFS							JOB NO:	720229-0600	
EMPIRE DR	ILLING										
	1				Y		X				
						1	1	7			
CASING	SAM	PLER	CORE	ARREL	DATE	TIME	DEPTH		DATESTAR	T11-6-91	
							ТО		DATEFINIS	111-6-91	
							WATER	TIME	DRILLER:	Empire	
AUGER	SPLIT SPOON	4	-				-		INSPECTOR:		
6.24/9.63	3" O.D.		-								
-	140 LB		-								
_	30 INCH		-								
		SAMPLE									
CASING	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATU	M DESCRIPTION	
BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN							
PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)					100		
					Olive-gray S	ILT, some +CL	AY, trace		Till (ML)		
			0-2								
	21				1						
	35										
	100/.2		2-3.2		Gray Weathered Shale. Fissile. Some SILT			Weathered Sha	c		
					,		.,				
					1						
					1						
			-	-			10				
		-			Gray Shale				Competent Sha	e	
		-		-	-						
-											
NULAR SO	DILS	CC	HESIVE	SOILS	VOL. WAT	ER LOST:	GAL.	DATE WEL	LL DEVELOP	ED:	
	DENSITY	BLOWS/F	CON	ISISTENCY	VOC DET	ECTOR:	ORGANIC	VAPOR MET	ER		
	V. LOOSE	<2		V.SOFT	WELL PIP	E PV	C DIAM.	2"	SLOT SIZE	0.010"	
	LOOSE	2-4		SOFT							
	M.DENSE	4-8		M.STIFF	REMARK	3:					
				STIFF							
	DENSE	8-15		01111							
	DENSE V.DENSE	15-30		V.STIFF							
	SEAD, ASH SENECA AF EMPIRE DR CASING AUGER 6249.63 CASING BLOWS PER FOOT	SEAD, ASH LANDFILL IS SENECA ARMY DEPOT EMPIRE DRILLING CASING SAM AUGER SPLIT SPOOR 6.24/9.63 3* O.D. - 140 LB - 30 INCH CASING SAMPLE BLOWS PER PER FOOT 6 INCHES 21 35	SEAD, ASH LANDFILL RIFS SENECA ARMY DEPOT EMPIRE DRILLING CASING SAMPLER AUGER SPLIT SPOON 6.24/9.63 3° O.D. - 140 LB - 30 INCH CASING SAMPLE BLOWS BLOWS PER RECOVERY PER FOOT 6 INCHES (FT.) 100/.2 100/.2 ANULAR SOILS COMMENTED DENSITY BLOWS/F	SENECA ARMY DEPOT EMPIRE DRILLING CASING SAMPLER AUGER SPLIT SPOON - 6.249.63 3" O.D 140 LB - 30 INCH - SAMPLE BLOWS BLOWS PER RECOVERY DEPTH RANGE PER FOOT 6 INCHES (FT.) RANGE 100/.2 2-3.2 100/.2 2-3.2 ANULAR SOILS COHESIVE SILOWS/F CONTINUED SILOW	SEAD, ASH LANDFILL RIFS SENECA ARMY DEPOT EMPIRE DRILLING CASING SAMPLER CORE BARREL AUGER SPLIT SPOON - 6.249.63 3° O.D 1401B - 1001NCH SAMPLE CASING SAMPLE RECOVERY DEPTH SCREEN PER POOT 5 INCHES (FT.) RANGE (PPM) 21 35 0-2 0-2 0-2 0-3.2	SEAD, ASH LANDFILL RIFS SENECA ARMY DEPOT EMPIRE DRILLING CASING SAMPLER CORE BARREL DATE AUGER SPLIT SPOON - GAMPLE CORE BARREL DATE AUGER SPLIT SPOON - GAMPLE CORE BARREL DATE AUGER SPLIT SPOON - GAMPLE CORE BARREL DATE SAMPLE CASING SAMPLE CORE SAMPLE CORE BLOWS BLOWS PER RECOVERY DEPTH SCREEN PER FOOT 6 INCHES (FT.) RANGE (PPM) DESCRIPTION OF SAMPLE CORE PASS CORE	SEAD, ASH LANDFILL RIFS SENECA ARMY DEPOT EMPIRE DRILLING CASING SAMPLER CORE BARREL DATE TIME AUGER SPLITSPOON INDICATE TIME AUGER SPLITSPOON INDICATE TIME CASING SAMPLE SAMPLE CASING SAMPLE SAMPLE VOC SAMPLE BLOWS BLOWS PER RECOVERY DEPTH SCREEN PER FOOT 6 INCHES (FT.) RANGE (PPM) CIÓNE - pray SILT, some +CL - ORAVEL, trace fine to me 1	SEAD, ASH LANDFILL RIFS SENECA ARMY DEPOT EMPIRE DRILLING CASING CASING SAMPLER CORE BARREL DATE TIME DEPTH TO WATER AUGER AUGER SAMPLE CASING SAMPLE CASING SAMPLE CASING SAMPLE CASING SAMPLE CASING SAMPLE CASING SAMPLE CASING SAMPLE SAMPLE CASING SAMPLE SAMPLE CASING SAMPLE SAMPLE SCREEN PER POOT SINCHES (FT.) RANGE (PPM) CONSTRUCT	SEAD, ASH LANDFILL RIFS SENECA ARMY DEPOT EMPIRE DRILLING CASING SAMPLER	SEAD, ASH LANDFILL RIFS SENECA ARMY DEPOT EMPIRE DRILLING SAMPLER CORE BAREL CORE BAREL DATE TIME DEPTH TO 10ATIO DATE TIME DEPTH TO 10ATIO DATE TIME DEPTH TO 10ATIO DATE DATE TIME DEPTH TO 10ATIO DATE DATE TIME DATE DATE TO 10ATIO DATE DATE DATE TIME DATE	

FIGURE NO.

PROJECT:	SEAD, ASH		IAIN, IN	<u>. </u>	23	11	SI BUK	ING REP	UKI	JOB NO: 720229-0600
	SENECA AF									
										SHEET NO: 1 OF 1
ONTRACTOR:	EMPIRE DR	ILLING								ELEV. DATUP1929, NOD
							4,74 11			ELEV.(OS): 680.7
								TER READI		ELEV.(TOC): 683.04
	CASING	SAM	PLER	CORE	BARREL	DATE	TIME	DEPTH	STABIL-	DATE START11-7-91
								ТО	IZATION	DATE FINISHI1-7-91
								WATER	TIME	DRILLER: Empire
YPE:	AUGER	SPLIT SPOON	1							INSPECTOR:
IZE ID/OD:	6.24/9.63	3" O.D.								
AMMER WEIGHT:	-	140 LB								
AMMER FALL:	-	30 INCH		-						
			SAMPLE							
	CASINO	SAMPLE		SAMPLE	voc		SAMPLE	DESCRIPTION	N	STRATUM DESCRIPTION
EPTH (PT.)	BLOWS	BLOWS PER	RECOVERY	DEPTH	SCREEN					
	PER FOOT	6 INCHES	(FT.)	RANGE	(PPM)					
		2			T	Olive-grav.	SILT, Some +C	LAY, trace		
1		12					trace fine to me			
		20				OIL V LIL	mae to ale			
2		20								
3		15								
3		25								
	-	48								
4		50								
5										
6										Till (ML)
		18								
7		60								
		60								
8		100/.5								
		100/.5								
9										
		20								
10		35								
		100/0.0			-	Grav Wassh	ered Shale, Fissil	le Some SII T		Weathered Shale
11		.50/0.0				OLEY WESTE	SHEIC, F133()	n, ovat oill		Transcou Silaic
- 11										
40										
12						Gray Shale				Competent Shale
45										
13										
	ANULAR S			HESIVE			TER LOST:			LL DEVELOPED:
LOWS/FT		DENSITY	BLOWS/F	COI	NSISTENCY	VOC DE			VAPOR MET	
-4		V. LOOSE	<2		V.SOFT	WELL PII	PE PV	C DIAM	. 2"	SLOT SIZE: 0.010"
-10		LOOSE	2-4		SOFT					
0-30		M.DENSE	4-8		M.STIFF	REMARK	S:			
0-50		DENSE	8-15		STIFF					
50		V.DENSE	15-30		V.STIFF					
			1		HARD					

		OVE	RBUR	DEN	BOR	ING F	REPO	RT	
ENG	INEER	ING-SCIENCE	, INC. CL	IENT:	Seneca Army	y Depot	BOR	ING NO.:	B59/MW-59
PROJE LOCAT		Seneca Are Romulus, P	ny Depot (Ash Laudfil	II RI)			JOB NO.		720447-01005
DRULING	CUMMAN							OUND ELEV.:	
DRILLING	HOLE	DEPTH	SAMPL	ED.		HAMMER	START		3-29-94
					TIME				3-29-94
METHOD	DIA.	INT.	SIZE	TYPE Split Spoon	TYPE	WT/FALL	CONTRA		Empire Soils
HSA	4 1/4" ID	0-9.1	3" 8	put spoon	Hammer	140lb/ft	DRILLE		SB/B1
							INSPECT		KK/LR
							CHECKI	ED BY:	
							CHECK	DATE:	
DRILLING HSA DW MRSLC CA SPC	DRIVE-A MUD-RO	-STEM AUGERS ND-WASH TARY SOIL-CORING DVANCER	HMR SHR HHR DHR WL		IC HAMMER DLE HAMMER		SS CS 51 NS ST 3S	SPLIT SPOON CONTINUOUS S 5 FT INTERVAL NO SAMPLING SHELBY TUBE 3 INCH SPLIT SI	SAMPLING
MONITOR	ING EQUE	MENT SUMMARY	·						
INSTR	UMENT	DETECTOR	RANGE		BACKGROUN	1D	CAL	IBRATION	
T	YPE	TYPE/ENERGY	(PPM)	READING	TIME	DATE	TIME	DATE	WEATHER
OVM-58	30B	PID/10.6 eV	0-2,000	0	9:35	3/29/94	7:30	3/29/94	
Victoreen	190	Pancake XBX	variable	6-15	9:35	3/29/94			_
Particulat	e Meter	Miniram-PDM3	0-10 UM	0.02	9:35	3/29/94			
MONITOR	RING ACRO	NYMS				1	1	1	
PID		IONIZATION DETECTO	R BO	GD	BACKGROUND		DGRT	DRAEGER TU	BES
FID		IONIZATION DETECTO			COUNTS PER MI		PPB	PARTS PER BIL	
GMD SCT		MUELLER DETECTOR ATION DETECTOR			PARTS PER MILI RADIATION	LION	MDL	METHOD DET	ECTION LIMIT
сомме	NTS:				OTHER REPOWELL DEVELOP SURVEYOR CORE LOG WELL INSTALLAHYDRAULIC TE	MENT TION DETAILS STING	DATE/PENDIN	NG	N/A x x x x x x

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

	OVERBURDEN BORING REPORT										
ENG	SINEE	RING-	-SCIE	NCE,	INC.		CLII	ENT: Seneca Army Depot	BORING #:	B59	9/ MW -59
V) 100000			ONITOR	1		-		COMMENTS			
	UMENT_ VM	INTE	RVAL	BGI 0	_	9:35		No chemical samples taken	DRILLER:	SB/BT	······································
Dı	ıst			0.2		9:35		,	INSPECTOR:	KK/LR	
RA	AD _			6-15		9:35			DATE.	2 20 0	
D	S	AMPLING	3		SAMP	LE		SAMPLE	DATE:	3-29-94	
E P	BLOWS	PENE-	RECOV-	DEPTH			RAD	DESCRIPTION		USCS	STRATUM
T H	PER 6	TRATION RANGE	ERY RANGE	INT (FEET)	NO.	VOC	SCRN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification	inor Components	CLASS	CLASS
(FT)		(FEET)	(FEET)	<u> </u>	+					<u> </u>	
ĺ	1	0	1.0	NT A	AT A	0		0-0.3' Olive gray SILT, little organic material, wet,			-
-	2		1.6'	NA	NA	0	oga_	0.3'-1.4' Olive gray, grading downward from SILT,	•	ľ	-[
<u>ا</u>	3	_				0		and CLAY, little f to m gray Shale frags. and gravel	grading		-
2 _	5	2			-	0		downward from soft to medium stiff, saturated.			-
	7	2	0,	NT A	D.T.A	0		1.4'-1.6' fractured weathered gray shale fragment,			<u> </u>
-	14		2'	NA	NA	0	oga_	2'-2.6' Olive gray CLAY and f to m SAND, slightly			Till –
	21					0	-	weathered shale fragments, saturated, med. stiff, iro	•		-
4 -	44	4				0		2.6'-3.1' Olive gray CLAY and f to m SAND, sligh			4.0'
	30	4	1.7	NT A	D.T.A	0	L	weathered shale fragments, wet, med. stiff, iron stair	•		-
_	32		1.7	NA	NA	1	bgd_		the onve gray clay		-
_	54 95					0		saturated, med. dense, iron staining.		,, _G , ,	
6 –		6			-	0				W. Shale	
	100/.3'	0	0.22	NI A	DIA	U	had	CLAY moist, loose, iron staining.	oo CIIAI E		-
-			0.3'	NA	NA		bgd_	4'-4.5' Gray slightly to higly weathered fine to coarse SHALE		-	
8		62	i					fragments, trace intersticial clay, saturated, loose	oores CIIAI E		-
° -	100/.1	6.3 8	NR		NA	BT A	DT A	4.5'-5.7' Gray slightly to highly weathered fine to c			-
	100/.1	8.1	IVIC		MA	INA	INA.	fragments, trace intersticial clay, saturated in selecte otherwise dry, loose.	u areas		01,
-	100/.1	9	NR		NA	NT A	NT A	6'-6.3' Highly weathered SHALE, dry to moist			9.1'
10	100/.1	9.1	IVIC		INA	INA	INA	No Recovery after the 6'-8' split spoon.			-
10—		7.1		-				No Recovery after the 0 -8 split spoon.			C. Shale
								Boring Terminated at 9.1'			C. Silale
_							-	After 3 spoon refusals, call 9.1 competent rock			-
								Bottom of overburden 4.0'			-
-							-	Bottom of overbuilden 4.0			-
								Water at 3.1'			-
_							_				
		'					-	_			
-							_				1
							-				-
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-							_				
	ļ										
-							-				_
-								-			1
-							-				

PAGE 2 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #:

B59

ENGINEERING-SCIENCE, INC. CLIENT: Seneca Army Depot BORING NO.:	B60/MW-60
	200/11211
PROJECT: Seneca Army Depot (Ash Landfill RI) LOCATION: Romulus, NY JOB NO.: EST. GROUND ELEV.:	72044701005
DRILLING SUMMARY: START DATE:	3~29-94
DRILLING HOLE DEPTH SAMPLER HAMMER FINISH DATE:	3-30-94
METHOD DIA INT. SIZE TYPE TYPE WT/FALL CONTRACTOR:	Empire Soils
HSA 4 1/4" ID 0-9.1 3" Split Spoon Hammer 1401b/ft DRILLER:	SB/BI
INSPECTOR:	KK/LR
CHECKED BY:	
CHECK DATE:	
DRILLING ACRONYMS: HSA HOLLOW-STEM AUGERS HMR HAMMER SS SPLIT SPOOD DW DRIVE-AND-WASH SHR SAFETY HAMMER CS CONTINUOU MRSLC MUD-ROTARY SOIL-CORING HHR HYDRAULIC HAMMER 51 5 FT INTERV. CA CASING ADVANCER DHR DOWN-HOLE HAMMER NS NO SAMPLIN SPC SPIN CASING WL WIRE-LINE ST SHELBY TUE 3S 3 INCH SPLIT	S SAMPLING AL SAMPLING G E
MONITORING EQUPMENT SUMMARY	
INSTRUMENT DETECTOR RANGE BACKGROUND CALIBRATION	
TYPE TYPE/ENERGY (PPM) READING TIME DATE TIME DATE	WEATHER
OVM-580B PID/10.6 eV 0-2,000 0 1530 3/29/94 7:30 3/29/94	
Victoreen 190 Pancake XBX variable 5-10 1530 3/29/94	
Particulate Meter Miniram - PDM3	
	
SCT SCINTILLATION DETECTOR RAD RADIATION	
COMMENTS: OTHER REPORTS DATE/PENDING WELL DEVELOPMENT SURVEYOR CORE LOG	N/A x
WELL INSTALLATION DETAILS	x
HYDRAULIC TESTING GEOPHYSICAL LOGGING	x x

PAGE 1 OF 2

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING NO.: B60

	OVERBURDEN BORING REPORT										
ENC	SINEE	RING-	-SCIEI	NCE,	INC.		CLII	ENT: Seneca Army Depot	BORING #:	В6	0/MW-60
		M	ONITORI	ING				COMMENTS:			
	UMENT	INTER	RVAL	BGI		TII			DRILLER:	SB/BT	
	VM			0.0)	1530		No chemical samples taken	n vontramen		
Du R/				0.0 5-10		1530 1530			INSPECTOR:	KK/LR	i
	<u> 10</u>			5-10		1330	,		DATE:	3-29-94	ا
D	S	AMPLING	ì		SAMP	LE	,	SAMPLE			
E P	BLOWS	PENE-	RECOV-	DEPTH			RAD	DESCRIPTION		USCS	STRATUM
T H	PER	TRATION	ERY	INT	NO.	voc	SCRN	(As you Burmaistan aglor amin size MAJOR COMPONENT M	inon Components	CLASS	CLASS
(FT)	6 INCHES	RANGE (FEET)	(FEET)	(FEET)			SCRIN	(As per Burmeister: color, grain size, MAJOR COMPONENT, M with amount modifiers and grain-size, density, stratification,	wetness, etc.)		
	1	0				0		0-0.4' Brown SILT, little organic clay, trace f gravel	, wet, soft		
	2		1.5'	NA	NA	0	bgd	0.4'-1.3' Light Brown to Olive gray grading downw	ard from SILT		1
-	4		1.5	1		0	-8-	, little clay to Clay, grading downward from trace f. t			-
				1					_		│
2 _	7	2			-	0		and gravel. grading downward from soft to med. stiff	trace of organic		-
	35	2				0		clay throughout, most to wet throughout			
	50		1.5'	NA	NA	0	bgd	1.3'-1.5' Gray coarse Shale fragments, fractured, w	eathered, little		Till _
	30					0		olive gray Clay, loose, moist, saturated in a few place	es.		
4	30	4				0		2'-2.4' Gray coarse Shale fragments, trace olive gra	v Clav.		4.3'
l · -	34	4				0		saturated, loose.	,,		
		7		27.4		~		<u></u>	C1		_
-	65		1.4	NA	NA	0	bgd_	-	ay Clay,		-
	100/.4					0		saturated, loose.			_
6 _		6				0		3'-3.5' Gray coarse Shale fragments, trace olive gra	ay Clay,		W. Shale
	100/.2	6				0	-	saturated, loose.			ľ
			0.2'	NA	NA		bgd	4'-4.3' Brown to olive gray SILT and CLAY, some	f. to m.		1
-					-		-6-	grading downward from soft to stiff.			_
8		6.3						F	u to cliabtly		-
° -			<u> </u>	 	-	 		4.3'-5.4' Highly weathered gray SHALE, dense, dr	y to slightly		i -
	100/.1'	8			NA	NA	NA	_moist.			_
l _			0.1'				_	6'-6.1' Fractured, weathered SHALE, little organic	c Clay, saturated.		9.1'
l								6.1'-6.2' Fractured SHALE, more competent than	above, dense, dr	.	
10		8.1						8'-8.1' Fractured SHALE, finely laminated, satura	ted.		
-								<u> </u>			C. Shale
								Boring Terminated at 9.1'			-
-				-			-	 			-
								After 3 spoon refusals, call 9.1 competent rock			_
_							_	Bottom of overburden 4.3'			4
								L			
							_				
		1]				-				
-	 						-	<u> </u>			-
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	<u>L</u> _]					_				
		1									

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SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

BORING #: B60

PROJECT .	81-26-8020	DATE	July 1979
LOCATION	Seneca AD, NY	DRILLERS	LT Corbitt, Mr. Smithson
DRILL RIG	Acker II	BORE HOLE	10

(Feet)	SAMPLE TYPE BLOWS		
DEPTH	BLOWS PER 6 IN	<u> </u>	REMARKS
		Brown clay with gravels	
<u>-</u>		,	
		•	
5			
	_	Gray, hard shale	
-			
	·		
10			
-	•	Blue-black shale, flakes	Water drilling Auger refusal
\dashv			
-			
\dashv			

PROJECT	81-26-8020	_ DATE	July 1979
		DRILLERS	LT Corbitt, Mr. Smithson
DRILL RIG	Acker II	BORE HOLE	10

(Feet)	SAMPLE TYPE BLOWS PER 6 IN	·	
DEPTH	PER 6 IN	DESCRIPTION	REMARKS
		, .	
		·	
-		·	
20			
		More gray in color.	
		Fine grain.	
25			
	,		
	:	·	
30			

PROJECT .	81-26-8020	DATE _28 July 1979
LOCATION	Seneca AD, NY	DRILLERS LT Corbitt, Mr. Smithson
DRILL RIG	Acker II	BORE HOLE 10

_			
(Feet)	SAMPLE TYPE BLOWS		
DEPTH	PER 6 IN	DESCRIPTION	REMARKS
_			
_			
35		·	
_			
40			
70			
_			,
			:
45			

PROJECT	81-26-8020	DATE 28 July 1979			
	Seneca AD, NY	DRILLERS	LT Corbitt. Mr. Smithso		
DRILL RIG	Acker II	BORE HOLE	10		

(Feet)	SAMP LE TYPE		
DEPTH	BLOWS PER 6 IN	\ DESCRIPTION	REMARKS
_		•	
-		5	
_			
50		·	
-			
_		Bottom of hole.	Could not tell if water was hit.
-			
55		·	
_			
-			
-			
60			

PROJECT 81-26-8020 LOCATION Seneca AD, NY	DATE 28 July 1979 DRILLERS LT Corbitt, Mr. Smithson			
DRILL RIG Acker II	BORE HOLE			
SAMPLE (Feet) TYPE BLOWS DEPTH PER 6 IN DESCRIPTION	. REMARKS			
Burnt ash -	•			
Light gray weathered	shale			
5 —	Very moist			
10				
Bottom of hole				

PROJECT	81-26-	-8020	DATE 28 July 1979 DRILLERS LT Corbitt, Mr. Smithso BORE HOLE 12				
LOCATION	Seneca	a AD, NY					
DRILL RI	IG Acker	r II					
(Feet)	SAMP LE TYPE BLOWS	DESCRIPTION		REMARKS			
DEPTH	PER 6 IN	Top soil		NEI B WIND			
_		Brown clay					
_							
5		Weathered shale					
_				WT			
10							
-		Bottom of hole					
15							

PROJECT LOCATION			DATE 2 August 1979 - DRILLERS LT Corbitt, Mr. Smithso		
DRILL RI	G Acker	r II	BORE HOL	E	
(Feet)	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION		REMARKS	
5		Top soil Gray shale Bottom of hole		WI	

PROJECT 81-26-8020 LOCATION Seneca AD, NY	DATE - 2 August 1979 DRILLERS LT Corbitt, Mr. Smithson			
DRILL RIG Acker II	BORE HOLE 14			
SAMP LE (Feet) TYPE				

(Feet)	SAMP LE TYPE		
DEPTH	BLOWS PER 6 IN	DESCRIPTION	REMARKS
		Top soil	
		Soft shale	
-	-	,	·
_		Hard shale starts	
5			
			Unable to determine specific height
10			WT
			·
15.5		Bottom of hole	

PROJECT	81-26-8020	DATE 2 August 1979	_
LOCATION	Seneca AD, NY	DRILLERS LT Corbitt. Mr. Smithso	n
DRILL RIG	Acker II	BORE HOLE 15	

	SAMPLE	I	
(Feet)	TYPE	1	
DEPTH	BLOWS PER 6 IN	1	REMARKS
		Top soil	
		Soft shale	
_			•
		Hard shale	
_		· .	
5		·	•
-			Very moist
10		•	Very moist
7			
\dashv			
.5.5			
		Bottom of hole	



TEST BORING LOG

PROJECT

Ground Water Monitoring Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING

30" — ASTM D-1586, STANDARD PENETRATION TEST

LOCATION

Seneca Army Depot Romulus, New York

DATE STARTED

9/24/87

DATE COMPLETED

9/24/87

HAMMER FALLING

FISHER ROAD EAST SYRACUSE, N.Y. 13057

HOLENO. PT-16

SURF. EL.

JOB NO.

87188

GROUND WATER DEPTH WHILE DRILLING 4.0'

BEFORE CASING

REMOVED

4.0'

AFTER CASING

3.0' ln

REMOVED

Well

C - NO. OF BLOWS TO DRIVE CASING 12" W/

"/OR - % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE	С	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1		2/3		TOPSOIL	1.5'
	2.01			3/5	6		
	2.0'-	2		6/12		clay, trace fine gravel	2.0'
WL V	4.0'			12/10	24		
5.0	4.01-	3		504		dense SHALE GRAVEL and SILT	5.01
	4.41					Gray wet hard silty weathered SHALE	
•						Augered to 11.0'	
	8.0'-	4		5031			
10.0	8 31						
						Bottom of Boring	11.0
						Joseph Committee	
						Note: Installed 2" PVC screen 9.0' to	
15.0						4.0', 2" PVC riser to surface	
	i					with locking cover.	
						With focining covers	
							- - - - - -
			 				
		_					
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			-		-		
	!	1	1		1 1		1



TEST BORING LOG

FISHER ROAD EAST SYRACUSE, N.Y. 13057

PROJECT

Ground Water Monitoring Well

LOCATION

Seneca Army Depot Romulus, New York

30" — ASTM D-1586, STANDARD PENETRATION TEST

N -- NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING

DATE STARTED

9/24/87

DATE COMPLETED

9/24/87

HAMMER FALLING

HOLE NO. PT-17

SURF. EL.

JOB NO. 87138

GROUND WATER DEPTH

WHILE DRILLING 5.0'

BEFORE CASING

REMOVED

3.0'

AFTER CASING REMOVED

3.0' In Well

C — NO. OF BLOWS TO DRIVE CASING 12" W/

"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	С	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	1		2/3		TOPSOIL	
ĺ	2.01			3/4	6		1.5'
	2.0'-	2		3/6		Brown moist medium stiff SILT, fine	
	4.0'			7/15	13	to coarse SAND and fine to coarse	
5.0	4.01-	3		4/6		GRAVEL	3.51
WL	6.0'			16/50-		Gray moist very stiff SILT and SHALE	
				.31		GRAVEL	5.0'
ĺ	6.0'-	4		504		Gray wet hard silty weathered SHALE	
Ī	6.4 ^t						
10.0	8.0'-	5		504'		Augered to 11.0'	
	8.41						
						Bottom of Boring	11.0'
						Note: Installed 2" PVC screen 9.0' to 4.0', 2" PVC riser to surface with locking cover.	
}							
,							
					- 1		1

DRILLING LOG (The proponent of this form is HSHB-ES)

PROJECT -	38-26-0313-88 Seneca AD	DATE	18 Oct 87	
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		DRILLERS	William P. Smithson	
DRILL RIG	Acker AD-II	BORE HOLE	Well PT-19	

	SAMP LE TYPE BLOWS		
DEPTH	PER 6 IN	DESCRIPTION	REMARKS
(feet	:)	Moist brown silty-gravely-clay	
-			
5	_		·
5.5		Gray shale, fractured 1	
-			
		Cuttings very dry	
10		Very hard shale Some fracture zones	•
-		·	
-			
14 -		вон	

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DRILLING LOG (The proponent of this form is HSHB-ES)

P	ROJECT 38-26	-0313-88 Seneca AD	DATE 18	Oct 87
LOCATION West of incinerator		DRILLERS .	William P. Smithson	
_	approximately 200	feet		
D	RILL RIG Ack	er AD-II	BORE HOLE	Well PT-20
	SAMPLE TYPE BLOWS DEPTH PER 6 IN	DESCRIPTION		REMARKS
	(feet)	Brown silty-gravely-c	lay	
			,	· · ·
	2.5	Weathered shale		
	5 —			•
-	6.67	3		
	_			
	10			
	-	Hard shale		
	14	вон		

DRILLING LOG

(The proponent of this form is HSH6-ES)

PROJECT	38-26-0313-88 Seneca AD	DATE -	16 Oct 87
LOCATION	Between incinerator and	DRILLERS	William P. Smithson
perimete	r security road		
DRILL RIG	Acker AD-II	BORE HOLE	Well PT-22

DEPTH	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION	REMARKS
(feet)		Brown silty-pebbly-clay	
(1661)		brown silty-pebbly-clay	
3.7 _		3	
5		Weathered shale	
_			
10		Hard shale	4
12 —		вон	
		•	

DRILLING LOG

(The proponent of this form is HSH8-ES)

PROJECT .	38-26-0313-88	DATE	18 Oct 87
11100201			William P. Smithson
LOCATION			
DRILL RIG	Acker AD-II	BORE HOLE	Well PT-23

		,	
	SAMPLE		
	TYPE		
	BLOWS		
DEPTH	PER 6 IN	DESCRIPTION	REMARKS
-		Brown silty, gravely-clay; dry	
(feet)		brown sirty = gravery-cray, dry	
_			
			• .
i			
_			.*
4.5		Gray shale dry cuttings	
5 —		Gray share dry cuttings	
5.5		Light brown dry cuttings 3	
		Light brown, dry cuttings 3	Very quiet, easy
			drilling
_			Slower drilling
			Slower driffing
8 -			
		Hard shale	
1			
10			
		Dry cuttings	
10.5			***
_		ВОН	
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US ARMY ENVIRONMENTAL HYGIENE AGENCY

DRILLING LOG

(The proponent of this form is HSHB-ES)

DRILL RIG	Acker AD-II	BORE HOLE	Well PT-24
LOCATION	Corner of fence offset	DRILLERS	William P. Smithson
PROJECT	39-26-0313-88 Seneca AD	DATE -	18 Oct 87

SAMP LE TYPE		
BLOWS DEPTH PER 6 I	DESCRIPTION	REMARKS
(feet)	Brown silty gravely clay and ash	
	,	
3		
3 — Shelby	Ash, weathered shale	
4.75	3	
5 Tubes 5.5	Hard shale	Oil slick on mud
_		
_		
10	вон	
_		
-		

DRILLING LOG (The proponent of this form is HSHB-ES)

PROJECT -	38-26-0313-88	DATE -	ATE = 17 Oct 87	
	On fenceline, between wells			
17 and 15				
DRIII RIG	Acker AD-II	BORE HOLE	Well Pt-25	

	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION	REMARKS
(feet)		Brown silty=pebbly clay film	
2 —		Weathered gray shale	
5.67		3	
9 -		Hard shale	
10			· · · · · · · · · · · · · · · · · · ·
_		Very hard, some fractures	Oil slicks on and coming from hole
14		ВОН	

DRILLING LOG

(The proponent of this form is HSHB-ES)

PROJECT	DATE 18 Oct 87
LOCATION North end of airstrip out	DRILLERS William P. Smithson
side of perimeter fence (NE corner)	
DRILL RIG Acker AD-II	BORE HOLE - Well PT-26

DEPTH	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION	REMARKS
(feet)		Red-brown clay, some sand and silt	
2 —		Very weathered shale?	
3.5		Gray-brown weathered shale	
5.2		3	
_			
10		Gray chips at shale	
11 -		Hard shale	
15		Very hard 17' BOH	

DRILLING LOG (The proponent of this form is HSHB-ES)

PROJECT Seneca Army Depot	DATE -	14 November 1989
LOCATION 86.5 feet SW from PT-23		
110.5 feet from MW-28		
DRILL RIG Mobile B-80 with 6-inch	BORE HOLE	MW27

			,
	SAMPLE TYPE BLOWS		
DEPTH	PER 6 IN	DESCRIPTION	REMARKS
1 —	·	Dark brown silty clay Weathered gray shale	
· —			
5			
_			
_		вон	_
8 —		Gray shale	
10			·
		./ +	- -
_			
<u>-</u>			

DRILLING LOG (The proponent of this form is HSHD-ES)

PROJECT Seneca Army Depot	DATE -	14 November 1989
LOCATION 81 feet from fence line		
110.5 feet from MW-27		
DRILL RIG Mobile B-80 with 6-inch	BORE HOLE	MW28

SAMFLE TYPE BLOWS DEPTH PER 6 IN DESCRIPTION RI O Dark brown silty clay	
DEPTH PER 6 IN DESCRIPTION RI	
DEPTH PER 6 IN DESCRIPTION RI	
O Dark brown silty clay	EMARKS
Weathered gray shale	
·	
5	
_	
ВОН	
8 gray shale	
	A CONTRACTOR OF THE CONTRACTOR
	Allega de

DRILLING LOG (The proposent of this form is HSHB-ES)

			,		
P	ROJECT		Army Depot	DATE -	14 November 1989
L	OCATION	167	feet from PT-24 58' feet	DRILLERS	D. Kestner, S. Curran
	from				
D	RILL RI		B-80 with 6-inch stem auger	BORE HOLE	
,	ОЕРТН	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION		REMARKS
	0		Dark brown silty clay		
	1 —				
i			Weathered gray shale		
	_				
	_				•
	-				
	5				
	-				
	_				
	9 -	· +	BOH Gray shale		
	10		Gray Share		
l					
	_				
			•		
					,

DRILLING LOG (The proponent of this form is HSHB-ES)

					.,
P	ROJECT		Army Depot	DATE -	14 November 1989
L	OCATION	29 fe	et from G Road 85.5 feet	DRILLERS	D. Kestner, S. Curran
_	feet fr	om PT-17			
D	RILL RI	G Mobile	B-80 with 6-inch stem auger	BORE HOLE	MW- 30
		SAMP LE TYPE			
	DEPTH	BLOWS PER 6 IN	DESCRIPTION		REMARKS
	0		Dark brown silty clay		
	1 —	-	Weathered gray shale		
	_			-	
	_				
	5				
	_				
	٠,		вон		
	7	1	Gray shale		
	_				
	10-				
	_		•		•
	_				
-1		1		ļ	

			The proponent of this for		
	ROJECT OCATION	50 5	Army Depot feet from fence	DATE —— DRILLERS	D. Kestner, S. Curran
	114.5 f	eet from	MW-30		
D		G Mobile		BORE HOLE	MW- 31
	DEPTH	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION		REMARKS
-	0		Dark brown silty clay	,	
	2 —		Weathered gray shale		
		: ·•	·		
	5	,	•		
	•				
	9		BOH Gray shale		
	10				
	<u>.</u>	4			

DRILLING LOG (The proposent of this form is HSHB-ES)

			, , , , , , , , , , , , , , , , , , , ,		
P	ROJECT	Seneca	a Army Depot	DATE -	14 November 1989
	OCATION		et from [©] of intersection N-30, 154 from PT-17		D. Kestner, S. Curran
D	RILL RI	G Mobile	B-80 with 6-inch stem auger	BORE HOLE	MW- 32
	ОЕРТН	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION		REMARKS
	0		Dark brown silty clay		
	5	•	Weathered gray shale	•	
	8 —		вон		
	9		Gray shale		
	10				

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DRILLING LOG (The proponent of this form is HSHB-ES)

ח	חס ובכד	Seneca	a Army Depot	DATE	14 November 1989
	ROJECT OCATION	/0.5-	et from E of road,	DATE —— DRILLERS	D. Kestner, S. Curran
_			31, 158 feet from PT-25		
D	RILL RI		B-80 with 6-inch stem auger	BORE HOLE	MW 33
,	DEPTH	SAMPLE TYPE BLOWS PER 6 IN	DESCRIPTION		REMARKS
	0		Dark gray shale		710
	1 —		Weathered gray shale		
	5				
	8		BOII Gray shale		
	-		Gray Share		
	10				
	_				
			·		
	_				
	<u>·</u>				

SENECA ASH LANDFILL DRAFT RI REPORT

APPENDIX D GEOPHYSICAL ANOMALY EXCAVATION LOGS

200 150		CHAS T MAIN, IN		TEST PIT REP	308 NO:	TEST PIT NO: TP-1 720229-05000
PROJECT: PRELIMINARY SITE CHARACTERIZATION REPORT ASH LANDFILL NON-COMBUSTIBLE DEBRIS LANDFILL CONTRACTOR: EMPIRE DRILLING, INC.				DATE FINISH: OPERATORS: INSPECTORS:	DECEMBER 5, 1992 I DECEMBER 5, 1992 I J. HAMMOND, A. KIMBELL J. CUPP, J. PETERS	
	7,07,071		10, 1110.		LINE	16 (1,482 FT.)
DEPTH (FT.)	FOUND AREA OBJECT				SOIL TYPE	
	NO	10 L x 3 W x 5 D	N/A			
1'	NO OBJECTS FOUND			TOPSOI	L GRADING I	NTO FILL
2'	NO OBJECTS FOUND			FILL		
3'	NO OBJECTS FOUND			FILL		
4'	NO OBJECTS FOUND			FILL		
5'	5' NO OBJECTS FOUND (BOTTOM OF HOLE 5') 6'				FILL	
6'						
I	VOC DET	ECTOR:	PARTI	CULATE METER:	RAI	DIATION METER:
OVM-580B			IRAM PDM-3 -0.12 MG/M3		MINI-CONRAD 0 MRADS	

	(CHAS. T. MAIN, IN	C.	TEST PIT REP	ORT	TEST PIT NO: TP-2
PRELIMINARY SITE CHARACT ASH LANDFILL NON-COMBUSTIBLE DEBRIS CONTRACTOR: EMPIRE DRILLING, INC.			AOB NO: SHEET NO: DATE START: DATE FINISH: OPERATORS: INSPECTORS: LINE:	720229-05000 1 OF 1 DECEMBER 5, 1992 DECEMBER 5, 1992 J. HAMMOND, A. KIMBELL J. CUPP, J. PETERS 16 (1,446 FT.)		
DEPTH (FT.)	FOUND AREA OBJECT			SOIL TYPE		
	YES	10 L x 3 W x 4.5 D	9"			
1'	SINGLE PIECE OF STEEL MEASURING 1x1 (SQ. FT.)			TOPSOI	L GRADING I	NTO FILL
2'	NO OBJECTS FOUND			FILL		
3'	NO OBJECTS FOUND			FILL		
4'	NO OBJECTS FOUND			FILL		
5'	NO OBJECTS FOUND (BOTTOM OF HOLE 4.5')				FILL	
6'						
	VOC DET	ECTOR:	PART	ICULATE METER:	RA	DIATION METER:
OVM-580B		NIRAM PDM-3 5-0.12 MG/M3		MINI-CONRAD 0 MRADS		

		CHAS. T. MAIN, IN	C.	TESTERIORE	ORT	TREST PROPERTY 3	
PROJECT: LOCATION: CONTRACTOR:		PRELIMINARY S ASH LANDFILL NON-COMBUS EMPIRE DRILLIN	TERIZATION REPORT,	EDRINO: SHEET NO: DATE START: DATE FINISH: OPERATORS: INSPECTORS: LINE:	720229-05000 1 OF 1 DECEMBER 5, 199 DECEMBER 5, 199 J. HAMMOND, A. KIMBELL J. CUPP, J. PETERS 16 (1,432 FT.)		
DEPTH (FT.)	OBJECT FOUND	TEST PIT DIM TEST PIT AREA (CUBIC FT.)	TENSIONS DEPTH TO OBJECT		SOIL TYPE		
	NO	10 L x 3 W x 5 D	N/A				
1'	NO OBJECTS FOUND			TOPSOIL GRADING INTO FILL			
2'	NO OBJECTS FOUND			FILL			
3'	NO OBJECTS FOUND			FILL			
4'	NO OBJECTS FOUND			FILL			
5'	NO OBJECTS FOUND (BOTTOM OF HOLE 5')			FILL			
6'							
	VOC DET	ector:	PARTI	CULATE METER:	RA	DIATION METER:	
OVM-580B			IRAM PDM-3 -0.12 MG/M3		MINI-CONRAD 0 MRADS		

	(HAS T MAIN IN	<u>e</u> .	TEST PIT REP	ORT	TEST PIT NO: TP-4
PROJECT: LOCATION: CONTRACTOR:		PRELIMINARY SITE CHARACT ASH LANDFILL NON-COMBUSTIBLE DEBRIS EMPIRE DRILLING, INC.		12/12/2012/2012/2017	ADB NO: SHEET NO: DATE START: DATE FINISH: OPERATORS: INSPECTORS LINE:	720229-05000 1 OF 1 DECEMBER 5, 1992 DECEMBER 5, 1992 J. HAMMOND, A. KIMBELL J. CUPP, J. PETERS 16 (1,252 FT.)
DEPTH (FT.)	OBJECT FOUND	TEST PIT DIM TEST PIT AREA (CUBIC FT.)	ENSIONS DEPTH TO OBJECT	SOIL TYPE		
	YES	10 L x 3 W x 4.5 D	2.5'			
1'	NO OBJECTS FOUND			TOPSOIL GRADING INTO FILL		
2'	2 CONCRETE FOOTINGS WITH STEEL FENCE POSTS THEREIN			FILL		
3'	NO OBJECTS FOUND			FILL		
4'	NO OBJECTS FOUND			FILL		
5'	NO OBJECTS FOUND (BOTTOM OF HOLE 4.5')			FILL		
6'						
VOC DETECTOR: PARTIC			CULATE METER:	RA	DIATION METER:	
OVM-580B			IRAM PDM-3 MINI-CONRAD -0.12 MG/M3 0 MRADS			

	(CHAS. T. MAIN, IN	(6.	TEST PUREP	ORT	TEST PIT NO: TP-5
PROJEC LOACTI CONTR		PRELIMINARY S ASH LANDFILL NON-COMBUS EMPIRE DRILLIN	TIBLE DEBRIS	CTERIZATION REPORT, SHEET NO: 1 OF 1 DATE START: DECEMBER 5, 19 DATE START:		
DEPTH (FT.)	OBJECT FOUND	TEST PIT DIM TEST PIT AREA (CUBIC FT.)	ENSIONS DEPTH TO OBJECT		SOIL TYPE	
	YES	10 L x 3 W x 5 D	2' & 3'			
1'		NO OBJECTS FOUR	ND	TOPSOIL GRADING INTO FILL		
2'		ONCRETE FOOTING EL FENCE POSTS T	State of the state	FILL		
3' 1 REINFORCED CONCRETE PIPE 16" I.D. (APPROX.)				FILL		
4'		NO OBJECTS FOUR	ND	FILL		
5'		NO OBJECTS FOUR		FILL		
6'						
	VOC DETI	ECTOR:	PARTI	TICULATE METER: RADIATION METE		DIATION METER:
OVM-580B				INIRAM PDM-3 MINI-CONRA 05-0.12 MG/M3 0 MRADS		MINI-CONRAD 0 MRADS

PAGE 1 OF 2

				TEST	PIT REPO	RT				
ENG	GINEE	RING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PI	1		
PROJE LOCAT	CT: FION:	Seneca Army I Ash Landfill,	Depot Romulus, NY		E			JOB NUMBER: 720447 EST. GROUND ELEV. INSPECTOR: Cupp/Fuller		
TEST F	IT DA	ГА					CONTRACT			
	IGTH	WIDTH	DEPTH	E	XCAVATION/SHORING METHOD		START DAT			
	0'	4'	6'					ON DATE: 12-28-92		
							CHECKED B			
MONIT	CODING	DATA				COMMENT	DATE CHEC	KED:		
MONI	INSTRU		DETECTOR	BACKGROUND	TIME/DATE	-11	fucted at Level "B"			
	OVM-									
						1				
						1				
						TOTAL SAM	IPLES:	No Samples Taken		
SCALE		SAM		STRATA	DESCRIPTION OF	F MATERIALS				
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER ME	ETHODOLOGY)	-	REMARKS		
					0-6" Turf and topsoil plus fill					
_										
_								-		
6"										
					Fill no objects found					
_ ,										
$ ^{1}$										
_										
_										
-								\vdash		
_										
2										
					Cill an abiants found					
-					Fill no objects found					
_										
3										
-										
_										
-								_		
_					,			_		
4										
					Fill no objects found					
-					in in objects to alla			-		
_								_		
-										
_								_		
5										

	TEST PIT REPORT											
			ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	1					
		DATA										
I	NSTRUM	ENT_	DETECTOR	BACKGROUND	TIME/DATE	DATE START:	12-28-92					
						DATE FINISH:	12-28-92					
				<u> </u>		INCREGROB	O (T. 11					
							Cupp/Fuller					
						CONTRACTOR:	American Auger					
SCALE	VOC./	54	MPLE	STRATA	DESCRIPTION OF MATERIAL	9						
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER METHODOLOG		REMARKS					
5'												
							_					
					Refusal at 5.5' Rock Ledge/END OF TEST P	IT						
<u> </u>							_					
6'												
						-						
—												
_												
			i									
7'												
							_					
8 [,]												
0												
_												
			i									
_												
_ 1							-					
9,												
	_											
							_					
_												
-												
							_					
							_					
							_					
—							_					
							TOTAL DATE 1					

				TEST	PIT REPO	RT		
EN	GINEE	RING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PIT	2
PROJE LOCA		Seneca Army I Ash Landfill, I	Depot Romulus, NY			JOB NUMBER: 720447 EST. GROUND ELEV. INSPECTOR: Cupp/Fuller		
TEST I	PIT DA	ГА	 				CONTRACTO	
LEN	IGTH	WIDTH	DEPTH	Е	XCAVATION/SHORING METHOD		START DAT	E: 12-28-92
1	0'	3'	6.8'		· · · · · · · · · · · · · · · · · · ·			N DATE: 12-28-92
							CHECKED B DATE CHEC	
MONI		DATA	ı			COMMENTS		
	OVM-		DETECTOR	BACKGROUND	TIME/ DATE	All work was a	onducted in Le	ual #D#
	0 4 141	- 300D				All Work was Co	onducted in Le	ACT D
				_				
						-		
						TOTAL SAM	PLES:	No Samples taken
SCALE	VOC./	SAM		STRATA	DESCRIPTION O			P
(FT)	RAD.	NUMBER	DEPTH RANGE _	SCHEMATIC	(BURMEISTER MI	ETHODOLOGY)		REMARKS
_					0-6" Turf and topsoil plus fill			
6"								
1					Fill			
			•					_
							i	
2								
3					Steel Plate 14"x14"x1/8" with hing	ies		_
						,		
					12" rock			-
								<u> </u>
								!
4								
_					PHII			
_					Fill			
_								_
5								

SEE MASIER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT 2

MONITORING DATA INSTRUMENT DETECTOR BACKGROUND TIME/DATE DATE START: 12-18-92 DATE FINISH: 12-18-92 INSPECTOR: Cupp/Fuller CONTRACTOR: American Auger SCALE VOC/ SAMPLE STRATA DESCRIPTION OF MATERIALS					TEST	PIT REPORT		
INSTRUMENT DETECTOR BACKGROUND TIME/DATE DATE START: 12-18-92 DATE FINISH: 12-18-92 DATE				ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	i 2
DATE FINISH: 12-18-92								
SCALE VOC/ RAD REMARK S' STRATA OBSCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY) Competent rock found at 6.8/END OF TEST PIT Competent rock found at 6.8/END OF TEST PIT	I	INSTRUM	ÆNT	DETECTOR	BACKGROUND	TIME/ DATE		
SCALE VOC SAMPLE STRATA DESCRIPTION OF MATERIALS (FT) RAD NUMBER DEPTH RANGE SCHEMATIC 6' Competent rock found at 6.8'/END OF TEST PIT 7' Competent rock found at 6.8'/END OF TEST PIT 8' Competent rock found at 6.8'/END OF TEST PIT							DATE FINISH:	12-18-92
SCALE VOC SAMPLE STRATA DESCRIPTION OF MATERIALS (FT) RAD NUMBER DEPTH RANGE SCHEMATIC 6' Competent rock found at 6.8'/END OF TEST PIT 7' Competent rock found at 6.8'/END OF TEST PIT 8' Competent rock found at 6.8'/END OF TEST PIT				-			INGREGIOR	0 77.11
SCALE VOC/ SAMPLE STRATA DESCRIPTION OF MATERIALS (BURMEISTER METHODOLOGY) REMARK 5'								
CFT RAD NUMBER DEPTH RANGE SCHEMATIC (BURMEISTER METHODOLOGY) REMARK							CONTRACTOR:	American Auger
CFT RAD NUMBER DEPTH RANGE SCHEMATIC (BURMEISTER METHODOLOGY) REMARK				_				
CFT RAD NUMBER DEPTH RANGE SCHEMATIC (BURMEISTER METHODOLOGY) REMARK	SCALE	VOC./	SA	MPI E	STRATA	DESCRIPTION OF MATERIA	LS	T -
Competent rock found at 6.8'/END OF TEST PIT 7' 8'						(BURMEISTER METHODOLOG	GY)	REMARKS
Competent rock found at 6.8'/END OF TEST PIT 7' 8'	5,							
Competent rock found at 6.8'/END OF TEST PIT 7' 8'								
Competent rock found at 6.8'/END OF TEST PIT 7' 8'								
Competent rock found at 6.8'/END OF TEST PIT 7' 8'								_
Competent rock found at 6.8'/END OF TEST PIT 7' 8'	_							_
Competent rock found at 6.8'/END OF TEST PIT 7' 8'								
Competent rock found at 6.8'/END OF TEST PIT 7' 8'								_
	6′	_						
							-	
								_
								_
8'						Competent rock found at 6.8'/END OF TEST	PIT	
8'	7,							
								_
								_
g [*]	8'							
9'					-			
9'	_							_
	_							
9'								
	_							
	9'							
	-							_
								_
	-							
								_
	-							_
-								_
								_
_								_

PAGE	1 OF 2
TEST PI1	3
JOB NUMBER:	720447
EST. GROUND ELI	EV.
INSPECTOR:	Cupp/Fuller
CONTRACTOR:	Amer Auger
START DATE:	12-28-93

COMPLETION DATE: 12-28-93

CHECKED BY: DATE CHECKED:

MONITORING DATA **COMMENTS:** INSTRUMENT DETECTOR BACKGROUND TIME/DATE OVM-580B TOTAL SAMPLES: No Samples taken DESCRIPTION OF MATERIALS STRATA SCALE VOC./ SAMPLE (FT) RAD. NUMBER DEPTH RANGE SCHEMATIC (BURMEISTER METHODOLOGY) REMARKS 0-6" Turf and topsoil plus fill 6" Fill 1 Fill 3 4 Fill

TEST PIT REPORT

EXCAVATION/SHORING METHOD

CLIENT: U.S. Army Corps

ENGINEERING-SCIENCE, INC.

WIDTH

3'

Seneca Army Depot LOCATION: Ash Landfill, Romulus, NY

DEPTH

6.5'

PROJECT:

TEST PIT DATA

LENGTH

12'

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT

				TEST	PIT REPORT			
			ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	i 3	
		DATA				1		
1	NSTRUM	ENT	DETECTOR	BACKGROUND	TIME/DATE	DATE START: DATE FINISH:		
				-		DATE PINION.		
						INSPECTOR:	Cupp/Fuller	
						CONTRACTOR:		er
		-		CTTD ATTA	DESCRIPTION OF MATERIA	10		
SCALE (FT)	VOC./ RAD.	NUMBER	DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION OF MATERIA (BURMEISTER METHODOLO		REMAR	KS
5'	ruib.	TTOMBET			Fill			
<u></u>								_
								_
					1			
					:			_
								_
6'								
<u> </u>								
					6.5 Depth to competent rock/END OF TEST	T PIT		
								_
								_
7'								
								-
_								
- 1								
								_
8'								
			1					_
								_
								_
9'								
	- "							
-								_
_								_
								_
_								_
								_
_								_
								_
								_
-								_
								_
			SEE A	ASTER ACRONY	M LIST FOR COMPLETE LISTING OF ABBR	EVIATIONS	TEST PIT	3

				TEST	PIT REPO	RT		
ENG	GINEE	RING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PI	Γ # : 4
PROJE	CT:	Seneca Army I Ash Landfill, I	Depot			_	JOB NUMBE EST. GROU	
LOCAI	ION:	Asn Landin, 1	Comulus, N 1				INSPECTOR	
	IT DAT		DEPTH		NO AVATION (GUODING A FETUOD		CONTRACTO	OR: Amer Auger
	GTH	WIDTH 5'	DEPTH 11'	E E	XCAVATION/SHORING METHOD		START DAT	E: $\frac{12-28-92}{12-28-92}$
				_			CHECKED B	Y:
MONIT	ORINO	DATA	<u> </u>			COMMENT	DATE CHEC	KED:
	INSTRU	MENT	DETECTOR	BACKGROUND	TIME/DATE	1		
	OVM-	-580B				-		
						1		
						-		
						TOTAL SAM	IPLES:	No Samples Taken
SCALE (FT)	VOC./ RAD.	SAM NUMBER	PLE DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION O (BURMEISTER M			REMARKS
(11)	RAD.	NOMBER	DEFIN RANGE		0-6" Turf and Topsoil plus fill	ETHODOLOGI		REWARD
-					Tarrana Topson plas in		,	
_								
6"								
_								
_ 1								
_								
_								
-								
_								_
2								
_					Fill			_
_					- 3 concrete posts 3'x 8" diam			_
3					-1 concrete piece with green pa	int		
					-1 concrete post 16"x 8"diam. w	ith stel pipe insid	le	
					-several small pieces of scrap we	ood		_
-								_
-								_
_					,			_
4								
_					Fill no objects found			_
_								
_								
_								_
 5								_
J		L	l					<u> </u>

	TEST PIT REPORT												
			ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	i 4						
		DATA											
	NSTRUM	ENT	DETECTOR	BACKGROUND	TIME/ DATE	DATE START: DATE FINISH:	12-28-92						
		-	-			DVIELIMI9U;	14-40-74						
						INSPECTOR:	Cupp/Fuller						
						CONTRACTOR:	American Auger						
							1						
SCALE (FT)	VOC./ RAD.	NUMBER	MPLE DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION OF MATERIA (BURMEISTER METHODOLO		REMARKS						
5,													
⊢' ∣							_						
-													
_				·									
6'													
-													
7'													
					-4"x6"x4' wood piece with nails								
					TAO AT WOOD PLEES WITH HAIRS								
				ļ			_						
_							_						
8'													
					-3" fragment of red clay pipe								
 													
_													
_							_						
-							_						
9'													
<u> </u>							_						
L							_						
10'					10' Depth to competent rock/END OF TEST	PIT							
<u> </u>							_						
-							_						
L													
			and the same of th	100000	A LIGHT HOD COLON THE LIGHT OF ARREST	CATI ATTIONS	TECT DIT A						

PAGE 1 OF 2

<u> </u>				TEST	PIT REPO	ORT		
EN	GINEE	RING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PIT	T #: 5
PROJE LOCA	CT: TION:	Seneca Army I Ash Landfill, I	Depot Romulus, NY				JOB NUMBER: 720447 EST. GROUND ELEV. INSPECTOR: Cupp/Fuller	
TEST F	IT DAT	ГА					CONTRACTO	OR: Amer Auger
LEN	IGTH	WIDTH	DEPTH	E	XCAVATION/SHORING METH	OD	START DAT	E: 12-29-92
COMPLETION DAT CHECKED BY: DATE CHECKED:								
MONI		DATA		Tu		COMMENTS	S:	
	OVM -		DETECTOR	BACKGROUND	TIME/DATE	40 DEG, Drizzel All work done	in level B	
SCALE	VOC./	SAM	DI E	STRATA	DESCRIPTION	TOTAL SAM N OF MATERIALS	PLES:	No Samples Taken
(FT)	RAD.	NUMBER SAM	DEPTH RANGE	SCHEMATIC		METHODOLOGY)		REMARKS
					0-6" Turf anf Topsoil plus fil	1		
		•						_
 6"								_
					DH11			
_					Fill			-
1					-Reinforced concrete debris,	, electrical insulator		
					-Iron Pipe 6'x 2"			_
					-Several 8" diam. X 3' concre	ete post footings		
					-Electrical Cable			
_					- 8"x8"x2" Asphalt Debris			
2								
					- Concrete fence post footing	gs		
					-Electrical Cable			
3					- 8"x8"x2" Asphalt Debris			
4								
•					-4'-8' Wood pots from old f	fence posts		
					-4 oz clean glass bottle	poon		
_					. 32 cican giass cottic			
[_
5								<u> </u>

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT 5

				TEST	PIT REPORT		
ENGI	NEER	ING-SCI	ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	i 5
MONIT	ORING	DATA_					
I	NSTRUM	ENT	DETECTOR	BACKGROUND	TIME/ DATE	DATE START:	
-						DATE FINISH:	12-29-92
					 	INSPECTOR:	Cupp/Fuller
						CONTRACTOR:	
SCALE	VOC./		MPLE DURENT BANGE	STRATA	DESCRIPTION OF MATERIAL		DEMARKS
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER METHODOLOG		REMARKS
5'							_
 							
							_
_,							
6'	_				<u></u>		
 							
L							_
 							_
7'							
L							_
<u> </u>	1						
<u> </u>	1						_
8'							
<u> </u>							_
							_
-							
L 1							_
9'							
							_
-							
H							
<u> </u>	Ì						_
10'							
				<u> </u>	Toron		1
					-Tree Branches		
					-Water at 10.5'		
-							_
11'		l					
			SEE N	ASTER ACRONY	M LIST FOR COMPLETE LISTING OF ABBRE	VIATIONS	TEST PIT 5

							PAGE 2 OF 2
				TEST	PIT REPORT		
			ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	i 5
	NSTRUM	DATA	DETECTOR	BACKGROUND	TIME/DATE	DATE START:	
						DATE FINISH:	12-29-92
						INSPECTOR: CONTRACTOR:	Cupp/Fuller American Auger
							_
SCALE (FT)	VOC./ RAD.	SA NUMBER	MPLE DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION OF MATERIA (BURMEISTER METHODOLO		DEMARKS
12'	ICAD.	NOMBER	DEFIN RANGE	SCHEWATIC	(BOKNESTEK METHOLOCO	<u> </u>	REMARKS
							_
					-12.5' Weathered shale fragments		_
_							
13'							<u> </u>
_							
_							
-							
_							_
14'							
_					14.5 Competent rock/END OF TEST PIT		
_							_
15'							
_							_
_							_
_							_
-							_
-							
-							
-							_
-							
					-Tree Branches		
_					~Water at 10.5'		

	٠							PAGE 1	OF 2
		•		TEST	PIT REPO	RT			
EN	GINEE	RING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PI	Γ#:	6
PROJE		Seneca Army I Ash Landfill, I			JOB NUMBER: 720447 EST. GROUND ELEV. INSPECTOR: Cupp/Fuller				
LEN	PIT DAT NGTH 12'	VIA WIDTH 4'	DEPTH 8'	Е	XCAVATION/SHORING METHOD		CONTRACTO START DAT COMPLETIC CHECKED B DATE CHEC	OR: E: ON DATE: Y:	Amer Auger 12-30-92
MONI	CORING	DATA	<u> </u>			COMMENT			
	INSTRU M — 580E	JMENT	DETECTOR	BACKGROUND	TIME/ DATE	Weather: 45 degree F, light drizzle All work was conducted in Level "B"			
						TOTAL SAM	PLES.	No Sample	c taken
SCALE (FT)	VOC./ RAD.	SAM NUMBER	IPLE DEPTH RANGE	STRATA SCHEMATIC		LIPTION OF MATERIALS EISTER METHODOLOGY)			MARKS
6"					$0\!-\!6$ " Turf and topsoil plus fill				
_ 1					Debris found within the fill included the control of the control o				
_	OVM				– 1 gallon plastic pail				_
_	4.5 ppm				 Residential refuse in plastic b 	ags			
_									
2									
_				:	Debris included: — Steel cable 1/2" x 8'				
3					 Pockets of ash — dark grey sta 	nined fill			
_					 dark grey weathered shale 				
_				:					

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

Clean and medium brown sand

4'-7'

TEST PIT #6

				TEST	PIT REPORT		
ENG	INEER	ING-SCI	ENCE, INC.	CLIENT:	U.S. Army Corps	TEST PIT	i 6
MONI	CORINC	3 DATA					·
	NSTRUM	ŒNT	DETECTOR	BACKGROUND	TIME/DATE	DATE START:	12-30-92
						DATE FINISH:	12-30-92
						INSPECTOR:	Cupp/Fuller
						CONTRACTOR:	
						1	
SCALE	VOC./	SA	MPLE	STRATA	DESCRIPTION OF MATERIA	LS	
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER METHODOLO		REMARKS
5'					See description for 4'-7' above		
					See description for 4 = 7 above		_
├							
	0						
							_
L			1				
6'							
<u> </u>			 				
					See description for 4'-7' above		
				1			
L_							_
	0						
—	v						_
							-
7'							
					Weathered shale to competent shale at 8'0"		
-					Weathered shale to competent shale at 80		
							_
_							
			ļ				
\vdash							_
8'					End of Test Pit		
L 1							
			İ	1			
⊢ ∣							_
							_
L_							
9,							
\vdash				:			_
	1				·		
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<u> </u>							_
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<u> </u>							
							_
<u> </u>							_
			L	L	A LIGHT DOD GOLDEN THE LIGHT OF A LINE		THE CALL PARTY III C

SEE MASIER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #6

				TEST	PIT REPO	KT			
EN	GINEE	RING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PIT	"#: 7	
PROJE		Seneca Army I					JOB NUMBE		
LOCA	rio n :	Ash Landfill, I	Romulus, NY				EST. GROUND ELEV. INSPECTOR: Cupp/Fuller		
TEST I	PIT DA	ΓΑ					CONTRACTOR: Cupp/Fuller Amer Auger		
	IGTH	WIDTH	DEPTH				START DAT	E: 12-30-92	
1	.0'	4'	9'	Backhoe excavat	ion/no sharing		COMPLETIO CHECKED B	N DATE: <u>12-30-92</u>	
							DATE CHEC		
MONI	CORING	DATA				COMMENT			
	INSTRU		DETECTOR	BACKGROUND	TIME/DATE	W4b 45 d	P. Caba d		
	70	/A			Weather: 45 degree F, light dri Level B for inspectors and con				
							postore unit so.		
						TOTAL CAN	DI EC.	No Comples toles	
SCALE	VOC./	SAM	PLE	STRATA	DESCRIPTION OF	TOTAL SAM	PLES:	No Samples taken	
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER ME			REMARKS	
					0-6" Turf and topsoil				
_					Piece of debris found within 0-2	'include:		_	
_						merade.		_	
_					- Piece of asphalt 18"x8"x4"			-	
					- Piece of CMP (corrugated me	tal pipe) approx	imately	_	
1					3-4 feet long - see photo				
_								_	
								_	
								_	
								_	
2									
					Debrish found within fill includes	:			
					- Automobile tire			_	
_								-	
_ 3					Miscellaneous dimensional lui	mber debris		_	
	OVA =				- Municipal solid waste - refus	e in plastic bags		_	
	0 ppm				Pockets of ash - black stained	l soils – OVM :	= 0 ppm		
	rr						1 K	_	
_								_	
								_	
4									
					4-7'				
								_	
_					Clean sandy soil			_	
	OVA				an oily sheen forms on water s	urface when the	:		
	4.5 ppm				backhoe bucket removes mat'	1		_	
_	ակկ շ.բ				Justinos buenet removes that	•		_	
5									

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #7

	TEST PIT REPORT											
			ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	i 7					
		DATA	Т.	,		l						
I	NSTRUM	ENT	DETECTOR	BACKGROUND	TIME/ DATE		12-30-92					
						DATE FINISH:	12-30-92					
				-		INSPECTOR.	Cupp/Fuller					
<u> </u>					-	INSPECTOR: CONTRACTOR:	Cupp/Fuller					
				1		CONTRACTOR:	American Auger					
 						1						
SCALE	VOC./	SA	MPLE	STRATA	DESCRIPTION OF MATERIA	ILS	<u> </u>					
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER METHODOLO		REMARKS					
5'					See above description for 4'-7'							
- "					See above description for 1							
<u> </u>												
6,												
°							_					
L												
7'												
\vdash												
					Weathered shale encountered at 7'. Backho	e dug into						
					weathered shale in one local region to confir	m and						
⊢ ∣					shale in one local region to comi	m, and	_					
					encountered competent shale at 9'0".							
├-							_					
8'												
			İ				_					
							_					
							_					
							_					
9'					End of Test Pit							
					·		_					
L l												
⊢ ∣							_					
							_					
							_					
							_					
L												
<u></u>							_					
<u> </u>												
			SEE N	AASTER ACRONY	M LIST FOR COMPLETE LISTING OF ABBR	EVIATIONS	TEST PIT #7					

PAGE	1	OF	1
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	TEST PIT REPORT											
ENGINE	ERING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PIT	8 :#					
PROJECT:	Seneca Army I	Depot - Ash L	andfill		- [[JOB NUMBE						
LOCATION:	Romulus, NY			EST. GRO			ND ELEV.					
TEST PIT DA	ATA					CONTRACT(
LENGTH	WIDTH	DEPTH		XCAVATION/SHORING METHOD		START DAT						
10'	3'	6'	Backhoe/No shar	ring used			N DATE: 12-30-92					
						CHECKED B						
MONITORIN	IG DATA		I		COMMENTS		KUD.					
	RUMENT	DETECTOR	BACKGROUND	TIME/DATE	Weather: over	east, 45 degree	F					
					Conducted in "	Level B"						
					TOTAL SAM	PLES:	No samples collected					
SCALE VOC. (FT) RAD		DEPTH RANGE	STRATA SCHEMATIC	DESCRIPTION OF (BURMEISTER ME			REMARKS					
(PT) TRAD	. NUMBER	DEPTH RANGE	SCHEMATIC				KEWARKS					
_				Turf and topsoil – debris found in	icludes:							
_				- Fragments from 6" clay pipe								
				- Sheet metal scraps at 1'x3'								
				-Small pieces of scrap lumber								
1				-Plastic garbage bags	- Twisted shee	et metal 2'x6'						
				Debris found within the fill includ	es:							
				Automobile time and sim (see	1 4 - X		-					
_				- Automobile tire and rim (see p	onoto)		_					
				- 4"x8'x2' lumber			_					
				- 4" diameter x 8' long steel lally	column							
_ 2							_					
				Debris found within the fill includ	es:		_					
				- Wood railroad tie 4"x8'x8' long	}							
				- 16" CMU (concrete mortar uni	(t)							
_	İ			,	it)							
				- Steel "I" beam 2" x5' long								
3												
_												
							_					
_												
-												
4												
				Undisturbed brown sandy soil								
_												
_							_					
_ [_					
5		L	<u> </u>									

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #:

TEST PIT REPORT											
			ENCE, INC.	CLIENT:	U.S. Army Corps	TEST PIT	#: 8				
MONIT	ORING	DATA									
1	NSTRUM	ENT	DETECTOR	BACKGROUND	TIME/ DATE	DATE START:	12-30-92				
						DATE FINISH:	12-30-92				
<u> </u>						INSPECTOR.	Cupp/Fuller				
						INSPECTOR: CONTRACTOR:	Cupp/Fuller				
						CONTRACTOR:	Amei. Augei				
SCALE	VOC./	SA	MPLE	STRATA	DESCRIPTION OF MATERIAL						
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER METHODOLOG	GY)	REMARKS				
5'					Weathered shale						
-											
L							_				
5'6"											
					Compatent shale						
-					Competent shale						
-											
⊢ ∣							_				
					Bottom of excavation pit at 6'6"						
-					l l l l l l l l l l l l l l l l l l l						
							_				
					All OVA readings = 0 ppm						
-					0 rr-		_				
L							_				
							_				
							_				
							_				
							_				
_							_				
-							_				
L							_				
-							_				
-							_				
							_				
L											
[⁻											
-							_				
							_				
-							-				

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #: 8
H:\Eng\Seneca\ASHRI\Tables\Tspt-8#2

TEST PIT REPORT											
EN	GINEER	ING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PIT	Γ#: 9			
PROJE	CT:	Seneca Army	Depot				JOB NUMBE				
LOCA	TION:	Ash Landfill,	Romulus, NY				EST. GROUN				
TEST I	IT DATA	<u> </u>					INSPECTOR:				
LE.	NGTH	WIDTH	DEPTH	Ε	XCAVATION/SHORING METHOD		START DAT	E: 12-29-92			
	11'	4"	6.0	Dug with Backho	oe, No sharing			ON DATE: 12-29-92			
							CHECKED B DATE CHEC				
MONITORING DATA						COMMENT					
	INSTRUM		DETECTOR	BACKGROUND	TIME/DATE						
	OVA					Conducted in	rcast, drizzle 35 Level B	-40 degree F			
						Conducted in	LCVCI D				
SCALE	VOC./	SAN	APLE	STRATA	DESCRIPTION OF	TOTAL SAM	IPLES:	No Samples			
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER ME			REMARKS			
					Topsoil, Turf						
6"	0 ppm				OVA = 0 ppm						
					6" Iron pipe fragment found			_			
1	0 ppm				OVA = 0 ppm						
_					Debris Found Includes:						
					- 1 Gallon paint can						
					- Styrofoam chips			_			
_					- Plastic garbage bag						
2											
_				i	Debris Found Includes:						
	0.4 ppm				- Plastic garbage with beer bottle	es					
					- Electric breaker equipment						
				!	- 2"x6" lumber scraps			_			
3					An oil sheen is developing on the	water from a po	oint source	Water at 2.8'			
_		•			- Cover to 55 gallon drum						
					- Plywood pieces			_			
					- 1 Gallon "Prestone" anti-free:	ze container					
					- 12" diameter steen round macl	hine gear — see	photo				
4					– Fill						
					In-Situ Soils						
_								_			
5											

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS TEST PIT #9

ENGINEERING—SCIENCE, INC. MORITORING DATA NOTIONESY OFFICIAN BACKGROUND TIME DATE DATE START: [2-29-92] DATE START: [2-29-92] DATE FINISH: [2-	TEST PIT REPORT											
INTELLIFENT DETECTION BACKGROUND TIME/DATE DATE STAKET 12-29-52	ENGI	NEER:	ING-SCI	ENCE, INC.	CLIENT:	U.S. Army Corps/SEAD	TEST PIT	i 9				
INTELLIFENT DETECTION BACKGROUND TIME/DATE DATE STAKET 12-29-52	MONIT	ORING	DATA					· -				
DATE FINISH: 12-29-92				DETECTOR	BACKGROUND	TIME/ DATE	DATE START:	12-29-92				
SCALE VOC SAMPLE STRATA DESCRIPTION OF MATRIALAS STATE ADD NAMES OF THE ANDES STRATA DESCRIPTION OF MATRIALAS REMARKS STRATA (BURNESSTER METHODOLOGY) REMARKS SCHEMATIC Competent Shale End of hole at 600' Max OVA for hole - 0.4 ppm Max OVA for hole - 0.4 ppm												
SCALE VOC SAMPLE STRATA DESCRIPTION OF MATRIALAS STATE ADD NAMES OF THE ANDES STRATA DESCRIPTION OF MATRIALAS REMARKS STRATA (BURNESSTER METHODOLOGY) REMARKS SCHEMATIC Competent Shale End of hole at 600' Max OVA for hole - 0.4 ppm Max OVA for hole - 0.4 ppm												
CONTRACTOR: American Auger CONTRACTOR: American Augurt CONTRACT			•				INSPECTOR:	Cupp/Fuller				
SEALE VOC SAMPLE STRATA DESCRIPTION OF MATERIALS												
ST												
ST												
Weathered shate Competent Shale End of hole at 60° Max OVA for hole – 0.4 ppm	SCALE	VOC./	SA	MPLE								
Competent Shale End of hole at 60" Max OVA for hole – 0.4 ppm	(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER METHODOLO	GY)	REMARKS				
Competent Shale End of hole at 60" Max OVA for hole – 0.4 ppm	5'					Weathered shale						
End of hole at 6'0" Max OVA for hole - 0.4 ppm												
End of hole at 6'0" Max OVA for hole - 0.4 ppm												
End of hole at 6'0" Max OVA for hole - 0.4 ppm												
End of hole at 6'0" Max OVA for hole - 0.4 ppm	_	i										
End of hole at 6'0" Max OVA for hole - 0.4 ppm						Competent Shale						
Max OVA for hote — 0.4 ppm	<u> </u>							_				
	6'					End of hole at 6'0"						
	I											
	<u> </u>											
SEE MASTER ACRONYM INT FOR COMPLETE INTING OF ARBEDULATIONS. TEST PLT # 9	L					Max OVA for hole – 0.4 ppm						
SEE MASTER ACRONYM LIST ROB COMPLETE LISTING OF ARRESTIATIONS TEST PET # 9												
SEE MASTER ACRONYM LIST ROR COMPLETE LISTING OF ARREPUATIONS TEST PET # 9	-							_				
SEE MASTER AS PONYAL LIST FOR COMPLETE LISTING OF ARROPULATIONS. TEST PLT # 9		i										
SEE MASTER ACRONYALIST FOR COMPLETE LISTING OF ARRESTRIATIONS. TEST PIT # 9												
SEE MASTER ACRONNALIST FOR COMPLETE LISTING OF ARRDEVIATIONS TEST PIT # 9	L											
SEE MASTER ACRONNALIST FOR COMPLETE LISTING OF ARREPUNATIONS TEST PIT # 9												
SEE MASTER ACCOMM LIST FOR COMPLETE LISTING OF ARRESTATIONS. TEST DIT # 9								_				
SEE MASTER ACCOMM LIST FOR COMPLETE LISTING OR ARRESTATIONS. TEST PLT # 9												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARREQUIATIONS. TEST PIT # 9												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARREQUIATIONS. TEXT PIT # 9	<u> </u>							_				
SEE MASTER ACRONYM LIST BOR COMPLETE LISTING OF ARRDEVIATIONS. TEST PIT # 0												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTUATIONS. TEST PLT # 0												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARREGULATIONS. TEST PIT # 9	_							_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTATIONS. TEST PIT # 0		i										
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTVIATIONS. TEST PIT # 0	-							_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OR ARREGULATIONS. TEST PIT # 9												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRDEVIATIONS TEST PIT # 9												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS. TEST PIT # 9	<u> </u>							_				
SEE MASTER ACRONYM LIST BOR COMPLETE LISTING OR ARREGULATIONS. TEST PIT # 0												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTVIATIONS. TEST PIT # 0								_				
SEE MASIER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0	L_							_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTULATIONS TEST PIT # 9												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS. TEST PIT # 9	⊢							_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0		ŀ						_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0		1										
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0	<u> </u>							_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0	\vdash	}										
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0								_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0	<u> </u>							_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESULATIONS TEST PIT # 0												
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTIATIONS TEST PIT # 0	├							_				
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTIATIONS TEST PIT #0				1								
SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ARRESTIATIONS TEST PIT #0												
				CEE A	AASTER ACRONY	M LIST BOR COMPLETE LISTING OF ARREIT	PARTIONS	TEST PIT #9				

				TEST	PIT REPO	RT			
EN	GINEE	RING-SCIE	NCE, INC.	CLIENT:	U.S. Army Corps		TEST PIT #: 10		
PROJE	CT:	Seneca Army D Ash Landfill, F	Depot				JOB NUMBE EST. GROUN INSPECTOR:	ND ELEV.	
	PIT DAT						CONTRACTO	OR: Amer Auger	
	NGTH o	WIDTH 4"	DEPTH 6.0	EXCAVATION/SHORING METHOD Backhoe — No sharing			START DATE	E: <u>12-29-92</u> N DATE: <u>12-29-92</u>	
	9	4"	0.0	Dacking - INO 8	nai mg		CHECKED BY	Y:	
MONI	TORING	DATA				COMMENTS			
	INSTRU	MENT	DETECTOR	BACKGROUND	TIME/ DATE	weether.	a 25cF		
	OV	A				weather: drizzle, 35oF conducted in Level B			
						TOTAL SALE	DIEC.	No Samples Colleges	
SCALE	VOC./	SAM	PLE	STRATA	DESCRIPTION OF	TOTAL SAM	LLUS.	No Samples Collected	
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER ME			REMARKS	
					Turf – Top Soil	(0-4"		
					- 12 oz. beverage can				
					- Metal strap				
					- Mostly Fill				
1									
					Miscellaneous Refuse including:				
					Residential garbage				
					- Automobile parts (Air filters,	oil cans)			
_ 2					- Oil cans (1 qt.)				
					- 3 gallon size milk bottle of mole	d – see photo			
_ 3									
							Ì		
							Ì		
					Fill ·				
4	<u> </u>				OVA = 0 ppm				
					Mostly fill				
	OVA				1 cardboard box 16" x 16" x 8"				
	22 ppm	at cardboard			filled with wood shavings				
5		box contents							

SEE MASTER ACRONYM LIST FOR COMPLETE LISTING OF ABBREVIATIONS

TEST PIT #10

TEST PIT REPORT											
			ENCE, INC.	CLIENT:	U.S. Army Corps	TEST PIT	10				
	FORINC INSTRUM	G DATA MENT	DETECTOR	BACKGROUND	TIME/ DATE	DATE FINISH:					
						INSPECTOR: CONTRACTOR:	Cupp/Fuller American Auger				
	.,,										
SCALE	VOC./	SA	MPLE	STRATA	DESCRIPTION OF MATERIAL	_s					
(FT)	RAD.	NUMBER	DEPTH RANGE	SCHEMATIC	(BURMEISTER METHODOLOG		REMARKS				
					Mostly fill (same as from 4'-5')						
							_				
_							_				
							_				
5'											
					Weathered Shale						
_											
_							_				
6'					Competent Shale						
_											
							_				
							_				
							_				
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SENECA ASE LANDFEL. DRAFT RI REPORT

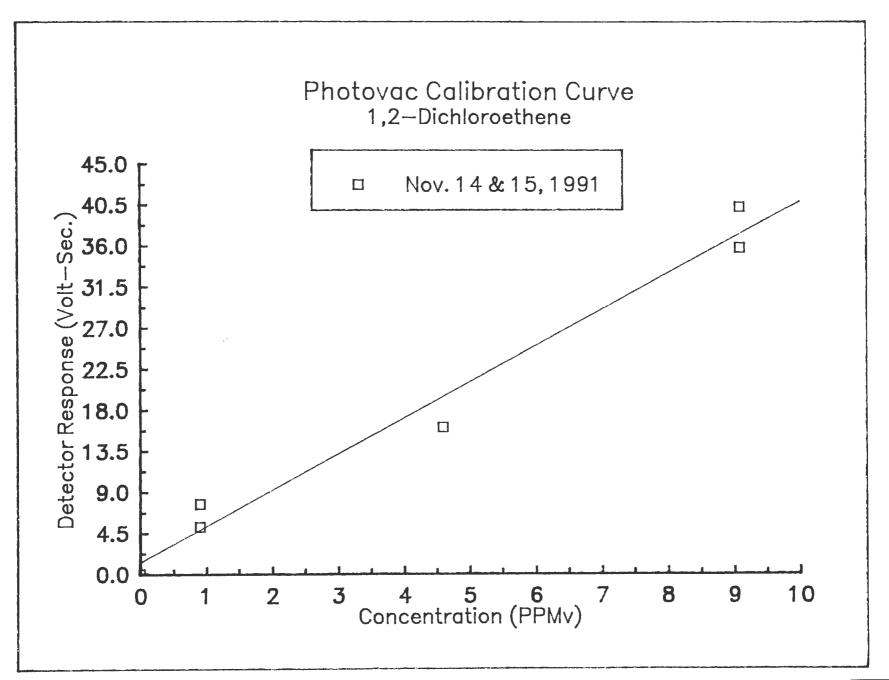
APPENDIX E

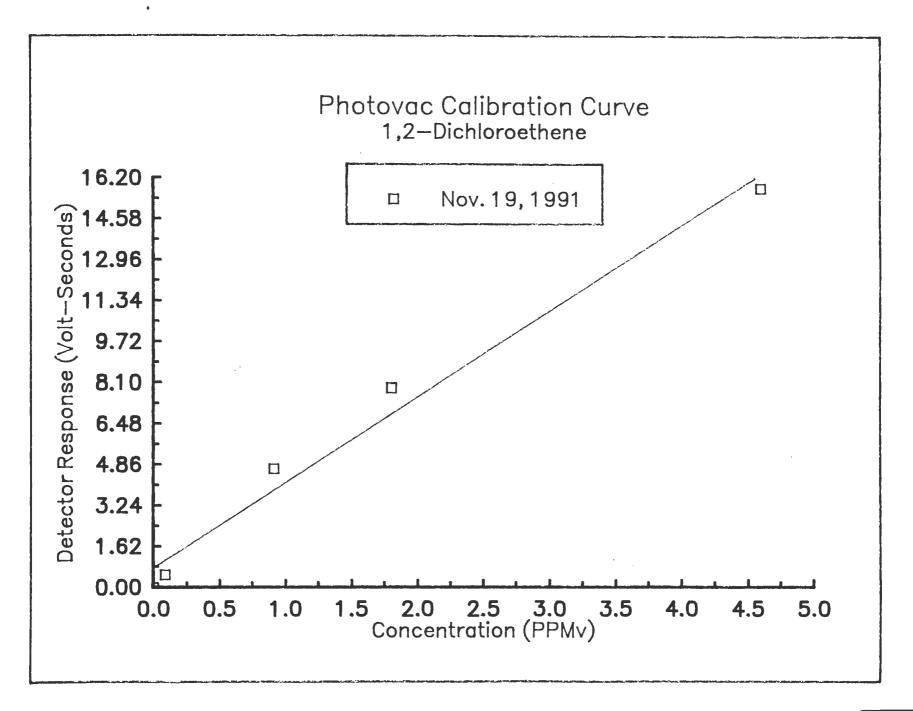
SOIL GAS AND HEADSPACE DATA

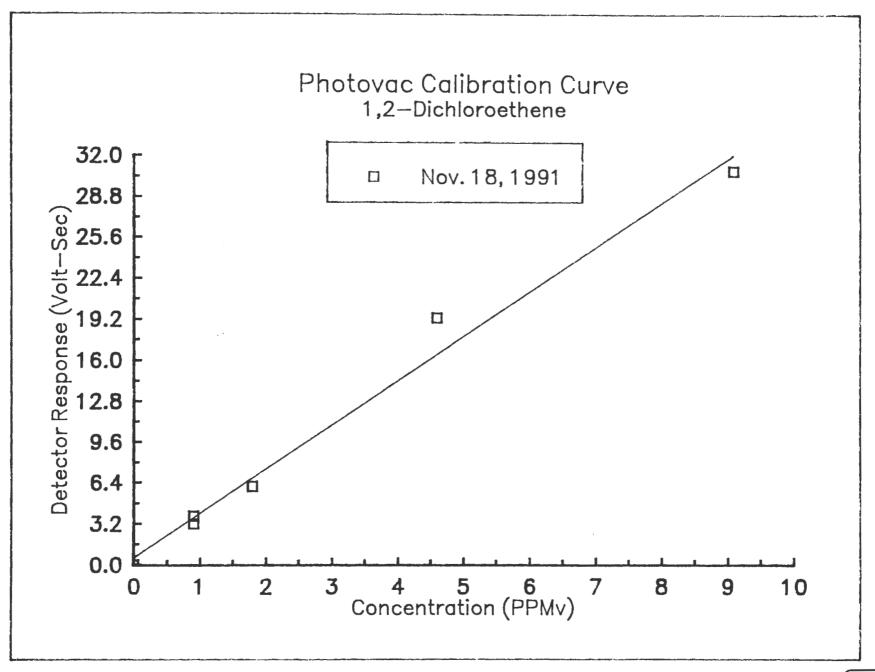
- SOIL GAS CHROMATOGRAMS
- SOIL GAS CALIBRATION CURVES AND STATISTICS
- SOIL HEADSPACE CHROMATOGRAMS
- SOIL HEADSPACE CALIBRATION AREAS AND STATISTICS

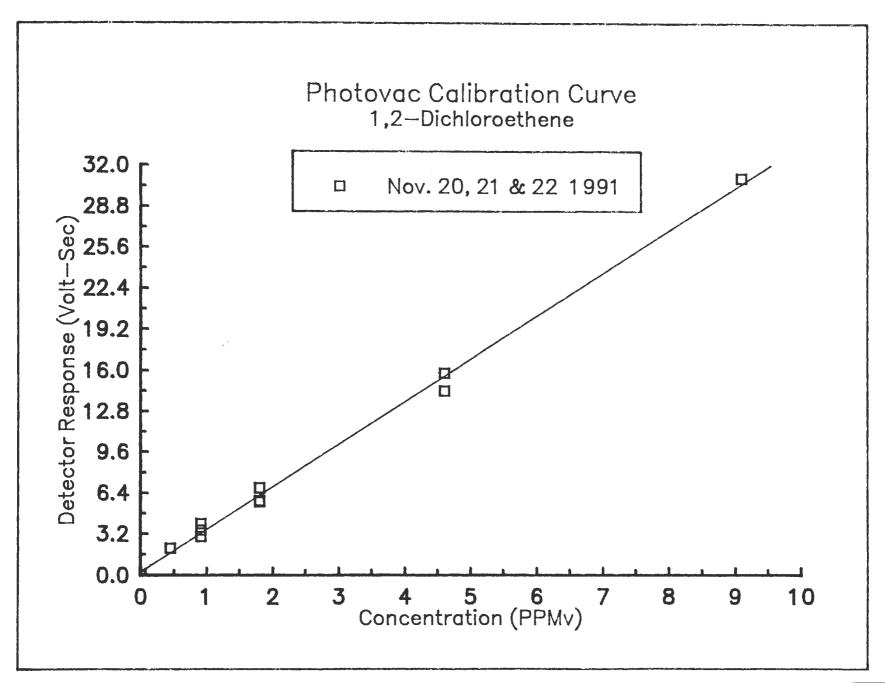
SENECA ASE LANDELL. DRAFT RI REPORT

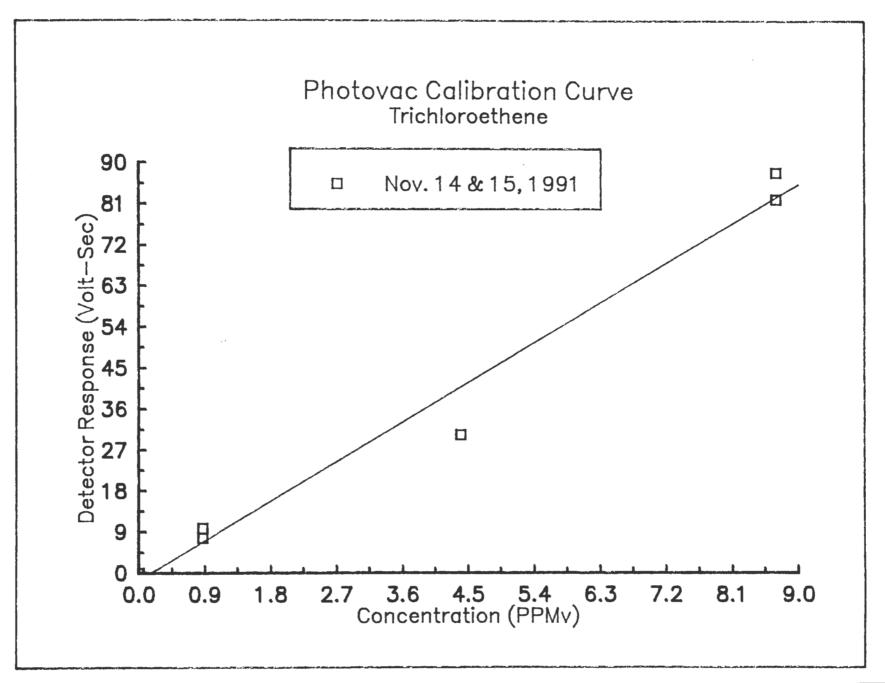
SOIL GAS CALIBRATION CURVES AND STATISTICS

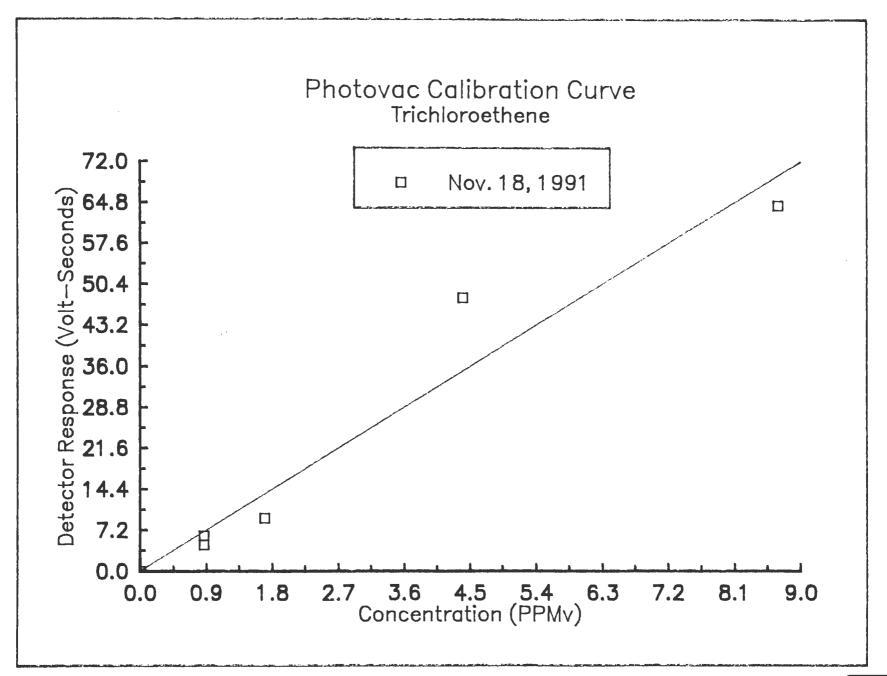


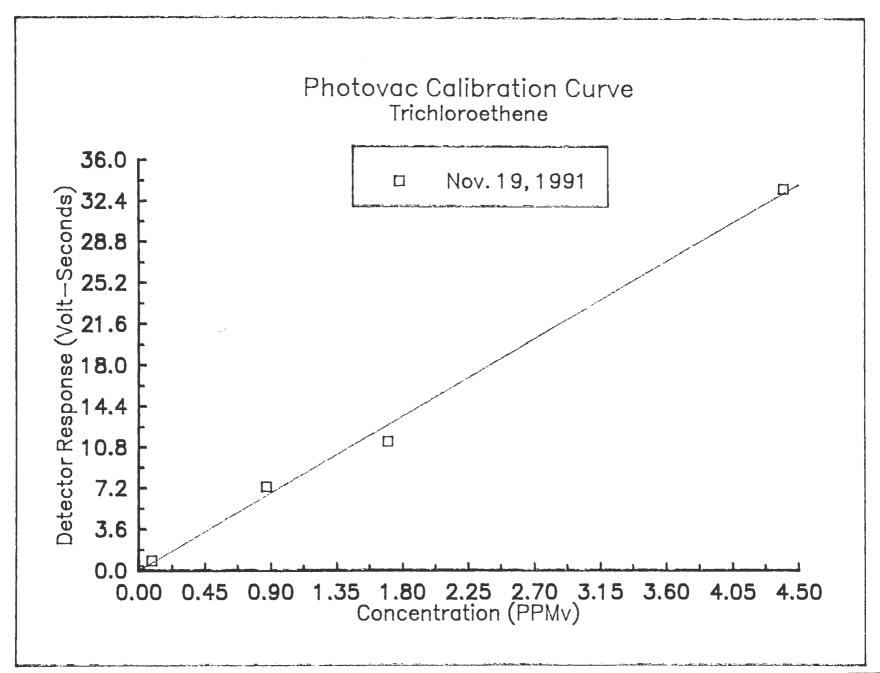


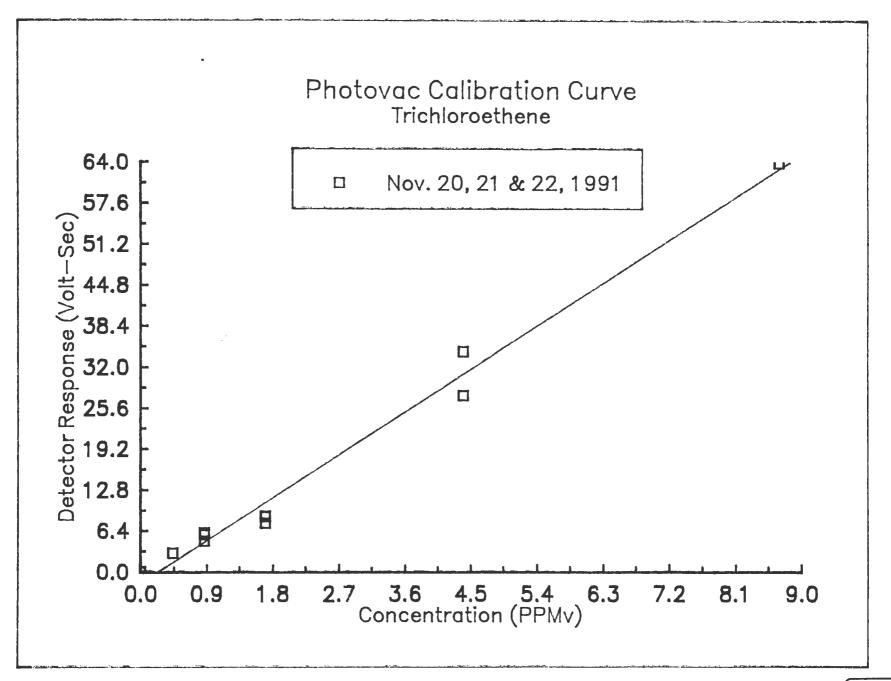


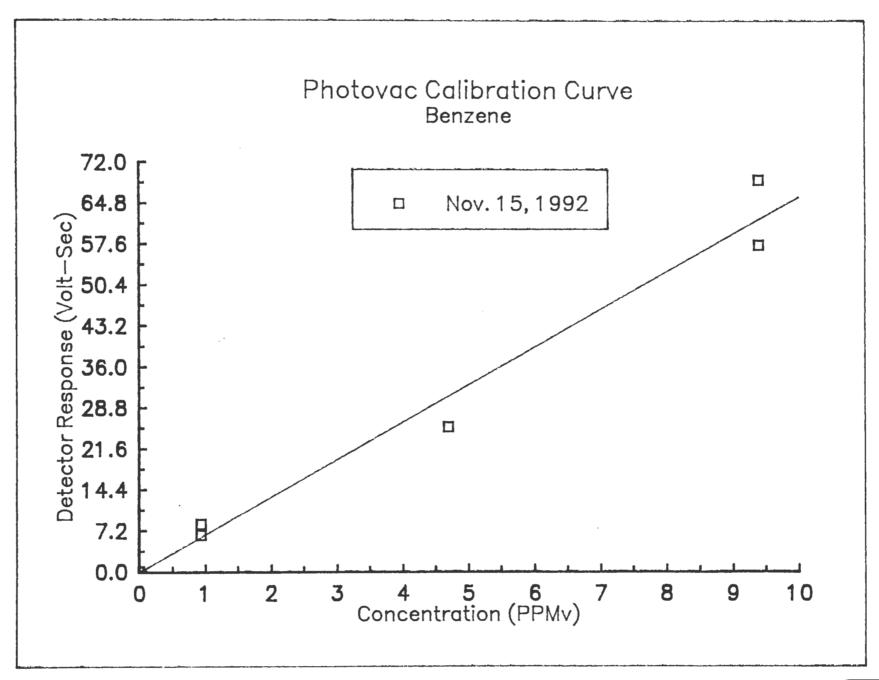


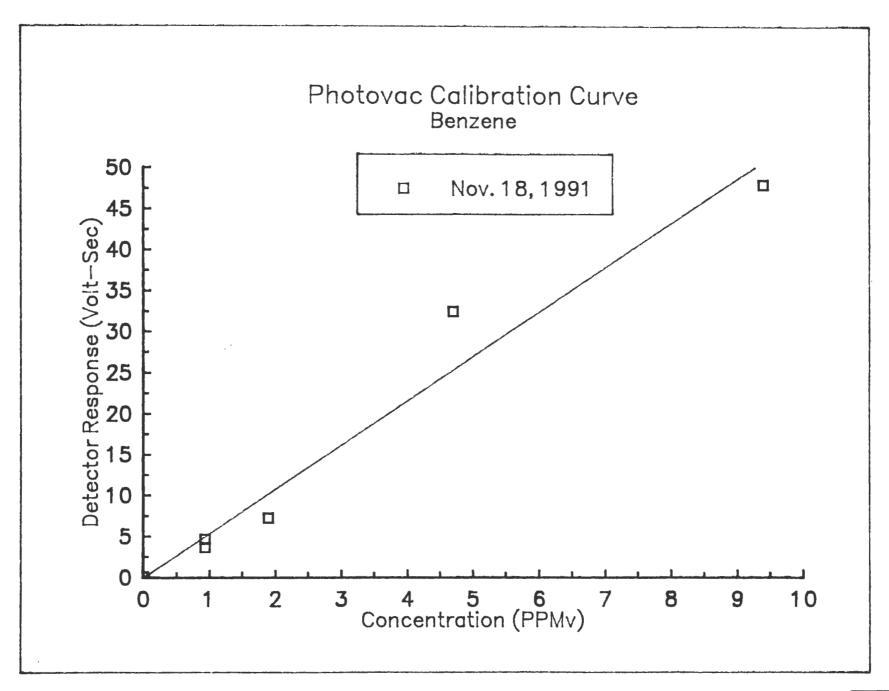


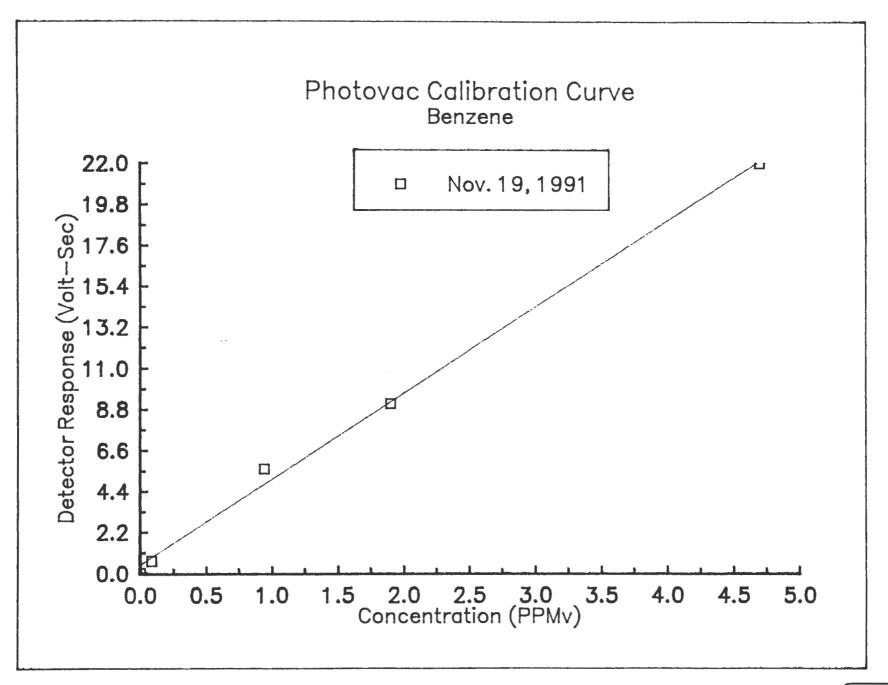


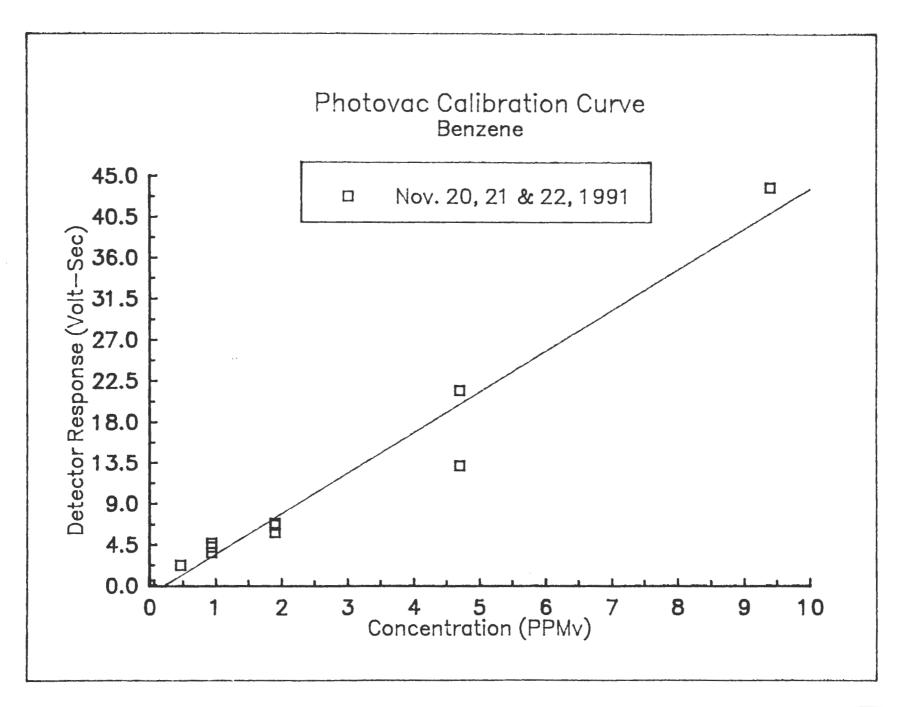














Seneca Army Depot Ash Landfill Soil Gas Survey Calibration Curves for Trichloroethylene

Soil Gas Calibration Curves November 15 & 16, 1991 Photavac Gas Chromatograph

Trichloroeti	rylene (TCE)
×	Y
Variable	Variable
0	0
	8.7
87.8	6.7 8.7
81.9 30.4	4.4
9.6	0.87
7.7	0.87
1.1	0.07
1	
Regression	Output:
Constant	0
Std Err of Y Eet	0.595
R Squared	0.978
No. of Observation	
Degrees of Freedo	
X Coefficient(s)	0.105
Std Err of Coef.	0.005

Soil Gas Calibration Curves November 18, 1991 Photavac Gas Chromatograph

Trichloroeth	ylene (TCE)
) X	Υ
Variable	Variable
	_
0	0
64.3	8.7
48	4.4
9.3	1.7
6.2	0.87
4.6	0.87
Regression	Output:
Constant	0
Std Err of Y Est	0.809
R Squared	0.939
No. of Observations	
Degrees of Freedor	n 5
X Coefficient(s)	0.121
Std Err of Coef.	0.01

Soil Gas Calibration Curves November 19, 1991 Photavac Gas Chromatograph

Trichloroeth	ylene (TCE)
X Variable	Y Variable
0 33.5 11.3 7.3	0 4.4 1.7 0.87
0.85	0.09
Regression	Output:
Constant Std Err of Y Est R Squared	0 0.115 0.996
No. of Observations	
Degrees of Freedor	n 4
X Coefficient(s)	0.133
Std Err of Coef.	0.003

Soil Gas Calibration Curves November 20, 21, 22, 1991 Photavac Gas Chromatograph

Trichloroeth	ylene (TCE)
x	Y
Variable	Variable
74114514	7 4114 515
o	0
63.9	8.7
34.4	4.4
27.6	4.4
8.6	1.7
8.7	1.7
7.6	1.7
6.1	0.87
5.8	0.87
4.8	0.87
2.9	0.44
Regression	Output:
Constant	0
Std Err of Y Est	0,38
R Squared	0.978
No. of Observations	s 11
Degrees of Freedor	m 10
X Coefficient(s)	0.14
Std Err of Coef.	0.005

Seneca Army Depot Ash Landfill Soil Gas Survey Calibration Curves for Dichloroethylene

Soil Gas Calibration Curves November 15 & 16, 1991 Photavac Gas Chromatograph

Dichloroeth	ylene (DCE)	٦
		٦
X	Y	1
Variable	Variable	١
		١
0	0	1
35.7	9.1	١
40.2	9.1	١
16.1	4.6	Ì
7.7	0.91	ı
5.2	0.91	1
		1
		4
Regression	Оитрит:	┥
Constant	(,
Std Err of Y Est	0.651	٠,
R Squared	0.976	
No. of Observation		
Degrees of Freedo		
X Coefficient(s)	0.239	- 1
Std Err of Coef.	0.23	- 1
Std Ell of Coel.	0.011	ш

Soil Gas Calibration Curves November 18, 1991 Photavac Gas Chromatograph

Dichloroethylene (DCE)			
X	Y		
Variable	Variable		
1			
0	0		
30.8	9.1		
19.3	4.6		
6.1	1.8		
3.8	0.91		
3.2	0.91		
Regression	Output:		
Constant	0		
Std Err of Y Est	0.425		
R Squared	0.985		
No. of Observation			
Degrees of Freedo			
X Coefficient(s)	0.279		
Std Err of Coef.	0.011		
Std Ell of Coel.	0.011		

Soil Gas Calibration Curves November 19, 1991 Photavac Gas Chromatograph

Dichloroethy	/lene (DCE)	
×	Υ	
Variable	Variable	
0	0	
15.8	4.6	
7.9	1.6	
4.7	0.91	
0.5	0.09	
Regression	Output:	
Constant		0
Std Err of Y Est	0.2	296
R Squared	0.9	975
No. of Observations	3	5
Degrees of Freedor	n	4
X Coefficient(s)	. 0.2	273
Std Err of Coef.	0.0	016

Soil Gas Calibration Curves November 20, 21, 22, 1991 Photavac Gas Chromatograph

Dishlars Abulana (DOD			
Dichloroethylene (DCE)			
v			
. X	Υ		
Variable	Variable		
0	0		
31	9.1		
15.8	4.6		
14.4	4.6		
6.8	1.8		
5.8	1.8		
5.7	1.8		
4	0.91		
3.5	0.91		
3.3	0.91		
_			
2.1	0.45		
Regression	Output:		
		_	
Constant		0	
Std Err of Y Est		0.176	
R Squared		0.995	
No. of Observations	3	11	
Degrees of Freedor	n	10	
X Coefficient(s)		0.295	
Std Err of Coef.		0.004	

Seneca Army Depot Ash Landfill Soil Gas Survey Calibration Curves for Benzene

Soil Gae Calibration Curves November 15 & 16, 1991 Photavac Gae Chromatograph

Bei	nzene
X Variable	Y Variable
0 68.8 57.3 25.4 6.3 6.4	0 9.4 9.4 4.7 0.94
Regression	Output:
Constant Std Err of Y Est R Squared No. of Observation	T I
Degress of Freedo X Coefficient(s) Std Err of Coef.	om 5 0.15 0.007

Soil Gas Calibration Curves November 18, 1991 Photavac Gas Chromatograph

Ве	nzene
X Variable	Y Variable
o	0
47.9	9.4
32.4	4.7
7.2	1.9
4.6	0.94
3.6	0.94
Regression	Output:
Constant	0
Std Err of Y Est	0.684
R Squared	0,963
No. of Observation	
Degrees of Freedo	
X Coefficient(s)	0.182
Std Err of Coef.	0.012

Soil Gae Calibration Curvee November 19, 1991 Photavac Gas Chromatograph

Bei	nzene	
X Variable	Y Variable	
0 22 9.1 5.6 0.64	0 4.7 1.9 0.94 0.09	
Regression	Output:	
Constant		0
Std Err of Y Est	0.12	
R Squared No. of Observation	0.99	5
Degrees of Freedo		4
X Coefficient(s)	0.21	1
Std Err of Coef.	0.00	5

Soil Gas Calibration Curves November 20, 21, 22, 1991 Photavac Gas Chromatograph

Benzene			
x	Y		
Variable	Variable		
0	0		
43.7	9.4		
21.4	4.7		
13.1	4.7		
6.6	1.9		
6.8	1.9		
5.8	1.9		
4.6	0.94		
4.2	0.94		
3.6	0.94		
2.2	0.47		
Regression	Output:	-	
Constant	(1	
Std Err of Y Est	0.626	-	
R Squared	0.948	-	
No. of Observation		•	
Degrees of Freedo		•	
X Coefficient(s)	0,228	-	
Std Err of Coef.	0.012		

SENECA ASE LANDFELL DRAFT RI REPORT

SOIL GAS CHROMATOGRAMS

FROM:

TO:

NATIONAL SPECIALTY GASES 630 UNITED DRIVE DURHAM, NORTH CAROLINA 27713

CANAAN

CERTIFICATE OF ANALYSIS

DATE REPORTED: 10/15/91

REFERENCE #: 88-14207

MATERIAL SUBMITTED: BENZENE, TOLUENE, O-XYLENE, TRICHLOROETHYLENE

CIS-1,2-DICHLOROETHYLENE IN NITROGEN

CERTIFIED CYLINDER #FF28709

INFORMATION REQUESTED: RATIO ANALYSIS

METHOD OF ANALYSIS: GAS CHROMATOGRAPH

RESULT OF INVESTIGATION:

Ī	COMPONENT SPECIFICATION		CONCENTRATION
	CIS-1,2-DICHLOROETH BENZENE TRICHLOROETHYLENE TOLUENE O-XYLENE	YLENE 100PPM 100PPM 100PPM 100PPM 100PPM	91.4PPM 93.8PPM 86.9PPM 100PPM 111PPM
	NITROGEN		BALANCE

AUTHORIZED SIGNATURE

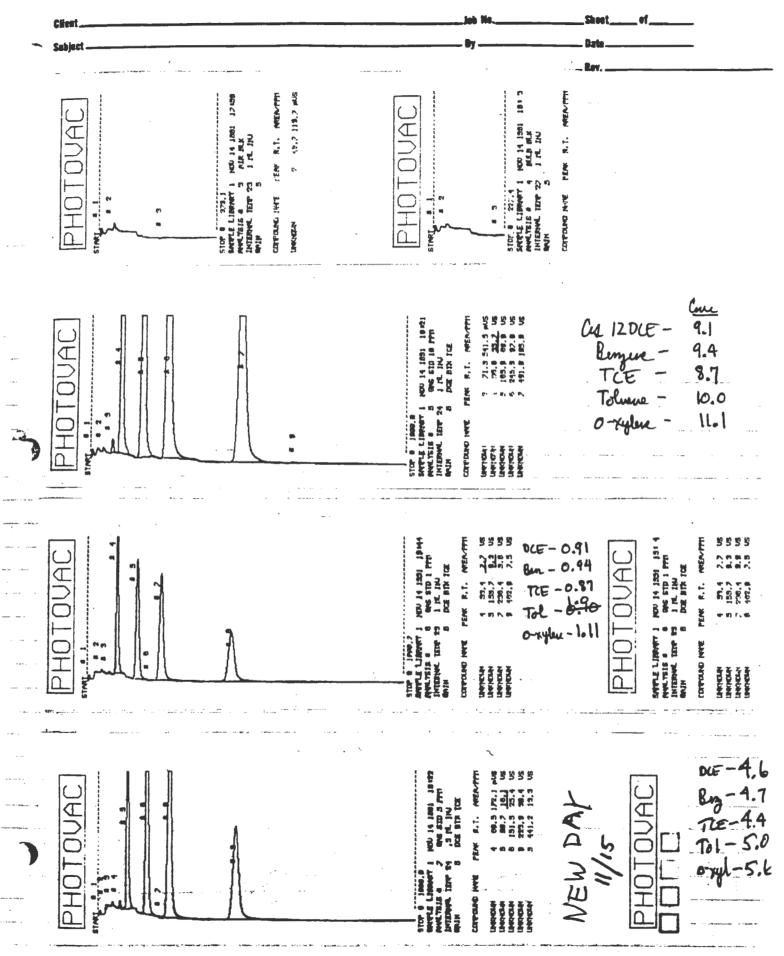
"THIS REPORT STATES ACCURATELY THE RESULTS OF THE INVESTIGATION MADE UPON THE MATERIAL SUBMITTED TO THE ANALYTICAL LABORATORY. EVERY EFFORT HAS BEEN MADE TO DETERMINE OBJECTIVELY THE INFORMATION REQUESTED: HOWEVER, IN CONNECTION WITH ITS RENDERING OF THIS REPORT, NATIONAL SPECIALTY GASES SHALL HAVE NO LIABILITY IN EXCESS OF ITS ESTABLISHED CHARGE FOR THE SERVICE. ANY USE OF THIS REPORT OR THE INFORMATION CONTAINED HEREIN SHALL BE AT THE SOLE RISK OF THE USER."



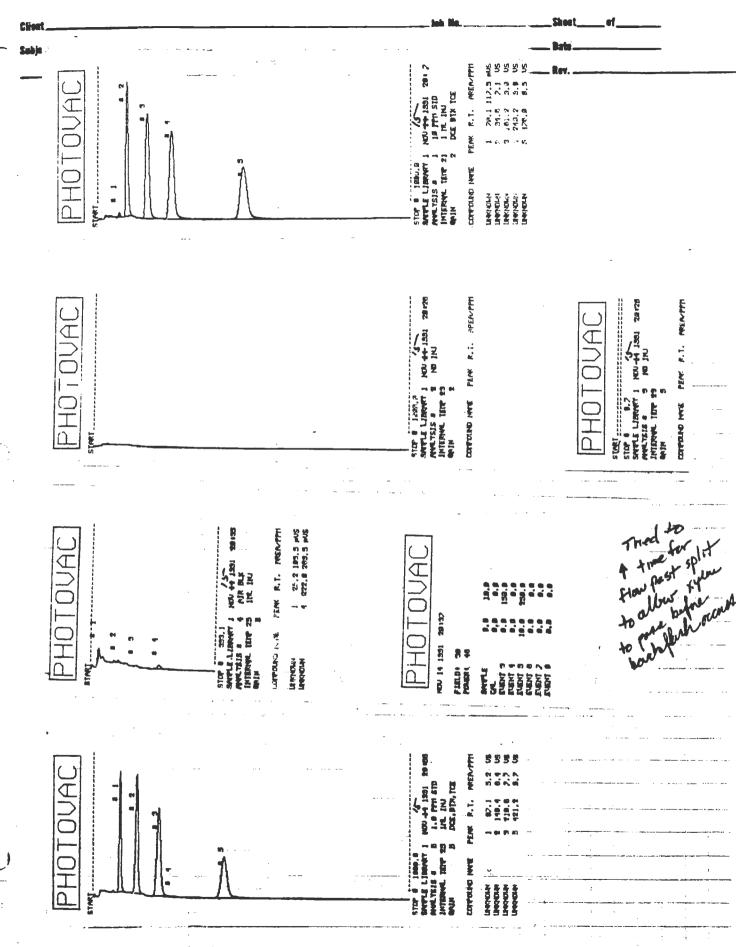
Client				Sheetef Date	
	Gas Standard Cu - 1,2-7 Benjene - TCE	93, 8 - 86,9	y National S	pecialty Gase	25
	Toluene 6-xyl	- 100,	Ne -Ba	lauce-	
	OVAC	OVAC	18.0 8.0 8.0 8.0 9.0 8.0 8.0	JUAC T	
	PHOT	DOCT 22 1391 10157	Better 9.8 CPC 8.8 CVENT 9 8.8 EVENT 9 18.8 EVENT 9 8.8 EVENT 9 8.8	PHOTO	<u>.</u>
	1729 Life Law, Pour OF	Pridunc T OF 11/14	TOUAC		
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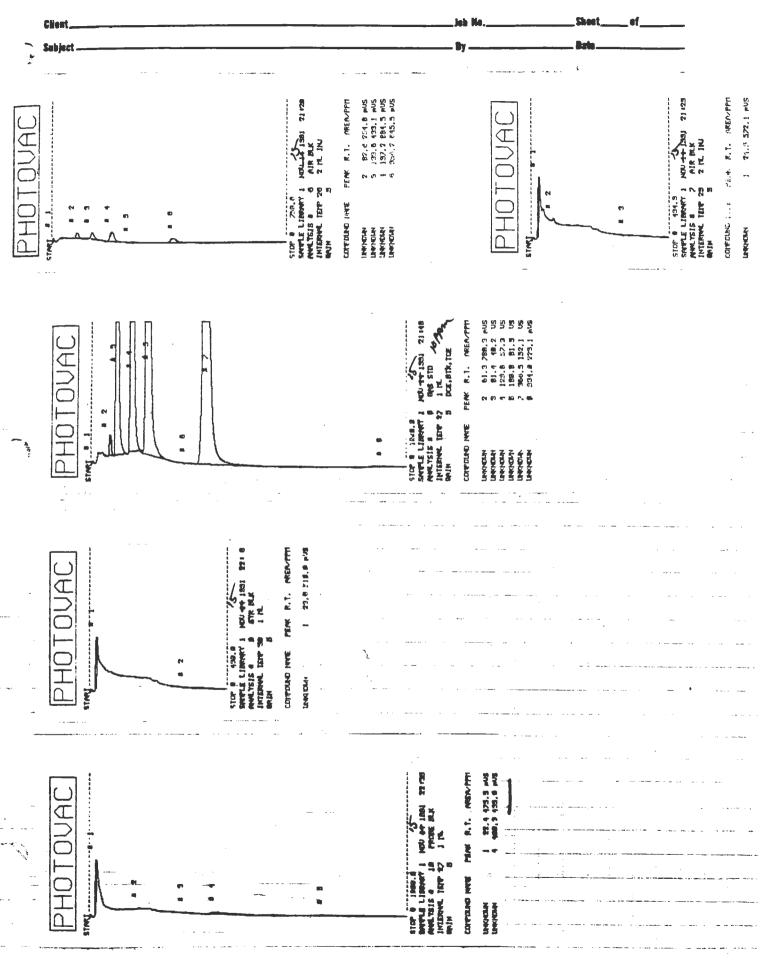




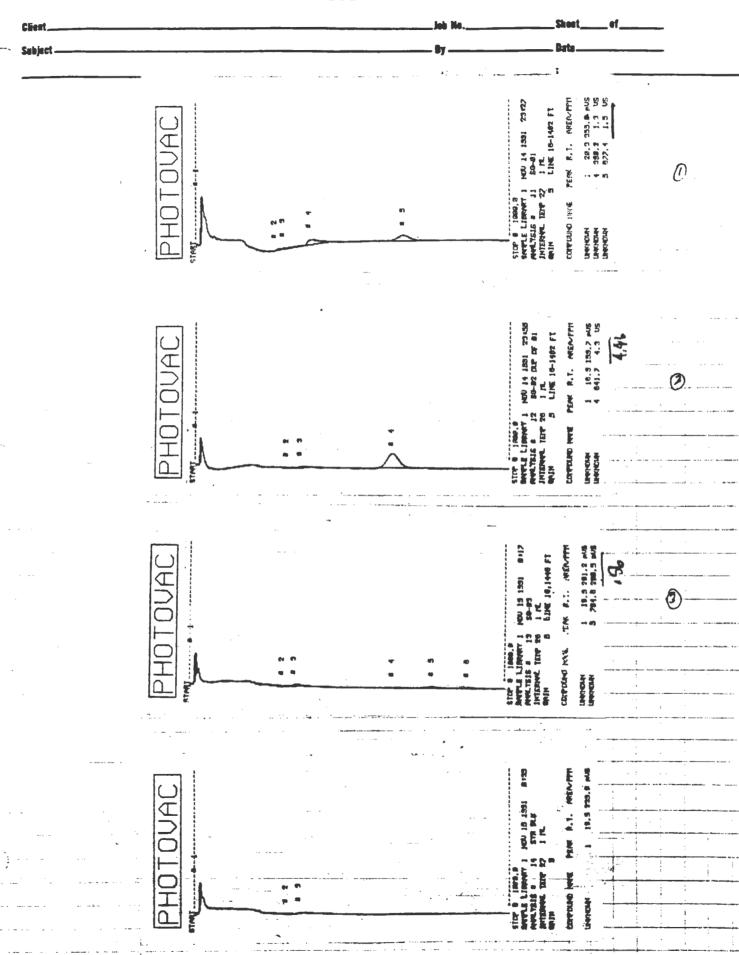














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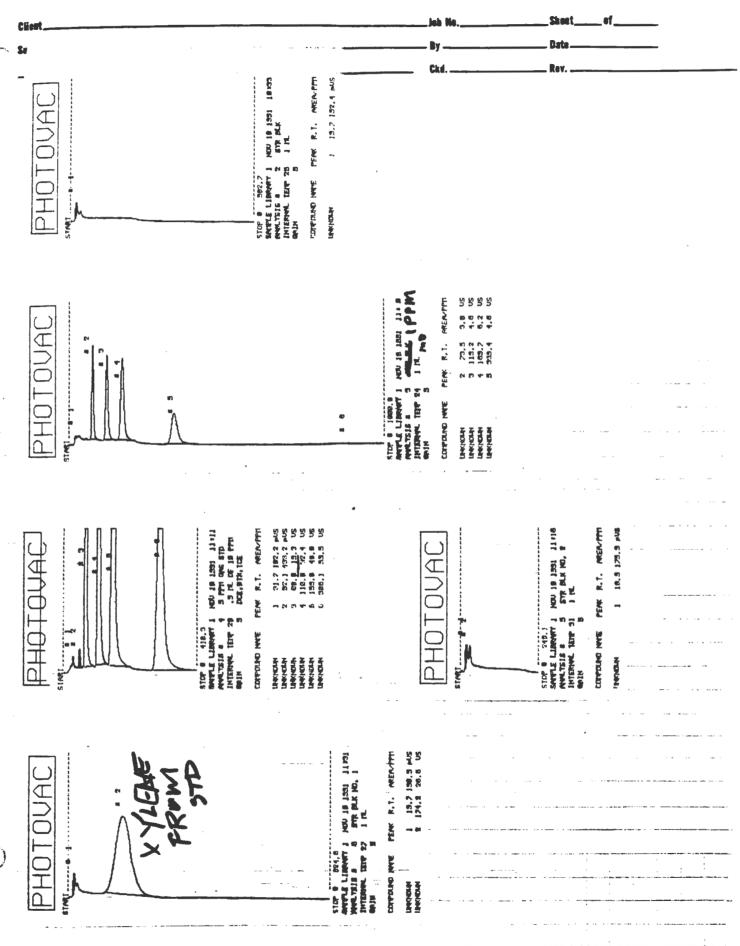
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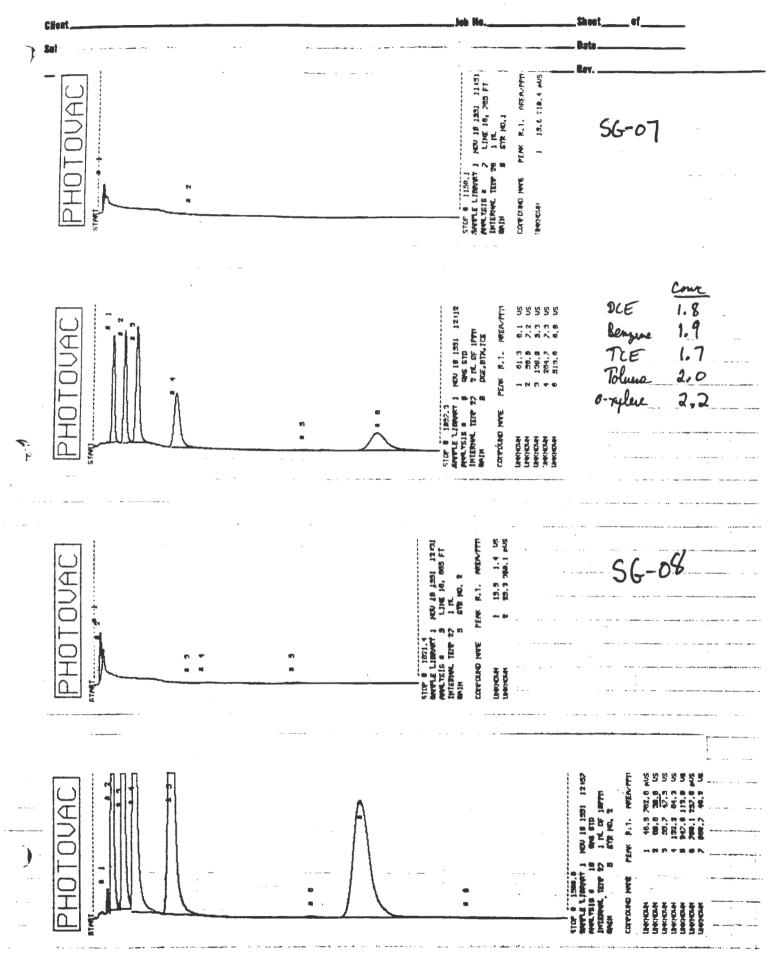
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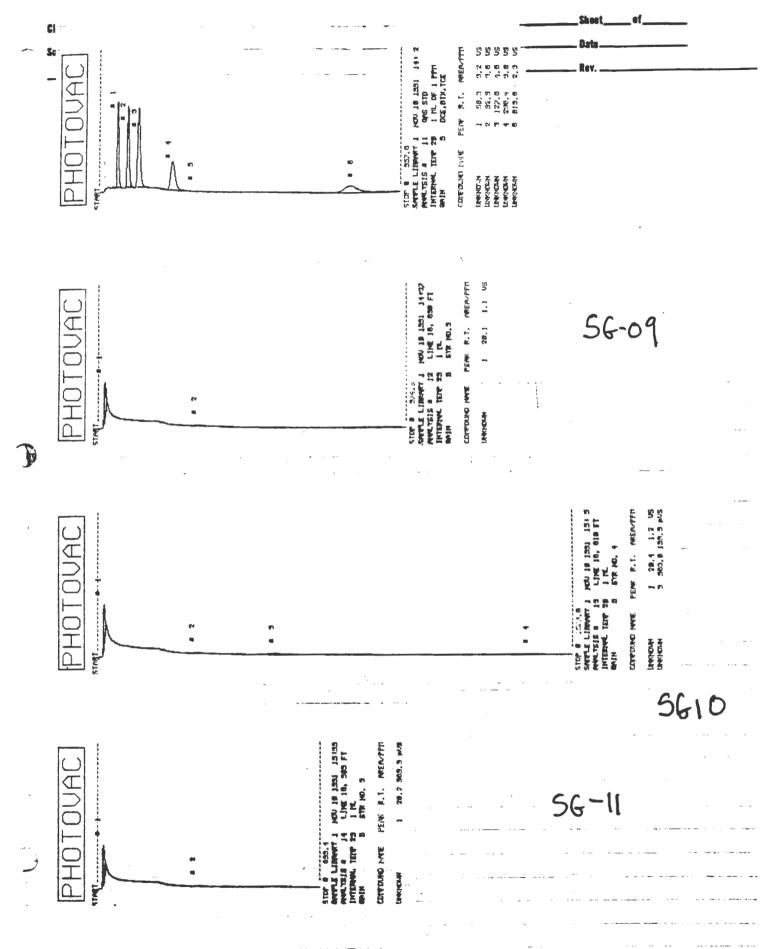
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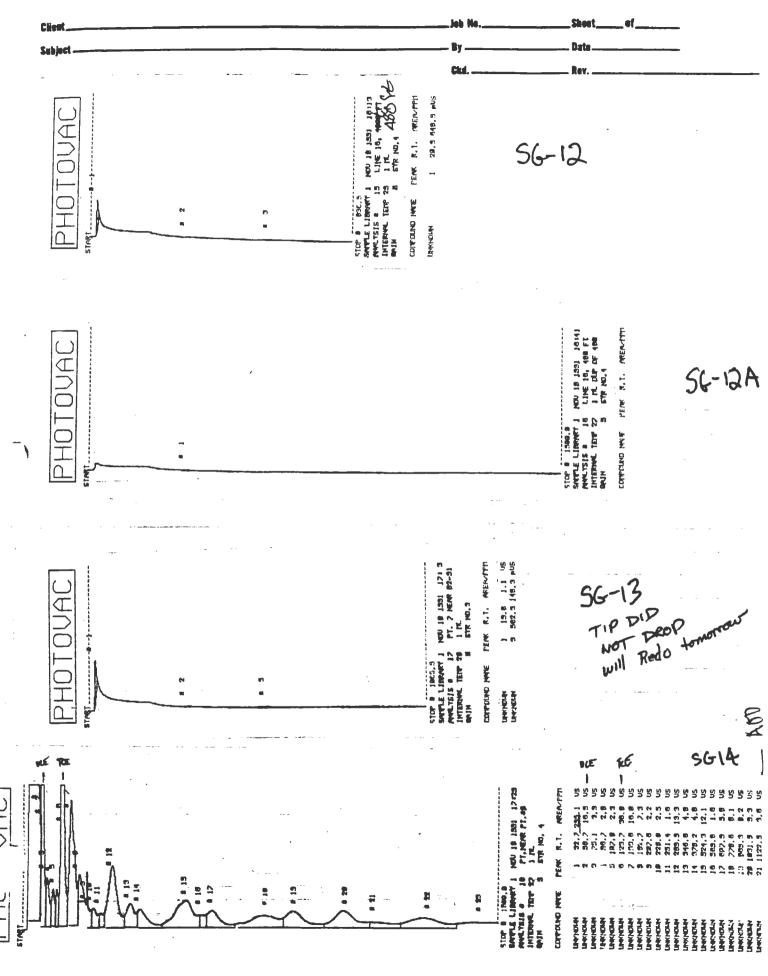














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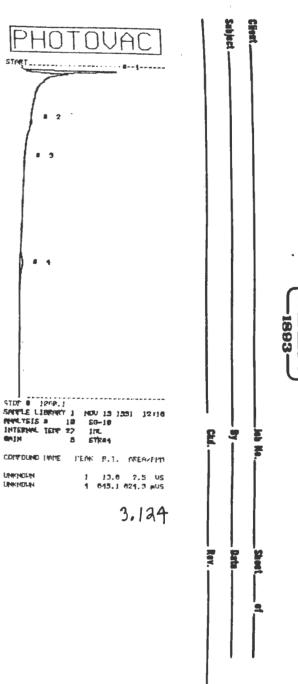
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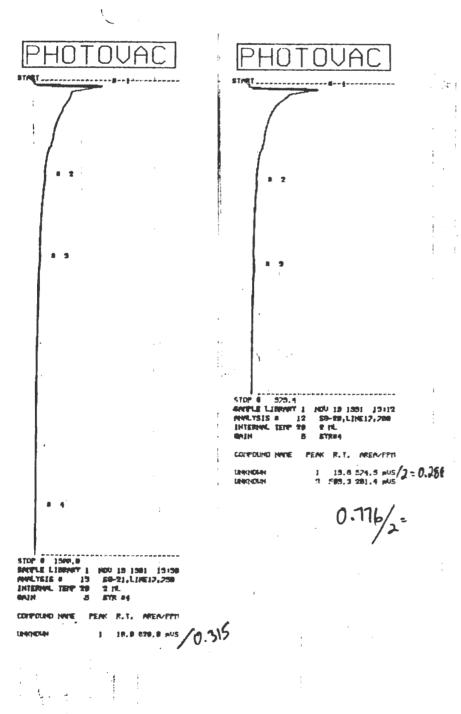


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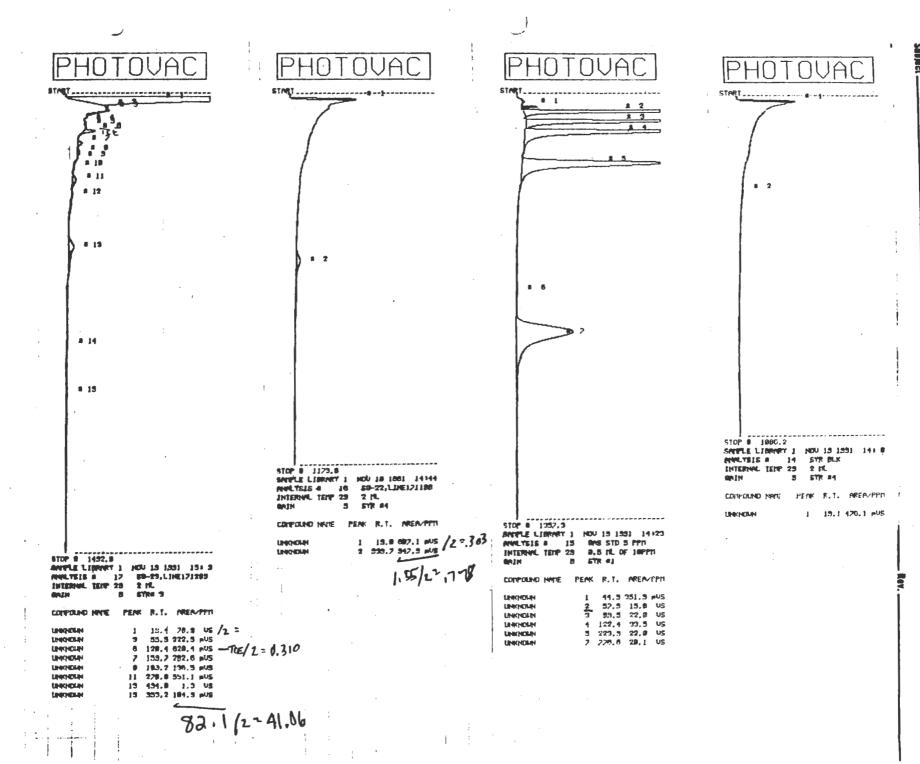


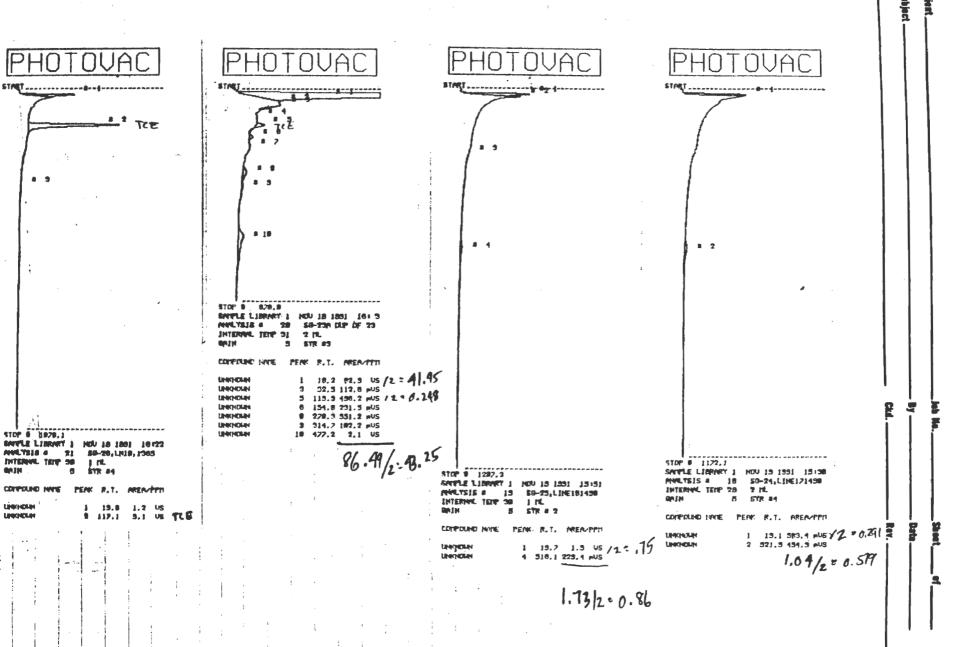
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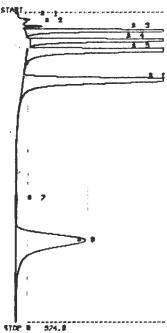
. 1 STOP # 1968.8 SMPLE LIBRARY | NOU 18 1881 12 154 MMLYSIS 8 | 11 68-18 LINE17,018 INTERNAL TELP 28 1 HL MARIN 5 57843 COMPOUND TOME FERK S.T. MPEAZPPH **UNKNOUN** 1 54.4 1.6 US THICHOUN 2 685,5 252,6 AUS 1.853







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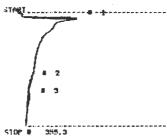


MALTER # 39 MM ED 191 191 8 INTERNAL TENP SO ITS. OF 10 PPH S SYRES

COMPOUND HAVE PEAK R.T. AREA/PTH

LIHICHOLIN	2	44.5	441.8	aUS
UNKNOWN	9	56,3	18.5	US
TINKHOPH	4	9.7. 4	25.1	US
UNKHOUN	5	118.6	48.3	US
LINKNOW	- 6	212.0	41.2	US
EINKHEEN	2	553.5	126.5	pUS
LINKHOSIN		233.5	23.8	US

lead badly wan recurred may lave



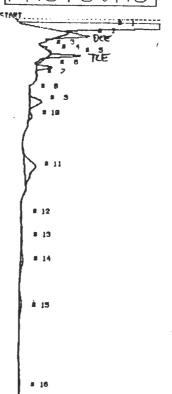
SMYLE LIBRARY | MOU 15 1351 18145 MULTEIS & 20 STR BLK SYRAS

INTERNAL TETP 34 2 IL, BLK AFTON

de I H 5 87843

COMPOUND NAME PERK R.T. AREA/PPM

1 19.6 559.0 mus/1=0.78 LINKHOLIN LINKHOUN 3 265,4 282,2 MUS



STORY BURELPHLETTING BEFORE BRIDE SAMPLE LIBRARY 1 NOV 15 1551 17:84 MMLYSIS # 26 S9-38, LN 17

INTERNAL TENP 29 2 ML, 25FT N DF

5 1265 CONFOUND HOME FERK R.T. GREAVEPT

COMPOUND NAME PERK R.T. AREA, PPM

5 1285, STR #3

SMIPLE LIBRARY 1 NOV 19 1991 18199

MMLTSIS # 27 89-30, LN 12 INTERNAL TENT 25 2PL, 25 SOUTH OF

STOP # 1222.7

UNKHOUN	1	20,6	113.7	95	122	5h.
FIRKHOLIN	2	54.7	2.3	US	12-	110
LINKHOWN	3	91,9	135.3	pUS	. ~ =	1. 1
THKHOPIN		116.8	1.6	US	12=	8.8
FIMIKHOPIH	6	154.8	1.2	US	•	
CIMINDUM	.3	262.5	1.8	US		
DIRECTATIONS	18	315.5	351.5	mUS		
FRAKTICIAN	11	122.2	3.5	uş		
UMKNOTIM	13	284.3	272.3	_m US		
にまるログス	14	789.6	458,2	MUS		
INKINDIN	15	926.8	663,2	mUS		
PHIKNDRIK	16	1161.9	530.7	eVS.		

126.0/2=63

SAFFLE LIBRARY 1 NOV 15 1891 17:51 MMLTSIS # 25 50-38,LH 17

INTERNAL TENP 29 2 ML, 25FT H DF

MIND	5 1	285		
COMPOUND : HIE	i'E∂K	8.t.	SRED	/PPM
TINK NCITUA		23.0	117.9	US
DIRKNOPM	3		112.1	mUS
DIMINION	5	115.6	138.1	mUS
FINIK INDITIA	6	134.4	927.3	₽US
TIHKHOMM	10	257.5	1.2	US
LINKHOWN	11	314.7	795.6	mUS
NWKHOMH	13	426.0	3,4	US
(NAKNOLIN	14	303.1	2.8	US
INKHONA	15	200.2	234.9	mUS
THKNDRIN	17	272.5	180.3	mUS
' ተቀ/ተነው <u>ርተ</u> ፣	13	£13.6	138, P	pUS

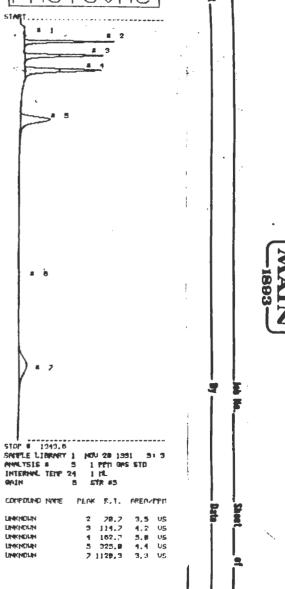


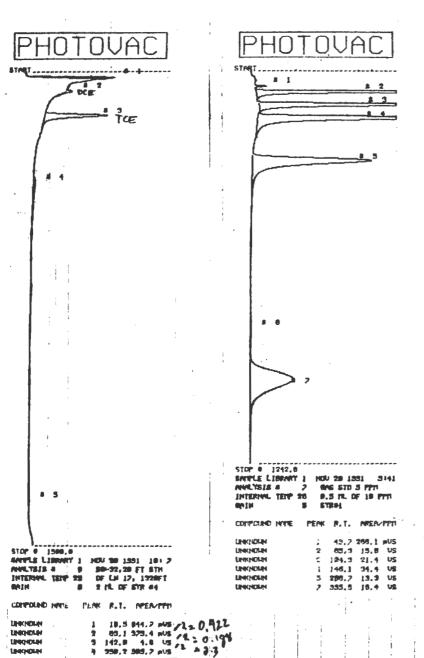


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PHOTOUAC	PHOTOUAC	SAFFLE LIBERERT I NOU IS 1883 181 8 NAME NELS 4 1 006 570 INTERVAL TITE 13 17L OF 18 FFTT SALIN E STRAN COPPUING NAME FERK R.T. NAEATFIT	PHOTOUAC	STOP 8 205.7 SATUE LIBRARY 1 NOU 28 1331 8:24 WWELTSIS 8 19 PTH BLLS PLK. INTERNAL TAP 24 1 JL. OF BULS AIR WALLY STOP STOP STOP STOP STOP STOP STOP STOP
	EXMINDE OF	Combleme Curre Pure Multing Multing Pure Pure Multing Pure WC (Uther Pure Pure Pure Pure Pure Pure Pure Pu		
PHOTOUAC	SWELL LINGUET 1 NOU 20 1501 0-21 MANUTALES 3 STR BR. MALIN 3 STR BR. COPTOLNO INVE. FEM. R.T. NERAPPT LINGUISM. 1 S B 1.7 US	PHOTOUAC	MYTERAN TERP SO 1 IN. OPIN B SYR OR CONTOUR MYE FER R.T. PREACEPTI	STOP 8 270.5 EMPLE LIBERT 1 NOU 28 1391 8-32 ANALYZES 9 1 PTT BALB BLK INTERNAL TOP 29 1 PL OF 9 PL STR SAIN 8 67R 86 CONTOLIO NEER PLAK R.T. AMEA-PTT
·			· · · · · · · · · · · · · · · · · · ·	





6.33/2 = 3.17

LINKHOLIN

8 2

. 3

STDP 8 857.4

LINKHOUN TINKHOLIN

INTERNAL TENP 25 1 ML

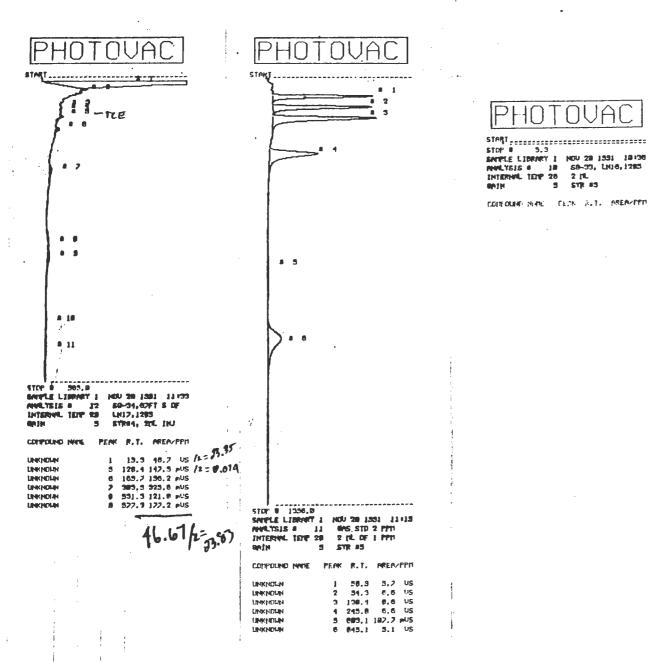
SMITTE LIBRARY I HOU 28 1331 3113 MAN SHORT , IC-D2 B & SISTING

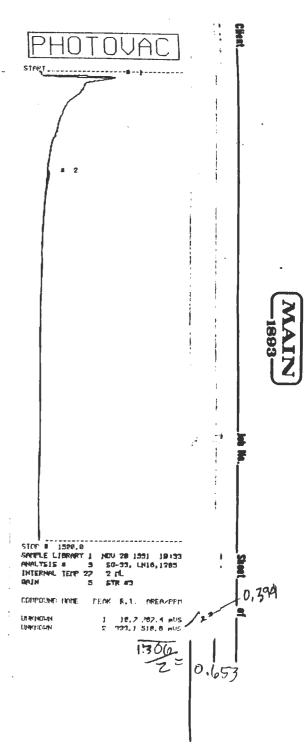
EN 97'3 COMPOUND NAME PEAK R.T. AREA/PPM

1 21.4 1.9 US

9 758.6 221.6 mUS

2.12





9 STR #3

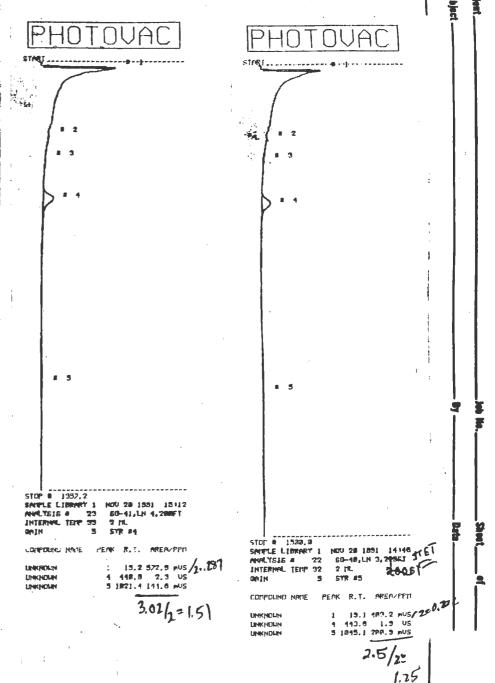


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PHOT	STOP 6 1140,6 SAVELE LIBORET ANTERNAL TOP 30 COPPOLING NETE LIBORET LI
OUAC	EW R.1. REAPTH 1 19.2 CEN.S MUS (\$ 20,14) 2 122.4 100.1 mus (\$ 2.0,05) 3 200.3 131.7 mus 0,737/2-6.34
	MANTEL LINGER 1 JATESTAN TEFF 20 BATH COPPLIAN UNCOLN UN
LOUAC	
日:1111:11:11:11:11:11:11:11:11:11:11:11:	STOP 0 1914, WHILE LIBERT WHILE LIBERT WHILE WHILE COPPLIED NOTE UNIVERSAL UNIVERSAL UNIVERSAL UNIVERSAL UNIVERSAL UNIVERSAL UNIVERSAL UNIVERSAL UNIVERSAL

6 2 . 1 8 4 STOP \$ 536.9 MALTEIS # 17 STR BLK INTERNAL TELP 34 MINE AIR STR 05 **NWKHONH** STOP 0 1010,2 SHULE LIBRARY 1 NOV 20 1231 14:28 8 3 MULTEIS # 21 80-99, LIVS, 150 FT INTERNAL TEIP SE 2 12 5TR #4 GAIN . COMPOUND NAME FERK R.T. AREA-PPM START ____ 17.4 452.6 PUS/2-136 FINKHOLIN 2 235.5 107.5 MUS UNKHCHH 4 458.6 373.8 AUS **UNKHOUN** 0953/2-.461 **8** 2 STOP @ 1500.0 STOP . 1500.0 SATPLE LIBRARY 1 NOU 28 1551 13155 SATTLE LIBRARY 1 NOV 28 1991 19124 58-38, LN 13,778 MARTEIS # 13 SG-37, LH 18,445 MYLTEIS # 28 INTERNAL TENP 32 2 (IL INTERNAL TELE 31 2 17 STOP 0 300.4 5 STR #4 M1AB 5 SYR #4 HIGH MALYSIS # 18 STR BLK COMPOUND NOTE FEAK R.T. AREA/PPH COMPOUND HAVE PEAK F.T. AREA/PPM INTERNAL TEMP 32 2 ML OF AMBIENT 5 MIR STR #3 1 28.3 1.2 US /2 366 HIGE UNYNOUN 1 18.4 428.1 MUS/2 = 0.314 MINICHOLIN **FINK NORTH** 4 481.8 121.8 AUS **FMKNOTAN** 5 425.2 413.6 mUS COMPOUND INVESTIGATION R. 1. AREA/EPIT 5 1869, 9 141.7 MUS THKHOTH 18.7 181.3 PUS /2=0.291 5.441712z +21 **UNKHOPN** FINKHUMH 2 253, 5 191.9 mUS

START SATPLE LIBRARY 1 NOU 28 1991 12:58 I I'L OF AMBIENT CONFIDURD THATE PLAK R.T. AREAZPPH 1 20,3 542.4 mUS SAMPLE LIBRARY 1 NOV 28 1591 12156

BAY ENT STOP # 238,9 SAIPLE LIBRARY 1 HOU 28 1551 15117 NWLYSIS 8 24 59-42,LH 5,225 INTERNAL TELP 38 2 IL MIND 8 SYR 49 CONFOUND NAME PERK R.T. AREA/PPM ۲. STOP 6 1231.4 SMELE LIBRARY 1 HOU 20 1231 15 733 MALTELS 8 25 80-47, LN 5,225 INTERNAL TELA 22 S LET SYR 49 M148 COMPOUND NAME PERK R.T. AREA/PPN 18.5 458.8 AUS 1=0.229 LOCKER



STOP 8 561.2 SMELE LIMMEY 1 HOU 29 1891 171 5 80-97,LH18,779FT 2 PL MANLYSIS # 25 INTERIOR TETP 34 STR #4

COMPOUND NAME PERK R.T. AREA/PPM

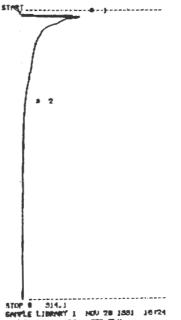
2 15.1 624.3 MUS/2: 312 3 183.6 227.4 MUS **UNKHOHM** LINKHOLIN 5 429.1 4.4 US **LINKHITCH**

3 8 4 STOP 0 845.8

SMPLE LIBRARY 1 HOU 28 1501 16:52 AVEYSIS # 28 55-44, LNIB, 778FT INTERNAL TETP 94 2 ML MIN 5 STR #4

COMPOUND NAME PERK R.T. AREA/PPH

UNKKULIN UNKNOWN 2 19.5 514.2 MUS/22 217 4 421.2 796.6 MUS



MYRTSIS 8 27 STR BLK INTERNAL TEMP 34 2 FL SYR #3 HIAD

CONFOUND NAME PERK R.T. MER/PPM

1 19.1 481.9 #US/2= , 241 LINKHOUN

START # 1 # 3

a 5

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STOP # 1500.0 SAMPLE LIBRARY 1 HOU 28 1591 16: 7 ANALYSIS # 26 SG-49, LNS, 75FT INTERNAL TEMP 33 2 ML 115 5 517 #3 ИІФВ

NAKADNA UNKNOWN MINKHOWN 2 19.3 424.5 AUS # = 0.2 12

5 195.3 129.5 eVS

1.09/2=8.595

COMPOUND NAME PERK R.T. AREA/PPM

4 422,3 544.7 PUS

	STOP # 676.3 MAYPLE LIBRARY J MANUTELS # 92 INTERNAL TERP 94 MAIN 8	\$0-48,LN12,899FT 2 HL	STOP 0 502.5 # 4 # 4 # 4 # 4 # 4 # 4 # 5 PRO	STOP 0 716.9 STOP 0 716.9 SNITLE LIBRARY 1 NOU 28 1991 17:22 SNITLE LIBRARY 1 NOU 28 1991 17:22 NNILTSIS 3 90 50-46, LNIB, 998FT INTERNAL TEMP 95 2 PL BAIN 5 5TR 83 COMPOUND NAME PEAK R.T. AREA/PFM UNKNOWN 1 19,1 512.8 #US/2=, 25 LATINEZ . 739	cabled by by
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		NOV 23, 1355) S+ 7 18 (*L. STR. NOV. 18FPTH BILLER BLK. 11ft.	FEM R.1. MREA/PPH 1 76.1 119.8 bus 2 124.4 189.7 bus 9 175.2 196.3 pus 4 958.2 285.7 pus		
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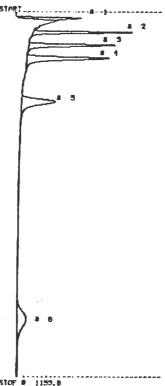


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STOP 8 824,5 SATTLE LIBRARY | NOV 21 1891 18:38 MANTALE 8 8 80-49, PROBE BLK INTERNAL TENP 27 2 HL 8 STR 44

COMPOUND NAME PERS R.T. (REA/PPH

LINKHOLIN LINGCHICLEN LINGGEDLIN 1 21,9 2,2 05/1= (.) 3 365,8 148,9 AVE 4 627.4 318.2 plus



STOP # 1153,8 HOU 21 1991 18:24 SMYLE LIBRARY 1 MALTETE 8 # GNE STD, I PPH INTERNAL TETP 28 INC OF 1 PPM BAIN STRE 5

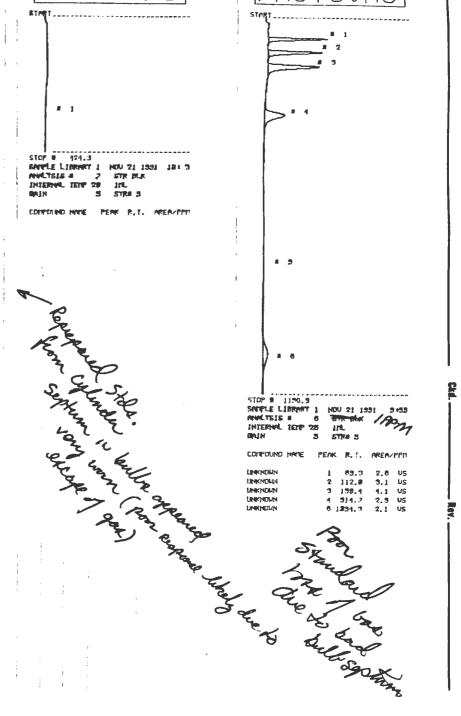
COMPOUND NAME PERK R.T. AREA/PPH

TINKHOTIN	1	28.8	1.5	US
UNKHOLIN	2	65.9	1.0	US
LINKHEIUN	. 3	185.7	4.0	US
LINKINDERN	4	142.8	6.1	US
THKNOHN	5	287.5	4.8	us
f marrett film:		998.4	9.3	PIC

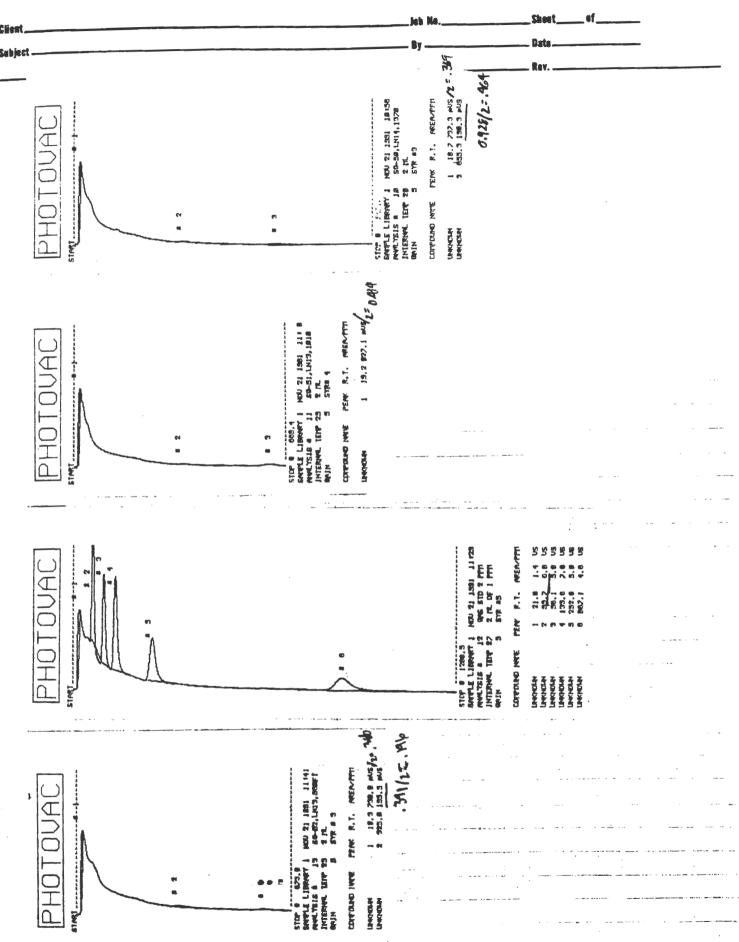
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STOF # 424.3 SMELE LIBRARY 1 HOU 21 1991 181 3 MWLTSIE 4 2 SYR BLK INTERNAL TELA 58 TUT S SYRE S MIND

COMPOUND NAME PERK R.T. AREA/PPM



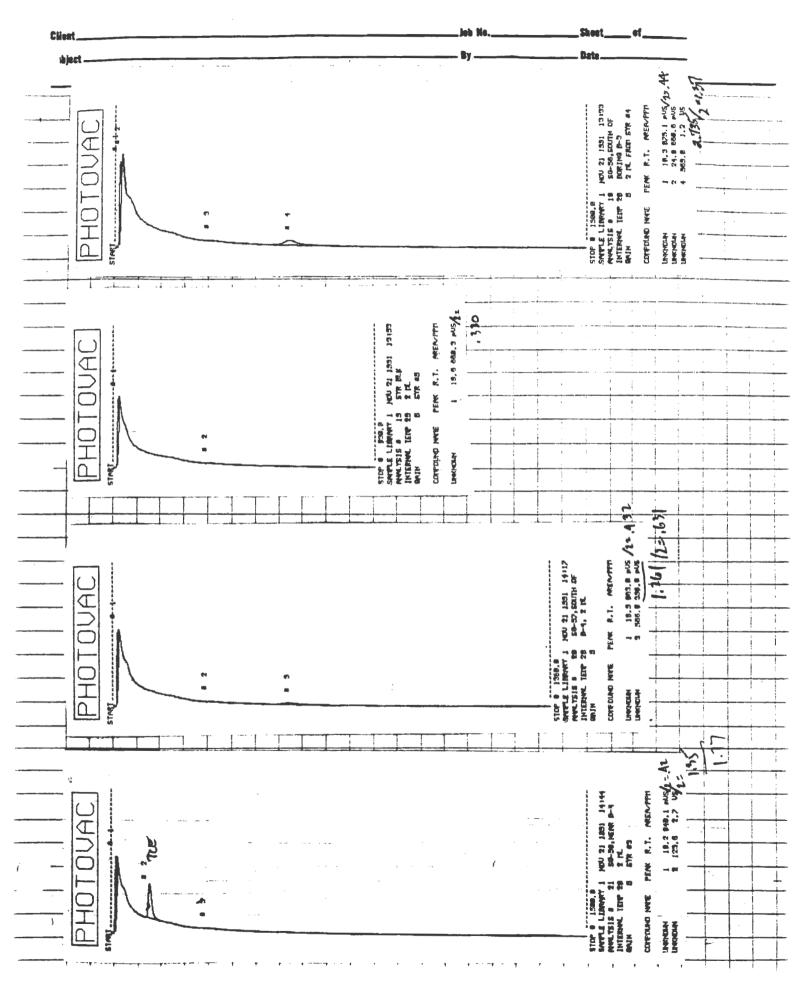




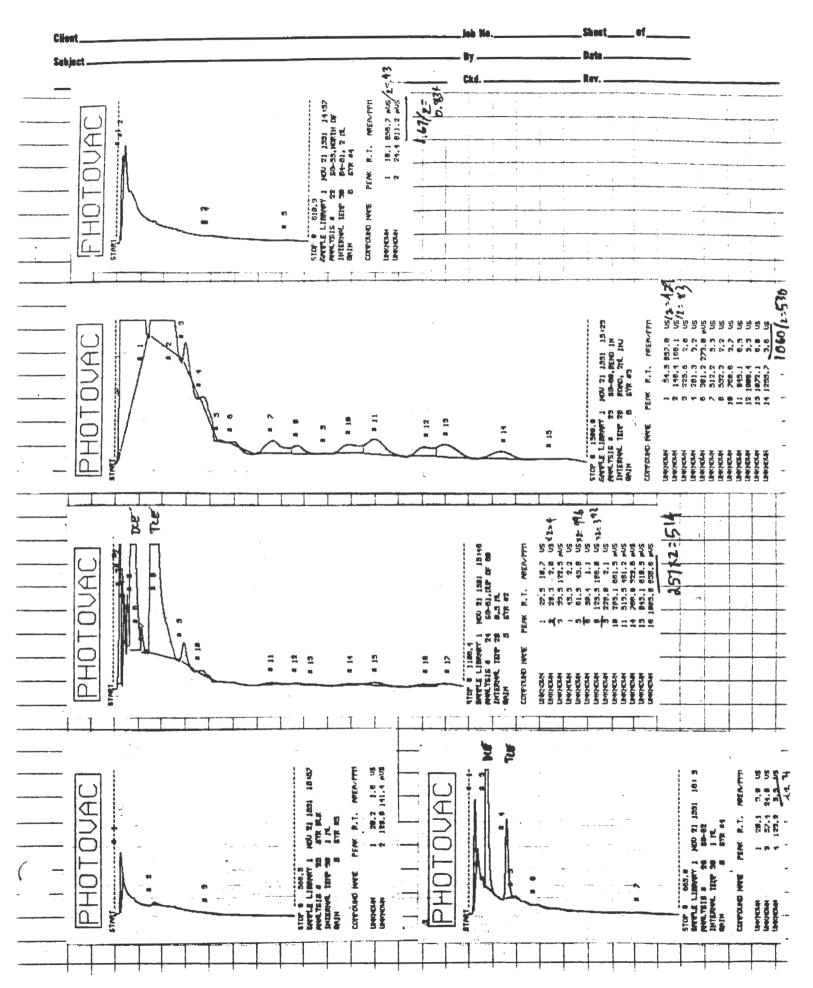


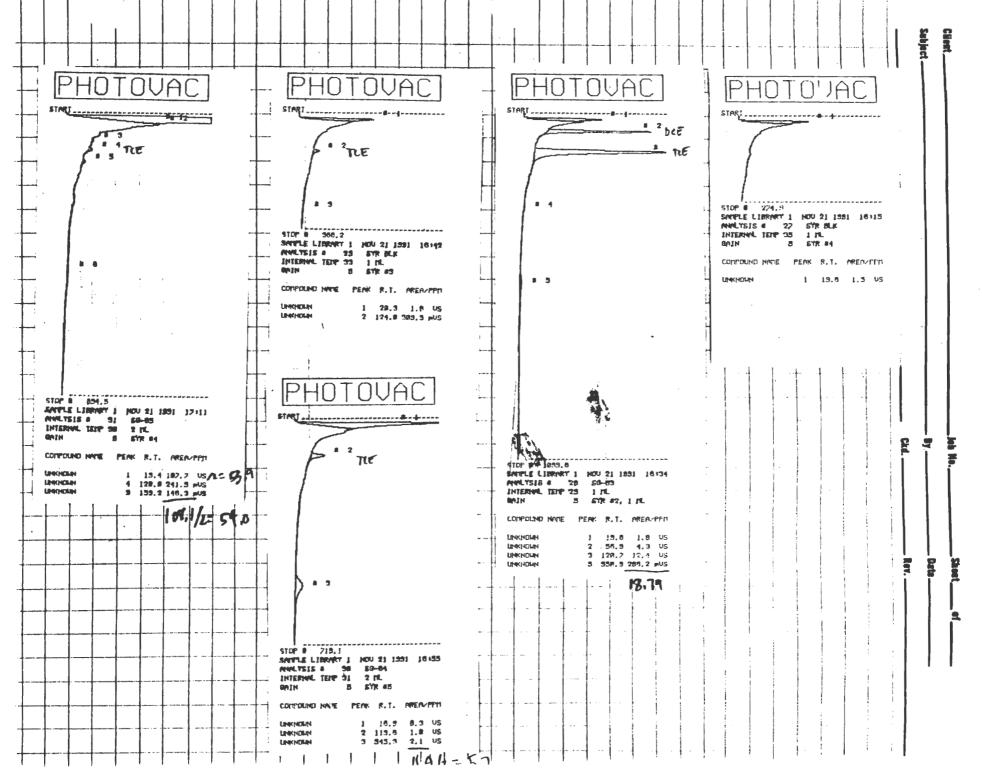
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Subject		. Rev
PHOTOUAC STATE 1 1 2 2 2 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	STOP 6 1874.5 STOP 6 1874.5 SWATTLE LINEWAT 1 NOV 21 1331 121 8 AWALTELS 4 4 695 STD, 3 FPT INTERNAL EXP 22 8.5 FL OF 18 FPT GOLUN GOLUN LINEWOLLN 1 46.3 266.5 LINEWOLLN 2 37.7 14.4 US LINEWOLLN 1 2 37.7 14.4 US LINEWOLLN 3 29.6 13.1 US LINEWOLLN 4 128.8 27.6 US LINEWOLLN 5 27.9 15.1 US LINEWOLLN 6 894.3 14.3 US	
PHOTOUAC	STOP = 589.8 SWATEL LIBERT HOU 21 1391 12135 NNALYSIS 4 13 50-25,LN13,313FT INTERNAL IEFP 29 2 FL BATH 43 COTTOUR NYE FEW R.T. MEAPPT UNKIGH 1 18.2 743.5 FUS UNKIGH 3 580.3 134.8 FUS 6.94(/2.5.47)	
PHOTOUAC		SAVETE LINGUITY 1 NOV 21 1331 12141 MANUTALE 8 18 85-94, LH13, 636FT ANTHONY TEV 2 17. ANTHONY TEV P. 1. ANTHONY LINGUITY 1 1814 337.9 AUG / 1. A. S. A. A. A. A. A. A. A. A. A. A. A. A. A.
PHOTOUAC	SITE # 1186.2 ANYLE LIBERT DOU 21 1331 13+7 WENTER # 12 SE-23, SERVENCE AND ANYLE LIBERT 10 SE-23, SERVENCE AND ANYLE 10 SE ANYLE	

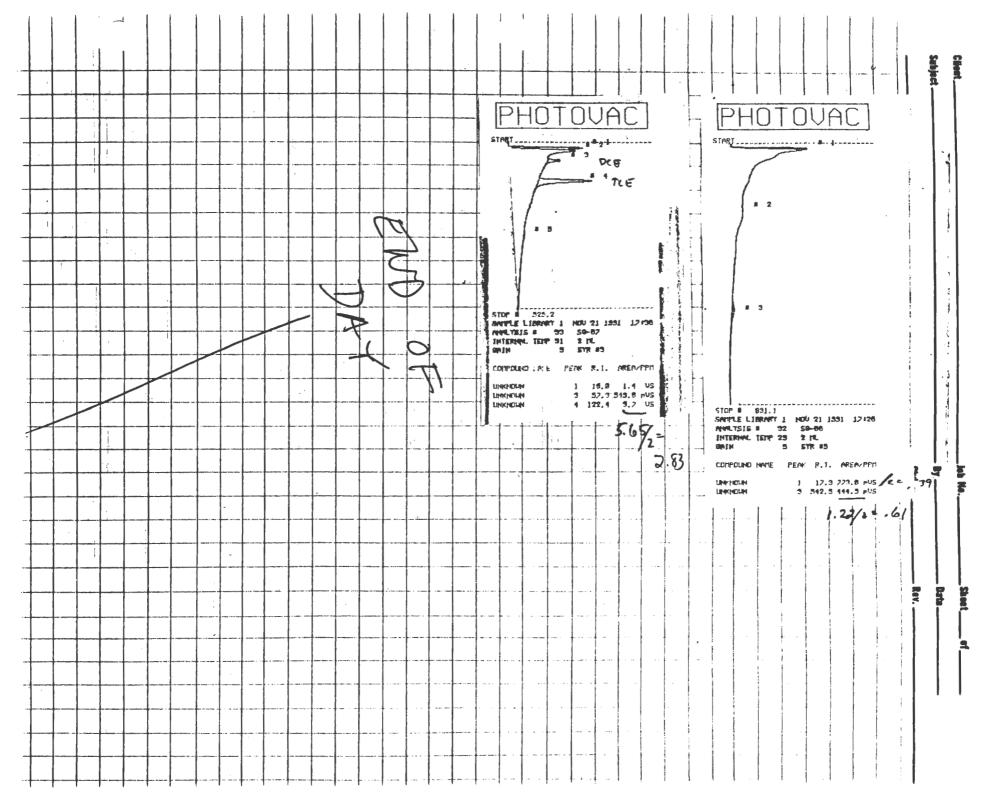




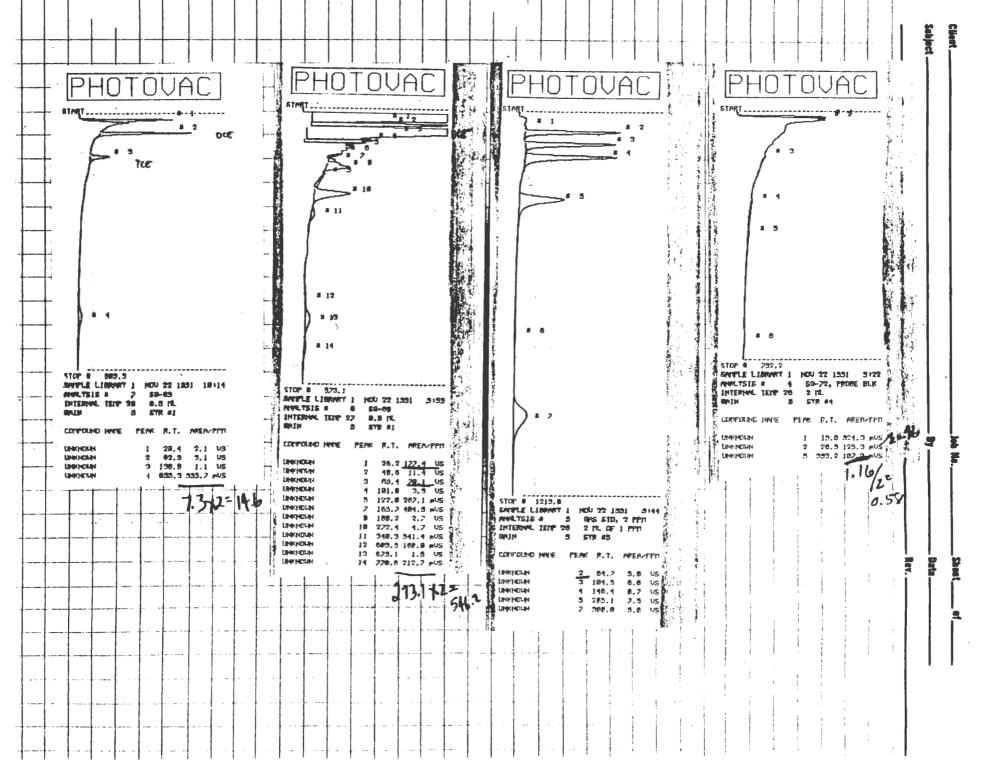




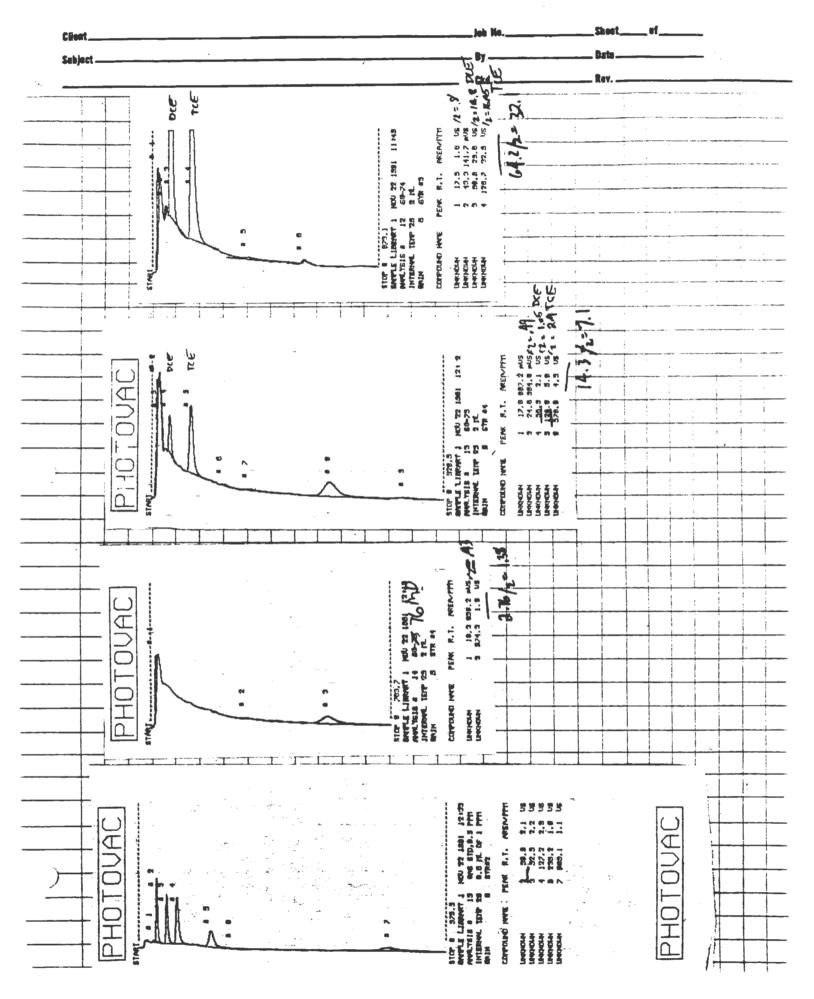




PHOTOVAC	PHOTOUAC	PHOTOVAC
5 STOP 0 1214.8	STOP 4-66,5 SAMPLE LIBRARY 1 HOU 22 1551 6145 REALTHER 2 STR BLK INTERMELTER 30 1 FL GAIN 5 STR 85 COMPOUND MAKE PEAK R.T. RREAPPH LINKINGH 1 28.5 1.1 US NO	PHOTOVAC
SMYTHE LIBRARY 1 NOU 22 1331 31 134 135	7	STOP 248.80 SMTPLE LIBRARY 1 NOU 22 1391 8700 MANUTSIS 8 1 10 PT TROPE BUK ONIN TO 1 TL COMPOUND NAME PERK R.T. AREA/PPH



PHOTOUAC	PHOTOUAC STORT	Circuit
MLENE	TOPPOUND NYE PERK R.T. AREA/PPH I 28.8 850.5 MUS UNIQUEN UNIQUEN 2 81.5 4 8 MG	
STOP 0 1142.3 SOUPLE LIMPOUT 1 MOU 22 1091 11:340 POULTAIR 0 11 WHE STD, 10 FFF1	7.56	, E
JATERIAL JEEP 28 J PL OF 18 PPH 40,000 B STR 81 CONTROL OF 18 PPH 8,1, AREA-PPH 18 PPH	STOP @ 1473.5 EARTHE LIBRARY 1 NOU 22 1891 18439 ANNELYSIS @ 8 50-28 INTERNAL TEIT 27 8.25 IL ROTH. 5 SYR #2 CONFOUND NAME PEAK R.T. AREA/PPH	
Section 1 10 10 10 10 10 10 10	UNKNOUN 1 18.3 658,6 mUS 18.4 1.2 US 18.4	Sheet ef
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	(6 432 IMC 2014800 SC-05
	1250 Inc
)

(UTHUCH MINTER) BEAD 1 TE THE 8:30 At THUCH & Cloud, 40-5h' & winder 10 1176 (6 - 610 (4) 56-10 10-10:45hmistlad of points about the 117 house 6" = 3-3-7-10-39-31-53-53 11:00 Am high (6 765 (0) 56-07) 11:00 Am high (6 765 (0) 56-07) 12:00 Am night 10-39-31-37-55-99 12:00 Am night 20-3-11-33-55-99 12:00 Am night 20-3-11-35-70-100/ 13:00 Am night 20-3-11-35-70-100/ 13:00 Am night 20-3-11-35-70-100/ 13:00 Am night 20-10
Supplies that the points along first letter blows 16 12 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -
11 high 16 765 (V) SG-09 blowing 1 Dot 27-57-99 cum make bale 10 min Dows/6"= 2-2-3 cum make bale 10 min Dows/6"= 2-2-3 com when 3 1 min Dows/6"= 2-2-3 com when 3 1 min Dows/6"= 2-2-3 com when 3 1 min Dows/6"= 2-2-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3 com when Dows/6"= 2-3-3
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CATE 3 L/min OVM CONTROLL OVM NOTE = CONTROLL CONTROLL
EVAC DO STANGED
1 2 of the contract stated on
277 (20) 27
16" 2.4-11-15-28-50-52-130 3:40pm
2
10/c - Approx 34 min refres
12 Vole = 10 minutes - continuous
(E) (C2) 1/
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
DVA watering - continues manting
ovar high = norle = Oppm
rate 32/min 10 minutes sufmin

152-9, 56-1 6, 5, 8, 7, 5/44, 5 800, 100, 100, 100, 100, 100, 100, 100,	Sum continuos Oum high = 0.0	1033 (Line 17 3 40 ft) SG-17 Mouss (64 2, 20 60/3' COUM COND, COUM high = 0	a, a, a, 3/12, 5 2, a, a, 3/12, 5 COUNT (14) =	
4:10 pm (5' firm) (5' firm) blows / 6' = 4-6-5-4-3-3-4-4 oum - condinions oum hely = 0 pp n - nover	new all ESE hat spet (8) SG-14 hours/6" * <2001	CUM CONTRACTOS	1/19/2012 10 West 36/1/19/2012 1/19/2012	the bocations signer

12:10 1:10 17 610 56-19	30 - 37 (1/ 502) 01 01 11 11 12 C
	A MAN CONTRACTOR OF STATE OF S
کر بر	blan 5 (4 9, 8, 6/11, d3, 30, d/
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W Columbia	7
ما	
337W/W.18.57	400 (Cine 17 1320) 56-27
T. C. C. S. L.	Mars 72" 8 38, 269/6, 534 10pm
63	over confidents prop = P. P. ppm
Chies (2)	6 1000 A July 10 10 10 10 31/M
	Legos Honor
	The Contraction

50-34 Gording Sels / Orlan high = 8:0 contracts commanding eurevode 10 min 31/min In dead VCGUGA from) Mobus/6" |3,7,13,12/8,8,6,4 blans 64 4,13, 22 13/10,3,4,3 61 3,3,3,5/6,6,6,10 ewite. (5 mm 3C) Vicezy And char dy, 55 oun cont. / oun 9181 (20 500th of aim countillous line 16 26-38 119mg 1 5c. th of SG-30 sprib from evanite 60 min Jan you refisal 4.0 (25) now of crocerate to my El Lows 6" 347, 13 Hook wolfer Gum contine 035/ at Mis ·(25) 18

(mile 100 (12,0 2) 2 27) 200	8) ow (6" 1,3,8,1 asm cont oun	230 (Line 4 200) SG-4(3) bloss 6" 2, 2, 48/1731, 58/100/3' outh continuous (outh high = 100)	300 (Line 5 2005) 52-42 blasson 2000, 00m man = 5	330 (Line 5 man 56-43 Mars/6" (2,3,2/511,16,20	expert our with the
	11° Am (Line 19 1340) 56-3530 blows 600, 5,8,76/5,434 over cont our high & p	Want Line 19 12/3/5/5/10 brun cont/ brun mish = 6 eage = 10 minn 31 (min)	120 (Line 18 445) 56-37 32, blows (6"-123,8,8) 64 64 00-10, 20,000, 2000, 0000, 1000, 2000	115 (Line 19 770 56-38 33 blass/ cut 1, 2, 4,8/21, 48,74, 100/,3', 00000 cout out min = \$	1:50 (Line 3 (50) SG-3 (9 x) blow (6" 1, 2, 2, 3/8, 22, 14 over conf. aven high > 6 14

8 . 4.

39 5 Co. (Line 12 930) SG- 47 dows/6 2, 2, 3, 3/18, 47, 100/2" SG- 43 COUNT COOT, OUM MISH = 0	530 [Lina 1 2 490] 86-48. 2000 CONT. BUN high = 0 40 10 18/38 43 43 2000 CONT. BUN high = 0 40 40 10 10 10 10 10 10 10 10 10 10 10 10 10	11. 1 15 (Rod Blank) SG-49 2 evac 10 ming high = 9 ming out with 1370 SG-50 ming high = 4 ming high
40° (Line 10 770) 56-44 39 610005/6" 2,2,9,9,71 curac cont (cours (nep=0	43° (Line vo 850) SG-45 40, Ward Court (our min)	500 (Line to 990) SG-46 41 Blows (6" 2,1,2,6 27,42,65, toof.3 Blows (6" 2,1,2,6 27,43,65, toof.3 Blows (6" 2,1,3,6 2,7,43, toof.3 Blows (6" 2,1,3,6 2,7,43, toof.3 Blows (6" 2,1,3,6 2,7,43, toof.3 Blows (6" 2,1,3,6 2,7,43, toof.3 Blows (6" 2,1,3,6 2,7,43, toof.3 Blows (6" 2,1,3,6 2,7,43, toof.3 Blows (6" 2,1,3,6 2,7,43, toof.3 Blows

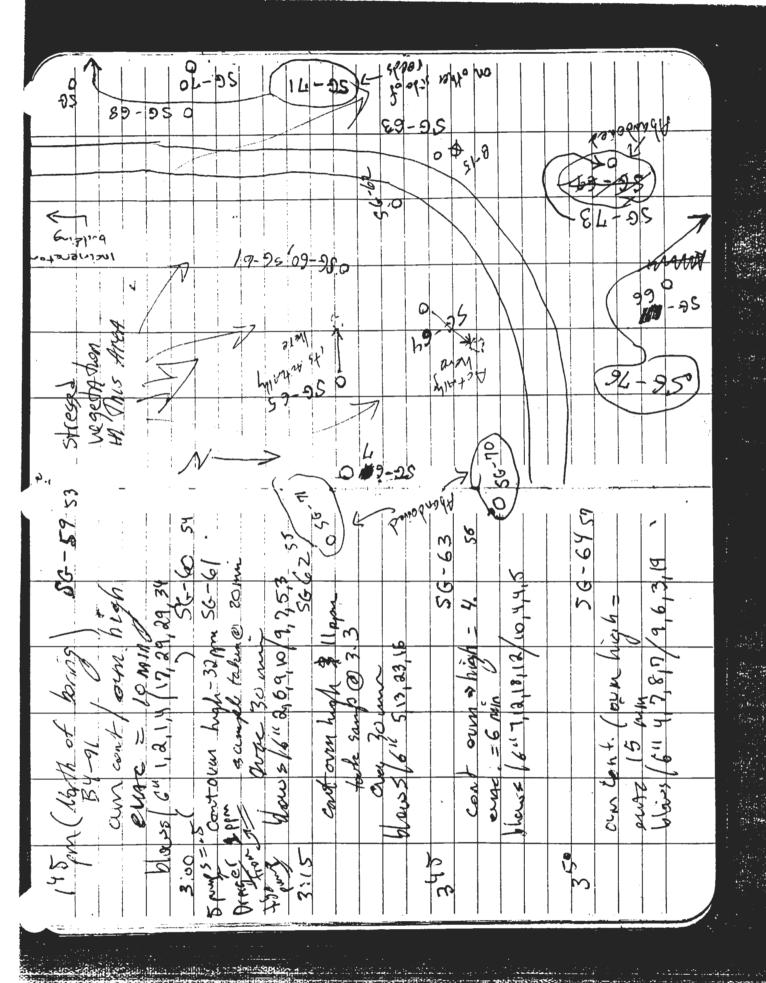
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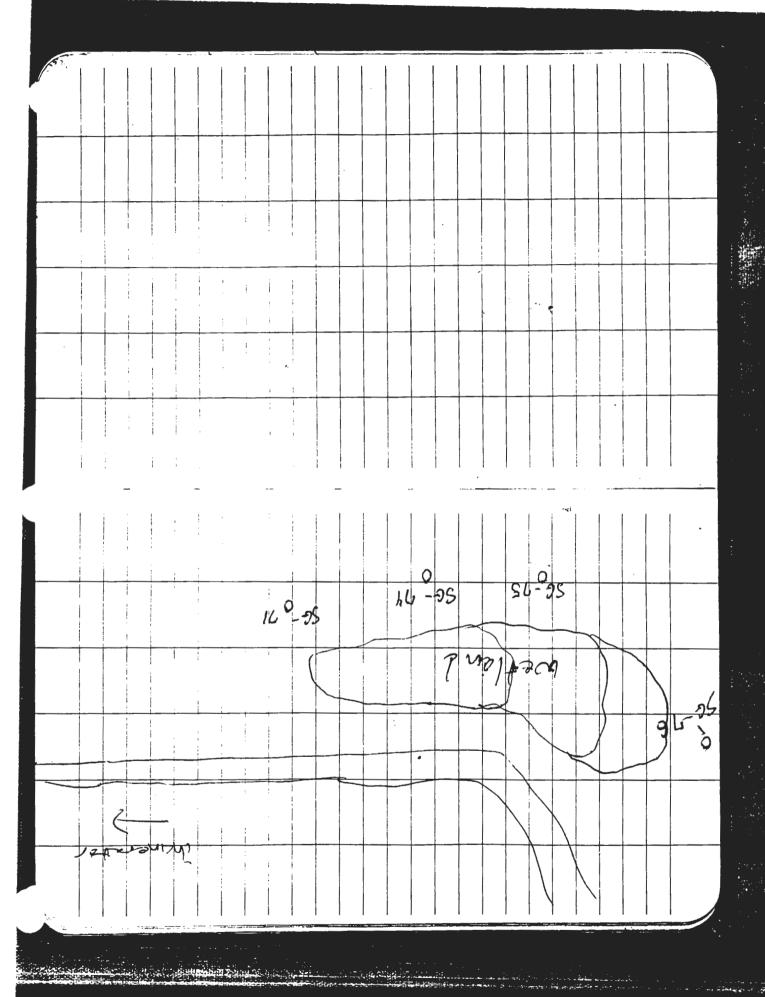
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د اروند اسال دریگ دارا در در دود. گهانهٔ هوروندریشون کروند کسوسه

Cline 13 1010 SG-51 45 Mer Doling SG-55 45 Mer Doling SG-55 Mer Doling SG-55 Mer Doling SG-55 Mer Doling SG-55 Mer Doling SG-55 Mer Mill	160) SG-52 46 Hous (M 1, 2,2)	4 1,3,24/7,7 W, 12 4 1,3,24/7,7 W, 12 6 13 21 5 6 - 5 3 49 M 10, 4 0 20 Min to 20 10 2, 2 10 10 10 10 10 10 10 10 10 10 10 10 10	Mars (64 113, 194)	Own cont. / 32 Min high = 6 So min and 6 (13,19,30, 52) 30 00 m cont (84 - 10) 6 m cont	DIGWS/6" Q, Q, I, M, I, M, I, Q, I, M, I
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58 930 BUM COND, JOHN Migh = 75 ENDE - 20, 14	Conference Cond. 10	(1 powe = 3) - 5 60 pm month / 56-7 10'6 cent conte / 0 mm high = 8	85° Rol Blank SG-72	1030 Oun Cont	Mouse (1) 2, 2, 3, 3, 3, 4, 4, 3, 5
430 guy cont low, high = 9 cut 131 min 1,9h = 9 dows /6" 3,5,7,6/4,5,6,12	500 SG-66 59	500m (and am high = 40 60) every de 12, 28, 23, 50, 66, 23		every 6 4 4 3,3 / 5,7 W 9	

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SENECA ASH LANDFILL DRAFT RI REPORT

SOIL HEADSPACE CALIBRATION AREAS AND STATISTICS

CANAAN SCIENTIFIC

4037 Darling Court Lilburn, (Atlanta), GA 30247 (800) 842-1088 (404) 925-2855

CERTIFICATE OF ANALYSIS

DATE REPORTED: 12-31-92

REFERENCE #:

88-21661

MATERIAL SUBMITTED: VINYL CHLORIDE, 1,1-DICHLOROETHYLENE,

CIS-1,2-DICHLOROETHYLENE,

TRICHLOROETHYLENE IN NITROGEN, CERTIFIED

CYLINDER # FF-28750

INFORMATION REQUESTED: RATIO ANALYSIS

METHOD OF ANALYSIS: GAS CHROMATOGRAPH

RESULT OF INVESTIGATION:

COMPONENT	SPECIFICATION	CONCENTRATION
VINYL CHLORIDE 1,1-DICHLOROETHYLENE CIS-1,2-DICHLOROETHYLENE TRICHLOROETHYLENE N2	100 PPM 100 PPM 100 PPM 100 PPM	97.5 PPM 98.2 PPM 90.6 PPM 91.6 PPM BALANCE

AUTHORIZED SIGNATURE

"THIS REPORT STATED ACCURATELY THE RESULTS OF THE INVESTIGATION MADE UPON THE MATERIAL SUBMITTED TO THE ANALYTICAL LABORATORY. EVERY EFFORT HAS BEEN MADE TO DETERMINE OBJECTIVELY, THE INFORMATION REQUESTED.

Subject			y Date	
	Concertation	Ant. S+d J-j.	Vesse	
A.)	. 5 ppm	25 ml 1	500 ml Bulb	
B)	1 ppm	2.5 1 .5	250 ml Culb	
c)	2 pp m	2.5 ml. ,25	125 ml Bulls	
D.)	5 gpm	12.5 .1	250ml 315	
E.	10 pp m	12.5 .05	125-1 BULS	

501+01-1



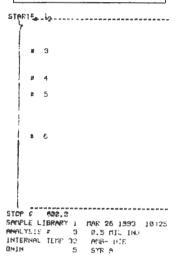
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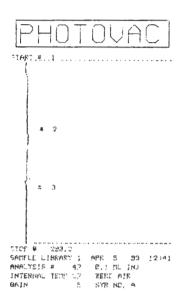
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SAMPLE 2, P d. N 10.0 10.8 125.5 0.8 224.8 0.9 0.9 CAL EVENT 0 0.0 0.0 0.0 10.2 0.0 0.0 EVENT 6 EVENT 6 EVENT 7 EVENT 3 0,5

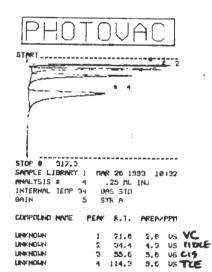
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COMPOUND NATE PEAK R.T. AREAZPPH



COMPOUND WANTE PERK R.T. OREAZPEN



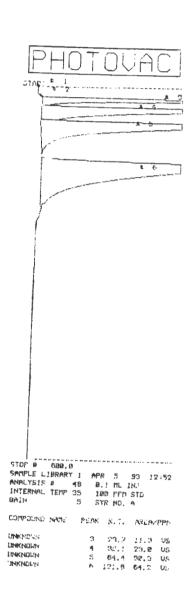
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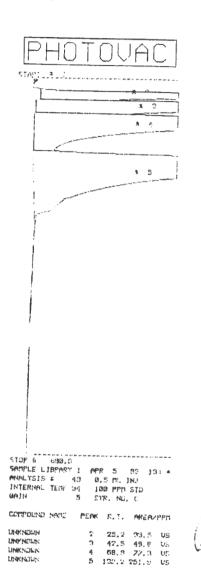
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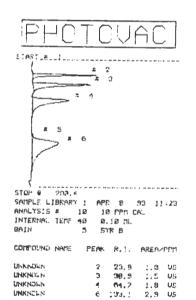


Client_ Sheet___ _ Date. Rev.

DIAST_E_1. STOP 6 195.1 COMPOUND NAME PEAK R.T. AREA/PPM 2 23,0 303,0 mU0 3 38,2 8:6,2 mU5 4 64,5 1:2 U5 6 132,5 1.4 U5 DINKHOPA

. - ppm equir.

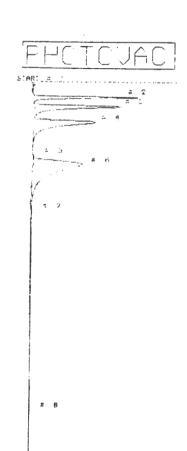
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I ppm equit

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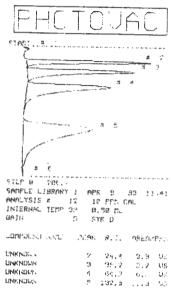
UNKNOWN



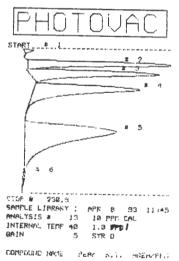
SAMPLE LIBRARY 1 APR 8 93 ;;:34 ANALYSIS 8 11 10 PPT CAL INTERNAL TEMP 36 9.25 ML GAIN 5 SYR B

COMPOUND NAME PEAK R.T. AREA/PPM UNKNOWN 24.2 2.2 VS LINKNOPIK 99.1 9.1 US 84.7 4.8 US UNKNOWN UNKNOUN '6 132.8 2.8 US

2 ppm egviv.



5 ppm equiv

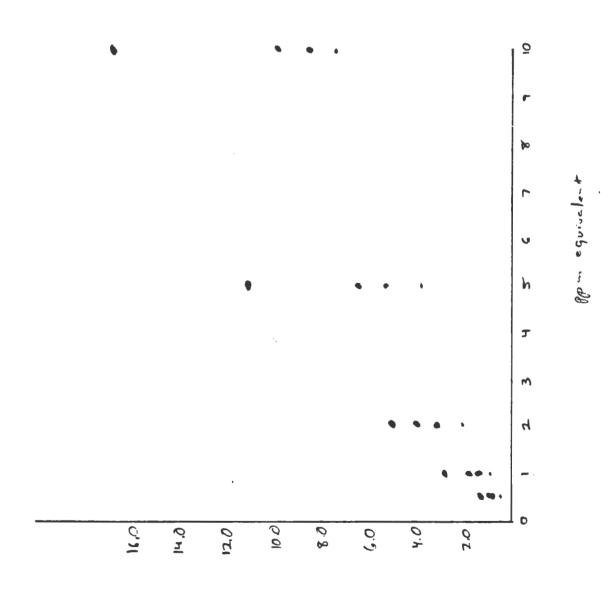


LINKNEUR 9.7 245.1 mus 2 24.5 7.4 05 3 48.1 9.3 05 4 65.7 9.5 05 5 133.4 16.8 95 UNKNOWN **DHKNOP!** UNKNOUN UNKNOUN 6 202.9 115.0 mUS



Client	Job 110	29 GET 61
Subject	Ву	Date
	Ckd	Rev

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2	,25	2.2	3.1	4.0	フロ	ĺ
-	,50	3.8	5.2	5.5	11.3	
15	1.0	7.4	8.5	5.5	12. 2	1



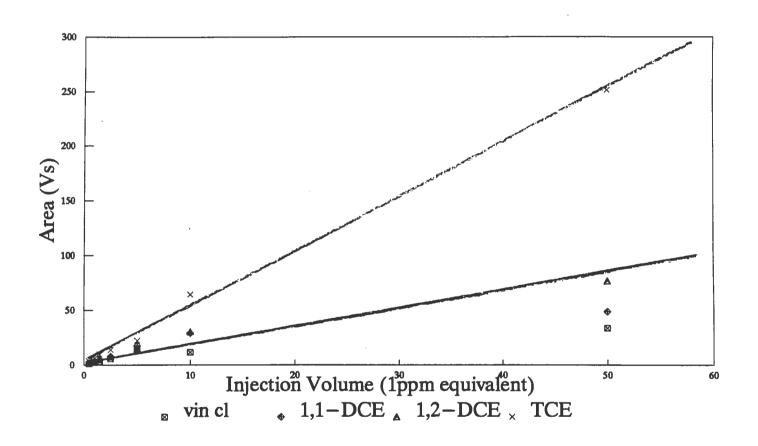


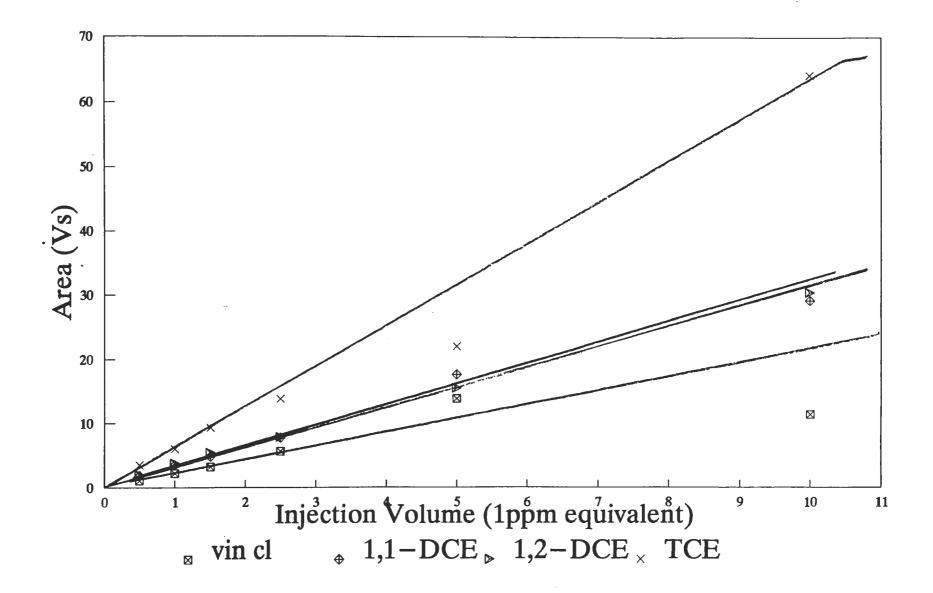
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Area (Vs)

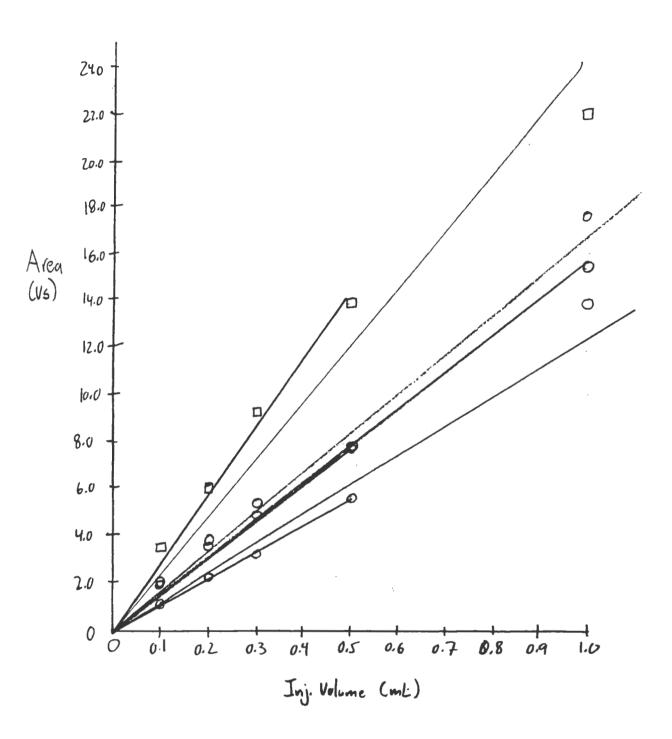
		Inj. Volume (InL)	Vinyl Chloride	I,I DLE	40 1,2 DCE	TCE	
	/	0.1	1.1	1.8	2.0	3.5	
		0.2	2.2	3.5	3.8	6.0	I
5ml etd	1	0.3	3.2	4.8	5.4	9.3	١
etd	.	0.5	5,6	7.7	7.8	13.8	1
		1.0	13.8	17.6	15.5	22.0	
		r	0.9953	0.997	0.9991	0.9911	
		-			_	5	
	0.1 (116	,) . ~ 2.0	11.3	29.0	30,3	64.2	
	0,5(10	z)= 10.0	33,5	48-8	77.3	251.9	
		V	0.956	0.918	0.983	0.998	

	Area (Vs)				
Inj. Volume	Vinyl				
(1 ppm equi	Chloride	1,1-DCE	1,2-DCE	TCE	
0.5	1.1	1.8	2	3.5	
1	2.2	3.5	3.8	6	
1.5	3.2	4.8	5.4	9.3	
2.5	5.6	7.7	7.8	13.8	
- 5	13.8	17.6	15.5	22	
10	11.3	29	30.3	64.2	
50	33.5	48.8	77.3	251.9	









0-Vinyl chloride 0-1,1 OCG 0-cis 1,2 DCE

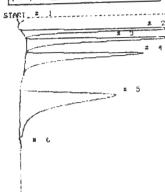
D-TCE.

MAIN



Subj

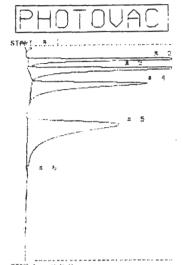




STOP # 135.K SAPPLE LIBRARY 1 APR S 93 9148 ANALYSIS # 94 5 PPM STD INTERNAL TEMP 39 8.5 ML INJ GAIN 5

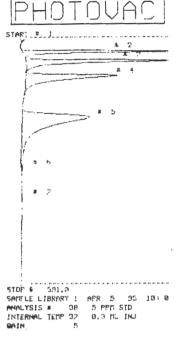
COMPOUND NAME PEAK R.T. AREA/PPM

LINKNULN	,	9.7	171	mUS
	2	22.7	5.3	US
THENNUM	_		2.6	US
UNKNOWIE	3	37.2	, , -	
DUKNO:	4	62,3	9.0	US,
UNKNOW:	÷.	125.3	19.0	ŲΣ



SAMPLE LIBRARY 1 APR 5 93 9:51
AMPLYSIS # 96 5 PPR STD
INTERNAL TENP 98 0.5 PL INJ BAIN

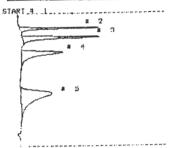
COMPOUND NAME	PEAK	5.1.	AKE A	TPU
UNKNOWN	1	3.8	172.2	mŲ5
UNKNOWN	2	22.8	5.6	US
UNKHOLIT	3	3,7,2	2.7	٧s
LINKINDLIN	4	62,3	7.8	VS.
LINKNOUN		129.6	10.9	US



COMPOUND NAME PEAK R.T. AREA/PPM

22.2 3.2 VS 37.2 4.9 VS 62.3 8.4 VS (28.5 8.3 VS 2 3 4 5 UNKNOWN DHKNORK THKNORK PHKNORK





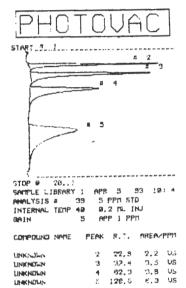
STOP @ 212.3 SMIPLE LIBRARY 1 APR 5 93 9:44 ANALYSIS # 35 5 PPH 3TD INTERNAL TEMP 40 8.1 ML INJ BAIN 5 P

COMPOUND NAME PEAK R.T. AREAVPPM

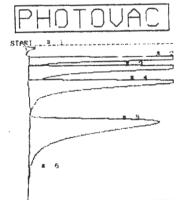
NKNOW	2	22,9	1.1	us
NAKHOMA	3	3,7.6	1.8	ŲS
FINA MOTH	4	62.5	2.8	ŲS
UNKNOWN		129.4	3,5	ŲΩ

START 3.0 STOP 9 3.0 SAMPLE LIBRARY 1 APR 5 93 ANALYSIS # 37 5 PPR SID INTERNAL TEMP 38 8.5 NL INJ

COMPOUND NAME PERK R.T. AREASPPTI



FIRM HOW P



STOP R 258.9
SAMPLE LIBRARY 1 APR 5 33 18: 9
ANALYSIS # 40 5 PPR STD
INTERNAL TEMP 48 1.3 ML INJ
GAIN 5 APP 5 PPR בוממו באנומיותכם PEAK R. L. BREBURRE

1 4.2 298.5 MUS 2 22.7 13.3 VS 3 32.2 17.6 US 4 61.1 15.5 US 5 127.1 22.8 US 6 282.0 112.6 MUS UNKKORK UNKNOUN LINKINGEN FINKHOPH UNKNOWN DHKNOLN



Client	Job 110	Sheet101
Subject	- By	Date
	Cird	Rev.

100 ppm

SEMECA ASH LANDFILL DRAFT RI REPORT

SOIL HEADSPACE CHROMATOGRAMS

October 20, 1993



Cheat	_jeb No	Sheet1011
Subject	- By	Date
	Ckd	Rev

4/19/93

Gas Standard: Prepared by National Specialty Gues

Vinyl Chbride: 97.5 ppm 1,1-dichloroekene: 98-2 ppm cis 12-dichloroekene: 906 ppm Trichloroekene: 91.6 ppm

POLER 1 35 7 3115
FIELD: 38
POLER 1 35 8.8 19.8
CAL
EVENT 2 8.8 19.8
EVENT 3 9.8 125.8
EVENT 4 9.8 20.8
EVENT 6 8.8 9.8
EVENT 7 8.8 9.8
EVENT 7 8.8 9.8

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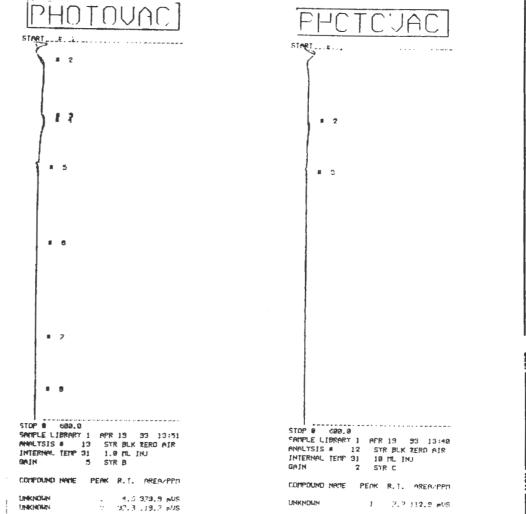
STOP B

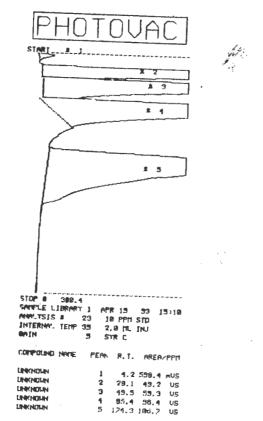
STOP B

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vinyl chloride = 19.5 pm 1,1-DCE = 19.6 pm cis 1,2-DCE = 18.1 pm TCE = 188 pm

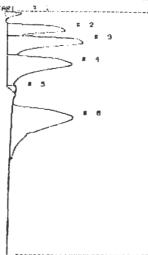
3

9

STOP 8 381.3 SAMPLE LIBRARY 1 APR 19 93 15:39 ANALYSIS # 27 I PPM STD INTERNAL TENP 34 1 PPH INJ 5 SYR B

COMPOUND NAME PERK R.T. AREA/PPM

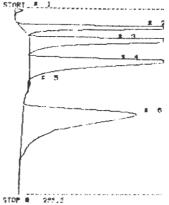
NHKHOFM	3	4.1	337.2	mUS
CINICHOPH	2	29,9	2.2	US
LIMIKINDELIK	3	49.0	3.0	us
ENKNOUN	4	83.5	3.0	US
UNKNOWN	;	168.9	4.3	US
INKNOUN	Ŕ		278.5	
	0	123,7	2/8,5	mV5



5TDP 0 584.7 SAMPLE LIBRARY 1 APR 19 93 15:31 ANALYSIS # 26 J PPH STD INTERNAL TEMP 34 2 ML INJ 5 SYR C

COMPOLIND NAME PEAK R.T. AREA/PPM

THKNON	1	4.8	591,2	MUS
こまえてロじて	2	30.4	5.0	US
DHKNOFN	3	49.1	8.4	US
INKNOUN	4	83.7	9.9	บร
NHKNORM	5	123.9	359.6	MUS
DHKHONH	ច	69.	14.7	US



SAMPLE LIBRARY 1 APR 19 33 15:24 ANALYSIS # 25 10 PPP STD INTERNAL TENF 35 0.5 ML INJ 5 STR B

COMPOUND NAME PEAK R.T. AREA/PPM

UNKHORN	1	3.8	217.5	mU.
DUKHONH	2	29.2	10.7	US
TB4KNOP4	3	49.4	10.3	US
THIKITOLIN	í	93.2	15.3	US
UNKNOWN	6	.78.3	21.9	195

1010VAC

STOF @ 39.,0 SAMPLE LIBRARY 1 APR 19 93 15:18 AMALYSIS # 24 10 PPM STD INTERNAL TEMP 35 1.0 ML INJ BAIN 5 SYR B

B 2

COMPOUND NAME PEAK R.T. BREAZPPM

UNKNOWN	1	4.4	384.7	mUS
UNKNOUN	2	29.0	24.5	צני
UNKNOWN	3	19.7	33.9	Ų9
URKNOLN	4	34.5	49.3	US
CINKNOSIN		119.7	2.7	U.S
LINKNEEN	G	1.28.6	93.2	Ų:

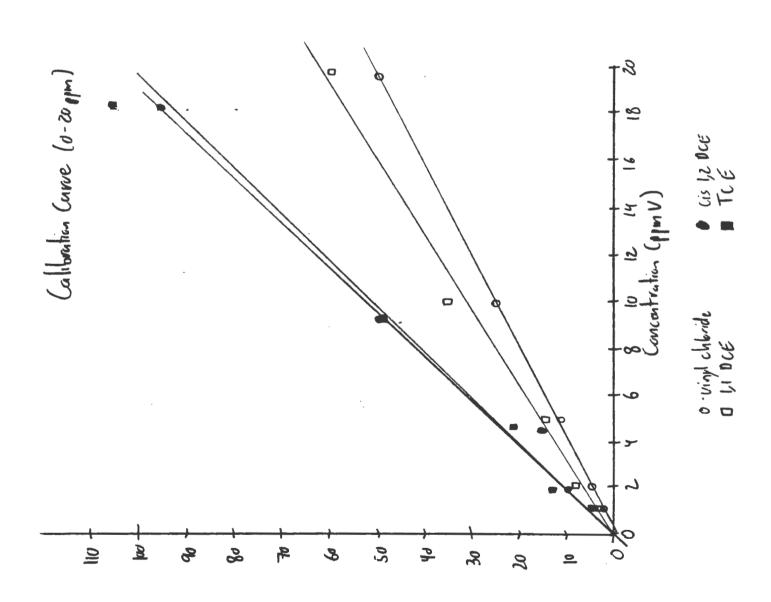
Viryl chloride: 1.0 110CE: 1.0 us 1,2 No.: 0.9 TCE: 0.9

Unyl chlande: 20 1,10CE: 2.0 (is 1,2 PCE: 1.8 TCE: 1.8

Vizylchlade. 4.9 110CE : 4.9 Us 1,2 OCE : 4.5 TCE : 4.6

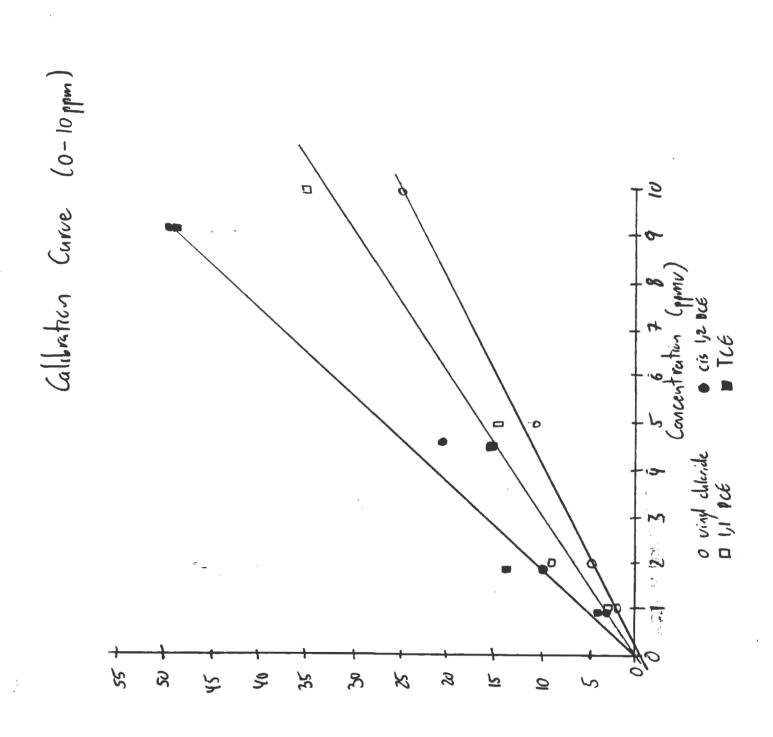


Client	.Job No	Sheet of
Subject	Ву	Date
	Chil	Pay





Client	_Jeb No	_Sheet of
Subject	- By	_ Date
	and	Day



October Response (Us at gain 5)

Date

START A L **8** 2 . 3 # 4 # 5 STOP @ 800,0 SAMPLE LIBRARY 1 APR 19 93 15:18 ANALYSIS # 31 ZERD AIR INTERNAL TEMP 33 1 HL INJ 5 SYR 3 COMPOUND NAME PEAK R.T. BREAZPPM

1 4.5 389.3 pUS

2 133,7 226.0 aUS

UNKHOUN ;

STOP 0 224.8

STOP 0 224.8

SATPLE LIBRARY 1 APR 19 93 16: 6
AMARTSIS 8 38 ZERO AIR
INTERNAL TEMP 36 1 ITL INJ
GAIN 5 STR 2

COMPOUND NOTE PEAK R.T. AREA/PPH
UNKNOWN 1 4.5 315.3 AUS
UNKNOWN 2 133.7 273.2 BUS

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COMPOUND NAME PENK P.T. NREGUPPH ..

UNKNOUN

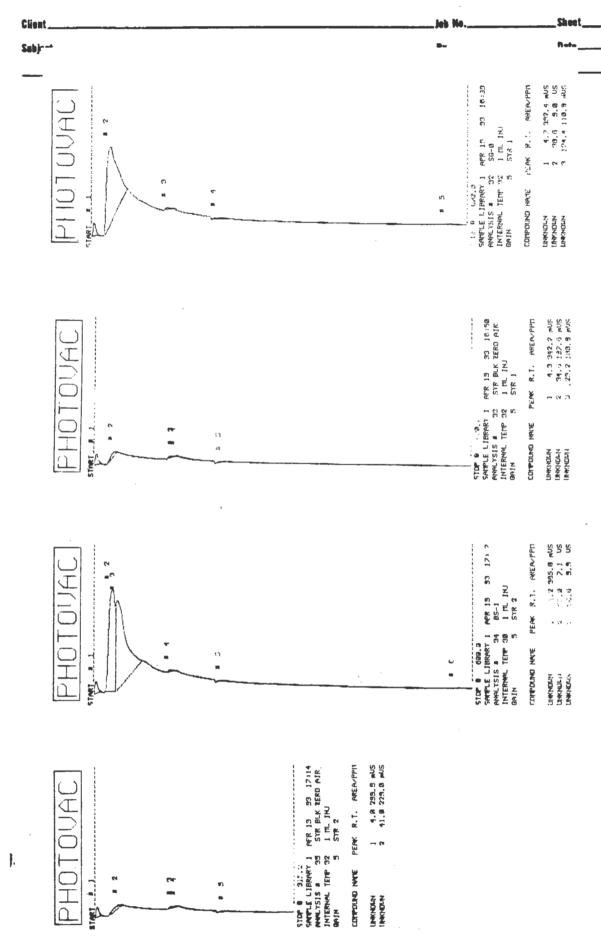
UNKHOUN

1 4,6 338,9 mUS

2 199, 2 292, 7 mUS

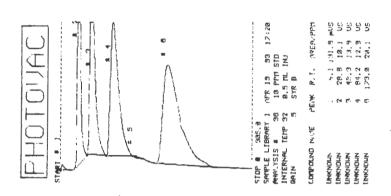
STOP 0 220.4
SHIPLE LIBRARY 1 APR 19 93 15:57
PHOLYSIS # 29 ARBIENT AIR
INTERNAL IEMP 35 1 THL INU
GAIN 5 SYR 1

COMPOUND 5 PERK 3.1. OREGITPH1
UNKNOWN 1 4.6 023.7 MUS
UNKNOWN 2 91.3 023.4 MUS





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Subject	Ву	Date
	Ckd	Rev

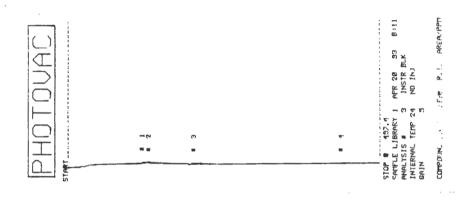


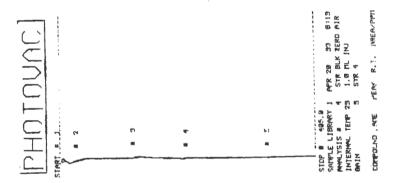
End of Day

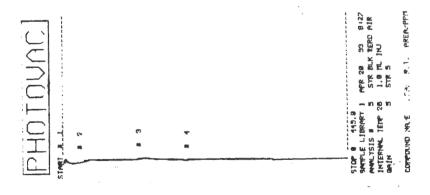


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Subject Soil Gas -	Ву	Date 4/20/43
	Ckd	Rev

Sturt: 4/20/93

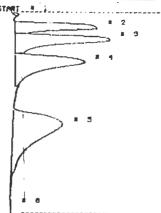








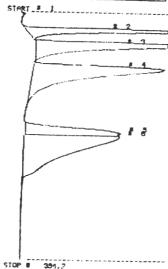
nt		1893————————————————————————————————————	Sheet 2 of
ject			Date 4/2/43
		Ckd	Rev
STALL B. 1.	et II	STOP 8 SALES AND STATE LEDRARY I PPR 20 33 8:37 AND STATE LEDRARY I PPR 20 33 8:37 AND STATE STATE SERVICE AND SERVICE STATE SERVICE SERVICE PERK R.T. PREA-PPIT	
STATE TOURCE	•	STOP # 457.8 SAPPLE LIBRARY 1 APPR 28 53 8:45 MANALTSIS # 7 STR BLK ZERO AIR INTERNAL TETP 27 2.0 PL INJ BAIN 5 STR 7 COMPOUND NAME PEAK R.T. AREA/PPI	
PHOTOUAC	т м м	10P 6 453.5 AMPLE LIBRARY 1 APR 28 93 8:54 MIL'81S 8 5 TR BLK ZERD AIR MIL'81S 8 5 TR BLK ZERD AIR MIL'81S 8 5 TR D ADMPDLIND , 197E : E.9: 98EA/PPR1	



STOP 0 318,4 TATPLE LIBRARY 1 APR 28 93 9128 MALTSIS # 14 1 PPH STD INTERNAL TEMP 33 2.8 ML INJ BAIN 5 STR D

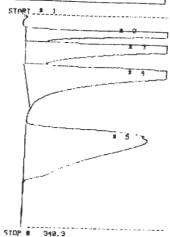
COMPOUND NAVE PERM K.T. PREAMPPM

UNKHOUN	2	25,0	6.2	US
THKNOHN	3	43.8	9.6	ŲS.
UNKNOWN	4	28, 9	12.3	US
UNKHOUN	5	178.7	14.4	US



SAMPLE LIBRARY 1 APR 29 93 9:18 AMACTSIS # 11 10 FPM STD INTERNAL TEMP 29 8.5 ML INJ BAIN 5 SYR 9

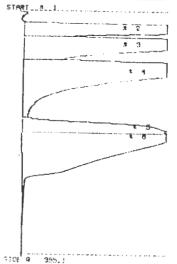
EAR	₽.T.	HEAL	PPI1
2	28,.1	17.1	US
3	50.5	18.6	US
4	90.1	12.3	US
5	193.7	2.9	US
6	199.3	19,9	US
	3 4 5	2 28,4 3 50,5 4 90,1 5 193,7	2 28.3 17.1 3 59.5 18.6 4 99.1 12.3 5 193.7 7.9



CAMPLE LIBRART 1 APR 20 93 9: 9 ANALYSIS # 10 10 PPH STD INTERNAL TEMP 29 1.0 ML INU 5 STR B DAK

COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOWN	٠.	28.0	27.4	บร
DUKADN!*	31	. 1 . 4	39.6	US
UNKNOUN	4	91,7	42.9	Ų3
NKHONH	5	201.3	39.9	US



SAMPLE LIBRARY 1 APR 20 93 91 2 ANALYSIS # 9 10 PPM STD INTERNAL TEMP 28 2.8 ML INJ BAIN 5 SYR D

COMPOUND ARGE SEAK P.T. AREASPON IJNKND:JN 4.9 ,53,3 mls 2 22.2 56.6 U ピススプロドア UNKNOUN 3 51.9 68.4 to []NKNONN 4 92.4 135.4 US UNKNOUN 5 193,4 14.3 US 6 232,5 43,9 US

UNKNOUN

1893

4/25/43

Mi s



4/20/93 \$100 0 2033.7 **PAPLE LIBRARY 1 APR 20 93 9134 **ANALYSIS 1 1 PPH SID INTERNAL IERP 34 1.0 PH IN I GAIN 5 5YR B PHOTOUAC PINT P. . AREA/PPI 80 80 80 90 ស្_មស្_ស ស្ស ២ ស COMPENIAS , AME UNKNOUN UNKNOUN UNKNOUN * 2 24.3 15.5 US . 77.3 15.4 US 175.1 28.8 US PIFFER R.T. AREA.PP.1 PHOTOUAC START BITHN ON TOTAL האינאסתיא היאלאסניוא היאלאסניוא היאלאסניוא 510° 8 477,7 SMPLE LIBRART I FPR 28 55 18:20 ANALTSIS 8 17 SG-8 MITERNAL IEFP 29 1:0 PL INU SAIN 5 SYR J COMPOUND NAME PERK R.T. AREA.PPM 2 25.2 5.6 US PHOTOUAC START . B. 1 € 8 NIUNIN STOP 8 397,7 PPR 29 33 10:32 MWHZ LIBRARY I PPR 29 39 10:32 PR 20 10:32 PR 20 10:32 PR 20 COMPOUND NAME (1998 R.T. PREPAPP) PHOTOUAC START ... E. .. Lu....

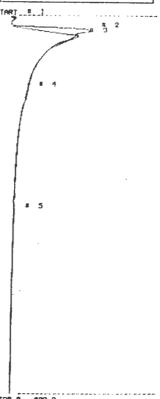
ຕ **ສ**

START * 2 1 4 . 7 . .

STOP 0 699.9 SAITLE LIBRARY 1 APR 29 53 11:18 ANALYSIS # 22 BS-1 HDSPC INTERNAL TEMP 30 1.0 ML INJ 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM

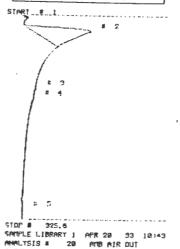
2 25.9 51.8 US UNKNOUN UNKNOUN 9 52,8 15,7 US UNKNOWN 4 34.8 95.1 US 5 103,1 18.2 US LINKHOUN DINKNOUN 6 125.7 11.4 US UNKNOWN 7 234.3 526.3 mUS



STDP 8 699.9 SAMPLE LIBRARY 1 APR 29 93 18:53 ANALYSIS # 21 BS-1 INTERNAL TEMP 31 1.8 HL INU 5 SYR 2

COMPOUND NOTE PEAK R.T. BREAVEPT

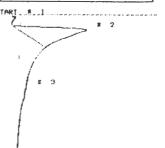
"MKHOUR 1 24.9 2.3 US UNKNOWN 3 12,4 233,2 aUS



INTERNAL TERP 34 1.0 ML INJ BAIN 5 SYR 1

COMPOUND NAME PERK R. L. AREALPPH

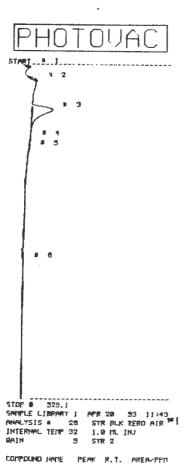
N. MCMONIA : 25.) 6.4 US



STOP 0 223.0 CAMPLE LIBRARY 1 APR 20 93 10:36 AMALTSIS # 19 AMB AIR IN INTERNAL TEMP 34 1.8 ML INT GAIN 5 SYR 1

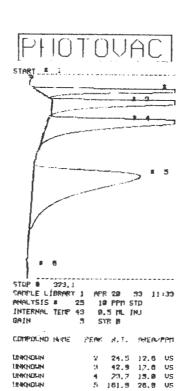
COMPOUND NAME ... AY R. T. AREAZPON

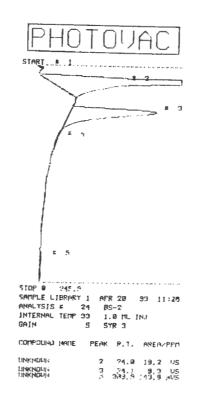
じるえてはにて 2 24.2 7.3 US

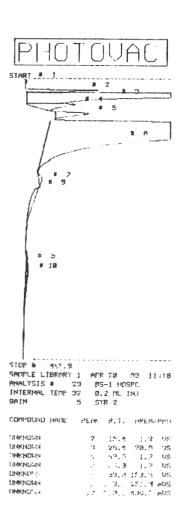


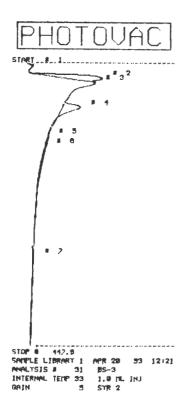
3 23.5 1.9 US

UNKNOUN









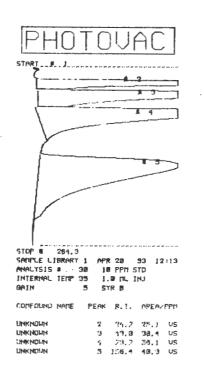
COMPOUND NAME PEAK R.T. AREA/PPM

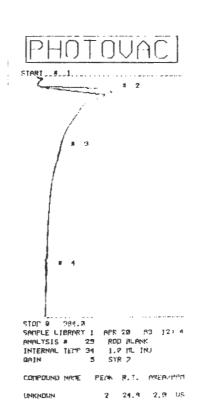
2 75.1 2.1 US

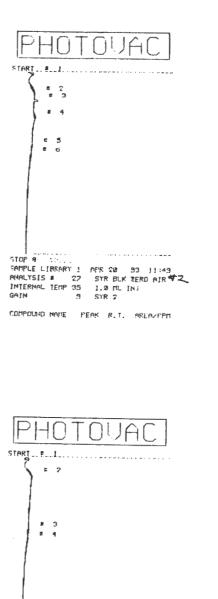
4 71.9 1.3 US

UNKNOUN

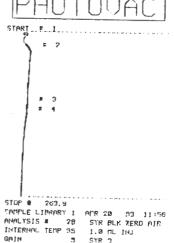
PHICHOTH







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CDIFFOUND NAME PERK R. L. ORFOLPPM

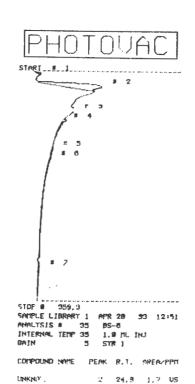
COMPOUND NAME PEAK R.T. AREA/PPM

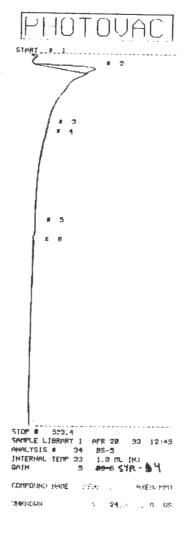
2 # 3 STOP @ 151.1 SATPLE LIBRARY 1 APR 29 33 13:55 ANALYSIS # 44 STR BLK RERD AIR

5 STR 1 COMPOUND NAME PEAK R.T. AREA/PPM

INTERNAL TEMP 38 1.8 HL INJ

MIAR







-1883

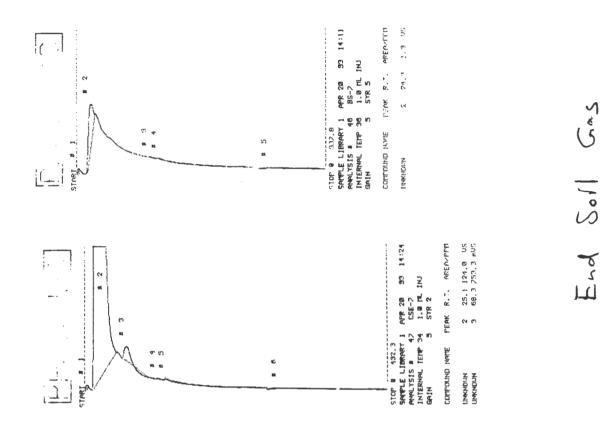
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INTERNA". TEMP 36 1.0 ML INT NIAD 5 5YR 2

COMPANIED THATE I SENT BUILD OF EACH PRO-

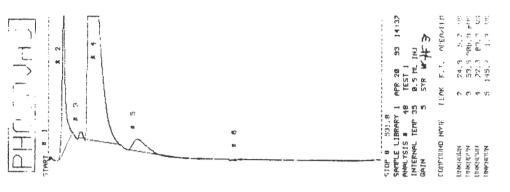


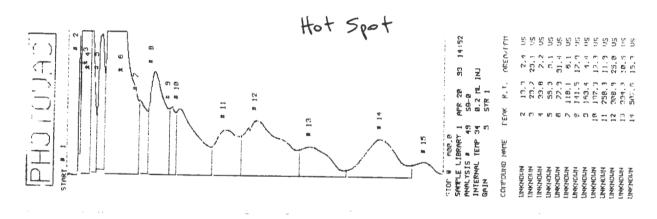
Client	Job No	Sheet
Subject	- By	Date 4/2-193

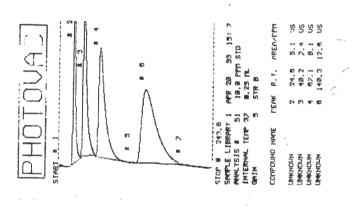


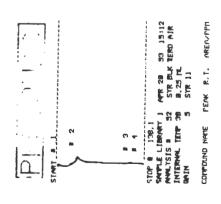
A

MAIN -1893-Soil Headspace Test to see if method work ~ 30' S B2-91









8 2 **3** 3 . 5 STOP # 216.9 SMIPLE LIBRARY 1 APR 28 53 15:47 ANALYSIS # 50 STR BK T AIR # (5 SYR 5 MINB

COMPOUND NAME PERK R.T. AREA/FPM

UNKHOUN

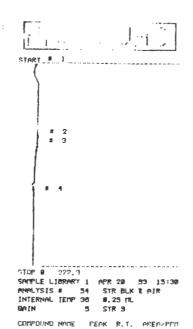
3 66,5 2.5 VS

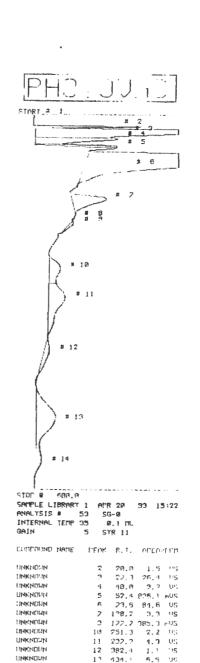
11

12 # 13 **8** 14 # 15 STDP 0 690.3

SAMPLE LIBRARY 1 APR 28 93 15:42 ANALYSIS 8 95 CSE-1 INTERNAL TEMP 35 8.18 ML BAIN 5 SYR 9

COMPOUND NAME	PEAK	R.T.	AREN.	/FFM
пикиоли	2	20.0	1.0	US
UNKHOTIH	3	25.5	20.4	US
NAKHORH	4	33,3	2.6	ŲS
UNKHOUH	5	40.3	10.8	US
UNKHOUH	5	54.3	2.3	US
UNKNOUN	7	89.1	356.7	US
UNKND NN	9	168.2	358.5	MUS
DNKNOTH	11	218.3	20.5	US
DHKHONH	12	378.3	832.3	mUS
DWKNONW	13	485.3	2.5	UŞ
DNKHOUN	14	554.1	364.3	mUS





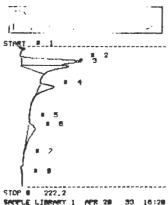




SATPLE LIBRARY 1 APR 28 33 16:15 ANALYSIS # 63 SYR BK % AIR INTERNAL TEMP 42 8.5 ML MIND 5 STR 8

COMPOUND NAME PERK R.T. AREA/PPM

UNKNOUN 3 55.1 153.8 mUS



SAPPLE LIBRARY 1 APR 28 53 16:28 ANALYSIS # 84 CSE-4 INTERNAL TEMP 42 9.5 HL MIND 5 SYR 8

COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN 2 24.5 3.1 VS UNICHOUN 3 32,3 2,8 US UNKHOUN 4 65.5 926.1 mUS INKNOUN 6 133,2 832,0 mUS

٠ ;

DEUU. CH9 STOP @ 138,5

SAMPLE LIBRARY 1 APR 28 93 161 6 ANALYSIS # 60 STR BK Z AIR INTERNAL TEMP 39 9.25 ML 5 SYR 9

COMPOUND NAME PERK R.T. AREA/PPM

LINKHOPIN 2 65.9 565.0 mUS

6 STOP 0 175.6 SAMPLE LIBRARY 1 APR 28 93 161 9

ANALYSIS # 61 CSE-3 INTERNAL TEMP 41 8,85 FL 5 STR 5

COMPOUND NOTE PEAK R.T. PREAZPPH

UNKNOUN 2 21.3 148.3 mUS **UMKNO!!N** 5 66.3 436.1 MUS

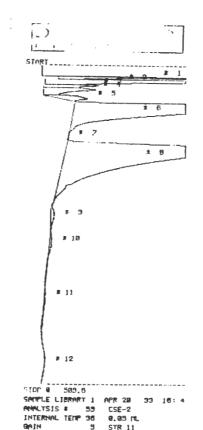
B

STOP # 142.0 SAMPLE LIBRARY 1 APR 20 53 16:13 ANALYSIS # 62 CSE-3 INTERNAL TEMP 41 8.25 ML 5 SYR 9

COMPOUND NAME PEAK F.T. AREA/PPM

2 21.2 328.1 mUS **UNKHOWN** UMKMONM 5 55,2 300,3 mUS

-- .



CEMPOUND NAME FERK R.T. OREA.PPM

1

19.8 2.2 US

25,4 3,3 US

33.9 2.4 US

54.3 1.3 US

3 33.3 1.3 US

6 63.4 58.4 US

8 137.7 29.6 US

9 214.3 313.7 mUS

19 399:3 188:8 RHS

INKHOUN

UNKHOUN

UNKNOUN

UNKNO!IN

DAKKOTA

DINKNOUN

UNKNOUN

DAKADHA

THKNDHH THKNDHH

STORT # 1 p 2 **#** 3 STOP # 186.2 SAMPLE LIBRARY 1 APR 28 93 15:54 ANALYSIS # 58 SYR BK Z AJR INTERNAL TEMP 40 0.25 ML GAIN 5 SYR 11 COMPOUND NAME PEAK R.I. AREAZOPH UNKNOUN 3 62,7 688,7 mUS

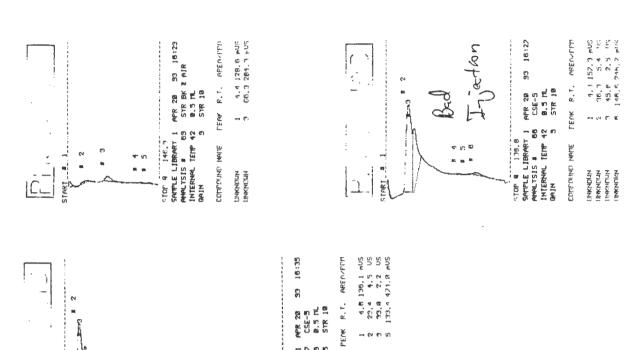
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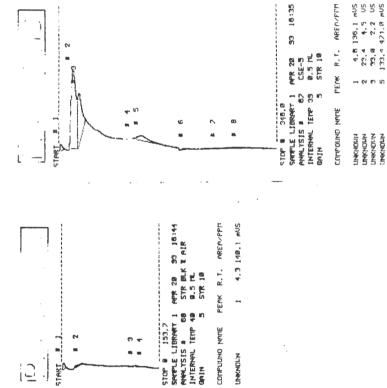
7

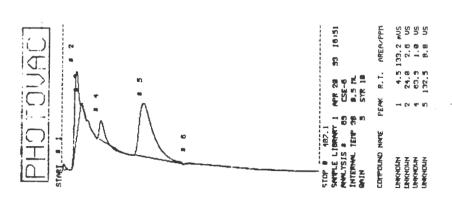
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Client	_Job No	_Sheet_ <u>13</u> ef
Subject	_ By	Sheet 3 at
	Ckd.	_ Rev



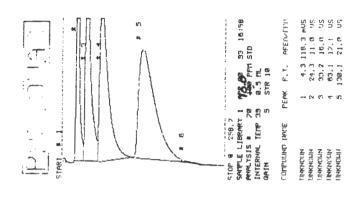


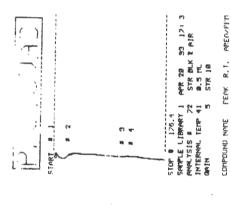


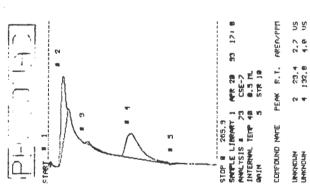
UNKNDL'N

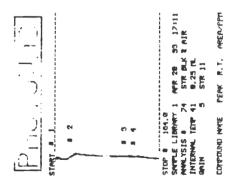


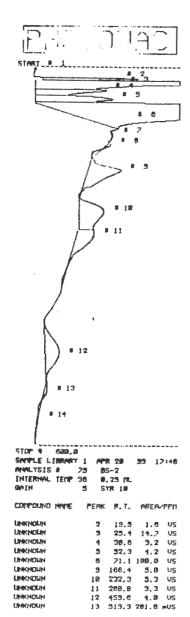
Client		Sheet	
Subject	Ву	Date 4/20/98	
	Ckd	Pay	







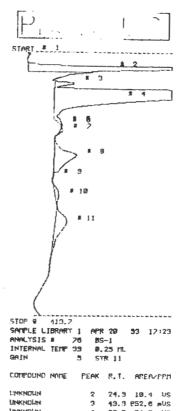


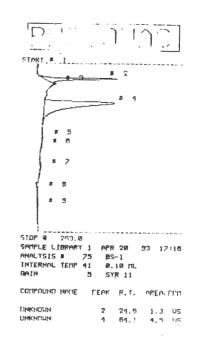


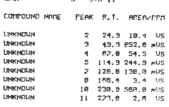


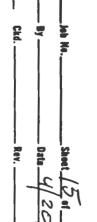
2 22.6 103.0 mUS

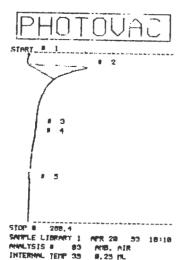
האאטחא







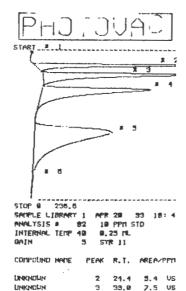




5 SYR 11

2 24.2 3.7 US

COMPOUND MANE PEAK R.T. AREA/PPH

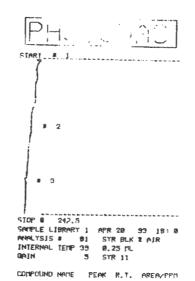


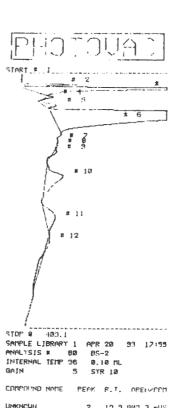
UNKNOUN

THKHOPH

4 64.1 8.3 US

5 132,8 13,7 US





- End of Day

HIAB

ENKNOWN

GAIN		R 10		
מאיומשחא מאיומ	PEAK	P.T.	OPEN	ԲԲԻ
Пикиспи	2	19.9	893.3	mUS
UNKHOHH	3	24.8	8.1	Ų5
INKHDHA	4	33.1	143.8	mUS
IJNKHOLIH	5	52.7	500,9	mUS
N14K410NH	6	67.5	51.1	US
NAKHOPIA	3	122.7	1116. 1	r LIS
NAKADHA	10	162.3	2,5	ŲS
UNKHOFIN	11	234, 3	1.7	บร

20200

Date

3 STOP . 151.8 SAMPLE LIBRARY I MPR 21 93 8:56 MMLYSIS # 11 SYR BLK INTERNAL TENP 35 8,25 PL BAIN 5 SYR 8

COMPOUND NAME PEAK R.T. AREA/PPM

STOP @ 192.6 SAMPLE LIBRARY 1 APR 21 93 8:51 MALTSIS # 9 STR BLK WAL INTERNAL TEMP 32 8.25 ML SYR 10 COMPOUND NAME PEAK R.T. AREA/PPM

leaky Plunger?

2 38.2 142.1 mUS

UNKNOUN

UNKHOHN

STDP # 82.1 SMIPLE LIBRARY 1 APR 21 53 1 8:53 INTERNAL TEMP 33 8,25 ML NIGO SYR 18 COMPOUND NAME FEAK P. T. AREA/PPM

START_#_1 2 29.0 105.7 mUS INTERNAL TEMP 31 8.25 ML GAIN 5 SYR 10

START_#_1 # 2 1 6 STDP @ 208.1 SAMPLE LIBRARY 1 APR 21 ANALYSIS # 7 1.8 PPH 🕩 INTERNAL TEMP 33 0.25 ML 5 SYR 10

COMPOUND NAME PERK R.T. AREA/PPM

NNKNONN 2 25.4 872.5 mUS **TINKHOTH** 3 46.4 1.2 US **П**ИКИОНИ 4 84.9 1.4 US UNKNOUN 2 133, 3 775, 3 mUS

STOP # 230.5

SAMPLE LIBRARY 1 APR 21 93 8:48 ANALYSIS # 8 10.0 PPH STD ...

COMPOUND NAME PEAK R.T. AREA/PPM

UNKHOLIN 2 25.3 7.2 US DINKHOUN 3 45.8 8.6 US LINKHOUN 4 83.3 9.2 US .5 132,5 16.3 US

FIELD: 30 POWER: 38

SAMPLE	8.0	10.
CAL	0.0	Ø,
E THEVE	Ø. G	125.
EVENT 4	0.0	ø.
EVENT 5	10.0	200.
EVENT 6	0.0	Ø.
EVENT 2	0.2	ø.
EVENT B	0.9	Ø.



COMPOUND NAME PEAK R.J. AREA/PPM

STOP 0 248,6 SAMPLE LIBRARY I APR 21 33 3: 1 AMPLYSIS # 12 RINSE BLK 1 INTERNAL TEMP 34 0.25 ML BAIN 5 SYR 8

2

3

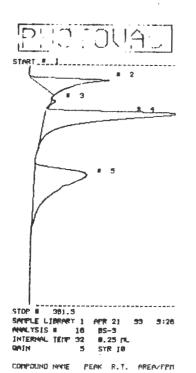
R 4

5

COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN

2 28.1 930.3 mUS

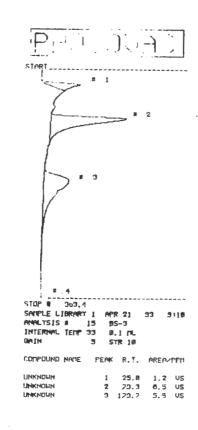


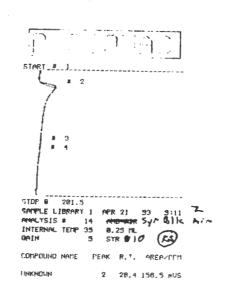
2 25.2 5.4 US

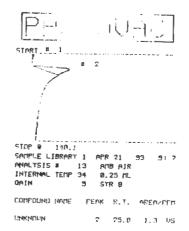
3 58.9 218.0 pUS

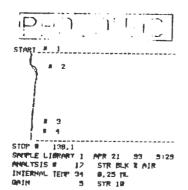
4 22.5 13.7 US

5 177.2 12.5 US









TINKHOUN

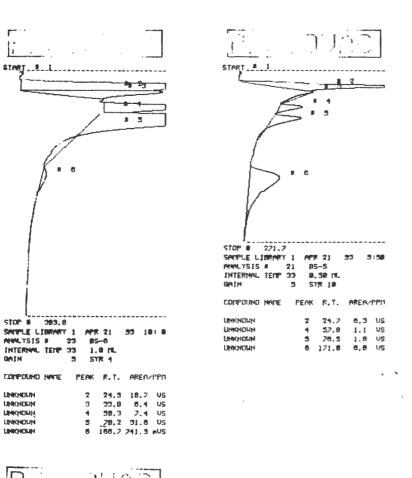
UNKNOUN

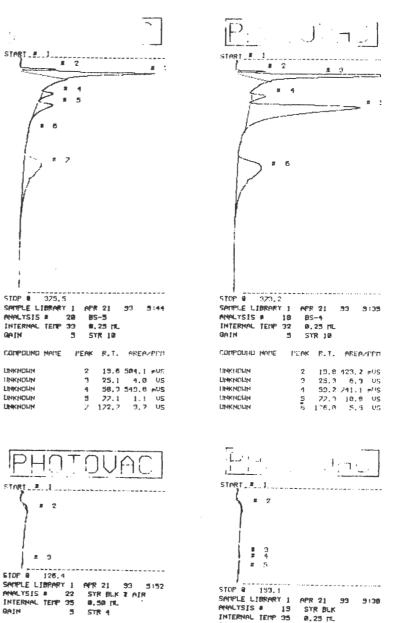
NWKHO.1H

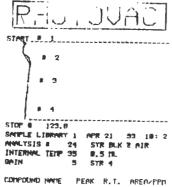
UNKNOUN

COMPOUND NAME PERK R.T. AREA/PPM









UNKNOWN

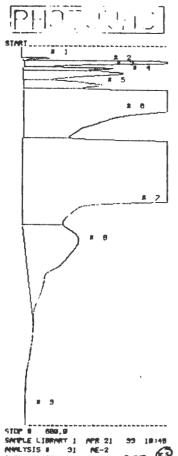
2 36.3 153.4 mUS

COMPOUND NAME PERK R.T. AREA/FOR 1 INKNOUN 2 35.8 132.1 mUS

COMPOUND MADE FEAK R.I. OFEA/FTM

5 SYR 10

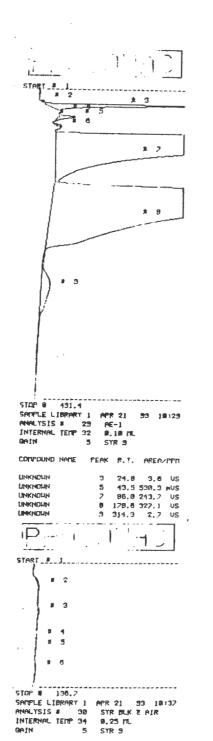
GAIN

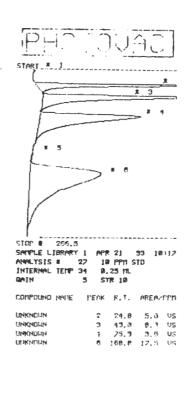


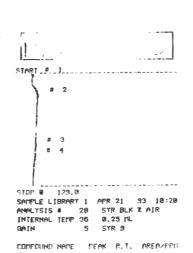
INTERNAL TENP 30 0-25 HL 0.07 MIAD S SYR S

COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOWN	1	19.7	363.0	MUS
LINKHOPIN	2	25.6	8.8	US
CINKNOLIN	3	33,7	2,3	US
LINKNOWN	4	43.3	6.7	US
UNKNOUN		62,7	5.3	US
LINKHOLIN	•	88.5	199.3	US
LINKHOUN	2	153.4	1.5	KUS
UNKNOWN	8	311,5	25.9	US





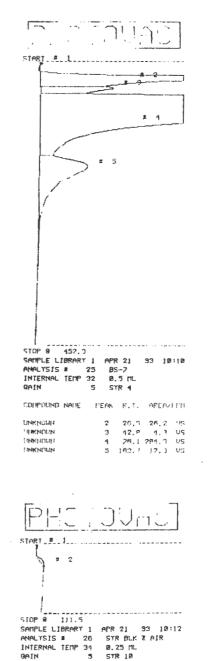


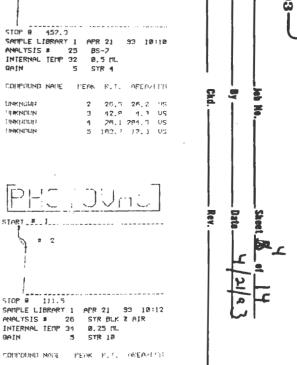
2 35.0 188.4 mUS

TINKITINI

2 56,3 162.2 mU.

UNKHOUK

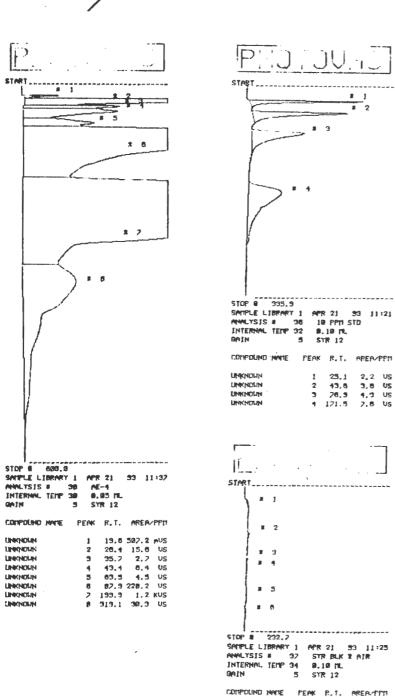


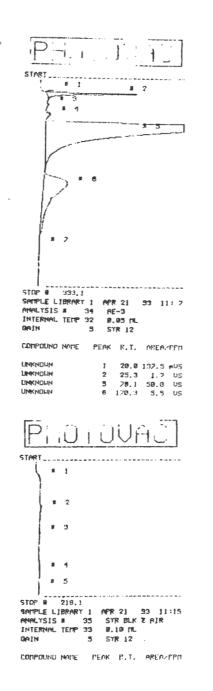


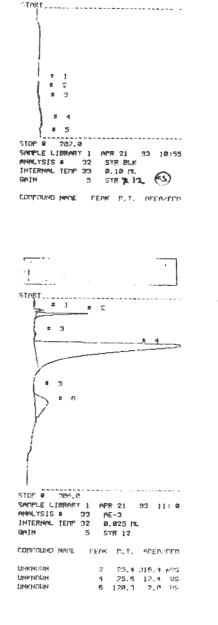
COMPOSINO NAME PEAK P.T. APENIPPM

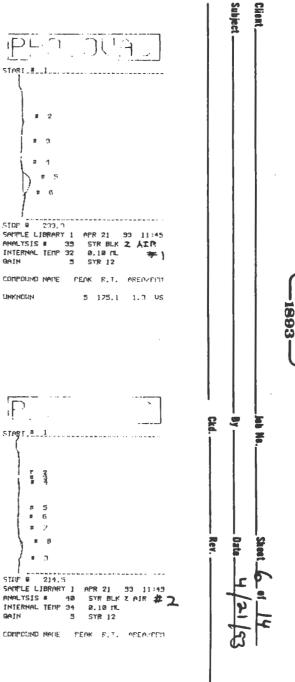


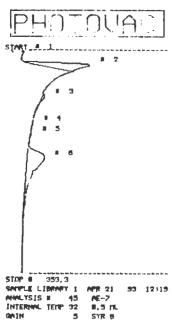
Date











COMPOUND NAME PEAK R.T. AREA/PPM

TINKHOUN 2 25.3 2.2 US UNKNOUN 3 26,1 126.8 mUS UNKNOUN 6 172,7 3,6 US

START_#_1 **2 8** 3 8 4 STOP 8 174.1

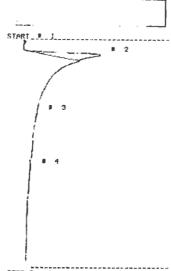
COMPOUND NAME PEAK R.T. AREA/PPM

SAMPLE LIBRARY J APR 21 93 12:25

5 STR - 12

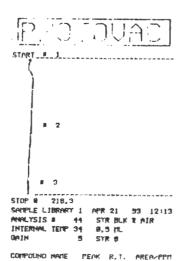
ANALYSIS # 46 SYR BLK T AIR

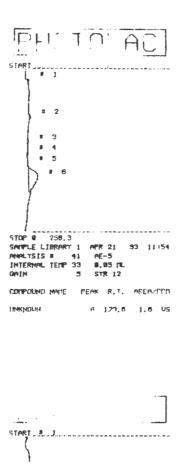
INTERNAL TEMP 33 8.18 ML

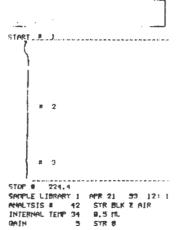


STDP 0 361.7 SAMPLE LIBRARY 1 APR 21 93 121 8 ANALYSIS # 43 AE-6 INTERNAL TEMP 32 8.5 FL 5 SYR 8

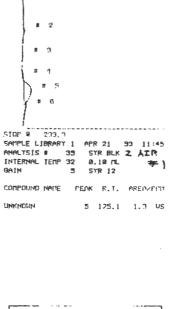
COMPOUND NAME PERK R.I. PREMITT INKNOUN 2 25.0 2.3 US







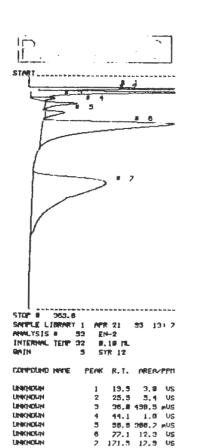
COMPOUND NAME FEAK R.T. APENZERM

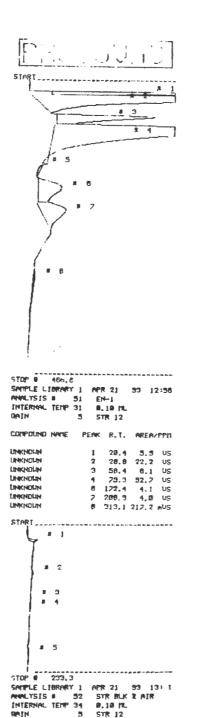




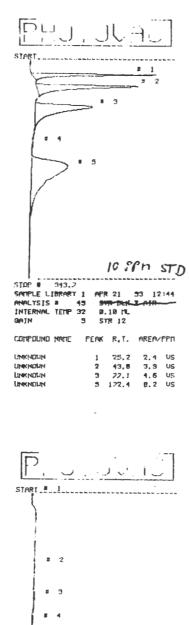
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Date





COMPOLIND MANE PEAK R.T. AREA/PPN



STDP @ 228.6

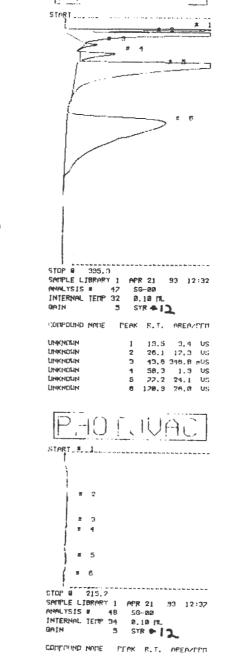
SAMPLE LIBRARY 1 APR 21 93 12:48

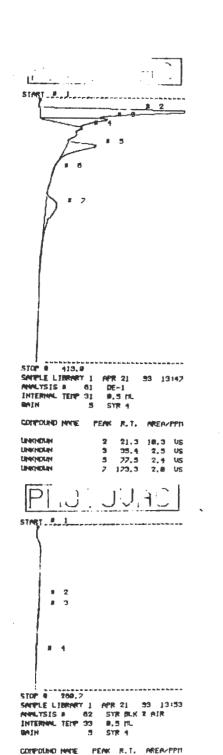
COMPOUND MANE FEAK R.T. AREA/PPH

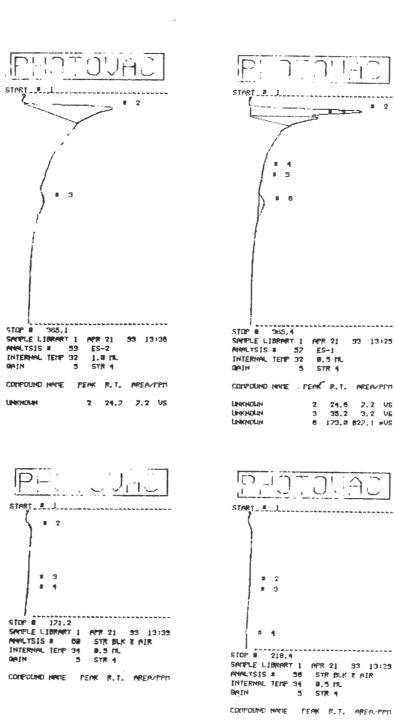
5 STR 12

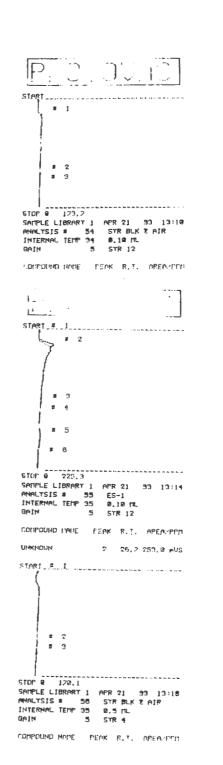
AMALYSIS # 50 SYR BLK T AIR

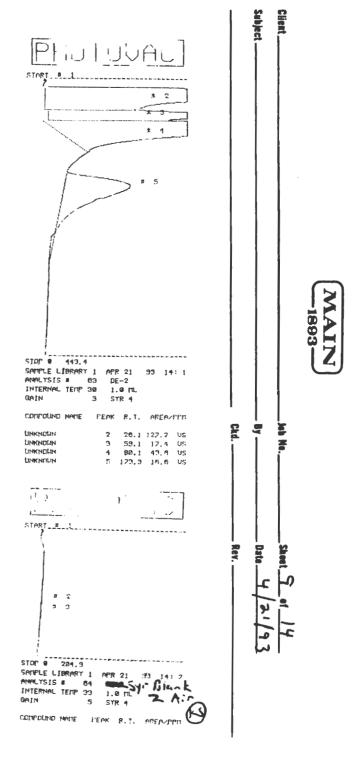
INTERNAL TEMP 34 8.18 ML

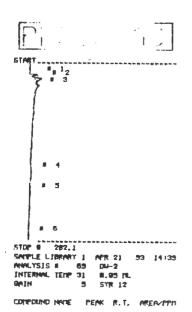










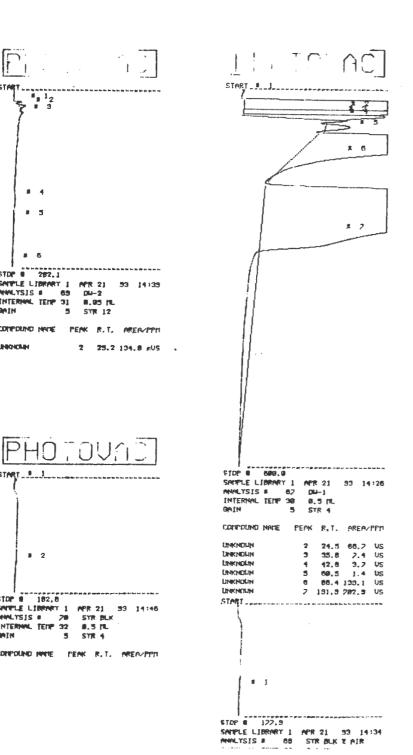


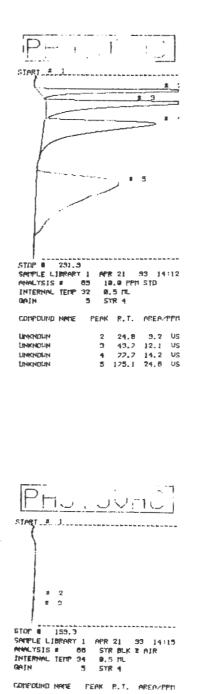
2 25.2 134.8 gUS .

LINKNOWN

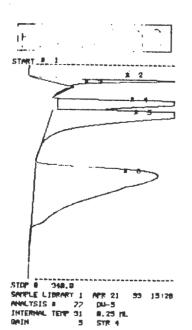


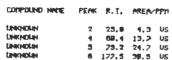
COMPOUND NAME TEAK R.T. AREA/PPM

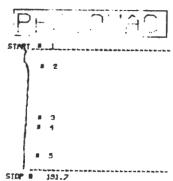




9







SOUTHE LIBRORY 1 OPR 21 93 15:32

SOUTHE LIBRORY 1 OPR 21 93 15:32

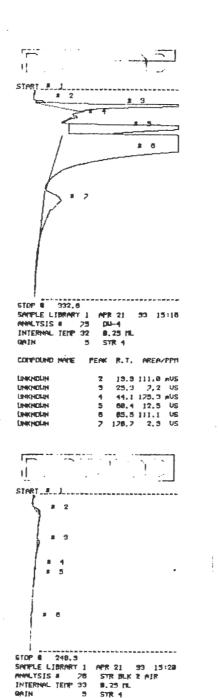
SOUTHE LIBRORY 1 OPR 21 93 15:32

SOUTHER SOUTH 1 OPR 21 93 15:32

SOUTH 1 OPR 21 93 15:32

SOUTH 1 OPR 21 93 15:32

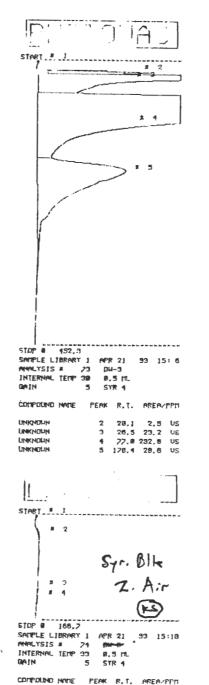
COMPOUND MANE PEAK R.T. AREA/PPH

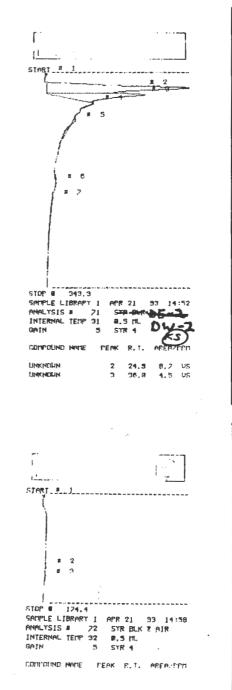


COMPOUND NAME PEAK R.T. AREA/PPM

3 79.3 131.1 mUS

UNKNOUN







8 7 STOP 0 326,1

SATPLE LIBRARY 1 MPR 21 93 18: 8 MACTSIS # #5 FS-1 INTERNAL TEMP 33 8,25 ML MIAB S SYR 4

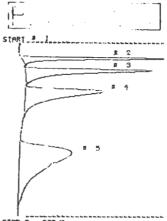
COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN 2 25.4 1.7 US UNKNOUN 3 59.5 1.0 US LINKHOLIN 77.8 483.1 mUS

STOP @ 319.5 SMTPLE LIBRARY 1 APR 21 33 15:58 ANALYSIS # 83 FN-2 INTERNAL TEMP 32 8.25 ML GAIN 5 STR 4

COMPOUND NAME PEAK R. I. AREA/PPM

TINKNOHN 2 26.5 1.1 US TINKNOUN 35.5 153.4 PUS UNKNOUN 53.3 174.5 mUS LINKHOLIN 5 78.3 5.8 US DIAKHORM 6 176.3 18,1 US



STOP @ 276,3 SATPLE LIBRARY 1 APR 21 93 15:48 MALTSIS # 81 19.8 PPR STD INTERNAL TEMP 33 8.25 ML 5 STR 4

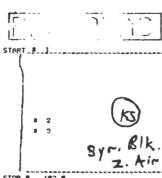
COMPOUND NAME PERK R.T. AREA/PPM

THICHDLIN UNKNOUN 4 78.5 7.7 US FINKHOPIN 5 128.1 13,4 US

8 2 8 3 STOP 6 154.3 SATPLE LIBRARY 1 APR 21 93 16:11

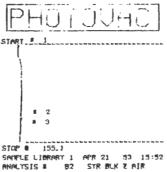
MALTEIS # 86 STR BLK T AJR INTERNAL TEMP 34 8.58 ML HIME 5 STR 4

COIPDEND HAVE PEAK R.T. PREAVPPH



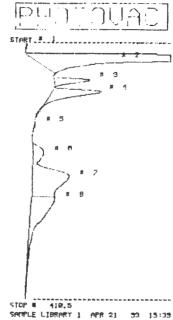
STOP # 187.8 SAMPLE LIBRARY 1 APR 21 93 16: 2 ANALYSIS # 84 PMP INTERNAL TENP 34 8.25 ML 5 SYR 4

COMPOUND NAME PEAK R.T. AREA/PPM



INTERNAL TEMP 34 9.25 ML GAIN 5 SYR 4

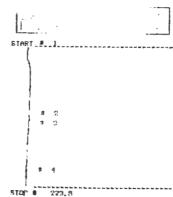
COMPOUND NAME PEAK R.T. AREAVPPM



ANALYSIS # 79 FN-1 INTERNAL TEMP 31 0.25 FL 5 SYR 4

COMPOUND NAME PEAK R.T. AREA/PEN

FINKHOLIN 2 23.7 52.3 05 UNKHOUN 3 53.7 1.8 US UNKNOUN 1 79.1 3.9 US **UNKHOUN** 6 178.2 1.2 US **THKHOPH** 2 212,3 8.5 US UNKNOUN 8 252.3 5.9 US

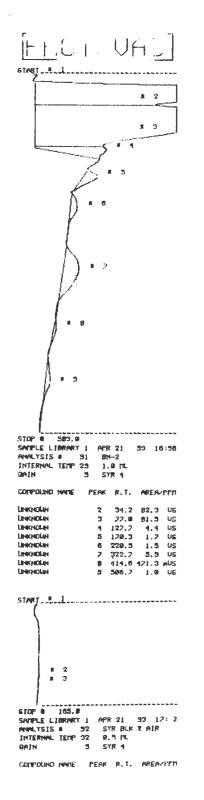


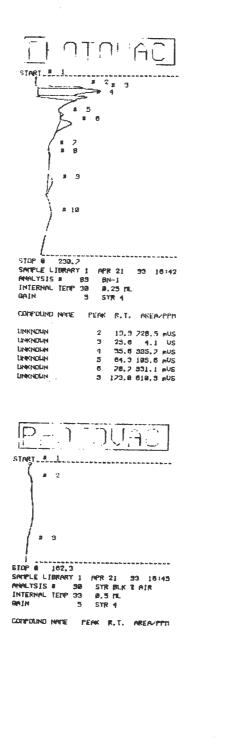
SATPLE LIBRORT 1 APR 21 93 15:43 MMALTSIS # 88 STR BLK Z AIR INTERNAL TEMP 34 0.25 ML BAIN 5 SYR 4

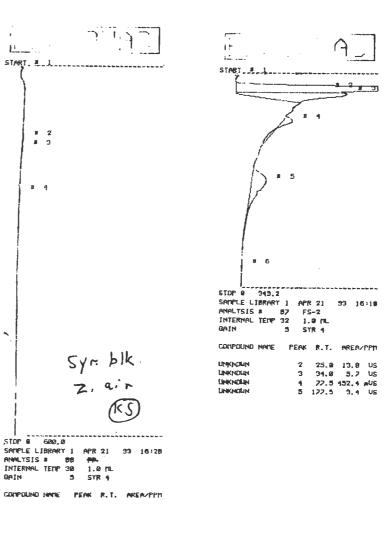
COMPOUND NAME FERK R.T. AREAVPEN

S

Date









Date

STOP 0 237.0

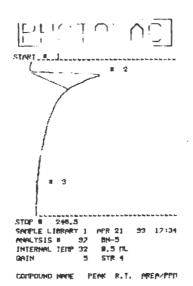
STOP 0 237.0

SEPTLE LIBRARY 1 APR 21 33 17:41
ANALYSIS 3 39 BN-7
INTERNAL TEMP 34 1.8 FL
GAIN 5 SYR 4

COMPOUND NAME PERK R.T. AREA/PPI

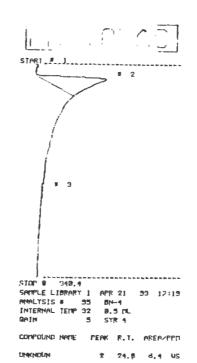
2 25.6 - 1.0 06

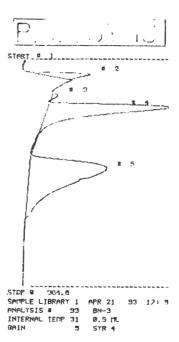
LINCHOLIN



2 25.0 5.1 US

UNKNOWN







START # 1

2

STOP # 170.5

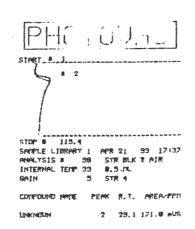
SAMPLE LIBRARY 1 APR 21 53 17:45

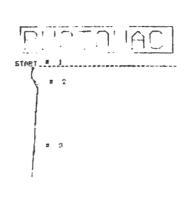
MALTSIS # 180 STR BLK 2 AIR

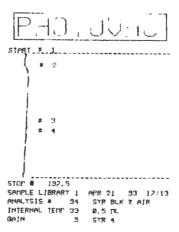
INTERNAL TEMP 34 #.5 HL

GAIN 5 STR 4

COMPOUND NAME PERK R.T. AREA/PPM







COMPOUND NAME PEAK R.T. AREA/FFM

START 8 1

STORY 8 90,8

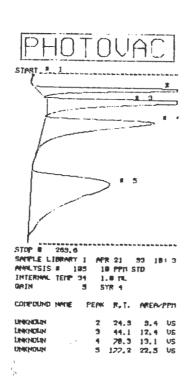
SAMPLE LIBRART 1 APR 21 93 18: 5

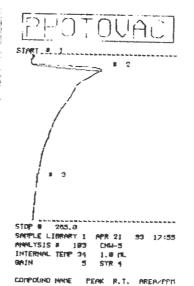
MANATSIS 8 190 ANB AIR
INTERNAL TEIP 34 8.5 PL

GAIN 5 STR 4

COMPOUND NATE PEAK R.T. AREA-PPTI

UNKNOWN 2 25.5 1.5 US

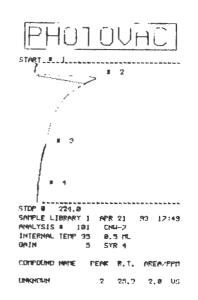


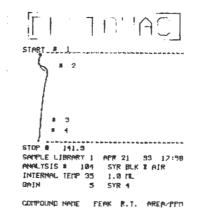


2 25,9 351.1 mUS

UNKHOUN

UNKNOUN





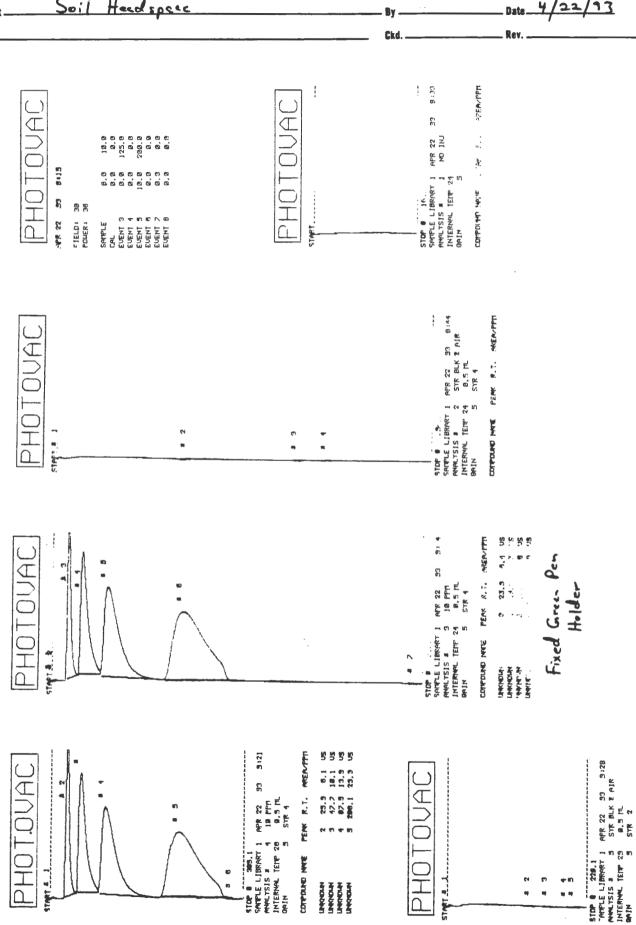
? 31.3 128.2 mUS



| Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 of 14 | Sheet 14 | Sheet 14 of 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 | Sheet 14 |

Client Soil Headspace Subject

Begin 4/22/93



HOUSE HOUSE HOUSE HOUSE

PERK R.T. MREN/PPH

COTPOLING INTE

4

3 # 5 STOP @ 361.8 SAMPLE LIBRARY 1 APR 22 93 19122

5 STR 2 COMPOUND NAME PEAK R.T. AREA/PPM

AMALYSIS # 12 CMI-3

INTERNAL TEMP 31 8.5 ML

BAIN

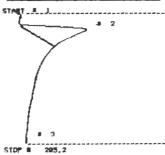
2 26,2 3,2 US LINKHOUN CHRONOLIN 3 63.5 474.6 mUS 4 82.7 12.7 US LINKHOUN 5 150.5 1.0 VS CHRONOUN LINKHOUN 6 199.3 854.3 MUS

START ______ 8 2 # 3 STOP @ 247.5 SAMPLE LIBRARY 1 AFR 22 93 11: 2

5 SYR 2 COMPOUND NAME PERK R.T. AREA/PPH

MMALTSIS # 13 STR BLK Z AIR

INTERNAL TEMP 38 8.5 ITL



SAMPLE LIBRARY 1 APR 22 93 18:12 ANALTSIS # 10 AMB AIR INTERNAL TEMP 31 1.0 ML 5 SYR 2

COMPOUND NAME PERK R.T. AREA/PPM

LINKHOLIN 2 26,8 6,3 US

START # 1 . 2 # 3 STOP @ 152.4 SATTLE LIBRARY 1 APR 22 33 10:15 ANALTSIS # 11 STR BLK & AIR INTERNAL TEMP 32 8.5 ML 5 STR 2 MIAD

COMPOUND NAME PEAK R.T. AREA/PPH



STOP @ 325.1 SAMPLE LIBRARY 1 APR 22 33 3:48 ANALYSIS # 8 CH PCH LAIR S INTERNAL TEMP 30 5 SYR 2

COMPDUND NAME PEAK R.T. AREA/PPH

UNKNOUN 2 25.9 9.1 VS

START # 1 1 2 a 3

STOP • 323,2 SAMPLE LIBRART I AFR 22 93 10: 8 ANALTSIS # 3 SYR BLK Z AIR INTERNAL TEMP 28 0.5 ML 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM

START # 1 £ 2 4/21 PM working back to CNW-5 # 6 n 7

STOP # 389.9 SAMPLE LIBRARY 1 APR 22 33 5:35 ANALYSIS # 6 ENH-4 INTERNOL TENE 28 0.5 ML 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM

חאגאסדא 2 26.7 3.6 US UNKNOUN 3 85.5 357.0 mUS 4 193,7 1.2 US LINKHOLIN пикиони 5 292.9 4.2 US

START # 1

B 2 STOP @ 215,7

SOMPLE LIBRARY 1 OPR 22 93 9:42 ANALYSIS # 7 STR BLK & AIR INTERNAL TEMP 30 8.5 ML BAIN 5 SYR 2

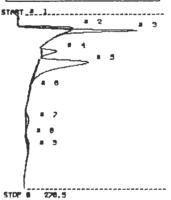
COMPOUND NAME PEAK R.T. AREA/PPM

1893

문 9

> Date_ 4/22/93



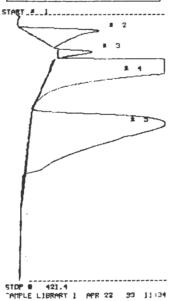


TAMPLE LIBRARY 1 APR 22 53 11:43 ANALYSIS # 21 CNH-1 INTERNAL TEMP 35 0.25 PL 5 STR 2

COMPDUND NAME PEAK R.T. AREA/PPM

UNKNOUN	2	21.8	354.3	MUS
UNKNOUN	3	25,8	1.5	US
LINKHOHH	4	53.1	833, 2	MUS
TINKHOPIN	5	77.7	4.2	VS.
UNKNOWN	7	158.5	322, 8	209
UNKNOWN	5	212.1	135.5	PUS

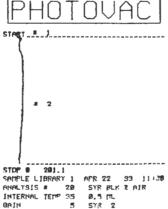
Try larger Injection



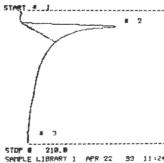
PNALTSIS # 19 CNU-2 INTERNAL TEMP 33 8.5 ML 5 SYR 2 MIAB

COMPOUND NAME PEAK R.T. AREA/PPM

THAKMORIM	2	25.9	6.3	ΨS
CHICHOUN	3	55.2	2.1	VS
UNKNOWN	4	\$2,8	117.7	U\$
LIMICHDUM	5	173.2	45.3	US



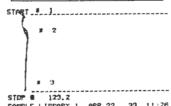
COMPOUND NAME PEAK R.T. AREA/PPM



SAMPLE LIBRARY 1 APR 22 93 11:24 ANALYSIS # 17 RINSE BLK-2 INTERNAL TEMP 34 0.5 ML 5 SYR 2

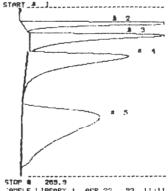
COMPOUND NAME PEAK R.T. AREA/PPM

UNKHOUN 2 25.8 8.4 US



SAMPLE LIBRARY 1 APR 22 33 11:26 ANALTSIS # 19 STR BLK Z AIR INTERNAL TEMP 35 0.5 ML 5 SYR 2

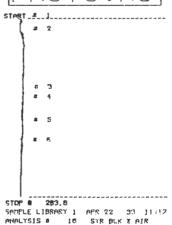
COMPOUND NAME PEAK R.T. AREA/PPM



'AMPLE LIBRARY 1 APR 22 93 11:11 ANALYSIS # 15 10 PFM STD INTERNAL TENE DO 0.5 ML 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM

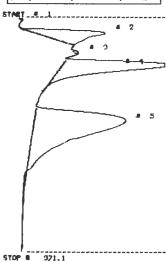
UNKNOUN 2 23.4 8.1 US UNKHOUN 3 44.6 10.7 US UNKNOUN 4 79.3 14.4 US UNKNOUN 5 177.5 24.8 US



5 SYR 2 COMPOUND NAME PERK R.T. AREA/PPM

INTERNAL TENT 33 8.5 ML

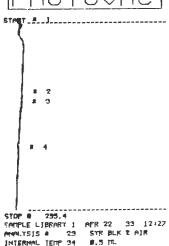
DATE



SAMPLE LIBRARY 1 APR 22 93 12:22 ANALYSIS # 28 AN-5 INTERNAL TEMP 34 1.8 ML 5 SYR 2

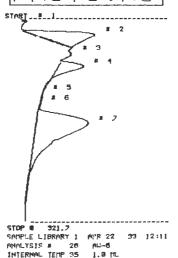
COMPOUND NAME PEAK R.T. AREA/PPM

UNICHOUN 2 25.1 5.7 US LINGCHOLIN 4 74.9 12.9 US DHKHOLH 3 184.8 28.3 US



5 SYR 2 COMPOUND HAVE PERK R.T. AREA/PPH

GAIN

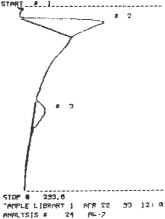


COMPOUND NAME PEAK R.T. AREA/PPM

GAIN

UNKHOUN 2 25.8 5.4 US **UNKNOWN** 4 78.1 2.2 US UNKNOUN 7 167.0 13.1 US

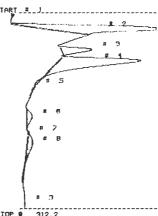
9 STR 2



ANALYSIS # 24 AL-7 INTERNAL TEMP 35 1.8 ML MIAD 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM

2 25.8 7.4 US UNKNOUN **UNKNOUN** 3 162.8 1.8 US



STDP @ 312,2 SAMPLE LIBRARY 1 AFR 22 93 11:50 ANALYSIS # 22 CNH-1 INTERNAL TEMP 34 8.5 ML 5 SYR 2

COMPOUND NAME PERK R.T. AREA/PPM

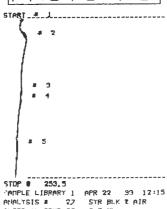
1893

Date 210

4/22

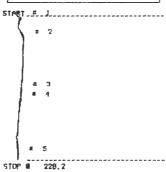
3

UHKHOUH 2 25.6 2.5 US **UNKHOPM** 3 58,7 1.6 US UNKHOUN 4 78.9 7.9 US UNKNOWN 8 167.9 829.6 mUS LINKNOUN # 203.7 991.9 mUS



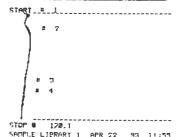
INTERNAL TEMP 36 0.5 ML 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM 2 34.5 199.2 mUS UNKNOUN



TAMPLE LIBRARY 1 APR 22 93 12: 4 ANALYSIS # 25 SYR BLK 7 AIR INTERNAL TEMP 37 8.5 ML 5 STR 2

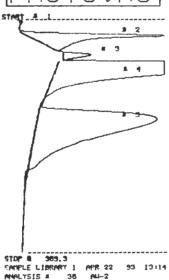
COMPOUND NAME PEAK R.T. AREA/PPM



SAMPLE LIPRARY 1 APR 22 93 11:55 ANALYSIS # 23 STR BLK 7 AIR INTERNAL TEMP 35 8,5 ML 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM





COMPDUND NAME PERK R.T. AREA/PPM

5 SYR 2

INTERNAL TENT 34 B. SIL

MIAD

 UNKYDEN
 2
 25.6
 8.4
 US

 LINKYDEN
 3
 36.8
 1.6
 US

 LINKYDEN
 4
 78.1
 89.9
 US

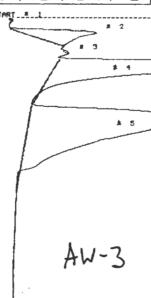
 LINKYDEN
 5
 188.4
 35.2
 US

PHOTOVAC

2 # 3 STDP 0 150.2

COMPOUND NAME PERK R.T. AREA/PPM

PHOTOVAC



STOP 551.7
APPR 22 93 12158
ANALTSIS 8 34
INTERNAL TEIP 33

5 STR 2

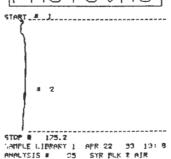
COMPOUND NAME PEAK R.T. AREA/PPM

 UNKNOWN
 2
 24,2
 5.7
 US

 LINKNOWN
 4
 76.9
 88.8
 US

 UNKNOWN
 5
 163.2
 78.3
 US

PHOTOVAC

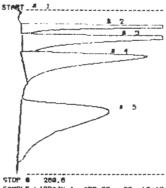


5 SYR 2

INTERNAL TEMP 35 0,5ML

GAIN

PHOTOVAC

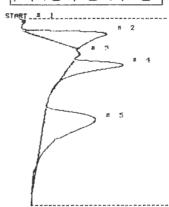


STDP @ 280.6
SAMPLE LIBRARY 1 APR 22 93 12:43
ANALYSIS # 32 10 PPH STD
INTERNAL TEMP 36 U.5HL
GAIN 5 STR 2

COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOWN	2	25.5	10.1	US
NAKADRA	3	43,3	15.1	US
UNKHOUN	4	74.7	15.1	US
UNKHOUN	5	152.8	25.2	Ų\$

PHOTOVAC



| STOP 0 297.8 | TAIPLE LIBRARY 1 | APR 22 | 90 | 12:05 | APRLYSIS # 30 | APRLYSIS # 30 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRLYSIS # 10 | APRL

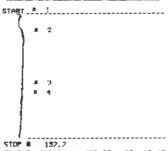
COMPOUND NAME PEAK R.T. AREA/PPM

 UNKNOWN
 2
 25.0
 7.0
 US

 UNKNOWN
 4
 75.1
 5.2
 US

 UNKNOWN
 5
 154.0
 12.0
 US

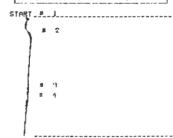
PHOTOVAC



STDP @ 157.2 SAIPLE LIBRARY 1 APR 22 93 12142 ANALYSIS # 33 STR BLK E AIR IPTERNAL TEIP 98 0.5PL GAIN 5 SYR 2

COMPOUND NAME PEAK R.T. AREA/PPM

PHOTOVAC



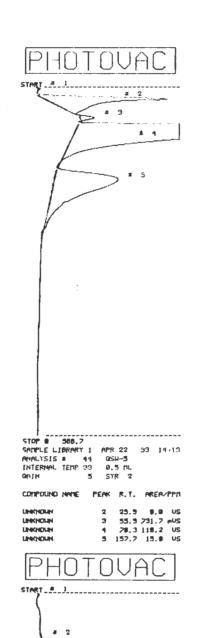
| STOP 8 | 198.8 | SAMPLE LIBRORY | 1 | APR | 22 | 93 | 12138 | ANALYSIS 4 | 31 | SYR BLK 2 AIR | INTERNAL TEMP | 32 | 8,5mL | GAIN | 5 | SYR | 2 |

COMPOUND NAME PEAK R.T. AREA/PPM

MAIN 1883

No.____Shee

Date 4/22/53



3

CAMPLE LIBRAPY 1 AFR 22 93 14126

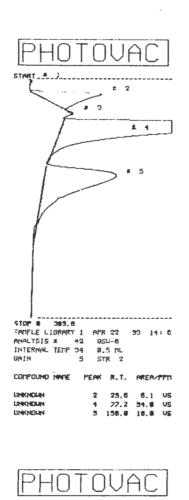
5 SYR 2

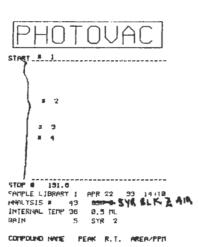
ANALTSIS # 45 STR BLK T AIR

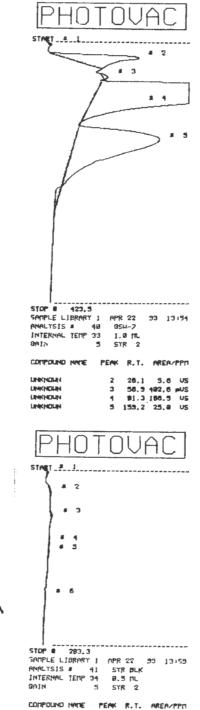
INTERNAL TEMP 35 8.5 M.

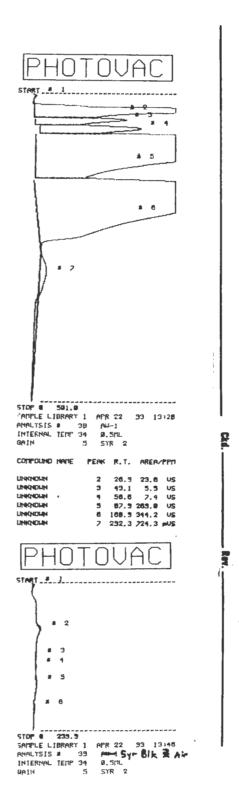
STOP @ 154.6

GAIN





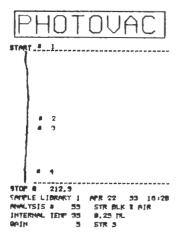




4/22/23

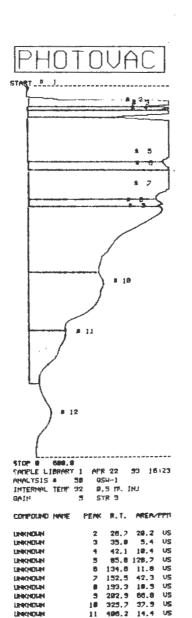
MAIN 1893

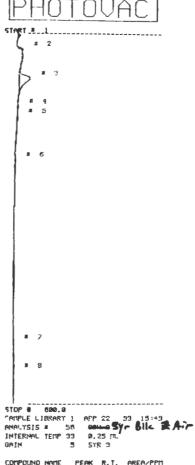
Subject	Job No By Ckd	Sheet 6 ef	493
START # 1 STOP # 243.4 SARPLE LIBRARY 1 APR 22 39 14:32 ANALYSIS # 46 0514-4 INTERNAL TEHT 36 0.5 PL GAIN \$ STR 2 COPPOUND NAME FEAK R.T. AREA/PPH UNKNOLN 2 25.6 5.2 US UNKNOLN 3 72.7 700.3 PUS	11 1 11	17. 18. 19.	FARPLE LIBRARY 1 AFK 22 23 14:37 ANALYSIS # 45 051-4 INTERNAL IEIN 32 1.9 FL 0A1N CORPOUND NAME PEAK R.T. MEEA/PPI UNKNOLM 2 25.3 5.3 US UNKNOLM 3 74.2 1.6 US
STATE BY	IO	STATION OF A CONTROL OF THE CONTROL	
STOP 8 313.9 STOP 8 313.9 STOP 8 313.9 STOP 8 313.9 STOP 8 313.9 STOP 8 313.9 STOP 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 T C	4 4 4 4 6 4 6 4 6 6 6 6 6 6 6 6 6 6 6 6	510F # 239.0 SANTLE LIPRARY 1 APR 22 53 15.123 ANALYSIS # 53 57R BLK 2 AIR INTERNAL TEIF 94 0.5 FL 9AIN 9 57R 9 CDIFOUND NAME FEAK R.T. AREA/FFT1
STOP # 257.9 ST			

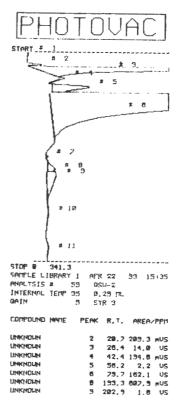


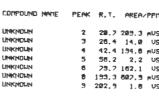
COMPDUND HAVE PEAK R.T. AREA/PPII

- 1





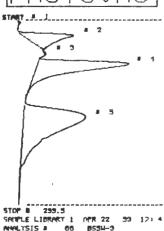




MIAD COMPOUND NAME PEAK R.T. AREA/PPM UNKNOUN 3 73.5 965.3 mVS

1

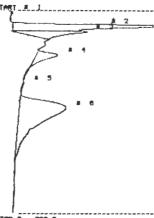




5 SYR 3 COMPOUND NAME ! PEAK R.T. AREA/PPH

INTERNAL TEMP 36 B.S IL

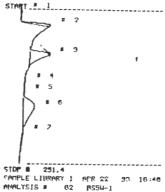
LINKNOUN 2 26.1 4.2 US UNKNOWN 4 73.3 18.5 US UNKNOWN 9 150.9 17.5 US



STDP @ 329.8 CAMPLE LIBRARY 1 APR 22 33 16:56 ANALYSIS # 64 BSSH-2 INTERNAL TEMP 35 B.5 ML MIAD 5 SYR 3

COMPOUND NAME PEAK R.T. AREA/PPM

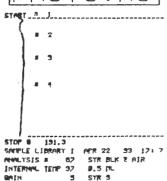
LINKHOUN 2 25.1 8.5 US UNKNOWN 3 34.9 3.3 US 4 23,5 1.8 US LINKNOUN LINKHOLIN 8 155,9 11.9 US



INTERNAL TEMP 36 8, 25 ML MIAD 5 SYR 3

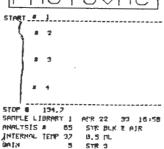
COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN 2 25.6 282,4 mUS UNKNOUN 9 73.9 1.6 US UNKNOUN 6 168,4 2,8 US

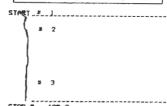


COMPOUND HYPE PENK R.T. AREA/PPH

r

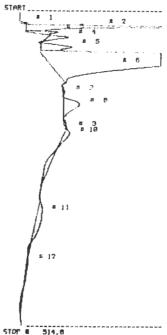


COMPOUND NAME PERK R.T. AREA/PPM



STOP # 138.3 CAMPLE LIBRARY 1 APR 22 33 16:50 ANALYSIS # 63 SYR BLK & AIR INTERNAL TEMP 37 8,5 ML 5 SYR 3

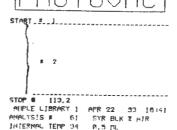
COMPOUND NAME PEAK R.T. AREA/PPM



CAMPLE LIBRARY 1 APR 22 93 15:38 ANALYSIS # 80 QSU-1 INTERNAL TEMP 33 B. 1 mg 5 SYR 9

COMPOUND NAME PEAK R.T. AREA/PPM

US	5.0	25.4	2	UNKHOUH	
_m US	511.7	35.3	3	UMKNOUM	
mŲS	819.9	43.2	4	(INKNONN	
US	1.7	99.3	5	UMICM □ L™	
US	98.7	78.3	•	SINKHOUN	
MUS	117.8	134.0	7	UNKNOHN	
US	. 1.7	154.4		NWKWONW	
US	2.0	330,5	11	UNKHOUN	
MUS	237.9	411.1	12	CHRHOTH	

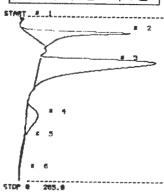


5 STR 3 COMPOUND NAME PEAK R.T. AREA/PPM

GAIN

y a



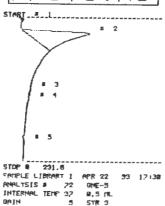


SAMPLE LIBRARY 1 APR 22 99 17:38 M'ALYSIS # 24 CNE-4

INTERNAL TENP 37 8,5 ML GAIN 5 STR 3

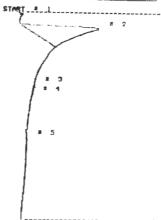
COMPOUND NAME PERK R.T. AREA/PPM

UNIONOLIN 2 26.2 5.8 US LINGIGUN 3 74.5 14.8 US LINGNOUN 4 182.2 2.2 US



COMPOUND NAME PERK R.T. AREA/PPM

2 25.5 8.4 US

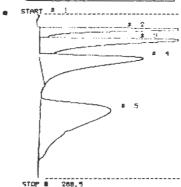


STDP 0 337.6 SAMPLE LIBRARY 1 APR 22 93 12122 MALTSIS # 70 GNE-7 INTERNAL TEMP 35 0.5 ML

9 SYR 3 COMPOUND NAME PERK R.T. AREA/PPM

BAIN

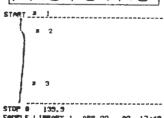
LINKHOUN 2 25.8 8.1 US



CAMPLE LIPRARY 1 HPR 22 30 17:12 ANALYSIS # 68 IN PPM STD INTERNAL TEMP 37 0.5 IL 5 SYR 3

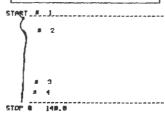
COMPOUND NAME PEAK R.T. AREA/PPM

LINKHOUN 2 25.0 8.3 US LINKHOUN 3 42.4 11.9 US LINKNOUN 4 73.3 14.0 US **UNKNOUN** 5 159.2 21.3 US



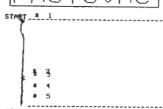
SAMPLE LIBRARY 1 APR 22 99 17148 MALTSIS # 75 STR BLK E AIR INTERNAL TENP 38 8.25 FL BAIN 5 518 3

COMPOUND HAVE PERK R.T. AREA/PPIL



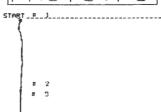
SAMPLE LIBRARY 1 AFR 22 93 17:33 ANALYSIS # 23 STR BLK & AIR INTERNAL TEMP 38 9.5 ML 5 STR 3

COMPOUND HAVE PEAK 'R.T. AREA/PPIL



STOP # 140.4 SAMPLE LIBRARY 1 APR 22 93 17:20 ANALTSIS # 71 DIE- Syr BIK INTERNAL TEMP 37 8.5 ML 5 SYR 3

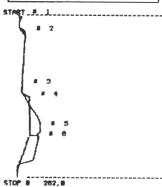
COMPOUND NAME PERK R.T. AREA/PPM



STOP # 157.0 SAMPLE LIBRARY 1 APR 22 93 17:16 ANALYSIS # 63 STR BLK E HIR INTERFAL TENP 37 0.5 PL GAIN 5 SYR 3

COMPOUND NAME PEAK R.T. AREA/PPM

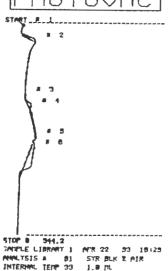




SAMPLE LIBRARY 1 APR 22 33 18:18 AMALTSIS # 80 STR BLK T AIR INTERNAL TENP 34 8,25 ML BAIH 5 STR 4

COMPOUND NAME PEAK R.T. AREA/PPM

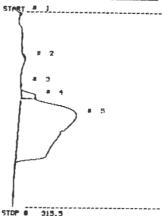
UNKHOUN 4 137.3 227.1 mUS UNKHOUN 5 185.3 2.5 US 6 281.7 3.2 US I PHOTOGRAPH



5 STR 4 COMPOUND NAME PERK R.T. AREA/PPH

BAIN

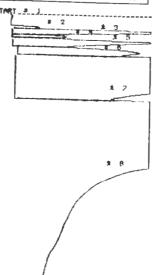
LINKHOUN 2 38.1 132,9 aUS LIMICHOLIN 4 135.9 158.9 mUS UNKNOWN 5 195.7 169.8 mUS LINKHOLIN 6 284.1 1.2 US



CAMPLE LIBRARY 1 APR 22 93 18:11 ANALTSIS # 79 STR BLK E AIR INTEPNAL TEMP 33 8.25 ML 5 SYR 4

COMPOUND NAME PEAK R.T. AREA/PPM

LINKNOUN 4 137.8 889.9 mUS UNKNOWN 5 158,2 26,8 US

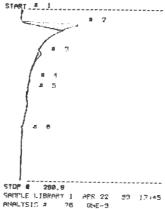


STOP 4 699.9 SAMPLE LIBRARY 1 APR 22 33 18: 3 INTERNAL TETP 33 8.25 FL

5 STR 3 COMPOUND NAME PEAK R.T. AREA/PPM

BAIN

UNKNOWN	2	21.6	817.7	₩US
UNKNOUN	3	29,9	9.3	US
UNKNOWN	4	35.7	1.6	US
UNKHOUN		42.6	8.5	US
UNKNOUN	8	60.5	9.4	US
UNKHOUN	2	36.4	192.5	US



INTERNAL TEMP 37 M. 25 ML GAIN 5 SYR 3

COMPOUND NAME PEAK R.T. AREA/PPM

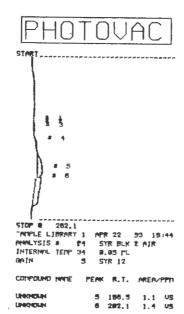
UNKNOUN 2 25.9 1.8 US UNKNOUN 3 74.1 244.1 mUS

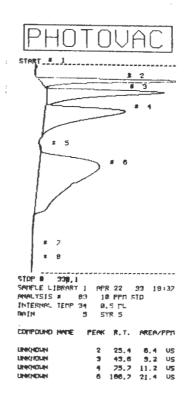


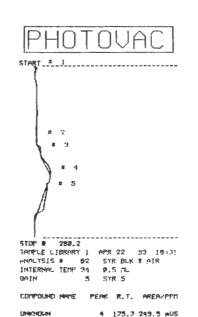
STOP @ 122,6 SAMPLE LIBRARY 1 AFR 22 33 17152 AMALTSIS # 22 SYR BLK I AIR INTERNAL TEMP 38 0.5 ML GRIN 5 STR 3

COMPOUND NAME PEAK R.T. AREA/PPM

9 1





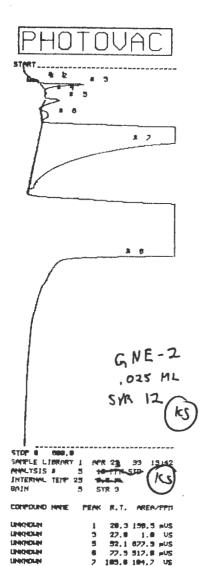


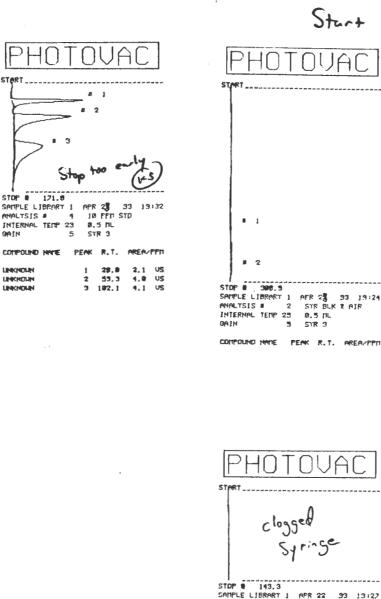
5 281.3 656.8 mUS

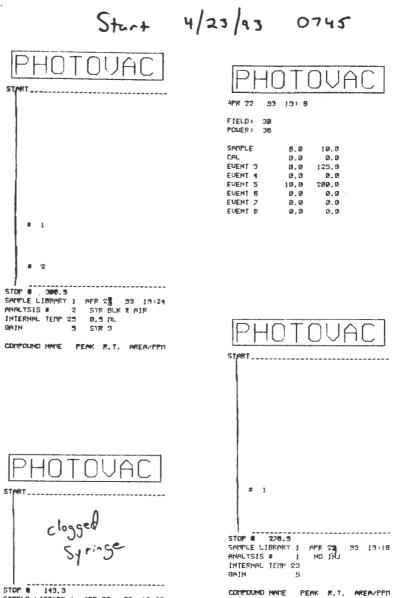
Ckd. By =

Date

LIMKNOUN







ANALYSIS # 3 19 PPH STD INTERNAL TEMP 27 8.9 HL

GAIN 5 SYR 3

COMPOUND MANE PEAK R.T. AREA/PPH



3 m 19 . 11 ---------STOP 0 301.9

5 STR 3 COMPOUND NAME PEAK R.T. AREA/PPIL

SIMPLE LIBRARY 1 APR 28 93 28139

ANALYSIS # 13 #S5E-1

INTERNAL TEMP 31 9.25 HL

UNKNOWN 1 28.8 3,8 US UNKHOUN 2 26.4 1.2 US UNKNOWN 3 38,7 297,8 mUS

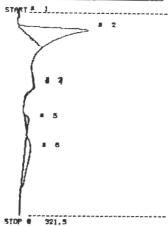
STORT # 1 # 2 # 3 . 4 # 5 STOP 0 259,5 SAMPLE LIBRARY 1 APR 23 93 28:44 MALTSIS # 14 STR BLK T AIR

5 STR 3 COMPOUND NAME PEAK R.T. AREA/FPM

4 193.3 115.0 mUS INCHILIN **LINKHOUN** 5 212,1 198,2 aUS

INTERNAL TEMP 33 8.5 ML

MIAD



SAMPLE LIBRARY 1 APR 22 93 28124 AMALTSIS # 11 RB-3 INTERNAL TEMP 38 8.5 ML NIPE 5 SYR 3

COMPDUND NAME PEAK R.T. AREA/PPH

LINKNOWN 2 27.3 6.1 US LINKHOLIN 5 171.2 395.6 mUS UNKNOWN 8 218.5 1.9 US

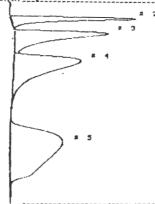


COMPDUND NAME PERK R.T. AREA/PPM LINKHOUN 3 221.7 121.1 mUS

5 SYR 3

GAIN

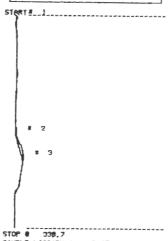
PHOTOVAC



STOP @ 322.9 SAMPLE LIBRARY 1 APR 23 93 20110 ANALYSIS # 8 10 PFP STD INTERNAL TEMP 28 8.5 ML GAIN 5 SYR 3

COMPOUND NAME PEAK R.T. AREA/PPM

LINKNOUN 12 27.2 5.4 US NHOWNIA 3 58.4 5.3 US 4 55.0 12.8 US UNKNOUN UNKNOUN 226.1 29.6 US

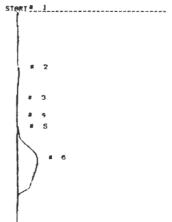


SAMPLE LIBRARY I APR 23 93 20:17 AMPLYSIS # 9 STR BLK & AIR INTERNAL TEMP 29 8.5 ML BAIN 5 SYR 3

COMPOUND NAME PEAK R.T. AREAUPPH

LINKNOUN

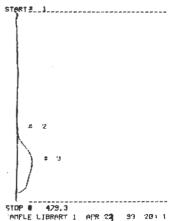
3 229,7 311 7 mbs



STOP # 339.9 SAMPLE LIBRARY 1 AFR 23 93 19:52 ANALYSIS # 6 SYR BLK Z AIR INTERNAL TEMP 27 0.5 ML DAIN 5 SYR 3

COMPOUND NAME PEAK R.T. AREA/PPM

UNKHOLIN 6 243.3 8.4 US



BAIN 5 STR 3 COMPOUND NAME PEAK R.T. AREA/PPM

ANALYSIS # 7

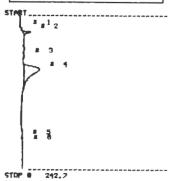
INTERNAL TENT 26 1.00 ML

NWKNOWN 3 243,3 5.8 US

STR BLK & AIR

IJ

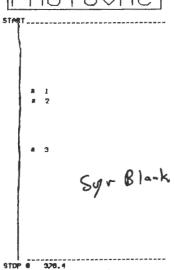




COMPDUND NAME PERK R.T. AREA/PPH

UNKNOWN 2 28.7 134.2 MUS UNKNOWN 4 86.1 1.6 US

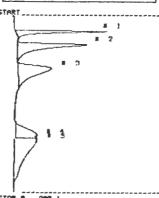
PHOTOVAC



9TDP 0 326.4 SNIPLE LIBRAPY 1 APR 28 93 21149 ANALYSIS 3 25 ONE 3 PRISAP INTERNAL TEIP 32 9.85 TL GAIN 5 STR 12

COMPOUND NAME PERK R.T. AREA/PPH

PHOTOVAC

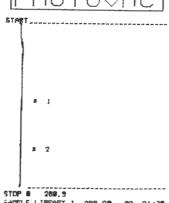


STOP @ 288,1 SAMPLE LIBRARY 1 APR 23 93 21:22 ANALYSIS # 22 10 PPH STD INTERNAL TEMP 34 8.10 HL OAIN 9 STR 12

5 299.5 4.8 US

UNKHOLIN

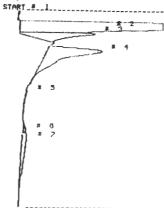
PHOTOVAC



STOP 8 200,9
SAMPLE LIBRARY 1 APR 29 93 21:26
ANALYSIS 8 29 SYR STD 2 AIR
BNTERNAL TEMP 34 B,18 mL
GAIN 5 SYR 12

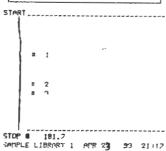
COMPDUND NAME PERK R.T. AREA/PPM

PHOTOVAC



COMPOUND NAME PEAK R.T. AREA/PPM

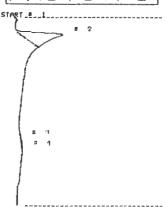
PHOTOVAC



| STOP | | | 191.7 | SAMPLE LIBRARY | APR 23 | 93 | 21:17 | SAMPLE LIBRARY | APR 23 | 93 | 21:17 | STR BLK 2 AIR | INTERNAL IEMP 34 | 8.18 ML | GAIN | 9 | STR 12

COMPOUND MARKE PEAK R.T. AREA/PPM

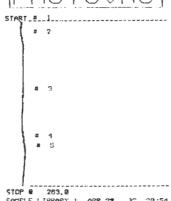
PHOTOVAC



COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN 2 27.3 3.1 US

PHOTOVAC

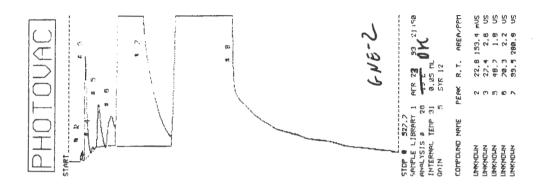


COMPOUND NAME PEAK R.T. AREA/PPM

MAIN 1893

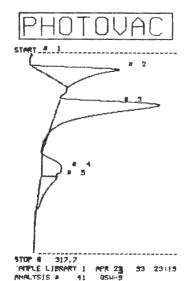


G.5.00		Sheet 4 of 7
Subject	Ву	Date 4/23/93
	Ckd	Rev.





Subject	Job No By Ckd	
START	2 H B B B B B B B B B B B B B B B B B B	# 3 STOP # 306.2 SAPICE LIBRARY I APR 23 93 22: 9 FINALYSIS # 28 SYR BLK Z AIR INTERNAL IETP 32 8.5 PL GAIN COMPOUND MATE FEAK R.T. MREA/FITT LINKHOLN 7 193.3 198.9 #US UMKNOLN 6 218.9 348.6 #US
STIPET. # 2 # 3 # 4 # 5 # 6 # 7 STIPE # 729.1 STIPE # 729.	PHOTOUAC	# 2 # 3 STDP # 222.1 SAMPLE LIBRARY I APR 23 93 22:28 RNALYSIS # 31 18 E INTERNAL TEITP 39 8.05 FIL, GAIN 5 STR 14 COTIFICIAN PAYE PEWK R.T. AREA/PPTI UNKNOLN 1 21:7 213:8 MUS UNKNOLN 1 12:7 213:8 MUS
START 3 1 START 3 1 STORE 3 305.7 STOP 6 305.7 STOP 6 305.7 STOP 6 305.7 STOP 7 1 PFR 25 59 22.134 RANKTSIS 8 32 STR BLIK 2 PIR INTERNAL 1EPP 32 1.07. GOTPOLOU WWE PERK R.T. AREAPPT	UNNTITIES 3 197.4 PUS	

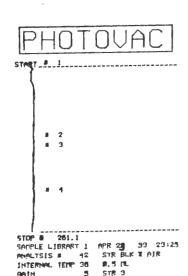


9 SYR 3 COMPOUND NAME PEAK R.T. AREA/PPM

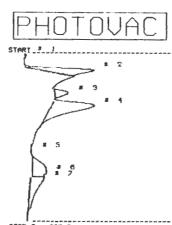
INTERNAL TEMP 35 0.5 ML

MIRE

UNKNOUN 2 27.4 7.9 US UNKNOWN 3 83.3 13.7 US LINKNOUN 4 186.1 3,1 US UNKNOWN 5 158.9 2,5 US



COMPOUND NAME PEAK R.T. AREA/PPH



STOP 8 265, 2 SAMPLE LIBRARY 1 APR 2 33 231 9 AMALTSIS # 33 PH-8 INTERNAL TEMP 35 0.5 ML 5 SYR 3

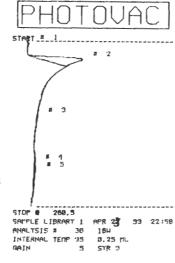
COMPOUND NAME PEAK R.T. AREA/PPM LINKNOUN 2 27.9 2.2 US FINKNOFIN 3 64.7 869.7 mUS UNKNOUN 4 84.5 4.9 US LINKNOUN 8 199.7 2,2 US

7 199.7 2.3 US

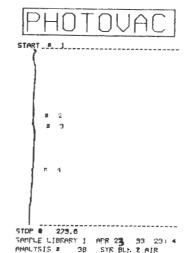
LINKNOUN

2 -------STOP # 191.1 SAMPLE LIBRARY 1 APR 29 33 23112 ANALYSIS # 40 SYR BLK E AIR INTERNAL TEMP 37 0.5 ML BAIN 5 STR 3

COMPDIND NAME PERK R.T. AREA/PPM



COMPOUND NAME PERK R.T. AREA/PPM UNKNOUN 2 28.8 2.1 US UNKNOWN 5 203,7 134.5 mUS

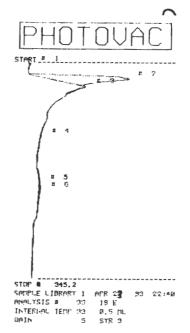


COMPOUND NAME PEAK R.T. AREA/PPM

5 SYR 3

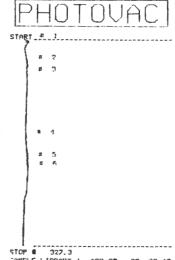
INTERNAL TENE 15 1.0 ML

GAIN



COMPOUND NAME PEAK R.T. AREA/PPM

UNKHOUN 2 26.1 5.0 US **UNKHOUN** 3 38,6 143,2 mUS **LINKHOUN** 6 283.7 148.4 mUS



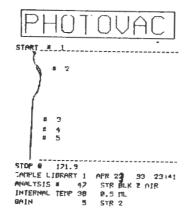
SAMPLE LIBRARY 1 AFR 23 93 22146 ANALTSIS # 34 STR BLK E AIR INTERNAL TEMP 33 0,5 ML 5 SYR 3

COMPOUND HAME PEAK R.T. AREA/PPM

9

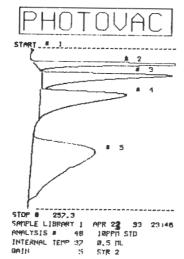
. Date

9



COMPOUND NAME PEAK R.T. AREA/PPM

LIMK MORN 2 38.8 126.5 mUS



COMPOUND NAME PEAK R.T. AREA/PPM

2 25.0 7.1 US

3 43.3 9.7 US

1 76.1 11.6 US

5 169.4 28.5 US

UNKNOUN

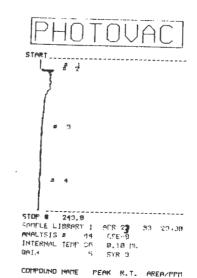
UNKNOUN

THKHONN

UNKNOUN

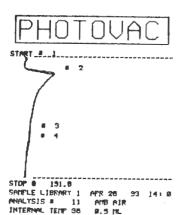
6 # 7 STDP @ 262,6 SAMPLE LIBRARY 1 APR 23 93 23138 ANALYSIS # 48 CSE-8 INTERNAL TEMP 38 0.5 ML 9 STR 3 COMPOUND MANE PERK R.T. AREA/PPM 2 24.5 8.0 US UNKNOUN UNKNOUN

3 38.3 2.4 US



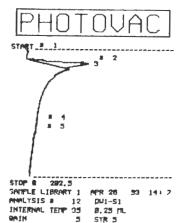


COMPOSIND NAME PEAK R.T. AREA/PFM

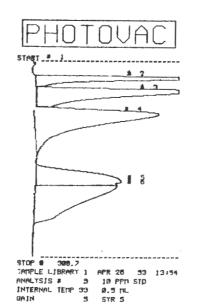


5 SYR 5 COMPDUND NAME PEAK R.T. AREA/PPM

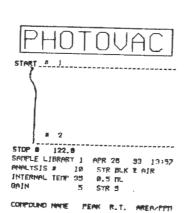
MIND

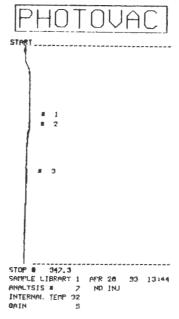


COMPOUND NAME PEAK R.T. AREA/PPH LINKNOUN 2 22.9 1.8 US

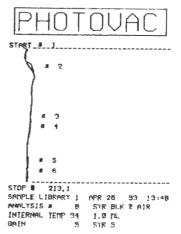


COMPOUND NAME PEAK R.T. AREA/PPM LINKHOUN 2 26.8 12.3 US UNKHOUN 3 47.6 18.6 US LINKHOLIN 4 85.1 21.7 US LINKNOUN 5 192.9 11.4 US UNKNOUN 6 199.3 18.1 US





COMPOUND NAME PERK R.T. AREA/PPM

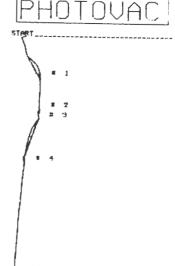


COMPOUND NAME PEAK R.T. AREA/PPM UNKNOWN 2 39.1 179.5 mUS

9PR 26 93 11129

TIELD: 30 POWER: 35

SAMPLE 8.0 10.9 CAL 0.0 0.0 E THAVE 9.9 129.6 EVENT 4 0.0 0.0 EVENT 5 10.0 200.0 EVENT 6 0.0 0.8 EVENT 7 2.2 0.0 EVENT B 0.0 0.0



STOP # 366.9 SAMPLE LIBRARY 1 APR 26 50 11:36 ANALYSIS # 1 NO INJ INTERNAL TEMP 22

COMPOUND NAME PEAK R.T. AREA/PPM UNKNOWN 1 66.7 629.6 mUS

Change gain to 5

D

0

3 8 4 STOP 8 183,3

COMPOUND NAME PEAK R.T. AREA/PPM UNKNOWN 2 24.5 1.2 US

GAIN

TAMPLE LIBRARY 1 APR 28 93 14:42 ANALYSIS # 20 DU3-SU3 INTERNAL TEMP 36 8.5 ML

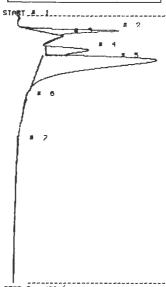
5 STR 5

START # 1 STOP # 126,4

SAMPLE LIBRARY 1 APR 26 93 14:48 MALTSIS # 22 849-943 INTERNAL TEMP 37 8.5 ML MIND 5 SYR 5

COMPDUND NAME PEAK R.T. AREA/PPM

UNKNOWN 2 31.1 181.9 aVS



STDP @ 423;2 SAMPLE LIBRART 1 APR 28 99 14:31 ANALYSIS # 18 DH3-SH2 INTERNAL TEMP 34 8.5 ML 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM

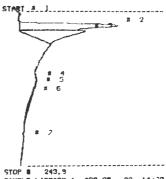
2 23.6 2.5 US 4 53,5 2,7 US UNKNOUN UNKNOUN 5 79.7 15.2 US

START #_1_ # 2 # 3 ------SAMPLE LIBRARY 1 APR 26 93 14:38 ANALYSIS # 15 STR BLK E AIR

5 SYR 5 FORFOLIND NAME PEAK R.T. AREA/PEN

INTERNAL TEMP 34 0.5 ML

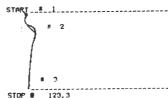
MIAD



CAMPLE LIBRARY 1 APR 28 93 14:20 ANALYSIS # 16 DU2-SI INTERNAL TEMP 38 0.5 ML 5 STR 5

COMPOUND MAME PERK R.T. AREA/PPM

2 22.6 5.1 US UNKHOUN 3 31.8 4.5 US TINKNOUN



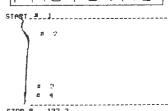
SAMPLE LIBRARY 1 APR 28 33 14:23 AMALYSIS # 17 SYR BLK & AIR INTERNAL TEMP 36 0.5 MI. 5 SYR 5 BAIN

COMPOUND NAME PERK R.T. AREA/PPM UNKNOWN 2 33,4 182,9 mUS

STOP @ 280.9 AMPLE LIBRARY 1 APR 26 93 14:12 ANALTSIS # 13 DU1-S1 INTERNAL TEMP 35 1.0 ML 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM

UNKHOUN 2 23.8 9.2 VS UNKNOUN 3 31.6 520.7 mUS



5TDP @ 137.2 SAMPLE LIBRARY 1 APR 26 93 14:16 ANALYSIS # . 15 STR BLK & AIR INTERNAL TEMP 38 0.5 ML MIAB 5 SYR 5

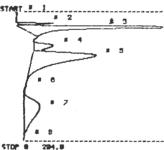
COMPOUND NAME PEAK R.T. AREA/PPM

UNKHOWN 2 35.0 105.9 mUS 문

1893

Date ä 126 9





SAMPLE LIBRARY 1 APR 28 93 15:33 MALTSIS # 29 PU3-NU2 INTERNAL TENP 35 8.25 ML MIAB 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM

LINKHOWN	2	15.0	541.3	mUS
UNKHOLIN	3	23, 9	6.5	US
NIKKONIN	4	53.9	1.1	US
UNKNOUN	5	78.3	7.1	US
LINKNOUN	7	153.5	3,3	US

CONFOUND NAME PERK R.T. AREA/PPIT

MING

STDP 0 271.5

MIAD

UNKNOUN

UNKHOUN

UNKNOUN

UNKHOWN

UNKHOUN

* 6

7

SAMPLE LIBRARY 1 APR 26 93 15:13

COMPOUND NAME PEAK R.T. AREA/PPM

5 STR 5

SAMPLE LIBRART 1 APR 26 93 15:17

5 STR 5

COMPOUND NAME PEAK R.T. AREA/PPM

MALTSIS # 28 STR BLK & AIR

INTERNAL TEMP 36 8.5 FL

MIRD

3 23.1 6.9 VS

4 38.7 194.9 mUS

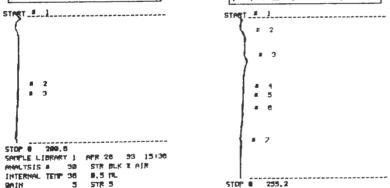
5 52.5 3.2 VS

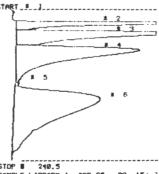
8 74.4 124.8 US

7 151.4 15.2 US

ANALYSIS # 27 DU3-NU1

INTERNAL TENT 35 8.25 ML

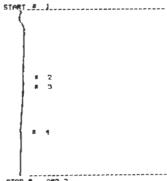




STDP # 248.5 SAMPLE LIBRARY 1 AFR 26 93 15: 2 ANALYSIS # 25 10 PPH STD INTERNAL TEMP 37 0.5 ML GAIN S STR 5

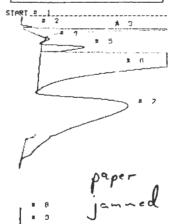
COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN	2	22.2	10.2	US
UNKHOLM	3	37.9	15.7	VS
UNKHOUN	4	65.7	18.8	US
UNKHOUN	5	117.7	122.0	MUS
UNKHOUN	•	149.4	27.2	US



STOP # 263.7 SAMPLE LIBRARY 1 APR 20 93 15: 6 ANALTSIS # 20 STR BLK E AIR INTERNAL TENF 37 8.9 ML MIAD 5 SYR 5

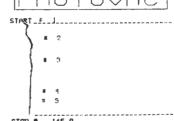
COMPOUND NAME PEAK R.T. AREA/PPM



STOP # 318.9 SAMPLE LIBRARY 1 APR 28 93 14:54 ANALTSIS # 20 PDW3-SU1 INTERNAL TENP 36 0.25 ML 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM

NAKHORN	2	17.7	112.2	mUS
NHKHONH	3	22.1	4.9	US
DHKHDMH	4	37.4	130.9	mUS
UMKHDHH	5	50.5	2.2	บร
UNKHONH	6	71.2	77.8	US
こで不るりにて	7	140.8	30.4	υs



STOP # 145.8 SAMPLE LIBRARY 1 AFR 26 93 14:57 ANALTSIS # 24 SYR BLK Z AIR INTERNAL TENT 37 8.5 TL BAIN 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM

Date

泛 9

2

4 **3** 5 . . ______ STOP @ 226.1 SAMPLE LIBRARY 1 APR 26 93 16:34

5 SYR 5 COMPOUND NAME PEAK R.T. AREA/PPM

INTERNAL TERP 37 8.5 ML

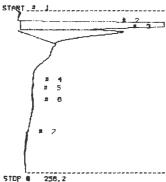
LINKNOWN 2 21.1 11.9 US UNKHOUN 3 37.1 113.3 mUS

START # 1

2 # 3

STOP 0 195.3 SAMPLE LIBRARY -1 APR 26 93 16:38 MMPLTSIS # 39 STR BLK T AIR INTERNAL TEMP 37 8.5 ML MIRE 5 STR 5

COMPOUND HAVE PERK R.T. AREA/PPTI



SAMPLE LIBRARY 1 APR 26 93 16:27 ANALTSIS # 36 EN-3 INTERNAL TEMP 35 0.9 ML

BAIN

5 STR 5 COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN 2 22.2 15.3 US **UNKNOWN** 3 34.2 7.8 US

START # 1

FAMPLE LIBRARY 1 AFR 26 33 16:29 MALTSIS # 37 STR BLK E AIR

5 SYR 5

2 37.8 211.5 mUS

COMPOUND NAME PEAK R.T. AREA/PPM

2

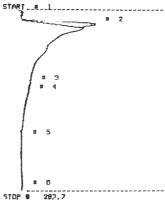
B 3

INTERNAL TEMP 36 B.5 ML

STOP 0 123.9

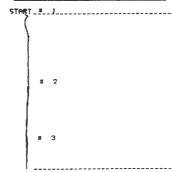
GAIN

UNKNOWN



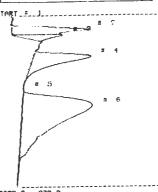
SAMPLE LIBRARY) APR 28 33 15:54 ANALYSIS # 34 DU-7 INTERNAL TEMP 37 1.0 ML GAIN 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM UNKNOUN 2 23.6 1.3 VS



STOP # 248.3 GAMPLE LIBRARY 1 APR 28 93 16:22 ANALTSIS # 35 STR BLK E AIR INTERNAL TEMP 34 0.5 ML GAIN 5 S1R 5

COMPOUND MAKE PEAK R.T. AREA/PPM

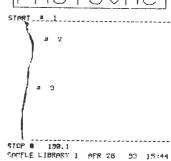


STOP 8 272.9 "AMPLE LIBRARY 1 APR 26 33 15:41 ANALYSIS # 31 DU3-NU3 INTERNAL TEMP 96 8.5 ML 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM UNKHOWN 2 22.9 4.2 US 3 30.9 1.9 VS UNKNOWN 4 66.9 8.4 US UNKHOUN

6 145.4 22.6 US

UNKNOWN



AMALYSIS # 32 SYR BLK & AIR INTERNAL TEMP 32 0.5 HL 5 STR S

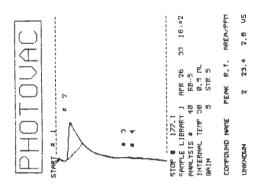
COMPOUND NAME PEAK R.T. AREA/PPM

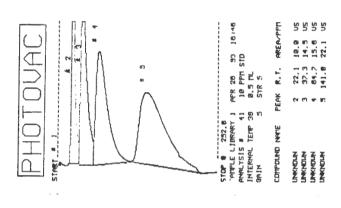
UNKNOUN 2 33.5 105.9 mUS

Date 4/26 Fisher H



Client		Sheet_5_ef_5_
Subject	Ву	Date_ 4/26/93
	Ckd	Rev





2 8 3 8 4 STOP 0 201.4 SATTLE LIBRARY 1 APR 27 93 8125 ANALYSIS # 9 RINSATE 8 INTERNAL TEMP 28 8,5 ML

5 STR 5 COMPOUND NAME PERK R.T. AREA/PPM

BAIN

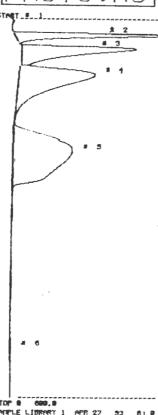
LINKHOLIN 2 28.8 757.4 pUS

START # 1 8 2 # 3 ------STOP @ 263,5

SAMPLE LIBRARY 1 APR 27 93 8:33 PHALTSIS # 11 SYR BLK E PIR INTERNAL TEMP 25 0.5 ML GAIN 5 SYR 5

COPPOUND NAME PENK R.T. AREA-PPH

r v



STOP @ 600,0 SAMPLE LIBRARY 1 APR 27 93 61 8 ANALYSIS # 7 19 PPH STD INTERNAL TEMP 25 8,5 ML S SYR 5

CONTOUND NAME PERK R.T. AREA/PTIL

LINKHOUN 2 25.2 7,8 VS UNIQUOUN 3 46,7 11.3 US CHKNOHH 4 88.9 16.8 US UNKNOWN 9 210,9 23,9 US

STORT #_1 s 2 STOP # 119.7 3AMFLE LIBRARY 1 APR 27 93 8: 6 MARLTSIS # 8 SYR BLK Z AIR INTERNAL TEMP 27 0.5 ML

5 SYR 5

F '7

Start 0710 4/27/93.

START_#_1 STOP @ 191.2

SAMPLE LIBRARY 1 APR 22 93 7:23 ANALYSIS # 3 SYR BLK % AIR INTERNAL TEMP 28 0.5 ML MIAD 5 STR 5

COMPOUND NAME PERK R.T. AREA/PPM

START_#_1_ 8 2 STDP # 127.5 SAMPLE LIBRARY 1 APR 27 93 7:46

ANALYSIS # 5 AMB AIR INTERNAL TEMP 27 B.5 ML 5 SYR 5

COMPOUND NAME PERK R.T. AREA/PPM

APR 27 53 7:12

FIELD: 30 POHER: 37

SAMPLE 8.0 10.0 CAL 0.0 0.0 EVENT 3 0.0 125.0 EVENT 4 0.8 0.0 EUENT 5 19,9 200.0 EVENT & 9.0 8.0 EVENT 7 0.0 2.0 EVENT 8 0.0 0.0

1

STOP @ 221.9 ------SAMPLE LIBRARY 1 AFR 22 93 7:17 AMALYSIS # 1 NO INJ INTERNAL TEMP 23 BAIN 2

COMPOUND NAME PEAK R.T. AREA/PPM

N

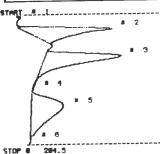
77

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Herdspac





STOP # 204.5
SAMPLE LIBRARY 1 APR 27 93 9:24
ANALYSIS # 28 GSUG-NU1
INTERNAL TEMP 48 8.5 ML
BAIN 5 SYR 5

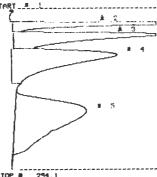
COMPOUND NAME PEAK R.T. AREA/PPH

 UNKNOWN
 2
 23.2
 6.5
 US

 UNKNOWN
 3
 67.5
 9.5
 US

 UNKNOWN
 5
 145.7
 2.6
 US

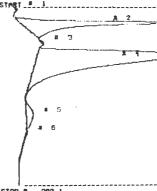
PHOTOVAC



\$10P @ 254.1 \$AMPLE LIPRARY 1 APR 27 93 3:18 ANALYSIS # 17 10 PPH STD INTERNAL TEMP 38 0.5 HL BAIN 5 STR 5

COMPOUND NAME PERK R.T. AREA/PPH

PHOTOVAC



STOP 0 283.1
SAMPLE LIBRARY J APR 27 90 5: I
ANALYSIS # 15 GSU4-NUJ
INTERNAL TEMP 35 #5.5 PL
GRIN 5 STR 5

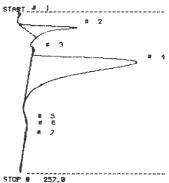
COMPOUND NAME PEAK R.T. AREA/PPM

 INNKNOUN
 2
 24.5
 3.5
 US

 UNKNOUN
 4
 77.2
 28.8
 US

 LINKNOUN
 5
 172.1
 1.3
 US

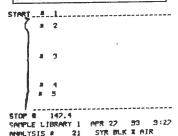
PHOTOVAC



COMPOUND NAME PEAK R.T. AREA/PPM

UNKNOUN 2 25.4 2.8 US
UNKNOUN 3 61.5 155.3 MUS
UNKNOUN 4 68.2 18.5 US
UNKNOUN 7 281.7 184.2 MUS

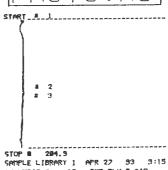
PHOTOVAC



INTERNAL TEMP 41 8.5 ML GAIN 5 SYR 5

COMPDIAND NAME PERK R.T. AREA/PPH

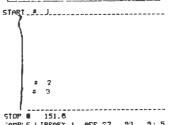
PHOTOVAC



SAMPLE LIBRARY 1 APR 27 93 3:15
ANALTSIS # 18 STR BLK 2 AIR
INTERNAL TEMP 99 8.5 ML
BAIN 5 STR 5

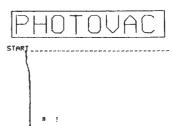
COMPOUND NAME PEAK R.T. AREA/PPM

PHOTOVAC



STOP # 151.6
IAMPLE LIBRORY | AFR 27 93 9:5
ANALYSIS # 16 SYR BLK & AIR
INTERNAL TEMP 32 8.5 ML
GAIN 5 SYR 5

COMPOUND NAME PEAK R.T. AREA/PPM



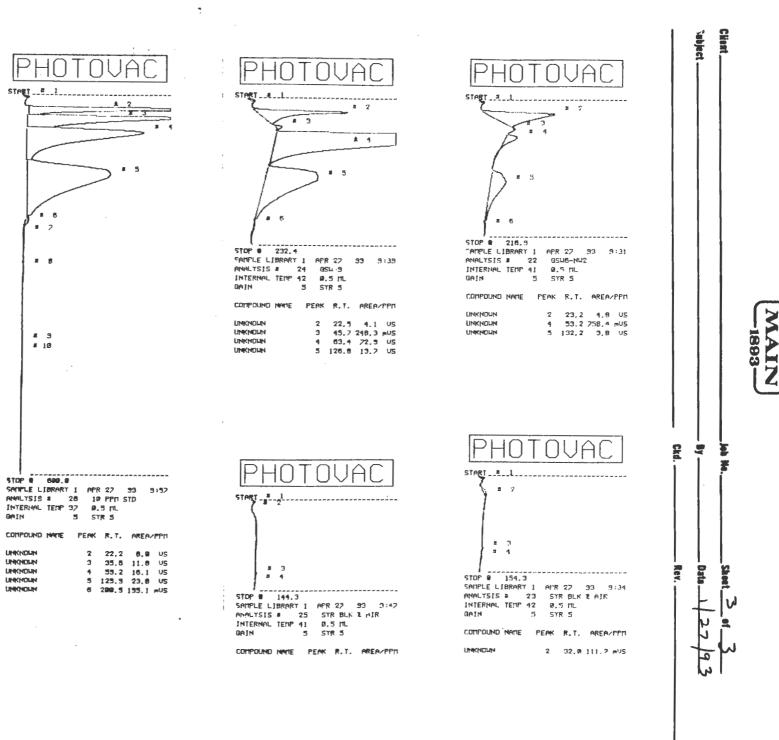
COMPOUND NAME PERK R.T. AREA/PPM

MAIN -1893

No.______Sheet_2

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SENECA ASH LANDFILL DRAFT RI REPORT

APPENDIX F MONITORING WELL INSTALLATION DIAGRAMS

OVERBURDEN MONITORING WELL Empire Soils, Inc. Project Seneca Army Depot Driller Ash Landfill (MW-34) Drilling Method Hollow Stem Auger Location October 24, 1991 Development Method Teflon Bailer Date - Elev. (Top of Surface casing): 633.18 — Elevation Top of Riser: _____632.89¹ -Length of Exposed Guardpipe: 2.18 - Type of Surface Seal: Concrete Collar I.D. of Surface Guardpipe: ____4" — Diameter of Hole: 6.25" - Riser Pipe I.D.: 2" Type of Riser Pipe: Schedule 40 PVC – Type of Grout: Not Required — Elevation/Top of Seal: 631.0' Type of Seal: Bentonite Type of Sandpack: # 3 Sand Elevation/Top of Screen: 624.5' — Type of Screen: ___Machine Slotted Slot Size x Length: _____.010 x 10' I.D. Screen: ______2" Type of Sand Pack: # 3 Sand Elevation/Bottom of Screen: 614.5' — Bottom of Sump: Elevation/Bottom of Hole: 614.5'

BEDROCK MONITORING WELL Seneca Army Depot Empire Soils, Inc. Project Driller Ash Landfill (MW-35D) Drilling Method Hol.Stem Auger/Air Rotary Location Teflon Bailer November 5, 1991 Date Development Method _____ Elev. (Top of Surface casing): 631.88 Elevation Top of Riser: 631.90' - Length of Exposed Guardpipe: 2.28 Elevation/Ground Surface: 629.6' -Type of Surface Seal: Concrete Collar I.D. of Surface Guardpipe: 4" Diameter of Hole: 10.25" - Riser Pipe I.D.: _____ Type of Riser Pipe: Schedule 40 PVC - Type of Grout: Cement/Bentonite - PVC I.D. (Surface to Bedrock): 6" Weathered Bedrock Surface Type of Grout (outside PVC):Cem./Bent. Elevation/Depth Top of Seal: 606.2' Type of Seal: Bentonite Competent Bedrock - Elevation/Depth Top of Screen: 600.6' Type of Screen: ___Machine Slotted Slot Size x Length: .010 x 25' I.D. Screen: - Type of Sand Pack: #3 Sand Diameter of Hole in Bedrock: Core/Rock: Elevation/Bottom of Screen: 575.6' Elevation/Bottom of Hole: 575.11

OVERBURDEN MONITORING WELL Empire Soils, Inc. Seneca Army Depot Driller Project Location Ash Landfill (MW-36) Drilling Method Hollow Stem Auger October 30, 1991 Development Method Teflon Bailer Date - Elev. (Top of Surface casing): 632.04 - Elevation Top of Riser: 631.73 - Length of Exposed Guardpipe: 2.03 - Type of Surface Seal: Concrete Collar I.D. of Surface Guardpipe: ____4" Diameter of Hole: 6.25" Riser Pipe I.D.: 2" Type of Riser Pipe: Schedule 40 PVC — Type of Grout: Not Required Elevation/Top of Seal: 630.1 Type of Seal: Bentonite —Type of Sandpack: # 3 Sand Elevation/Top of Screen: 625.3' — Type of Screen: <u>Machine Slotted</u> Slot Size x Length: _____.010 x 10' I.D. Screen: 2" Type of Sand Pack: # 3 Sand Elevation/Bottom of Screen: 615.3' — Bottom of Sump: — Elevation/Bottom of Hole: 615.3'

OVERBURDEN MONITORING WELL Seneca Army Depot Driller Empire Soils, Inc. Project Hollow Stem Auger Location Ash Landfill (MW-37) Drilling Method Date October 25, 1991 Development Method Teflon Bailer ---- Elev. (Top of Surface casing): 633.02 —— Elevation Top of Riser: 632.89' -Length of Exposed Guardpipe: 2.02 - Type of Surface Seal: Concrete Collar I.D. of Surface Guardpipe: ____4" Diameter of Hole: 6.25" - Riser Pipe I.D.: _____2" Type of Riser Pipe: Schedule 40 PVC Type of Grout: Not Applicable — Elevation/Top of Seal: 631.0' -- Type of Seal: Bentonite — Type of Sandpack: # 3 Sand Elevation/Top of Screen: 624.3* Type of Screen: <u>Machine Slotted</u> I.D. Screen: ______ 2" Type of Sand Pack: # 3 Sand Elevation/Bottom of Screen: 619.3 — Bottom of Sump: Elevation/Bottom of Hole: 619.3

BEDROCK MONITORING WELL Seneca Army Depot Empire Soils, Inc. Driller Project Ash Landfill (MW-38D) Hol.Stem Auger/Air Rotary Location Drilling Method November 6, 1991 Teflon Bailer Date Development Method _____ - Elev. (Top of Surface casing): 638.04 -Elevation Top of Riser: 637.93' Length of Exposed Guardpipe: 2.64' -Elevation/Ground Surface: 635.4 -Type of Surface Seal: Concrete Collar I.D. of Surface Guardpipe: 4" Diameter of Hole: 10.25 Overburden - Riser Pipe I.D.: ______ 2" Type of Riser Pipe: Schedule 40 PVC - Type of Grout: Cement/Bentonite - PVC I.D. (Surface to Bedrock): Weathered Bedrock Surface Type of Grout (outside PVC):Cem./Bent. Elevation/Depth Top of Seal: 630.5' Type of Seal: Bentonite Competent Bedrock Elevation/Depth Top of Screen: 625.7' Type of Screen: ___Machine Slotted Slot Size x Length: .010 x 20' I.D. Screen: - Type of Sand Pack: #3 Sand Diameter of Hole in Bedrock: Core/Rock: 6.25" Elevation/Bottom of Screen: 605.7' Elevation/Bottom of Hole: 605.41

OVERBURDEN MONITORING WELL Seneca Army Depot Empire Soils, Inc. Driller Project Location Ash Landfill (MW-39) Drilling Method Hollow Stem Auger October 28, 1991 Development Method Teflon Bailer Date — Elev. (Top of Surface casing): 659.95° — Elevation Top of Riser: 659.76' -- Length of Exposed Guardpipe: 2.15 - Type of Surface Seal: Concrete Collar - I.D. of Surface Guardpipe: ____4" — Diameter of Hole: 6.25" Riser Pipe I.D.: 2" Type of Riser Pipe: Schedule 40 PVC — Type of Grout: Not Required Elevation/Top of Seal: 657.8' — Type of Seal: Bentonite —Type of Sandpack: # 3 Sand Elevation/Top of Screen: 651.3 — Type of Screen: Machine Slotted Slot Size x Length: .010 x 5' I.D. Screen: 2" Type of Sand Pack: # 3 Sand Elevation/Bottom of Screen: 646.3 — Bottom of Sump: Elevation/Bottom of Hole: 646.3'

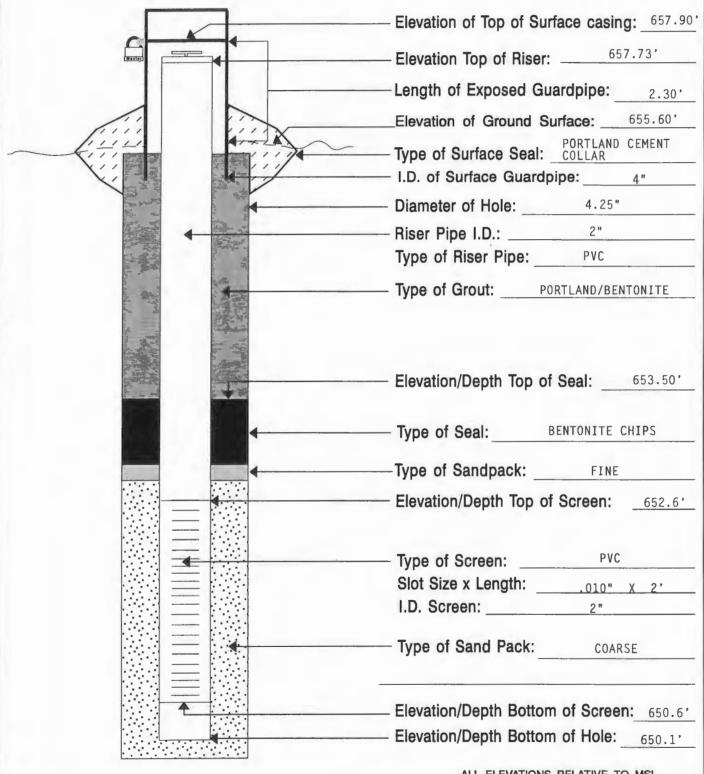
OVERBURDEN MONITORING WELL Empire Soils, Inc. Seneca Army Depot Driller Project Hollow Stem Auger Location Ash Landfill (MW-40) Drilling Method October 29, 1991 Development Method Teflon Bailer Date - Elev. (Top of Surface casing): 659.49' Elevation Top of Riser: 659.32' - Length of Exposed Guardpipe: 2,49 - Type of Surface Seal: Concrete Collar I.D. of Surface Guardpipe: ____4"__ Diameter of Hole: 6.25" - Riser Pipe I.D.: _____2" Type of Riser Pipe: Schedule 40 PVC — Type of Grout: Not Required Elevation/Top of Seal: 657.0' — Type of Seal: Bentonite —Type of Sandpack: ____# 3 Sand Elevation/Top of Screen: 651.8' Type of Screen: Machine Slotted Slot Size x Length: _____.010 x 7' I.D. Screen: 2" - Type of Sand Pack: # 3 Sand Elevation/Bottom of Screen: 644.8 — Bottom of Sump: Elevation/Bottom of Hole: 644.8'

			K MONITORING WELL
	Project _	Seneca Army Depot	
	Location _ Date	Ash Landfill (MW-41D) November 6, 1991	Drilling Method Hol.Stem Auger/Air Rotary Development Method Teflon Bailer
L	Date _		
	Overburden		Elev.(Top of Surface casing): 694.04' — Elevation Top of Riser: 694.02' — Length of Exposed Guardpipe: 2.44' — Elevation/Ground Surface: 691.6' — Type of Surface Seal: Concrete Collar — I.D. of Surface Guardpipe: 4" — Diameter of Hole: 10.25" — Riser Pipe I.D.: 2" — Type of Riser Pipe: Schedule 40 PVC
Weat	hered Bedrock Surfac	ye	Type of Grout: Cement/Bentonite PVC I.D. (Surface to Bedrock): 6" Type of Grout (outside PVC):Cem./Bent. Elevation/Depth Top of Seal: 682.8'
			Type of Seal: Bentonite
	Competent		Elevation/Depth Top of Screen: 677.1'
	lent		Type of Screen: Machine Slotted
			Slot Size x Length:010 x 30'
	Bedrock		I.D. Screen: 2"
	ock ——		Type of Sand Pack: #3 Sand
			Diameter of Hole in Bedrock: Core/Rock: 6.25"
			Elevation/Bottom of Screen: 647.1'
•	↓		Elevation/Bottom of Hole: 646.6'

Empire Soils, Inc. Seneca Army Depot Driller Project Hol.Stem Auger/Air Rotary Ash Landfill (MW-42D) Location Drilling Method Teflon Bailer November 8, 1991 Development Method _____ Date - Elev. (Top of Surface casing): 683.18 -Elevation Top of Riser: 683.04' Length of Exposed Guardpipe: 2.48 Elevation/Ground Surface: 680.7' - Type of Surface Seal: Concrete Collar I.D. of Surface Guardpipe: 4" Diameter of Hole: 10.25 Riser Pipe I.D.: 2" Type of Riser Pipe: Schedule 40 PVC - Type of Grout: <u>Cement/Bentonite</u> PVC I.D. (Surface to Bedrock): 6" Type of Grout (outside PVC): Cem./Bent. Weathered Bedrock Surface Elevation/Depth Top of Seal: 661.9' Type of Seal: Bentonite Competent Bedrock Elevation/Depth Top of Screen: 656.0 Type of Screen: ___Machine Slotted Slot Size x Length: .010 x 20' I.D. Screen: Type of Sand Pack: #3 Sand Diameter of Hole in Bedrock: Core/Rock: Elevation/Bottom of Screen: 636.0 Elevation/Bottom of Hole: 635.71

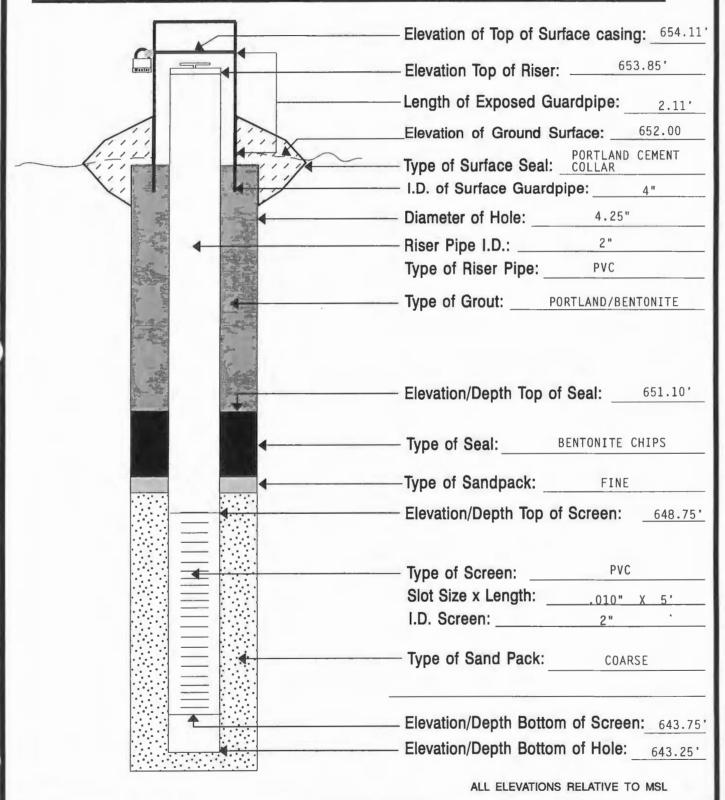
BEDROCK MONITORING WELL

OVERBURDEN MONITORING WELL							
PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER							
LOCATION ASH LANDFILL		DRILLING METHOD_	HSA				
DATE .	F (0 / 00						

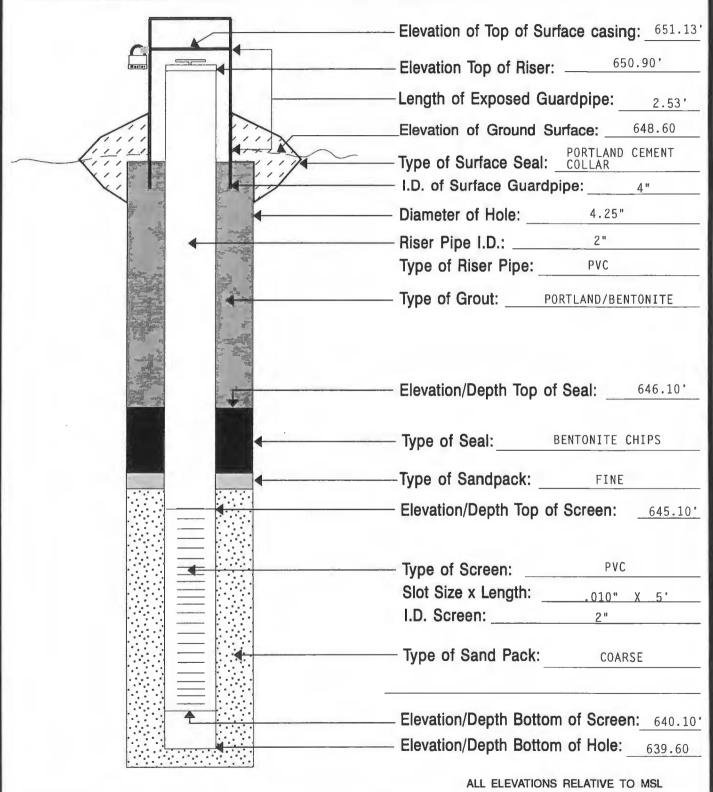


ALL ELEVATIONS RELATIVE TO MSL

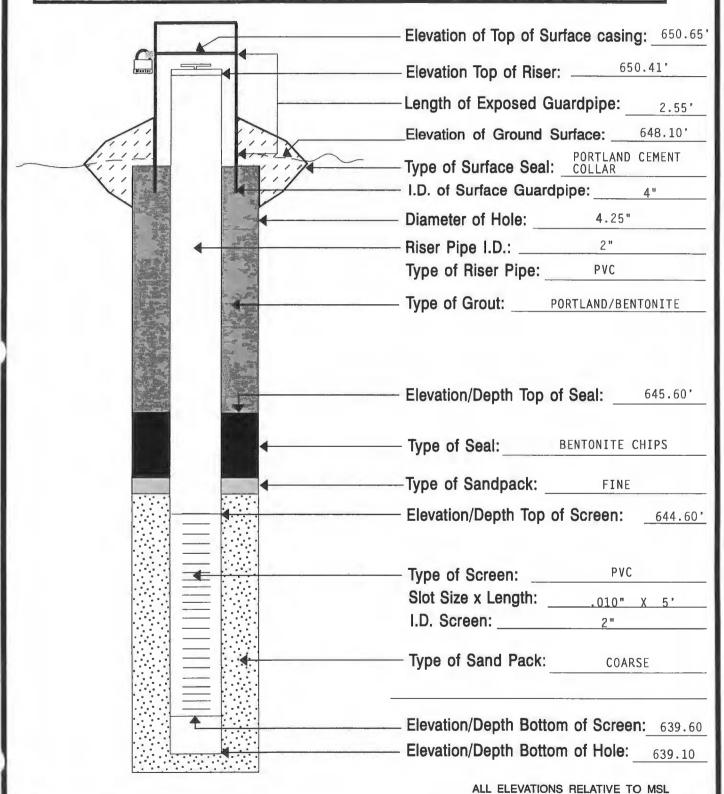
OVERBURDEN MONITORING WELL							
PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER							
LOCATION	ASH LANDFILL	DRILLING METHOD_	HSA				
DATE	5/3/93	WELL NAME	MW-44				



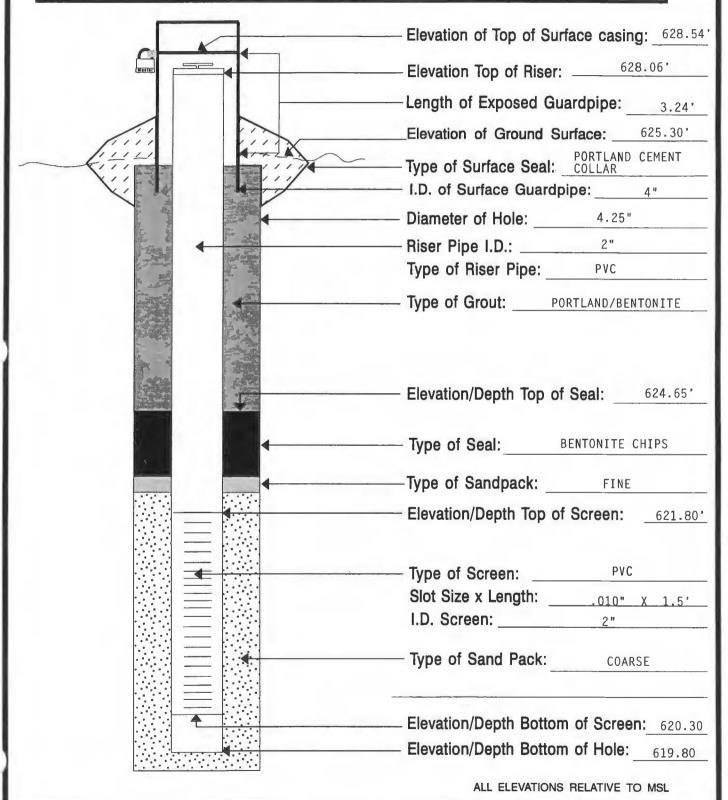
OVERBURDEN MONITORING WELL						
PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER						
LOCATION	ASH LANDFILL	DRILLING METHOD_	HSA			
DATE	5/5/93	_ WELL NAME	MW-45			



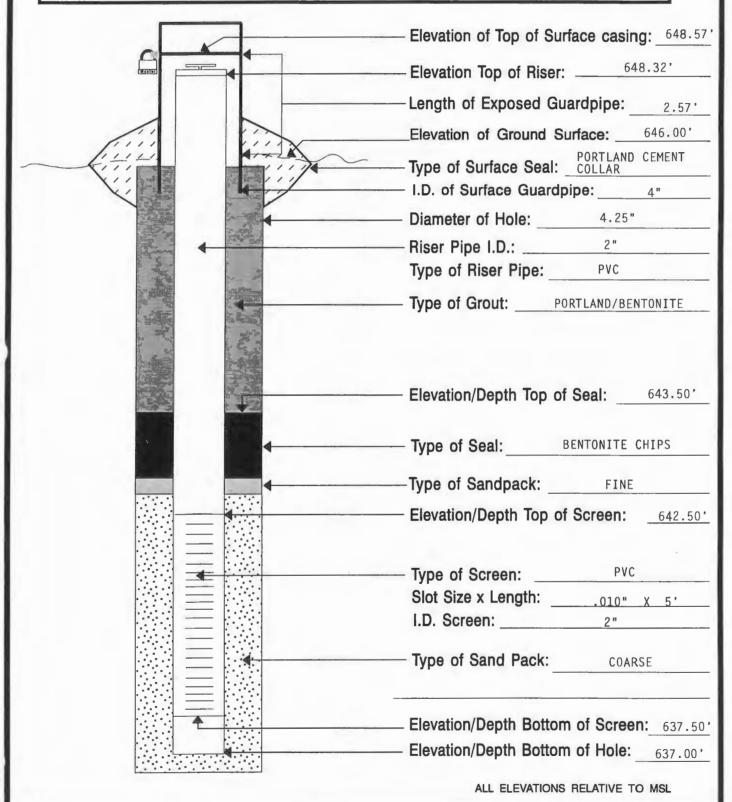
OVERBURDEN MONITORING WELL							
PROJECT _	PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER						
LOCATION _	ASH LANDFILL	DRILLING METHOD_	HSA				
DATE _	5/5/93	WELL NAME	MW-46				

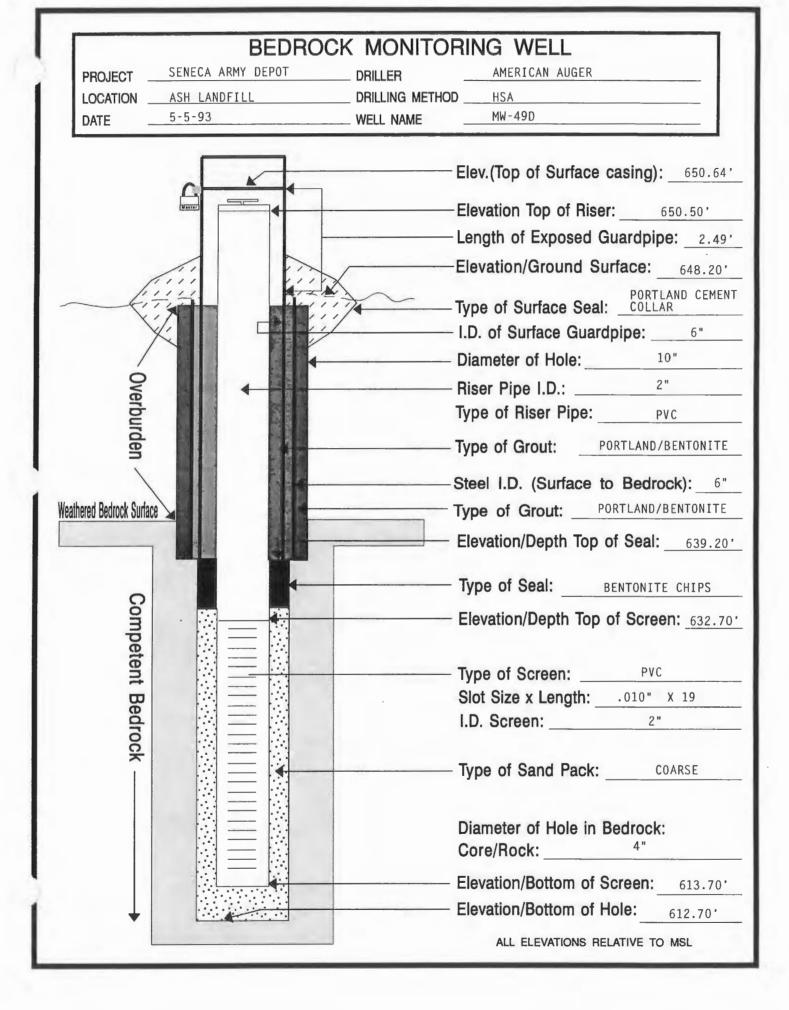


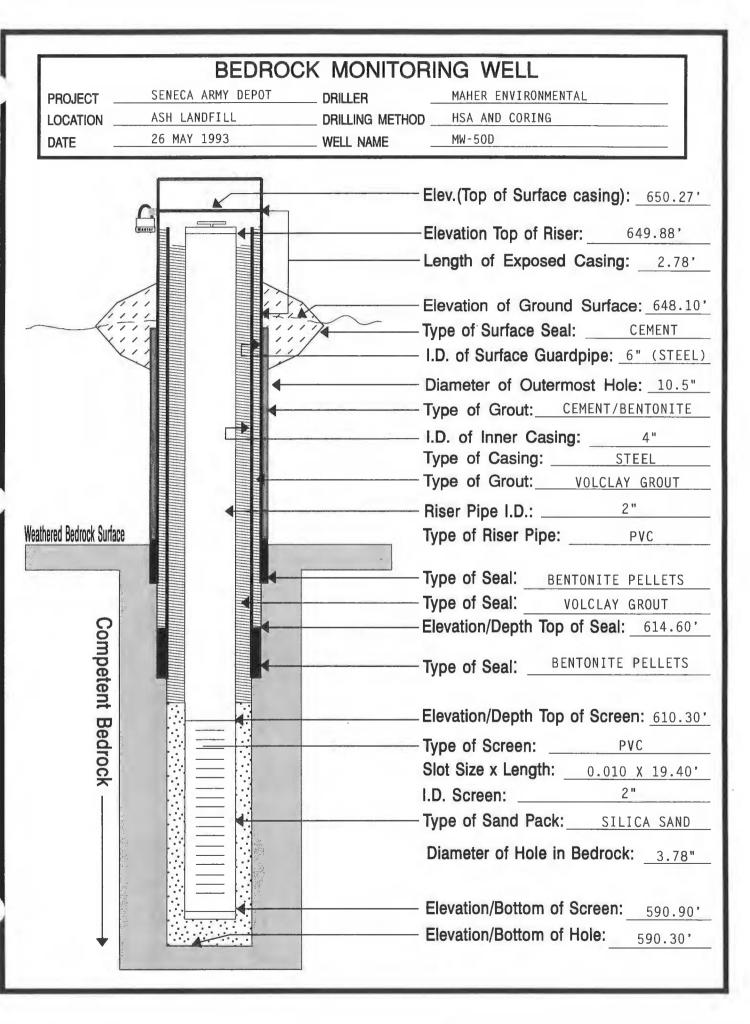
OVERBURDEN MONITORING WELL								
PROJECT _	PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER							
LOCATION _	ASH LANDFILL	DRILLING METHOD_	HSA					
DATE _	5/11/93	WELL NAME	MW-47					

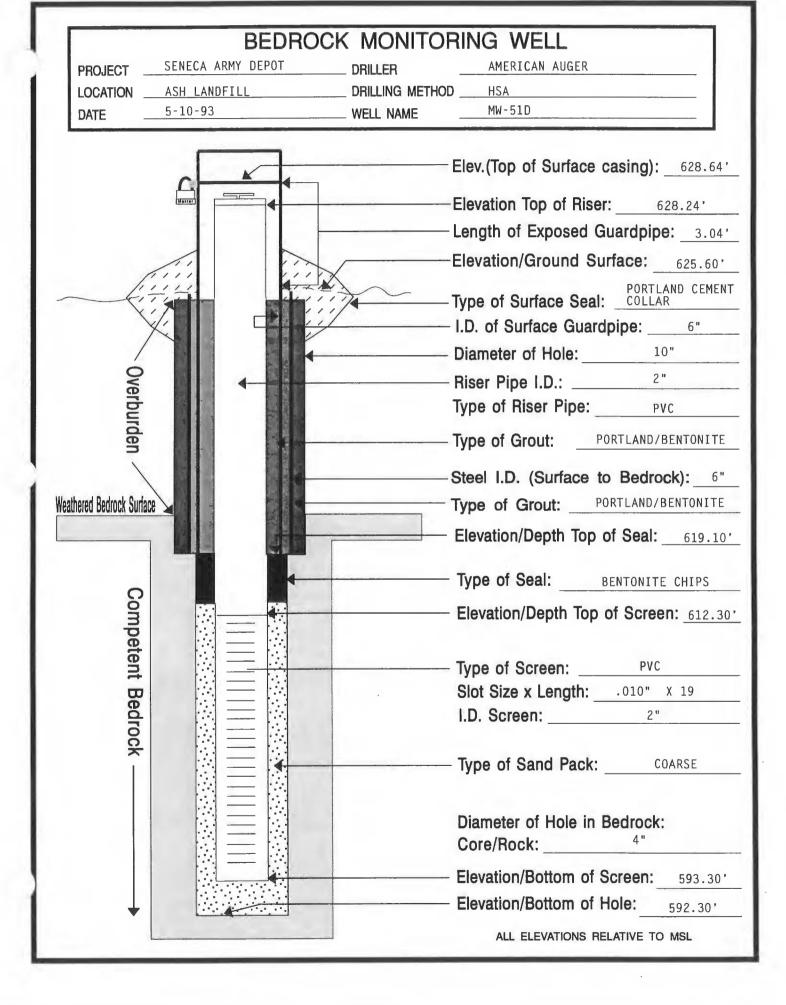


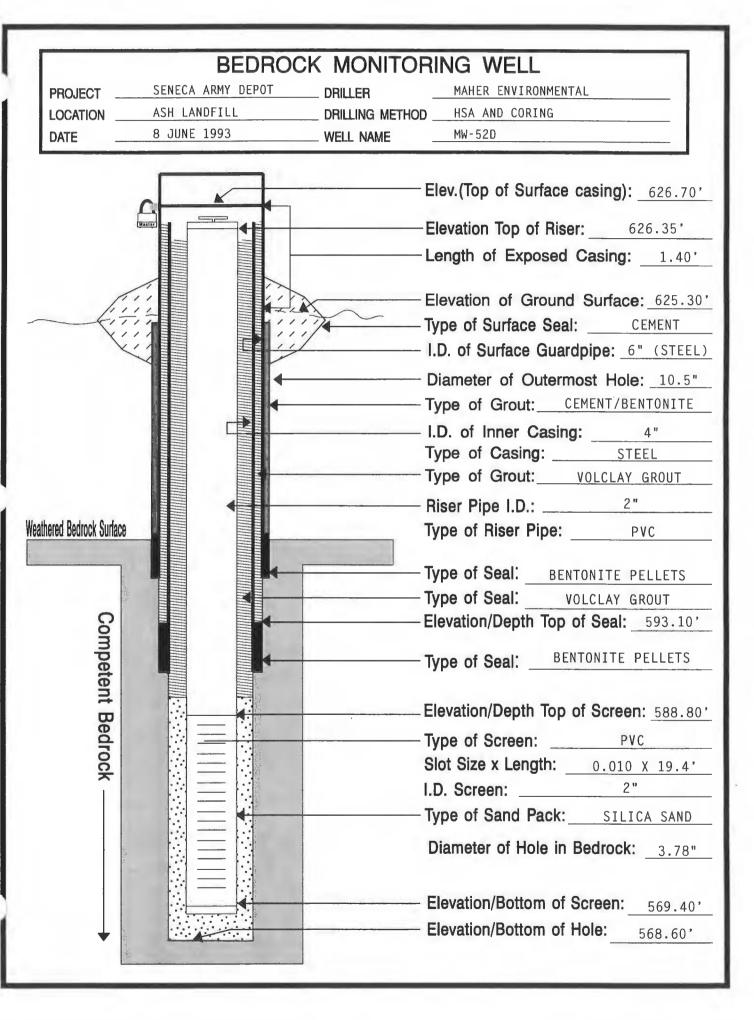
OVERBURDEN MONITORING WELL PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER LOCATION ASH LANDFILL DRILLING METHOD HSA DATE 5/4/93 WELL NAME MW-48



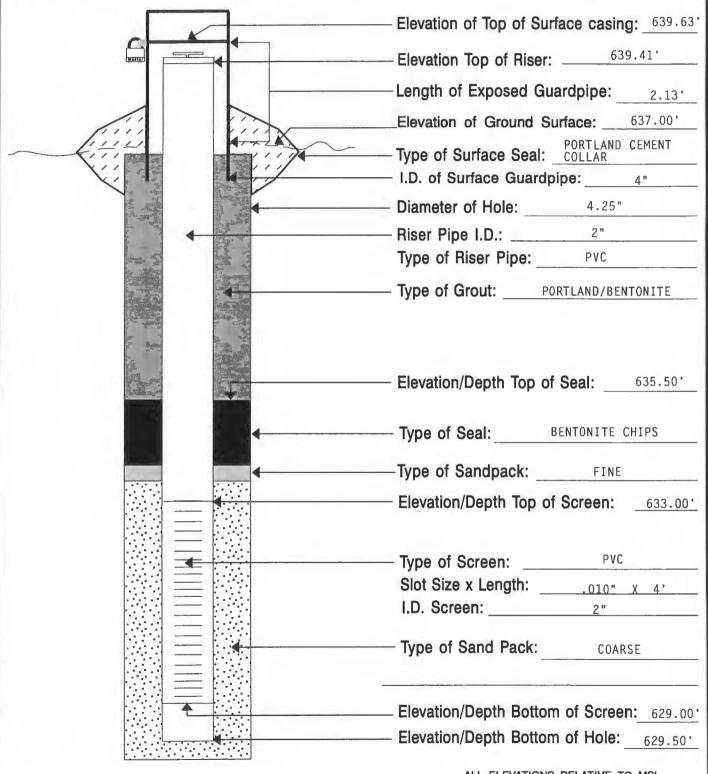




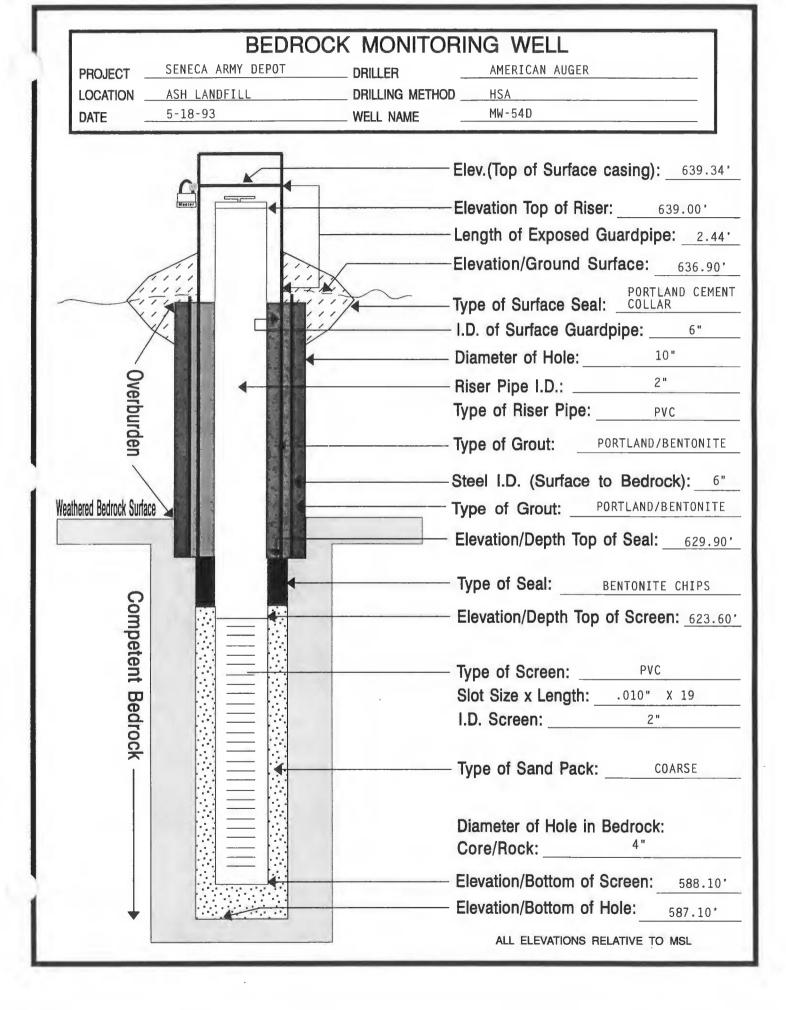


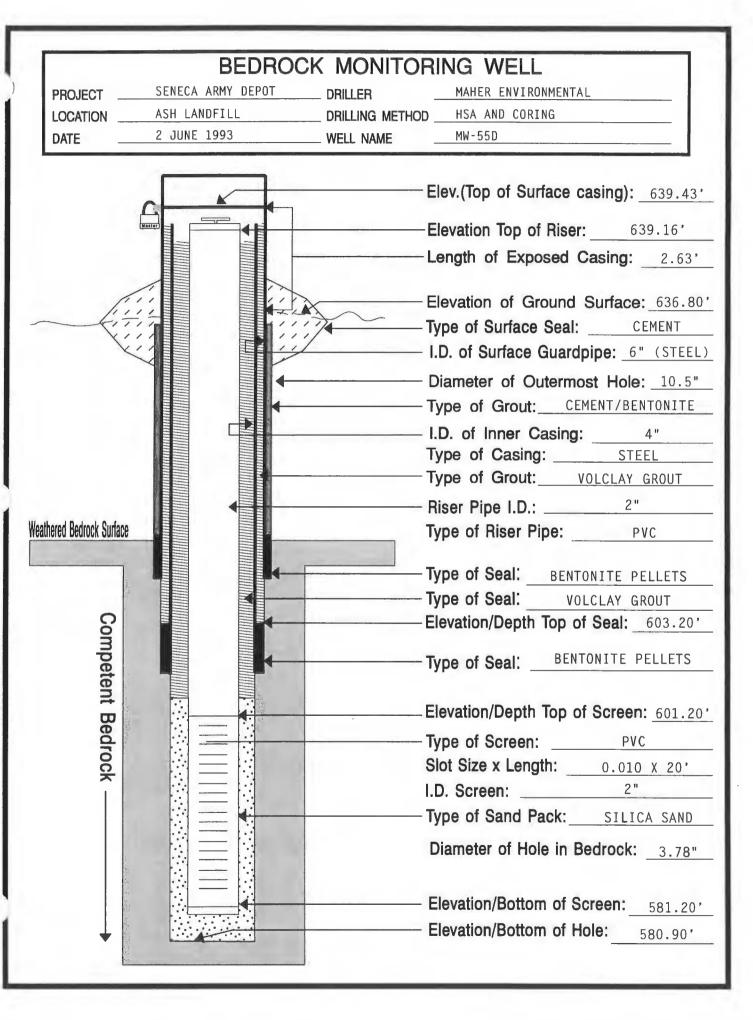


OVERBURDEN MONITORING WELL							
PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER							
LOCATION _	ASH LANDFILL	DRILLING METHOD_	HSA				
DATE	5/6/93	WELL NAME	MW-53				

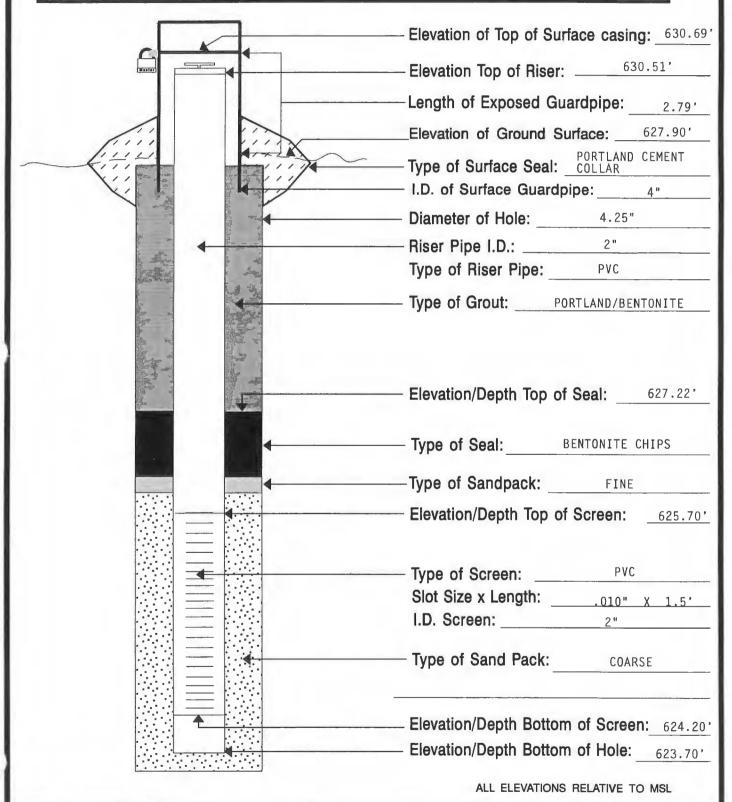


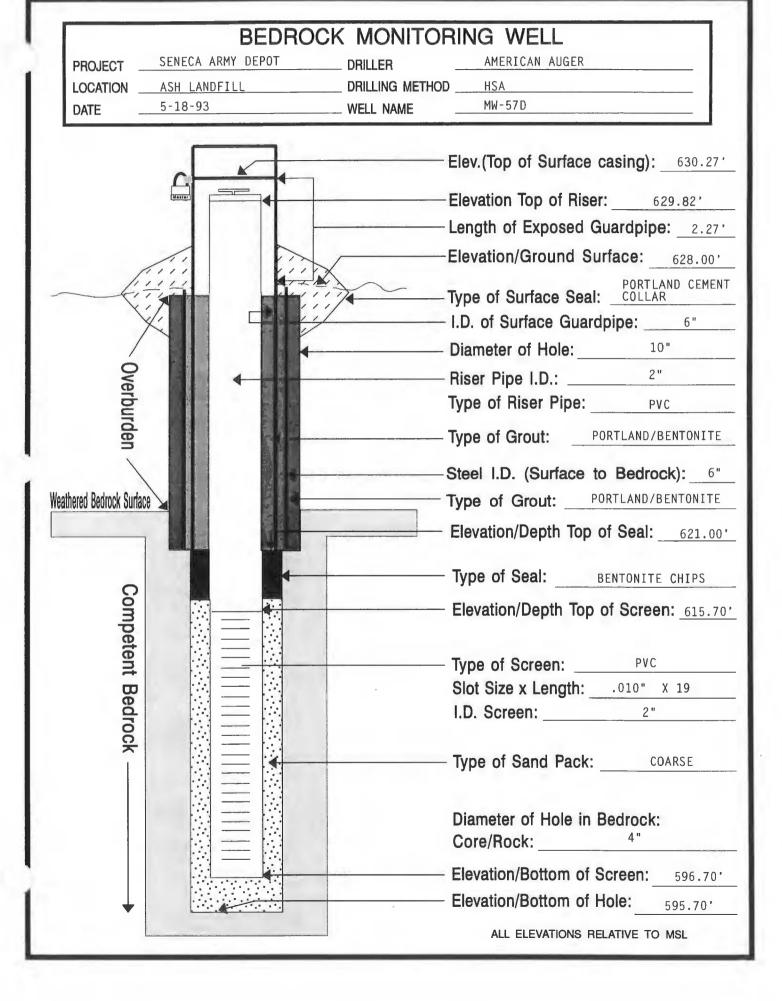
ALL ELEVATIONS RELATIVE TO MSL

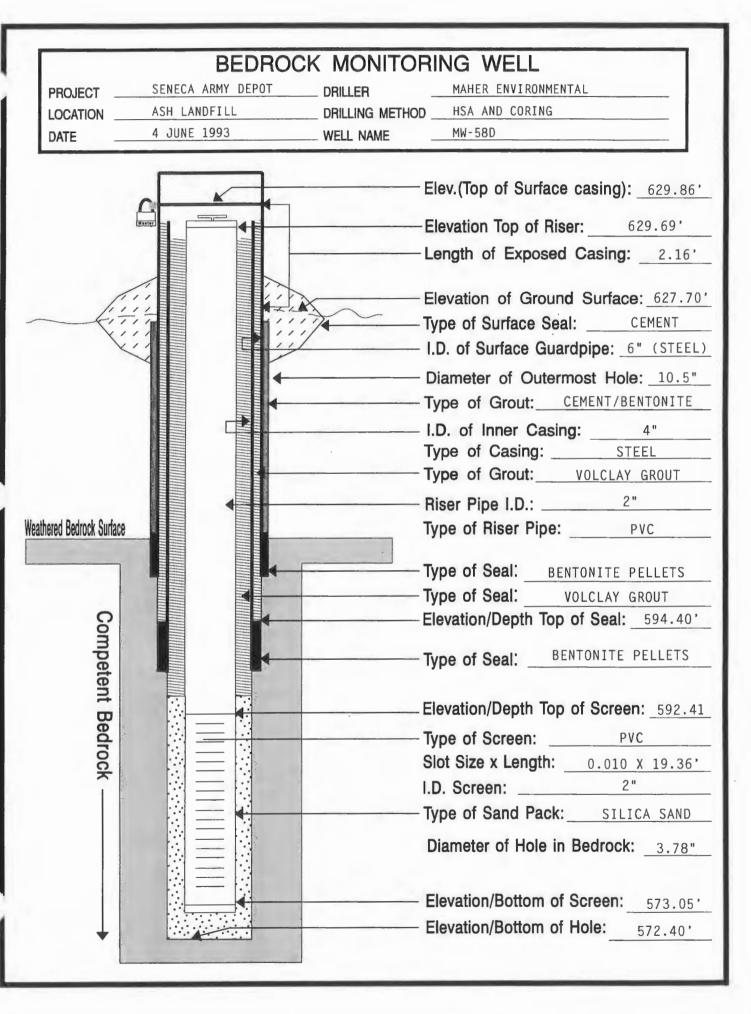




OVERBURDEN MONITORING WELL								
PROJECT	PROJECT SENECA ARMY DEPOT DRILLER AMERICAN AUGER							
LOCATION	ASH LANDFILL	DRILLING METHOD_	HSA					
DATE	5/11/93	WELL NAME	MW-56					







HISTORICAL MONITORING WELL INSTALLATION INFORMATION TO BE INSERTED INTO APPENDIX F

PROJECT __38-26-0313 88

DATE

13-21 Oct

WELL NUMBER	MW-18	MW-19	MW-20	MW-22	
1. Height of Monitoring Well Casing above ground level	30''	30"	30"	30"	30"
2. Total Depth of Well below ground level	9	9	8' 10"	9	17' 5"
3. Depth to Top of Well Screen below ground level	4	4	3' 10"	4	12' 5"
4. Well Screen Length	5	5	5	5	5
5. Well Screen Slot Size	0.010	0.010	0.010	0.010	0.010
6. Well Diameter	2 in ID	2 in ID	2 in ID	2 in ID	2 in ID
7. Monitoring Well Casing Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC
8. Monitoring Well Screen Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC
9. Grout Thickness below ground level	3' 10"	4	3	3' 11'	10' 6"
10.Depth to Top of Bentonite Seal below ground level	All wel	ls grouted	to surface	with bento	nite
11.Bentonite Seal Thickness	3' 10"	4	3	3' 11"	10' 6"
12.Depth to Top of Sand Pack	3' 10"	4	3	3' 11"	10' 6"
13.Depth to Static Water Level from top of monitoring well casing	5' 11"	5' 5½''	6' 8''	6' 6"	18' 8½"
Date Measured	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 8
14.Depth to Static Water from ground level	654.6	644.0	644.1	645.1	645.8
Date Measured	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 8
15.Elevation at ground level	654.6	644.0	644.1	645.1	645.8
<pre>16.Elevation - Top of monitoring well casing</pre>					
17.Ground-water elevation	651.1	641.0	637.4	641.1	629.2
Date Measured	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87
Comments					

~ ^

PROJECT 38-26-0313-88 DATE 13-21 Oct 87

WELL NUMBER	MW-23	MW-24	MW-25	MW-26	
1. Height of Monitoring Well Casing above ground level	30"	30"	30"	30"	
2. Total Depth of Well below ground level	9'	9 '	9 '	9'	
3. Depth to Top of Well Screen below ground level	41	41	4'	6 '	
4. Well Screen Length	51	5 '	5'	5 '	
5. Well Screen Slot Size	0.010"	0.010"	0.010"	0.010"	
6. Well Diameter	2 in ID	2 in ID	2 in ID	2 in ID	
7. Monitoring Well Casing Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	
8. Monitoring Well Screen Material	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	Schd 40 PVC	
9. Grout Thickness below ground level	4	3	4	4' 10"	
10.Depth to Top of Bentonite Seal below ground level	All well	s grouted	to surface	with bento	nite .
11.Bentonite Seal Thickness	4	3	4	4' 10"	
12.Depth to Top of Sand Pack	4	3	4	4' 10"	
13.Depth to Static Water Level from top of monitoring well casing	5 ' 5''	4' 9½"	5' 8"	5' 2"	
Date Measured	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87	
14.Depth to Static Water from ground level	2' 11"	2' 3½"	3' 2"	2' 8"	
Date Measured	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87	
15.Elevation at ground level .	638.6	633.3	634.0	617.5	
l6.Elevation - Top of monitoring well casing					
17.Ground-water elevation	635.7	631	630.8	615	
Date Measured	19 Oct 87	19 Oct 87	19 Oct 87	19 Oct 87	
Comments					
		,			
	,				

HARLAND SPACE

PROJECT Seneca Army Depot 38-26	5-K928-90		DATE N	ovember 198	
WELL NUMBER	MW - 27	MW - 28	MW - 29	MW - 30	MW - 31
1. Height of Monitoring Well Casing above ground level	2.0'	1.9'	1.4'	3-0'	0.8'
2. Total Depth of Well below ground level	8.0'	8.1'	8.6'	7.0'	9.2'
3. Depth to Top of Well Screen below ground level	3.0'	3.1'	3.6'	2.0'	4.2'
4. Well Screen Length	5.0'	5.0'	5.0'	5.0'	5.0'
5. Well Screen Slot Size	0.010"	0.010"	0.010"	0.010"	0.010"
6. Well Diameter	2.0"	2.0"	2.0"	2.0"	2.0"
7. Monitoring Well Casing Material	PVC	PVC .	PVC	PVC	PVC
8. Monitoring Well Screen Material	PVC	PVC	PVC	PVC	PVC
9. Grout Thickness below ground level	ALL WELI	s GROUTED	TO SURFACE	WITH BENTO	VITE:
10.Depth to Top of Bentonite Seal below ground level	0	0	0	. 0	· 0
ll.Bentonite Seal Thickness	3.0'	3.1'	3.6'	2.0'	4.2'
12.Depth to Top of Sand Pack	3.0'	3.1'	3.6'	2.0'	4.2'
13.Depth to Static Water Level from top of monitoring well casing	5.0'	4.65'	6.1'	4.2'	2.7:1
Date Measured	17 Nov 89	17 Nov. 89	17 Nov 89	17 Nov 89	17 Nov 89
14.Depth to Static Water from ground level . Date Measured					·
15.Elevation at ground level					· i. ·
16.Elevation - Top of monitoring well casing	638.38	636.46	636.42	639.41	635.88
17. Ground-water elevation	633.38	631.81	630.32	635.21	633.18
Date Measured	17 Nov 89	17 Nov 89	17 Nov 89	17 Nov 89	17 Nov 89
Comments					
					1

PROJECT Seneca Army Depot 38-26-K928-90

DATE November 1989

	1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
WELL NUMBER	MW - 32	MW - 33	1	1	
1. Height of Monitoring Well Casing above ground level	1.3'	1.5'		-	• .
2. Total Depth of Well below ground level	8.7'	8.5'			
 Depth to Top of Well Screen below ground level 	3.7'	3.5'			
4. Well Screen Length	5.0'	5.0'			
5. Well Screen Slot Size	0.010"	0.010"			
6. Well Diameter	2.0"	2.0"			
7. Monitoring Well Casing Material .	PVC	PVC			·
8. Monitoring Well Screen Material	PVC	PVC			
9. Grout Thickness below ground level .	ALL WELL SURFACE	GROUTED T	O ITE		
10.Depth to Top of Bentonite Seal below ground level	. 0	0		·	
11.Bentonite Seal Thickness	3.7'	3.5'			
12.Depth to Top of Sand Pack	3.7'	3.5'			
13.Depth to Static Water Level from top of monitoring well casing	3.8'	3.5'			2
Date Measured	17 Nov 89	17 Nov 89			
14.Depth to Static Water from ground level Date Measured					
15.Elevation at ground level					
16.Elevation - Top of monitoring well casing	640.92	638.68			
17.Ground-water elevation	637.12	635.18			
Date Measured	17 Nov 89	17 Nov 89			e e e e e e e e e e e e e e e e e e e
Comments					

SENECA ASSI LANDFILL DRAFT RI REPORT

APPENDIX G

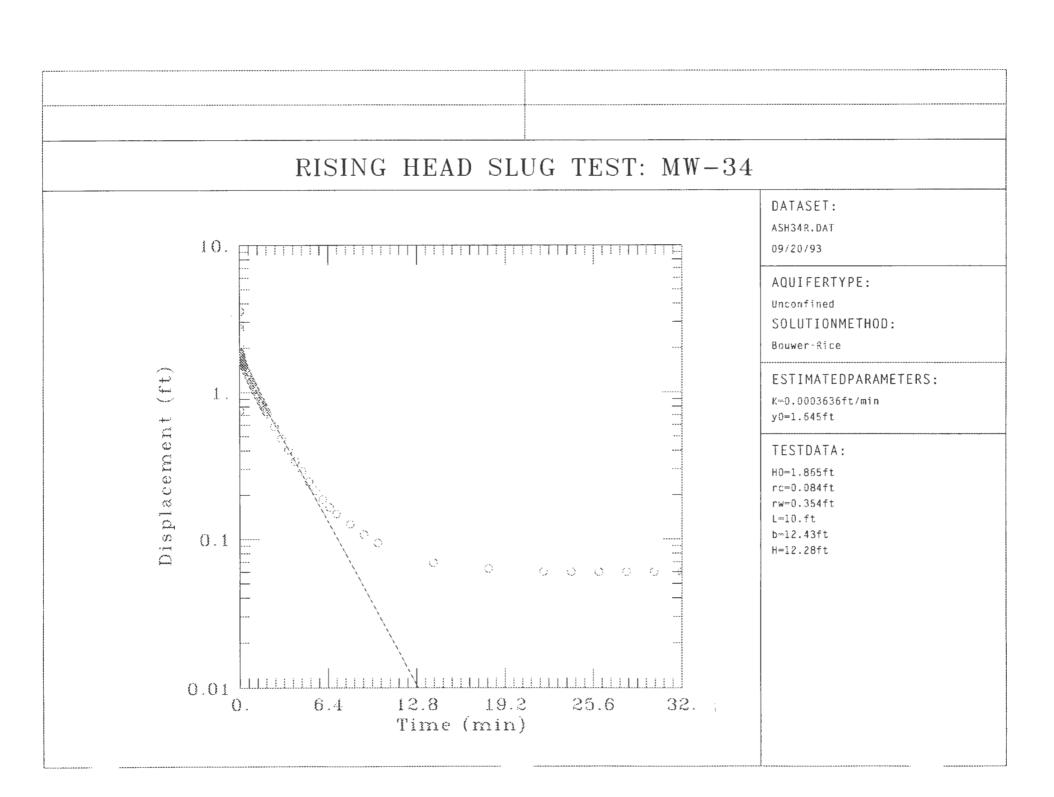
HYDRAULIC CONDUCTIVITY RESULTS

- SLUG TESTING
- PACKER TESTING

SENECA ASE LANDFILL DRAFT RI REPORT

SLUG TESTING

October 20, 1993



SE1000C ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-34 TEST TYPE: RISING HEAD DTW (TOC): 3.92

UNIT #: 1		TEST#: 4
<u>SETUPS:</u> TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	01/28/92	NA
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333 0.4166 0.5 0.5833	Input 1 Relative Change (feet) -0.006 -1.53 -2.718 -2.62 -3.613 -3.531 -2.876 -2.061 -0.749 0.537 -1.735 -1.865 -1.84 -1.776 -1.775 -1.745 -1.713 -1.685 -1.659 -1.634 -1.612 -1.593 -1.577 -1.561 -1.545 -1.53 -1.517 -1.504 -1.492 -1.432 -1.372 -1.318	Water Level Change from Static (feet) 3.926 5.450 6.638 6.540 7.533 7.451 6.796 5.981 4.669 3.383 5.655 5.785 5.760 5.731 5.696 5.665 5.633 5.605 5.579 5.554 5.532 5.513 5.497 5.481 5.465 5.450 5.437 5.424 5.412 5.352 5.292 5.238
0.6666 0.75	-1.267 -1.22	5.187 5.140

ASH34R.WK1 PAGE 1 OF 2

0.8333	-1.176	5.096
0.9166	-1.131	5.051
1	-1.09	5.010
1.0833	-1.049	4.969
1.1666	-1.014	4.934
1.25	-0.976	4.896
1.3333	-0.942	4.862
1.4166	-0.91	4.830
1.5	-0.878	4.798
1.5833	-0.847	4.767
1.6666	-0.821	4.741
1.75	-0.793	4.713
1.8333	-0.765	4.685
1.9166	-0.739	4.659
2	-0.714	4.634
2.5	-0.584	4.504
3	-0.483	4.403
3.5	-0.404	4.324
4	-0.338	4.258
4.5	-0.29	4.210
5	-0.246	4.166
5.5	-0.214	4.134
6	-0.186	4.106
6.5	-0.164	4.084
7	-0.148	4.068
7.5	-0.135	4.055
8	-0.126	4.046
8.5	-0.116	4.036
9	-0.107	4.027
9.5	-0.101	4.021
10	-0.094	4.014
12	-0.079	3.999
14	-0.069	3.989
16	-0.063	3.983
18	-0.063	3.983
20	-0.06	3.980
22	-0.06	3.980
24	-0.06	3.980
26	-0.06	3.980
28	-0.06	3.980
30	-0.06	3.980
32	-0.06	3.980

ASH34R.WK1 PAGE 2 OF 2

RISING HEAD SLUG TEST: MW-35D DATASET: ASH35DR.DAT 09/20/93 AQUIFERTYPE: Unconfined SOLUTIONMETHOD: Bouwer-Rice ESTIMATEDPARAMETERS: K=1.3653E-05ft/min Displacement y0=1.82ft TESTDATA: H0=2.137ft rc=0.084ft rw=0.229ft L=25.ft b-374.4ft H=53.76ft 120. 150. 30. 60. 90. 0. Time (min)

SE1000C ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-35D TEST TYPE: RISING HEAD DTW (TOC): 2.88

UNIT #: 1		TEST#: 4
SETUPS: TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	01/28/92	09:25:14
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3166 0.3333 0.4166 0.5 0.5833	Input 1 Relative Change (feet) -0.834 0.041 1.002 -0.888 -0.945 -0.935 -0.363 -1.1 -0.698 -1.564 -1.024 -2.137 -1.862 -1.919 -1.862 -1.859 -1.859 -1.859 -1.852 -1.852 -1.852 -1.852 -1.852 -1.849 -1.846 -1.846 -1.846 -1.843 -1.846 -1.836 -1.836 -1.836 -1.836	Water Level Change from Static (feet) 3.714 2.839 1.878 3.768 3.825 3.815 3.243 3.980 3.578 4.444 3.904 5.017 4.742 4.799 4.786 4.739 4.745 4.739 4.742 4.732 4.732 4.729 4.726 4.726 4.726 4.723 4.720 4.716 4.710 4.704 4.694
0.6666 0.75	-1.811 -1.805	4.691 4.685

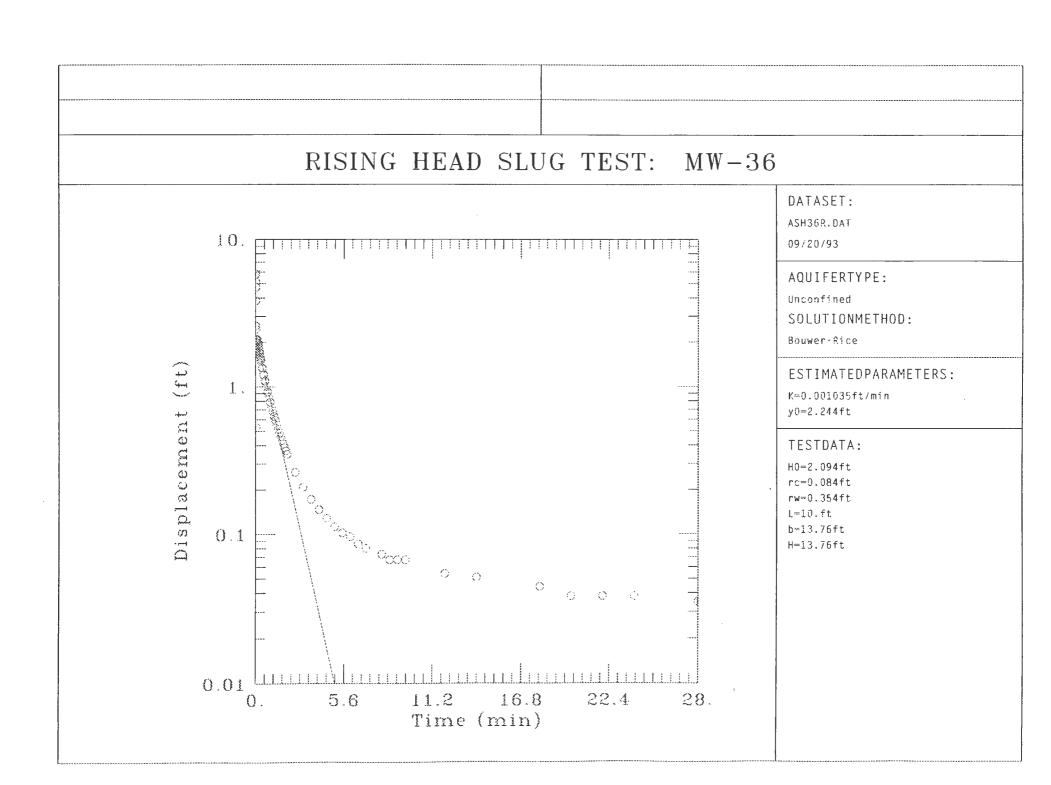
ASH35DR.WK1 PAGE 1 OF 3

0.8333	-1.798	4.678
0.9166	-1.792	4.672
1	-1.789	4.669
1.0833	-1.783	4.663
1.1666	-1.776	4.656
1.25	-1.773	4.653
1.3333	-1.767	4.647
1.4166	-1.764	4.644
1.5	-1.757	4.637
1.5833	-1.754	4.634
1.6666	1.748	4.628
1.75 1.8333	-1.745 -1.742	4.625 4.622
1.9166	-1.732	4.612
2	-1.732	4.612
2.5	-1.7	4.580
3	-1.675	4.555
3.5	-1.653	4.533
4	-1.634	4.514
4.5	-1.609	4.489
5	-1.59	4.470
5.5	-1.568	4.448
6	-1.542	4.422
6.5	-1.523	4.403
7	-1.504	4.384
7.5	-1.485	4.365
8	-1.463	4.343
8.5	-1. 444	4.324
9	-1.425	4.305
9.5	-1.41	4.290
10	-1.391	4.271
12 14	1.321 1.255	4.201 4.135
16	-1.255 -1.195	4.075
18	-1.135	4.015
20	-1.081	3.961
22	-1.03	3.910
24	-0.98	3.860
26	-0.932	3.812
28	-0.891	3.771
30	-0.853	3.733
32	-0.812	3.692
34	-0.78	3.660
36	-0.746	3.626
38	-0.714	3.594
40	-0.686	3.566
42	-0.657	3.537
44	-0.632	3.512
46	-0.603 -0.581	3.483
48 50	-0.559	3.461 3.4 3 9
52	-0.537	3.417
52 54	-0.518	3.398
56	-0.499	3.379
58	-0.48	3.360
60	-0.464	3.344
62	-0.448	3.328
64	-0.433	3.313

ASH35DR.WK1 PAGE 2 OF 3

66	-0.42	3.300
68	-0.404	3.284
70	-0.392	3.272
72	-0.379	3.259
74	-0.369	3.249
76	-0.357	3.237
78	-0.347	3.227
80	-0.344	3.224
82	-0.328	3.208
84	-0.319	3.199
86	-0.309	3.189
88	-0.303	3.183
90	-0.297	3.177
92	-0.29	3.170
94	-0.284	3.164
96	-0.275	3.155
98	-0.268	3.148
100	-0.262	3.142
110	-0.23	3.110
120	-0.208	3.088
130	-0.189	3.069
140	-0.17	3.050
150	-0.161	3.041

ASH35DR.WK1 PAGE 3 OF 3



SE1000C ENVIRONMENTAL DATA LOGGER

MONITORING WELL: MW-36 TEST TYPE: RISING HEAD DTW (TOC): 2.82

TEST#: 5

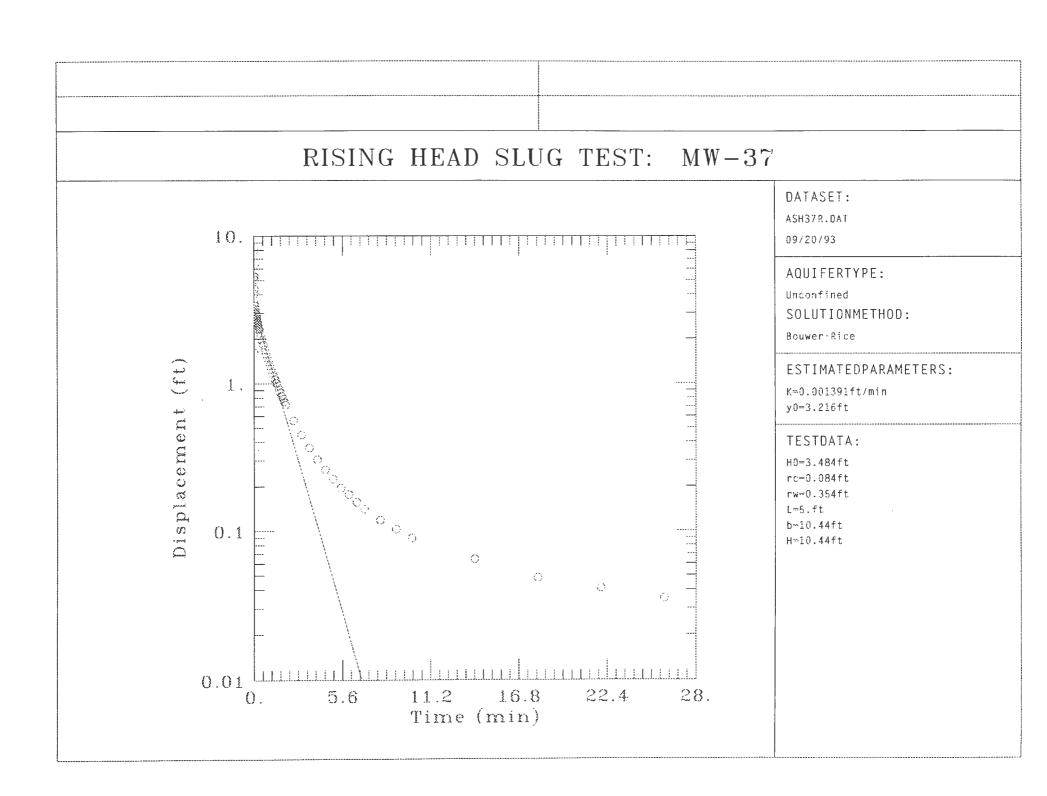
UNIT #: 1

SETUPS: INPUT# LEVEL F MODE SURFACE 0000 REFERENCE 0.0000 0.0000 LINEARITY 0.0000 10.01 SCALE FACTOR 10.01 -0.03 DELAY (mSec) 50 Water Level Change from Elapsed time (min) Change (feet) Change from 0 - 1.79 4.610 0.0033 -2.594 5.414 0.0066 -3.843 6.663 0.01 -5.179 7.999 0.0133 -5.784 8.604 0.0166 -5.855 8.675 0.02 -6.089 8.909 0.0233 -4.737 7.557 0.0266 -2.456 5.276 0.03 -0.531 3.351 0.0333 -1.742 4.562 0.05 -2.056 4.876 0.0666 -2.085 4.905 0.0833 -2.094 4.914 0.1 -2.081 4.901 0.1166 -2.056 4.876 0.0833 -2.094 4.914 0.15	UNII #. I		1501#: 5
LINEARITY SCALE FACTOR OFFSET DELAY (mSec) STEP 0 O1/28/92 O8:15:34 Input 1 Relative Change (min) (feet) (feet) (feet) 0 -1.79 4.610 0.0033 -2.594 5.414 0.0066 -3.843 6.663 0.01 -5.179 7.999 0.0133 -5.784 8.604 0.0166 -5.855 8.675 0.02 -6.089 8.909 0.0233 -4.737 7.557 0.0266 -2.456 5.276 0.03 -0.531 3.351 0.0333 -1.742 4.562 0.05 -2.056 4.876 0.0666 -2.085 4.905 0.0833 -2.094 4.914 0.1 -2.081 4.901 0.1166 -2.056 4.876 0.1333 -2.021 4.841 0.15 -1.979 4.799 0.1666 -1.931 4.751 0.1833 -1.883 4.703 0.2 -1.835 4.655 0.2166 -1.79 4.610 0.2333 -1.739 4.559 0.25 -1.694 4.514 0.2666 -1.652 4.472 0.2833 -1.607 4.427 0.3 -1.569 4.389 0.3166 -1.531 4.351 0.3333 -1.955 3.915 0.4166 -1.335 4.155 0.5 -1.204 4.024 0.5833 -1.095 3.915 0.6666 -1.002 3.822	TYPE MODE		LEVEL F SURFACE
Input 1 Relative Change from Change Static (min) (feet) (feet) (feet) 0 -1.79 4.610 0.0033 -2.594 5.414 0.0066 -3.843 6.663 0.01 -5.179 7.999 0.0133 -5.784 8.604 0.0166 -5.855 8.675 0.02 -6.089 8.909 0.0233 -4.737 7.557 0.0266 -2.456 5.276 0.03 -0.531 3.351 0.0333 -1.742 4.562 0.05 -2.056 4.876 0.0666 -2.085 4.905 0.0833 -2.094 4.914 0.1 -2.081 4.901 0.1166 -2.056 4.876 0.1333 -2.021 4.841 0.15 -1.979 4.799 0.1666 -1.931 4.751 0.1833 -1.883 4.703 0.2 -1.835 4.655 0.2166 -1.79 4.610 0.2333 -1.7739 4.559 0.25 -1.694 4.514 0.2666 -1.652 4.472 0.2833 -1.607 4.427 0.3 -1.569 4.389 0.3166 -1.531 4.351 0.3333 -1.495 4.315 0.4166 -1.335 4.155 0.5 -1.204 4.024 0.5833 -1.095 3.915 0.6666 -1.002 3.822	LINEARITY SCALE FACTOR OFFSET		0.0000 10.01 -0.03
Elapsed time (min) (feet) (feet) (feet) (feet) (feet) (feet) (0.0033	STEP 0	01/28/92	08:15:34
	(min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3166 0.3333 0.4166 0.5 0.5833	Relative Change (feet) -1.79 -2.594 -3.843 -5.179 -5.784 -5.855 -6.089 -4.737 -2.456 -0.531 -1.742 -2.056 -2.085 -2.094 -2.081 -2.056 -2.021 -1.979 -1.883 -1.835 -1.79 -1.694 -1.652 -1.607 -1.569 -1.531 -1.495 -1.335 -1.204 -1.095	Change from Static (feet) 4.610 5.414 6.663 7.999 8.604 8.675 8.909 7.557 5.276 3.351 4.562 4.876 4.905 4.914 4.901 4.876 4.841 4.799 4.751 4.703 4.655 4.610 4.559 4.514 4.472 4.427 4.389 4.351 4.315 4.155 4.024 3.915

ASH36R.WK1 PAGE 1 OF 2

0.8333	-0.852	3.672
0.9166	-0.787	3.607
1	-0.727	3.547
1.0833	-0.682	3.502
1.1666	-0.63	3.450
1.25	-0.592	3.412
1.3333	-0.55	3.370
1.4166	-0.515	3.335
1.5	-0.486	3.306
1.5833	-0.458	3.278
1.6666	-0.432	3.252
1.75	-0.409	3.229
1.8333	-0.387	3.207
1.9166	-0.368	3.188
2	-0.349	3.169
2.5	-0.262	3.082
3	-0.208	3.028
3.5	-0.172	2.992
4	-0.147	2.967
4.5	-0.128	2.948
5	-0.112	2.932
5.5	-0.102	2.922
6	-0.096	2.916
6.5	-0.086	2.906
7	-0.08	2.900
7.5	-0.076	2.896
8	-0.073	2.893
8.5	-0.067	2.887
9	-0.067	2.887
9.5	-0.067	2.887
10	-0.06	2.880
12	-0.054	2.874
14	-0.051	2.871
16	-0.048	2.868
18	-0.044	2.864
20	-0.038	2.858
22	-0.038	2.858
24	-0.038	2.858
26	-0.035	2.855
28	-0.035	2.855

ASH36R.WK1 PAGE 2 OF 2



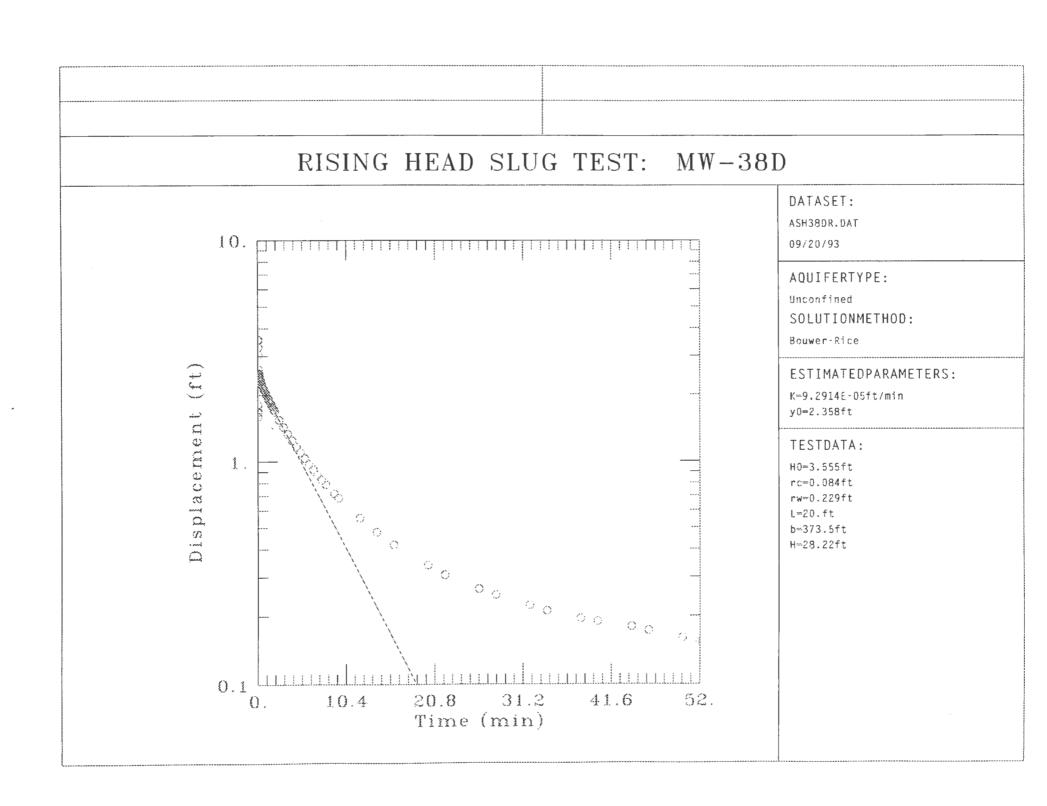
MONITORING WELL: MW-37 TEST TYPE: RISING HEAD DTW (TOC): 3.18

UNIT #: 1		TEST#: 3
SETUPS: TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	01/28/92	06:42:23
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.5	Input 1 Relative Change (feet) 0.003 -1.614 -0.355 1.54 -4.058 -8.042 -5.313 -4.375 -6.37 -5.067 -3.484 -3.372 -3.183 -3.158 -3.033 -2.962 -2.895 -2.895 -2.894 -2.777 -2.719 -2.664 -2.613 -2.562 -2.514 -2.469 -2.424 -2.383 -2.341 -2.299 -2.117 -1.96	Water Level Change from Static (feet) 3.177 4.794 3.535 1.640 7.238 11.222 8.493 7.555 9.550 8.247 6.664 6.552 6.363 6.338 6.213 6.142 6.075 6.014 5.957 5.899 5.844 5.793 5.742 5.694 5.649 5.604 5.563 5.521 5.479 5.297 5.140
0.5833 0.6666 0.75	-1.822 -1.7 -1.591	5.002 4.880 4.771

ASH37R.WK1 PAGE 1 OF 2

0.8333	-1.495	4.675
0.9166	1.406	4.586
1	-1.322	4.502
1.0833	-1.249	4.429
1.1666	-1.181	4.361
1.25	-1.117	4.297
1.3333	-1.06	4.240
1.4166	-1.005	4.185
1.5	-0.957	4.137
1.5833	-0.909	4.089
1.6666	-0.868	4.048
1.75	-0.826	4.006
1.8333	-0.791	3.971
1.9166	-0.752	3.932
2	-0.72	3.900
2.5	-0.56	3.740
3	-0.448	3.628
3.5	-0.365	3.545
4	-0.304	3.484
4.5	-0.259	3.439
5	-0.224	3.404
5.5	-0.195	3.375
6	-0.176	3.356
6.5	-0.156	3.336
7	-0.14	3.320
7.5	-0.131	3.311
8	-0.118	3.298
8.5	-0.112	3.292
9	-0.102	3.282
9.5	-0.096	3.276
10	-0.089	3.269
12	-0.073	3.253
14	-0.064	3.244
16	-0.054	3.234
18	-0.048	3.228
20	-0.044	3.224
22	-0.041	3.221
24	-0.038	3.218
26	-0.035	3.215
28	-0.032	3.212
-		

ASH37R.WK1 PAGE 2 OF 2



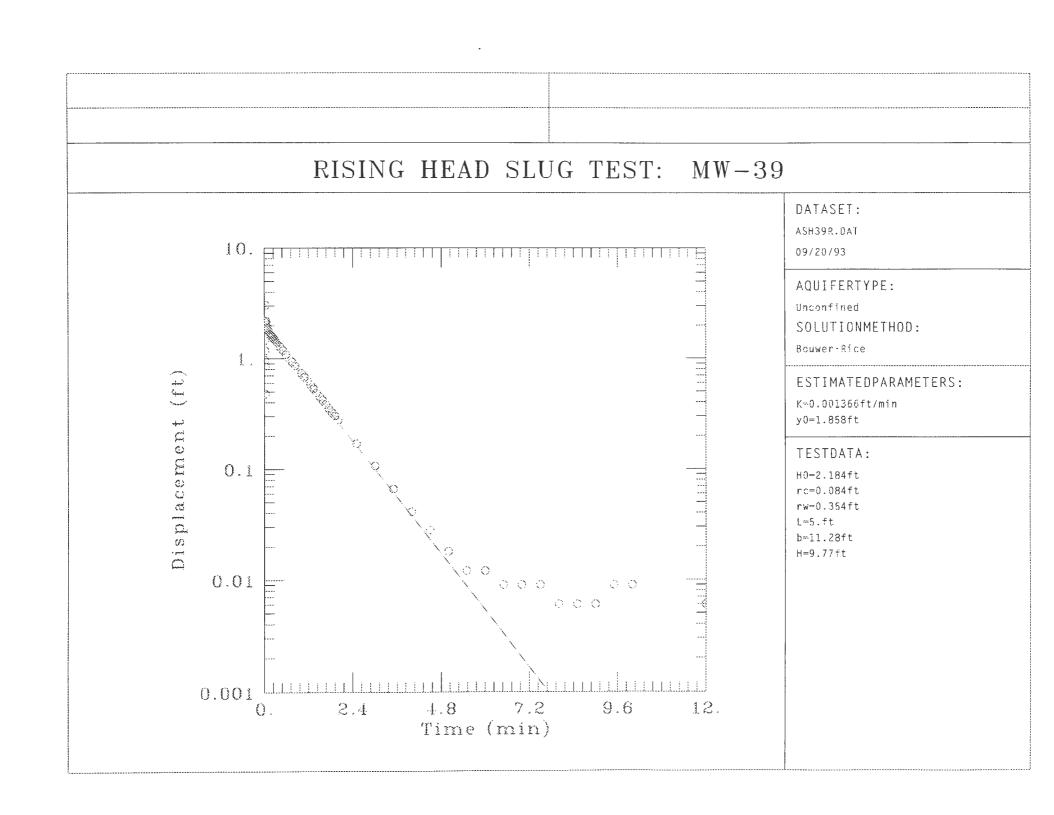
MONITORING WELL: MW-38D TEST TYPE: RISING HEAD DTW (TOC): 4.02

UNIT #: 1		TEST#: 5
SETUPS: TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	01/28/92	05:45:15
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166	Input 1 Relative Change (feet) -1.185 -1.598 -1.678 -1.803 -1.688 -2.203 -2.514 -3.049 -3.289 -3.555 -3.507 -3.308 -2.616 -2.411 -2.424 -2.479 -2.498 -2.482 -2.443 -2.418 -2.399 -2.386 -2.373 -2.37 -2.309 -2.312 -2.312 -2.306 -2.251	Water Level Change from Static (feet) 5.205 5.618 5.698 5.823 5.708 6.223 6.534 7.069 7.309 7.575 7.527 7.328 6.636 6.431 6.444 6.499 6.518 6.502 6.463 6.438 6.419 6.406 6.393 6.390 6.367 6.329 6.332 6.326 6.271
0.5 0.5833 0.6666 0.75	-2.206 -2.168 -2.13 -2.094	6.226 6.188 6.150 6.114

ASH38DR.WK1 PAGE 1 OF 2

0.8333	-2.062	6.082
0.9166	-2.03	6.050
1	-1.998	6.018
1.0833	-1.966	5.986
1.1666	-1.937	5.957
1.25	-1.909	5.929
1.3333	-1.883	5.903
1.4166	-1.854	5.874
1.5	-1.828	5.848
1.5833	-1.803	5.823
1.6666	-1.777	5.797
1.75	-1.752	5.772
1.8333	-1.729	5.749
1.9166	-1.707	5.727
2	-1.681	5.701
2.5	-1.543	5.563
3	-1.431	5.451
3.5	-1.332	5.352
4	-1.246	5.266
4.5	-1.165	5.185
5	-1.098	5.118
5.5	-1.034	5.054
6	-0.973	4.993
6.5	-0.922	4.942
7	-0.871	4.891
7.5	-0.826	4.846
8	-0.787	4.807
8.5	-0.749	4.769
9	-0.714	4.734
9.5	-0.682	4.702
10	-0.653	4.673
12	-0.554	4.574
14	-0.477	4.497
16	-0.419	4.439
18	-0.374	4.394
20	-0.339	4.359
22	-0.307	4.327
24	-0.281	4.327
26	-0.265	4.285
28 30	0.249 0.237	4.269
32	-0.237 -0.224	4.257 4.244
34	-0.211	4.244
36 30	-0.201	4.221 4.215
38	-0.195 -0.189	
40 42		4.209
42	-0.182	4.202
44	-0.179	4.199
46 40	-0.172	4.192
48	-0.166	4.186
50 50	-0.16	4.180
52	-0.153	4.173

ASH38DR.WK1 PAGE 2 OF 2



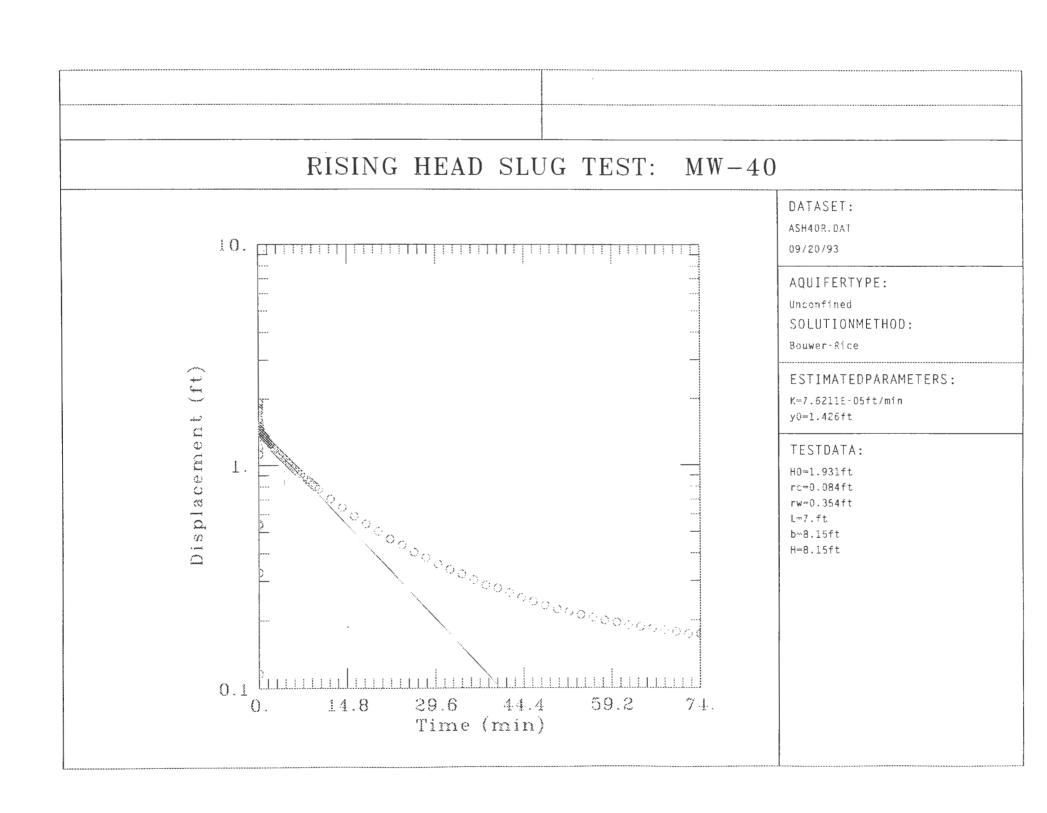
MONITORING WELL: MW-39 TEST TYPE: RISING HEAD DTW (TOC): 2.12

UNIT #: 1		TEST#: 6
SETUPS: TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	01/28/92	06:50:51
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333	Input 1 Relative Change (feet) 1.466 2.339 -0.97 -1.454 -1.182 -2.317 -2.206 -0.477 -0.85 -3.038 -2.184 -2.146 -1.915 -1.83 -1.789 -1.748 -1.713 -1.678 -1.678 -1.647 -1.618 -1.587 -1.561 -1.533 -1.587 -1.561 -1.533 -1.508 -1.482 -1.46 -1.435 -1.413 -1.391 -1.28 -1.185	Water Level Change from Static (feet) 0.654 -0.219 3.090 3.574 3.302 4.437 4.326 2.597 2.970 5.158 4.304 4.266 4.035 3.950 3.909 3.868 3.833 3.798 3.767 3.738 3.707 3.681 3.653 3.628 3.602 3.580 3.555 3.533 3.511 3.400 3.305
0.5833 0.6666 0.75	-1.093 -1.008 -0.932	3.213 3.128 3.052

ASH39R.WK1 PAGE 1 OF 2

0.8333	-0.863	2.983
0.9166	-0.796	2.916
1	-0.736	2.856
1.0833	-0.679	2.799
1.1666	-0.625	2.745
1.25	-0.578	2.698
1.3333	-0.534	2.654
1.4166	-0.49	2.610
1.5	-0.452	2.572
1.5833	-0.417	2.537
1.6666	-0.385	2.505
1.75	-0.354	2.474
1.8333	-0.325	2.445
1.9166	-0.303	2.423
2	-0.278	2.398
2.5	-0.17	2.290
3	-0.107	2.227
3.5	-0.066	2.186
4	-0.041	2.161
4.5	-0.028	2.148
5	-0.018	2.138
5.5	-0.012	2.132
6	-0.012	2.132
6.5	-0.009	2.129
7	-0.009	2.129
7.5	-0.009	2.129
8	-0.006	2.126
8.5	-0.006	2.126
9	-0.006	2.126
9.5	-0.009	2.129
10	-0.009	2.129
12	-0.006	2.126

ASH39R.WK1 PAGE 2 OF 2



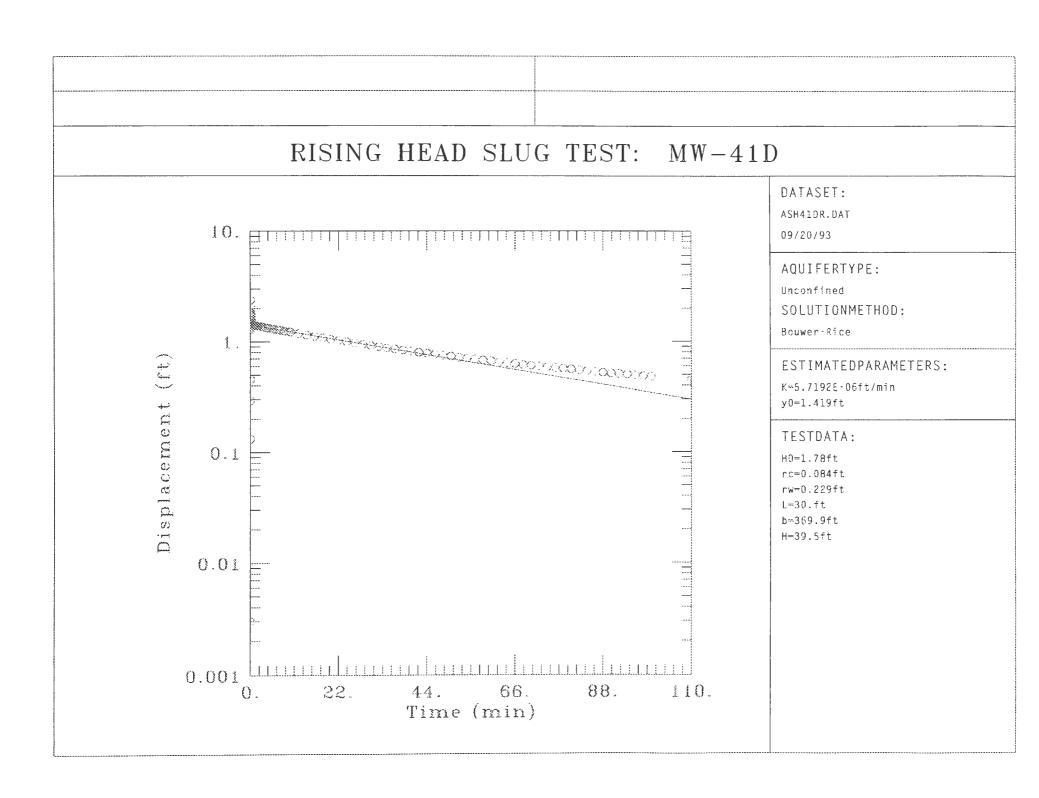
MONITORING WELL: MW-40 TEST TYPE: RISING HEAD DTW (TOC): 4.15

UNIT #: 1		TEST#: 1
SETUPS: TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	02/04/92	02:33:10
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333 0.4166	Input 1 Relative Change (feet) 0.003 -0.116 -0.543 -0.328 0.069 0.24 -0.534 -1.21 -1.821 -1.624 -1.122 -1.773 -1.931 -1.574 -1.346 -1.4 -1.504 -1.511 -1.466 -1.447 -1.457 -1.457 -1.457 -1.457 -1.457 -1.438 -1.438 -1.438 -1.438 -1.438 -1.438 -1.438 -1.441 -1.435 -1.422 -1.41	Water Level Change from Static (feet) 4.147 4.266 4.693 4.478 4.081 3.910 4.684 5.360 5.971 5.774 5.272 5.923 6.081 5.724 5.496 5.550 5.654 5.661 5.616 5.597 5.601 5.607 5.607 5.588 5.588 5.588 5.588 5.588 5.588 5.588 5.588 5.585 5.572 5.560
0.5833 0.6666 0.75	-1.397 -1.387 -1.375	5.547 5.537 5.525

ASH40R.WK1 PAGE 1 OF 2

0.8333 0.9166 1 1.0833	-1.365 -1.353 -1.346 -1.337	5.515 5.503 5.496
1.1666	-1.327	5.4 8 7 5.477
1.25	-1.318	5.468
1.3333	-1.308	5.458
1.4166	1.299	5.449
1.5	1.289	5.4 3 9
1.5833	-1.283	5.433
1.6666	-1.277	5.427
1.75	-1.267	5.417
1.8333	1.258	5.408
1.9166	1.251	5.401
2	1.245	5.395
2.5	1.198	5.348
3 3.5	-1.16	5.310
4	-1.122 -1.087	5.272 5.237
4.5	1.059	5.209
5	1.024	5.174
5.5	-0.992	5.142
6	-0.961	5.111
6.5	-0.935	5.085
7	-0.91	5.060
7.5	-0.885	5.035
8	-0.863	5.013
8.5	-0.84	4.990
9	-0.818	4.968
9.5	-0.799	4.949
10	-0.78	4.9 3 0
12	-0.704	4.854
14	-0.644	4.794
16	-0.588	4.738
18	-0.543	4.693
20	-0.502	4.652
22	-0.464	4.614
24	-0.436	4.586
26	-0.404	4.554
28	-0.382	4.532
30	-0.357	4.507
32	-0.338	4.488
34	-0.322	4.472
36	-0.303	4.453
38	-0.287	4.437
40	-0.278	4.428
42	-0.265	4.415
44	-0.252	4.402
46	-0.243	4.393
48	-0.233	4.383
50	-0.224	4.374
52	-0.218	4.368
54	-0.211	4.361
56	-0.205	4.355
58	-0.199	4.349
60	0.195	4.345
62	0.189	4.339
64	-0.186	4.336
66	-0.183	4.333
68	-0.18	4.330
70	-0.177	4.327
72	-0.173	4.323
74	-0.173	4.323

ASH40R.WK1 PAGE 2 OF 2



MONITORING WELL: MW-41D TEST TYPE: RISING HEAD DTW (TOC): 7.52

UNIT #: 1		TEST#: 1
SETUPS: TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	01/28/92	04:20:13
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.5 0.5833	Input 1 Relative Change (feet) -0.464 -0.461 0.607 -0.132 -0.003 -0.445 -0.294 -1.577 -2.371 -1.836 -1.596 -1.353 -2.083 -1.514 -1.726 -1.688 -1.466 -1.78 -1.783 -1.289 -1.729 -1.321 -1.644 -1.378 -1.558 -1.432 -1.485 -1.432 -1.435 -1.438	Water Level Change from Static (feet) 7.984 7.981 6.913 7.652 7.523 7.965 7.814 9.097 9.891 9.356 9.116 8.873 9.603 9.034 9.246 9.208 8.986 9.300 8.847 9.303 8.809 9.249 8.841 9.164 8.898 9.078 8.952 9.005 8.993 8.917 8.955 8.958
0.6666 0.75	-1.419 -1.413	8.939 8.933

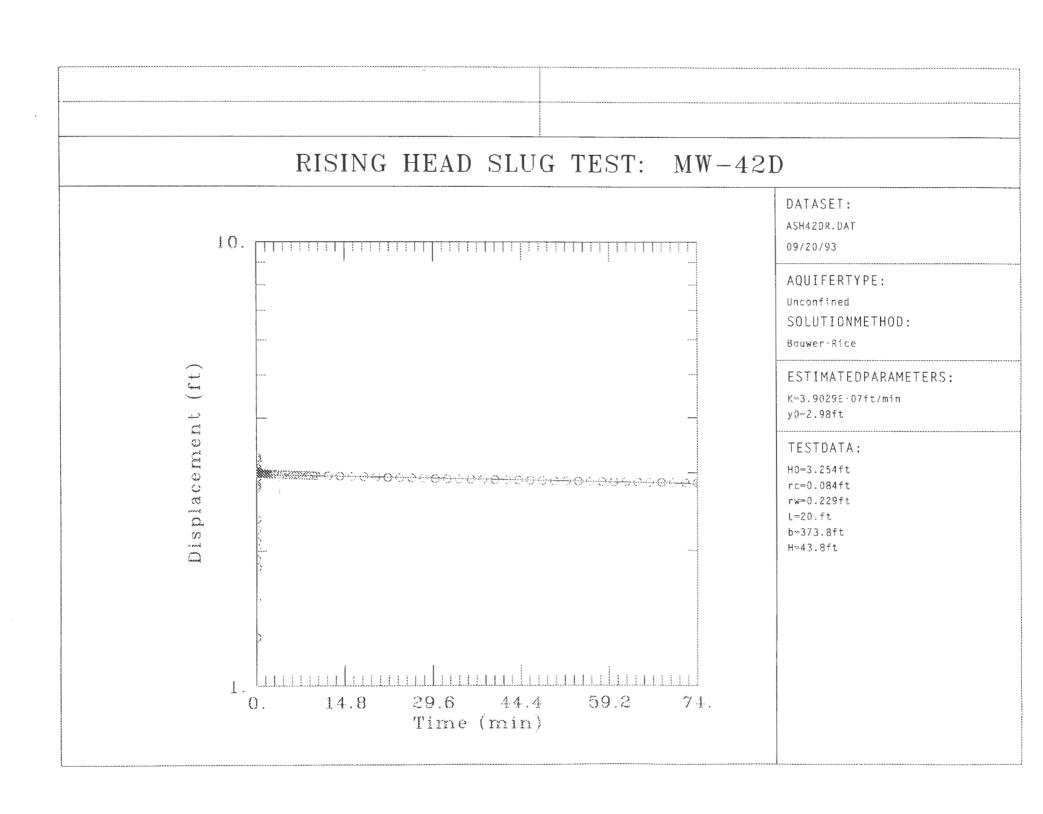
ASH41DR.WK1 PAGE 1 OF 3

0.8333	-1.413	8.933
0.9166	-1.41	8.930
1	-1.403	8.923
1.0833	-1.403	8.923
1.1666	-1.4	8.920
1.25	-1.397	8.917
1.3333	-1.397	8.917
1.4166	-1.394	8.914
1.5	-1.391	8.911
1.5833	-1.387	8.907
1.6666	-1.387	8.907
1.75	-1.384	8.904
1.8333	-1.384	8.904
1.9166	-1.381	8.901
2	-1.378	8.898
2.5	-1.369	8.889
2.3	-1.356	8.876
3.5	-1.343	8.863
3.5 4		8.854
-	-1.334 -1.321	8.841
4.5		
5	-1.315	8.835
5.5	-1.302	8.822
6	-1.293	8.813
6.5	-1.283	8.803
7	-1.274	8.794
7.5	-1.264	8.784
8	-1.255	8.775
8.5	-1.245	8.765
9	-1.236	8.756
9.5	-1.226	8.746
10	-1.22	8.740
12	-1.182	8.702
14	-1.147	8.667
16	-1.116	8.636
18	-1.084	8.604
20	-1.052	8.572
22	-1.027	8.547
24	-0.999	8.519
26	-0.973	8.493
28	-0.948	8.468
30	-0.923	8.443
32	-0.901	8.421
34	-0.878	8.398
36	-0.859	8.379
38	-0.837	8.357
40	-0.818	8.338
42	-0.799	8.319
44	-0.784	8.304
46	-0.765	8.285
48	-0.752	8.272
50	-0.736	8.256
52	-0.717	8.237
54	-0.705	8.225
56	-0.692	8.212
58	-0.679	8.199
60	-0.667	8.187
62	-0.651	8.171
64	-0.641	8.161
66	-0.629	8.149
68	-0.616	8.136

ASH41DR.WK1 PAGE 2 OF 3

-0.607	8.127
-0.597	8.117
-0.588	8.108
-0.578	8.098
-0.569	8.089
-0.562	8.082
-0.55	8.070
-0.54	8.060
-0.531	8.051
-0.521	8.041
-0.515	8.035
-0.509	8.029
-0.502	8.022
-0.493	8.013
-0.486	8.006
-0.48	8.000
-0.448	7.968
	-0.597 -0.588 -0.578 -0.569 -0.562 -0.55 -0.54 -0.531 -0.521 -0.515 -0.509 -0.502 -0.493 -0.486 -0.48

ASH41DR.WK1 PAGE 3 OF 3



MONITORING WELL: MW-42D TEST TYPE: RISING HEAD DTW (TOC): 3.58

UNIT #: 1		TEST#: 1
SETUPS: TYPE MODE I.D.		INPUT# LEVEL F SURFACE 0000
REFERENCE LINEARITY SCALE FACTOR OFFSET DELAY (mSec)		0.0000 0.0000 10.01 -0.03 50
STEP 0	01/28/92	04:32:04
Elapsed time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333 0.4166 0.5 0.5833 0.6666	Input 1 Relative Change (feet) 0.112 -1.278 -1.915 -1.55 -2.107 -2.232 -2.36 -2.107 -2.815 -2.78 -2.03 -3.254 -1.835 -2.921 -2.94 -3.212 -2.988 -3.074 -3.023 -3.017 -3.033 -3.001 -3.026 -2.998 -3.02 -3.001 -3.001 -3.001 -3.001 -3.001 -2.998 -2.998	Water Level Change from Static (feet) 3.468 4.858 5.495 5.130 5.687 5.812 5.940 5.687 6.395 6.360 5.610 6.834 5.415 6.501 6.520 6.792 6.568 6.654 6.603 6.597 6.613 6.581 6.606 6.578 6.600 6.581 6.590 6.581 6.590 6.581 6.590 6.581 6.578 6.578 6.578 6.578
0.75	-2.994 -2.994	6.574

ASH42DR.WK1 PAGE 1 OF 2

0.9166 -2.994 6.57 1 -2.991 6.57 1.0833 -2.991 6.57 1.1666 -2.991 6.57 1.25 -2.991 6.57 1.3333 -2.991 6.57 1.4166 -2.988 6.566 1.5 -2.988 6.566 1.5833 -2.988 6.566 1.75 -2.988 6.566 1.8333 -2.988 6.566 2.985 6.566 2.985 6.566 2.986 6.566 3 -2.982 6.566 3.5 -2.982 6.566 3.5 -2.978 6.556 4 -2.975 6.556 5 -2.972 6.556 5.5 -2.972 6.556 6 -2.969 6.549 6.5 -2.969 6.549			
0.9166 -2.994 6.57 1 -2.991 6.57 1.0833 -2.991 6.57 1.1666 -2.991 6.57 1.25 -2.991 6.57 1.3333 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.6666 -2.988 6.56 1.75 -2.988 6.56 1.8333 -2.988 6.56 2.985 6.56 6.56 2.985 6.56 6.56 3 -2.985 6.56 3.5 -2.982 6.56 3.5 -2.972 6.55 4 -2.975 6.55 5 -2.972 6.55 6.5 -2.972 6.54 7 -2.966 6.54 8 <td>0.8333</td> <td>-2.994</td> <td>6.574</td>	0.8333	-2.994	6.574
1 -2.991 6.57 1.0833 -2.991 6.57 1.1666 -2.991 6.57 1.25 -2.991 6.57 1.3333 -2.991 6.57 1.4166 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.6666 -2.988 6.56 1.75 -2.988 6.56 1.8333 -2.985 6.56 2.985 6.56 6.56 2.985 6.56 6.56 2.985 6.56 6.56 3.5 -2.985 6.56 4.5 -2.975 6.55 4.5 -2.972 6.55 5.5 -2.972 6.55 6.5 -2.96<	0.9166		6.574
1.1666 -2.991 6.57 1.25 -2.991 6.57 1.3333 -2.991 6.57 1.4166 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.5 -2.988 6.56 1.666 -2.985 6.56 1.8333 -2.988 6.56 1.8333 -2.988 6.56 1.89166 -2.985 6.56 2 -2.985 6.56 3 -2.982 6.56 3 -2.982 6.56 4 -2.975 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 7 -2.966 6.54 7 -2.966 6.54 8 -2.966 6.54 8	1	-2.991	6.571
1.25 -2.991 6.57 1.3333 -2.991 6.57 1.4166 -2.988 6.56 1.5 -2.988 6.56 1.5833 -2.988 6.56 1.6666 -2.988 6.56 1.8333 -2.988 6.56 1.8333 -2.982 6.56 2 -2.985 6.56 2.5 -2.982 6.56 3 -2.982 6.56 3.5 -2.982 6.56 3.5 -2.982 6.56 4 -2.975 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7 -2.966 6.54 8 -2.962 6.54 8 -2.962 6.54 9 -2.962 6.54 10 -2.959 6.53 12 -2.95	1.0833	-2.991	6.571
1.3333 -2.991 6.57 1.4166 -2.988 6.56 1.5 -2.988 6.56 1.5833 -2.988 6.56 1.75 -2.988 6.56 1.8333 -2.988 6.56 1.8333 -2.985 6.56 1.8333 -2.985 6.56 2 -2.985 6.56 2.5 -2.982 6.56 2.5 -2.982 6.56 2.5 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 8 -2.969 6.54 7 -2.966 6.54 8 -2.966 6.54 8 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.53 10 -2.9	1.1666	-2.991	6.571
1.3333 -2.991 6.57 1.4166 -2.988 6.56 1.5 -2.988 6.56 1.5833 -2.988 6.56 1.75 -2.988 6.56 1.8333 -2.988 6.56 1.8333 -2.985 6.56 1.8333 -2.985 6.56 2 -2.985 6.56 2.5 -2.982 6.56 2.5 -2.982 6.56 2.5 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 8 -2.969 6.54 7 -2.966 6.54 8 -2.966 6.54 8 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.53 10 -2.9	1.25	-2.991	6.571
1.4166 -2.988 6.56 1.5 -2.988 6.56 1.5833 -2.988 6.56 1.6666 -2.988 6.56 1.75 -2.988 6.56 1.8333 -2.988 6.56 1.9166 -2.985 6.56 2 -2.985 6.56 2.5 -2.982 6.56 3 -2.978 6.55 4 -2.975 6.56 3.5 -2.972 6.55 4 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7.5 -2.969 6.54 8.5 -2.966 6.54 8.5 -2.966 6.54 8.5 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 10 -2.955 6.53 12 -2.926 6.53 14 -2.	1.3333		6.571
1.5833 -2.988 6.56 1.6666 -2.988 6.56 1.75 -2.988 6.56 1.8333 -2.988 6.56 1.9166 -2.985 6.56 2 -2.982 6.56 2.5 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 8 -2.966 6.54 8 -2.966 6.54 8 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 <td< td=""><td>1.4166</td><td>-2.988</td><td>6.568</td></td<>	1.4166	-2.988	6.568
1.5833 -2.988 6.56 1.6666 -2.988 6.56 1.75 -2.988 6.56 1.8333 -2.988 6.56 1.9166 -2.985 6.56 2 -2.982 6.56 2.5 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 8 -2.966 6.54 8 -2.966 6.54 8 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 <td< td=""><td>1.5</td><td>-2.988</td><td>6.568</td></td<>	1.5	-2.988	6.568
1.75 -2.988 6.56 1.8333 -2.985 6.56 1.9166 -2.985 6.56 2 -2.982 6.56 2.5 -2.982 6.56 3 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7.5 -2.969 6.54 7.5 -2.966 6.54 8.5 -2.966 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.926 6.53 14 -2.927 6.53 15 -2.92			6.568
1.75 -2.988 6.56 1.8333 -2.985 6.56 1.9166 -2.985 6.56 2 -2.982 6.56 2.5 -2.982 6.56 3 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7.5 -2.969 6.54 7.5 -2.966 6.54 8.5 -2.966 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.962 6.54 8.7 -2.926 6.53 14 -2.927 6.53 15 -2.92	1.6666	-2.988	6.568
1.9166 -2.985 6.56 2 -2.985 6.56 2.5 -2.982 6.56 3 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7 -2.966 6.54 8 -2.966 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.5 -2.962 6.54 8.6 -2.962 6.54 8.7 -2.962 6.54 8.8 -2.962 6.54 8.7 -2.956 6.53 12 -2.956 6.53 14 -2.92	1.75	-2.988	6.568
2 -2.985 6.56 2.5 -2.982 6.56 3 -2.978 6.55 4 -2.975 6.55 4.5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7 -2.966 6.54 8 -2.966 6.54 8 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.53 12 -2.95 6.53 14 -2.95 6.53	1.8333	-2.988	6.568
2.5 -2.982 6.566 3 -2.978 6.565 4 -2.975 6.555 4.5 -2.972 6.555 5 -2.972 6.555 6 -2.969 6.544 6.5 -2.969 6.544 7 -2.966 6.544 7 -2.966 6.544 8 -2.962 6.543 8 -2.962 6.543 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.544 9 -2.962 6.533 12 -2.956 6.533 14 -2.92 6.533 15 -2.924	1.9166	-2.985	6.565
3 -2.982 6.566 3.5 -2.978 6.555 4 -2.975 6.555 5 -2.972 6.555 5 -2.972 6.555 6 -2.969 6.545 6 -2.969 6.547 7 -2.966 6.547 7 -2.966 6.547 8 -2.962 6.547 8 -2.962 6.547 9 -2.962 6.547 9 -2.962 6.547 9 -2.962 6.547 9 -2.962 6.547 9 -2.962 6.547 9 -2.962 6.547 10 -2.959 6.530 12 -2.962 6.531 14 -2.95 6.531 15 -2.946 6.520 18 -2.943 6.521 18 -2.943 6.521 18 -2.943 6.521 20 -2.937 6.511 22 -2.93	2	-2.985	6.565
3 -2.982 6.56 3.5 -2.978 6.55 4 -2.975 6.55 4.5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 6 -2.969 6.54 7 -2.966 6.54 7 -2.966 6.54 8 -2.962 6.54 8 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.53 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 15 6.53 6.53 16 -2.94 6.52 18 -2.93 6.51	2.5	-2.982	6.562
3.5 -2.978 6.55 4 -2.975 6.55 4.5 -2.972 6.55 5 -2.972 6.55 6 -2.969 6.54 6.5 -2.969 6.54 7 -2.966 6.54 7.5 -2.966 6.54 8 -2.962 6.54 8.5 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.53 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 15 -2.946 6.52 16 -2.946 6.52 18 -2.937 6.51 20 -2.937 6.51		-2.982	6.562
4.5 -2.975 6.55 5 -2.972 6.55 5.5 -2.972 6.55 6 -2.969 6.544 7 -2.966 6.544 7.5 -2.966 6.544 8 -2.962 6.542 9 -2.962 6.542 9.5 -2.962 6.542 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 16 -2.946 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.943 6.52 18 -2.927 6.50 2 -2.93 6.51 2 -2.924 6.50 28 -2.921 <td< td=""><td>3.5</td><td>-2.978</td><td>6.558</td></td<>	3.5	-2.978	6.558
5 -2.972 6.55 5.5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7.5 -2.966 6.544 8.5 -2.962 6.54 8.5 -2.962 6.54 9 -2.962 6.54 9.5 -2.962 6.53 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 16 -2.946 6.52 18 -2.943 6.52 18 -2.943 6.52 20 -2.937 6.51 22 -2.93 6.51 24 -2.927 6.50 28 -2.918 6.49 30 -2.911 6.49 32 -2.924 6.50 28 -2.918 6.49 34 -2.905 6.48 34 -2.901 6.48 38 -2.898 6.47 42 -2.895	4	-2.975	6.555
5 -2.972 6.55 5.5 -2.972 6.55 6 -2.969 6.54 7 -2.966 6.54 7.5 -2.966 6.544 8.5 -2.962 6.54 8.5 -2.962 6.54 9 -2.962 6.54 9.5 -2.962 6.53 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 16 -2.946 6.52 18 -2.943 6.52 18 -2.943 6.52 20 -2.937 6.51 22 -2.93 6.51 24 -2.927 6.50 28 -2.918 6.49 30 -2.911 6.49 32 -2.924 6.50 28 -2.918 6.49 34 -2.905 6.48 34 -2.901 6.48 38 -2.898 6.47 42 -2.895	4.5	-2.975	6.555
5.5 -2.972 6.55 6 -2.969 6.54 6.5 -2.969 6.54 7 -2.966 6.54 8 -2.966 6.54 8.5 -2.962 6.54 9 -2.962 6.54 9 -2.962 6.54 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 16 -2.946 6.52 18 -2.943 6.52 18 -2.943 6.52 20 -2.937 6.51 22 -2.93 6.51 24 -2.927 6.50 28 -2.918 6.49 30 -2.911 6.49 32 -2.924 6.50 28 -2.918 6.49 34 -2.905 6.48 34 -2.901 6.48 38 -2.898 6.47 42 -2.892 6.47 42 -2.895 6.46		-2.972	6.552
6			6.552
6.5 -2.969 6.544 7 -2.966 6.544 7.5 -2.966 6.544 8 -2.962 6.545 8.5 -2.962 6.545 9 -2.962 6.545 9 -2.962 6.547 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 16 -2.946 6.526 18 -2.943 6.52 20 -2.937 6.51 22 -2.93 6.510 24 -2.927 6.50 25 -2.924 6.50 28 -2.918 6.49 30 -2.911 6.49 32 -2.908 6.48 34 -2.905 6.48 34 -2.905 6.48 34 -2.892 6.47 42 -2.895 6.47 42 -2.895 6.47 42 -2.892 6.46 48 -2.885			6.549
7 -2.966 6.544 7.5 -2.966 6.544 8 -2.962 6.545 8.5 -2.962 6.545 9 -2.962 6.545 9 -2.962 6.547 10 -2.959 6.530 12 -2.956 6.530 14 -2.95 6.530 16 -2.946 6.520 18 -2.943 6.521 20 -2.937 6.511 22 -2.93 6.511 24 -2.927 6.50 28 -2.924 6.50 28 -2.918 6.491 30 -2.911 6.49 32 -2.908 6.481 34 -2.905 6.483 34 -2.901 6.48 38 -2.898 6.47 42 -2.892 6.47 42 -2.895 6.45 46 -2.885 6.46 48 -2.882 6.46 48 -2.873 <td>_</td> <td></td> <td>6.549</td>	_		6.549
7.5 -2.966 6.544 8 -2.962 6.545 9 -2.962 6.545 9 -2.962 6.545 10 -2.959 6.53 12 -2.956 6.53 14 -2.95 6.53 16 -2.946 6.52 18 -2.943 6.52 18 -2.943 6.52 20 -2.937 6.51 22 -2.93 6.51 24 -2.927 6.50 28 -2.918 6.49 30 -2.911 6.49 30 -2.911 6.49 32 -2.908 6.48 34 -2.905 6.48 34 -2.901 6.48 38 -2.898 6.47 40 -2.895 6.47 42 -2.892 6.47 44 -2.889 6.46 48 -2.882 6.46 48 -2.882 6.46 48 -2.873			6.546
8 -2.966 6.544 8.5 -2.962 6.544 9 -2.962 6.545 9.5 -2.962 6.545 10 -2.959 6.530 12 -2.956 6.530 14 -2.95 6.531 16 -2.946 6.520 18 -2.943 6.521 20 -2.937 6.511 22 -2.93 6.511 24 -2.927 6.50 28 -2.918 6.491 30 -2.911 6.49 30 -2.911 6.49 32 -2.908 6.483 34 -2.905 6.483 36 -2.901 6.48 38 -2.898 6.47 42 -2.895 6.47 42 -2.892 6.47 44 -2.889 6.46 48 -2.882 6.46 48 -2.885 6.46 48 -2.886 6.45 50 -2.873 <td>-</td> <td></td> <td></td>	-		
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9			
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70 -2.85 6.43 72 -2.847 6.42			
72 -2.847 6.42			
17 -2.041 0.42			
	74	-2.04/	0.42/

ASH42DR.WK1 PAGE 2 OF 2

MONITORING WELL: MW-42D TEST TYPE: RISING HEAD (TEST 2) DTW (TOC): 3.61

SETUPS: INPUT# TYPE LEVEL F MODE SURFACE I.D. 0000 REFERENCE 0.0000 LINEARITY 0.0000 SCALE FACTOR 10.01 OFFSET -0.03 DELAY (mSec) 50 STEP 0 02/04/92 02:27:35 Elapsed time (min) Change (feet) Change from (feet) 0 -0.554 4.164 0.0033 -0.349 3.959 0.0066 -0.637 4.247 0.01 -0.227 3.837 0.0133 -0.598 4.208
LINEARITY SCALE FACTOR OFFSET DELAY (mSec) STEP 0 O2/04/92 Input 1 Relative Relative Change (min) (feet) (min) (feet) 0 -0.554 0.0033 -0.349 0.0066 -0.637 0.01 -0.227 0.0000 10.01 0 -0.003 0.0060 10.01 0.003 0.0060 10.000 10.001 0.0000 10.001 0.0000 10.001 0.0000 10.001 10.001 0.0000 10.001 10.001 10.001 10.001 10.001
Input 1 Water Leve Relative Change from Change Station (feet)
Relative Change from Change (min) (feet) (feet) (feet) 0 -0.554 4.164 0.0033 -0.349 3.959 0.0066 -0.637 4.247 0.01 -0.227 3.837
0.0166 -0.592 4.202 0.02 -0.509 4.119 0.0233 -0.541 4.151 0.0266 -0.522 4.132 0.03 -0.531 4.141 0.0333 -0.531 4.141 0.05 -0.506 4.116 0.0666 -0.502 4.112 0.0833 -0.493 4.103 0.1 -0.496 4.106 0.1166 -0.486 4.096 0.1333 -0.493 4.103 0.15 -0.486 4.096 0.1833 -0.486 4.096 0.2466 -0.486 4.096 0.2333 -0.486 4.096 0.25 -0.483 4.093 0.2666 -0.486 4.096 0.2833 -0.483 4.093 0.3166 -0.483 4.093 0.3166 -0.483 4.093 0.3333 -0.483 4.093 0.3483 -0.483 4.093 0.33333 -0.483 4.093
0.4166 -0.483 4.093 0.5 -0.48 4.090 0.5833 -0.48 4.090 0.6666 -0.483 4.093 0.75 -0.48 4.090

ASH42DR2.WK1 PAGE 1 OF 3

0.8333	-0.483	4.093
0.9166	-0.483	4.093
1	-0.486	4.096
1.0833	-0.486	4.096
1.1666	-0.477	4.087
1.25	-0.483	4.093
1.3333	-0.483	4.093
1.4166	-0.477	4.087
1.5	-0.477	4.100
	-0.49 -0.483	4.093
1.5833 1.6666		
	-0.48	4.090 4.087
1.75	-0.477	
1.8333	-0.48	4.090
1.9166	-0.48	4.090
2	-0.477	4.087
2.5	-0.48	4.090
3	-0.483	4.093
3.5	-0.483	4.093
4	-0.477	4.087
4.5	-0.48	4.090
5	-0.477	4.087
5.5	-0.48	4.090
6	-0.477	4.087
6.5	-0.477	4.087
7	-0.477	4.087
7.5	-0.477	4.087
8	-0.477	4.087
8.5	-0.477	4.087
9	-0.477	4.087
9.5	-0.48	4.090
10	-0.486	4.096
12	-0.48	4.090
14	-0.48	4.090
16	-0.483	4.093
18	-0.48	4.090
20	-0.48	4.090
22	-0.48	4.090
24	-0.48	4.090
26	-0.48	4.090
28	-0.48	4.090
30	-0.48	4.090
32	-0.483	4.093
34	-0.483	4.093
36	-0.48	4.090
38	-0.483	4.093
	-0.486	
40		4.096
42	-0.483	4.093
44	-0.483	4.093
46	-0.483	4.093
48	-0.486	4.096
50	-0.486	4.096
52	-0.483	4.093
54	-0.483	4.093
56	-0.483	4.093
58	-0.483	4.093
60	-0.486	4.096
62	-0.486	4.096
64	-0.483	4.093
66	-0.486	4.096
68	-0.486	4.096

ASH42DR2.WK1 PAGE 2 OF 3

70	-0.49	4.100
72	-0.49	4.100
74	-0.486	4.096
76	-0.49	4.100
78	-0.49	4.100
80	-0.493	4.103
82	-0.493	4.103
84	-0.493	4.103
86	-0.493	4.103
88	-0.493	4.103
90	-0.493	4.103
92	-0.493	4.103
94	-0.496	4.106
96	-0.496	4.106
98	-0.496	4.106

ASH42DR2.WK1 PAGE 3 OF 3

SLUG TEST	REPORT FO	RM
ENGINEERING-SCIENCE, INC. CLIENT:	ACOE	WELL #:MW-43
PROJECT: ASH RI PHASE II	INSPECTOR:	PFM/LB
LOCATION: SEAD	TEST DATE:	7/21/93
WELL AND ACHIEFD INFORMATION		
WELL AND AQUIFER INFORMATION WELL POINT (installed): 7.47	WELL SCREEN SLOT SIZE	E: 0.01"
WELL CASING INNER DIAMETER: 2.00"	AQUIFER THICKNESS:	
BOREHOLE DIAMETER: -	PRODUCT PRESENT (Y/N	?) N
STATIC DEPTH TO WATER: 6.07		
SCREENED INTERVAL – FROM: –		
TO: -	om TOC, or taken from installation detail)	
TEST EQUIPMENT SPECIFICATIONS	Too, or taken from instantation details	
DATA LOGGER BRAND: -	TRANSDUCER RATING (I	PSI):
INSTRUMENT MODEL: -	SLUG/BAILER DIMENSIO	
TRANSDUCER BRAND: -	SLUG/BAILER VOLUME:	
TEST INFORMATION		
REFERENCE VALUE: -	DATA LOGGER TEST NU	MBER:
TRANSDUCER MODE: SURFACE LEVEL or TOO		
STATIC WATER (START):	TRANSDUCER - LINEAR	ITY:
START TIME: -	- SCALE:	
END TIME: -	- OFFSET	
STATIC WATER (END):	DELAY SATURATED SCREEN LE	
NOTES: TOP OF PVC RISER: 657.73	' 1.4 feet o	of water — Not Enough
		_
GROUND SURFACE 655.6'		G TEST POSSIBLE
31130112 3311132		
TOP OF SCREEN: 652.6'		
BOTTOM OF SCREE: 650.6'		
POINT OF WELL: 650.1		
FOIRT OF WELL: 650.1		
(ALL DEPTHS RELATIVE TO THE TOP OF PVC CASING)		
COMMENTS:		
CONVERSION: 2.30667 FEET OF WATER/PSI		
YOU MUST RESET THE REFERENCE VALUE PRIOR TO	BEGINNING EACH TEST!!!!!	
TO MODIFICATION TO STAND THE PROPERTY OF THE P		

	SLUC	TEST	REPORT	FORM	
ENGINEERING-SCIEN	NCE, INC.	LIENT:	ACOE	WELL #: N	1W−43
PROJECT: ASH RI PH			INSPECTOR:	PFM/LB	
LOCATION: SEAD			TEST DATE:	7/22/93	
WELL AND AQUIFER INFO	RMATION	7 47'	WELL SCREEN SL	OT SIZE,	010"
WELL POINT (installed): WELL CASING INNER DIAME	TED.	7.47' 2.00"	AQUIFER THICKN	_	.010"
BOREHOLE DIAMETER:		2.00	PRODUCT PRESEN		N
STATIC DEPTH TO WATER:		6.07'	_		_
SCREENED INTERVAL - FRO	OM:	_		_	_
1	го:	_	_	_	
		depths measured from T	FOC, or taken from installation	ı detail)	.·
TEST EQUIPMENT SPECIFI	CATIONS				
DATA LOGGER BRAND:	_	Hermit	TRANSDUCER RA	· · · · —	10 (20 max)
INSTRUMENT MODEL: TRANSDUCER BRAND:		1000 C PTX - 161	SLUG/BAILER DIN SLUG/BAILER VO	_	2.86 x 1.66"
TRANSDUCER BRAIND:		F1X - 101	SLOG/BAILER VO	LOWE.	
TEST INFORMATION					
_	RFACE LEVEL 0.		DATA LOGGER TI	_	
REFERENCE POINT:	T	OC	_ TRANSDUCER DE		
STATIC WATER (START): START TIME:		_	TRANSDUCER - I	SCALE:	
END TIME:		_		OFFSET:	
STATIC WATER (END):	4	_		DELAY:	_
ELAPSED TIME:		_	SATURATED SCR	EEN LENGTH:	
NOTES:	TOP OF PVC F	RISER: 657.73'		NO SLUG TEST POSSIBLI 1.5' Water	E
	GROUND SUR	FACE 655.6'			
	TOP OF SCREE				
	POINT OF WE	LL: 650.1'			
(ALL DEPTHS RELATIVE TO THE TO					
COMMENTS:					
CONVERSION: 2.30667 FEE	ET OF WATER/	PSI			
YOU MUST RESET THE RE			GINNING FACH TEST!!	1111	
100 MOSI RESEI INE RI	L'ENGINCE VAI	DOL'I MION TO BE	OMMING EACH LEST!!	•••	

•	SLUG TES	ST R	EPORT F	ORM	-
ENGINEERING-SC	IENCE, INC. CLIENT:	A	COE	WELL #:N	√W-44
	PHASE II		INSPECTOR:	PFM/LB	
LOCATION: SEAD			TEST DATE:	7/21/93	
WELL AND AQUIFER II WELL POINT (installed): WELL CASING INNER DIA BOREHOLE DIAMETER: STATIC DEPTH TO WATE SCREENED INTERVAL —	10.78 AMETER: 2.00"		WELL SCREEN SLOT S AQUIFER THICKNESS PRODUCT PRESENT (or taken from installation deta	: Y/N?) 	- - - -
TEST EQUIPMENT SPE					
DATA LOGGER BRAND: INSTRUMENT MODEL: TRANSDUCER BRAND:			TRANSDUCER RATING SLUG/BAILER DIMENS SLUG/BAILER VOLUM	SIONS:	
TEST INFORMATION REFERENCE VALUE: TRANSDUCER MODE: STATIC WATER (START) START TIME: END TIME: STATIC WATER (END): ELAPSED TIME:	SURFACE LEVEL or	TOC	DATA LOGGER TEST I TRANSDUCER DEPTH TRANSDUCER – LINE – SCAI – OFF – DEL SATURATED SCREEN	: ARITY: LE: SET: AY:	- - - - - -
NOTES:	TOP OF PVC RISER: 6	553.85'	3.5 fe	et of water - Not Eno	ıgh
	GROUND SURFACE 6	552.00'	NO S	SLUG TEST POSSIBL	E
	TOP OF SCREEN: 6	548.75°			
	BOTTOM OF SCREE: 6	643.75'			
		643.25'			
(ALL DEPTHS RELATIVE TO TH		لطال			
COMMENTS: CONVERSION: 2.30667 YOU MUST RESET TH	FEET OF WATER/PSI E REFERENCE VALUE PRIOF	R TO BEGIN	NING EACH TEST!!!!!	7,0, 72, 1,0	

	SLUG TES	TR	EPORT FO	RM	
ENGINEERING-SCI	ENCE, INC. CLIENT:	A	COE	WELL #: MW	-45
	PHASE II	T	INSPECTOR:	PFM/LB	
LOCATION: SEAD			TEST DATE:	7/21/93	
WELL AND AQUIFER IN					0.010
WELL POINT (installed):	METER: 8.34 2.00"		WELL SCREEN SLOT SIZE AQUIFER THICKNESS:		0.010"
WELL CASING INNER DIAI BOREHOLE DIAMETER:	VIETER: 2.00		PRODUCT PRESENT (Y/N	2)	N
STATIC DEPTH TO WATER			TRODUCT TRESERT (1/14		
SCREENED INTERVAL - F					
CONTENT	TO: -				
·		from TOC.	or taken from installation detail)		
TEST EQUIPMENT SPEC	FICATIONS				
DATA LOGGER BRAND:	-		TRANSDUCER RATING (I	PSI):	-
INSTRUMENT MODEL:			SLUG/BAILER DIMENSIO	NS:	
TRANSDUCER BRAND:			SLUG/BAILER VOLUME:		
TEST INFORMATION					
REFERENCE VALUE:	_		DATA LOGGER TEST NU!	MBER:	_
	SURFACE LEVEL or T	roc	TRANSDUCER DEPTH:		_
STATIC WATER (START):	-		TRANSDUCER - LINEAR	ITY:	_
START TIME:	_		- SCALE:		_
END TIME:			- OFFSET	`: <u> </u>	
STATIC WATER (END):	_		- DELAY:		
ELAPSED TIME:	<u> </u>		SATURATED SCREEN LEI	NGTH:	
NOTES:	GROUND SURFACE 648.	5.10 [']		f water — Not Enough G TEST POSSIBLE	
COMMENTS: CONVERSION: 2.30667 F YOU MUST RESET THE		TO BEGINN	NING EACH TEST!!!!!		
100 MOSI RESEI IIIE	**************************************				

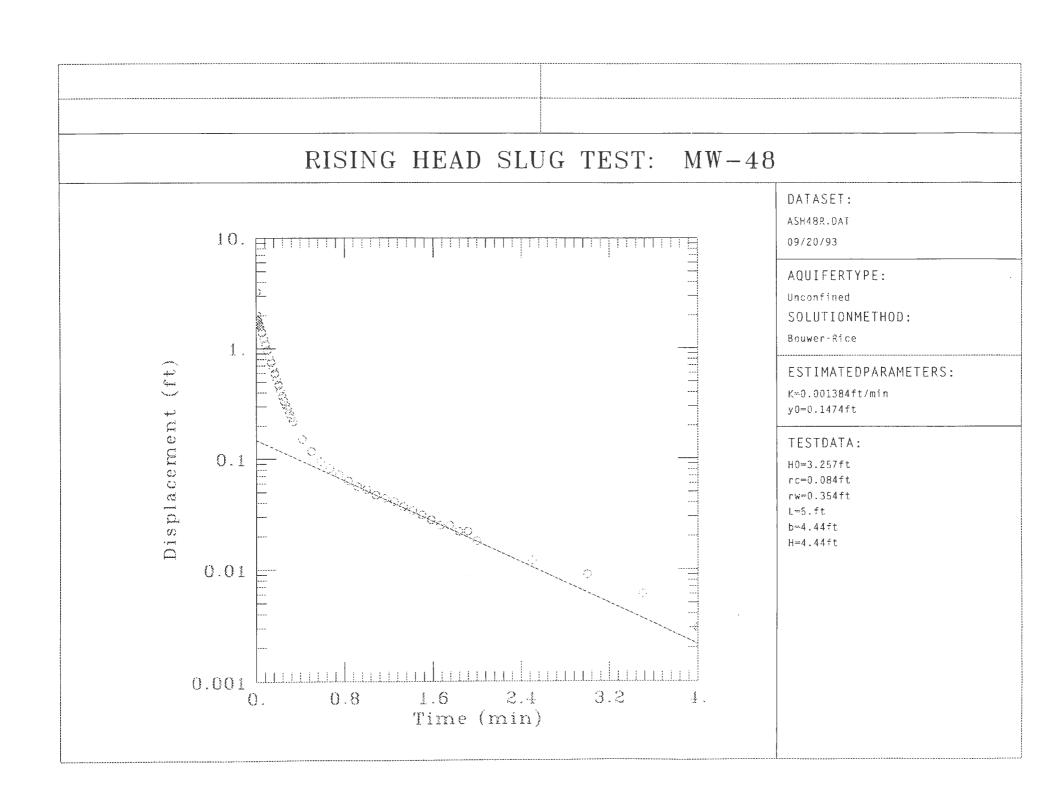
	SLU	G TE	EST R	EPORT	FORM	
ENGINEERING-SCI	ENCE, INC.	CLIENT:	A	COE	WELL #:	: MW-45
PROJECT: ASH RI	PHASE II			INSPECTOR:	PFM/LB	
LOCATION: SEAD				TEST DATE:	7/21/93	
WELL AND ACTUEED IN	CODMATION					
WELL AND AQUIFER INF WELL POINT (installed):	ORMATION	8.3	34	WELL SCREEN SLO	T SIZE:	0.010"
WELL CASING INNER DIAM	/ETER:	2.0		AQUIFER THICKN		
BOREHOLE DIAMETER:	_		-	PRODUCT PRESEN		N
STATIC DEPTH TO WATER:	_ :	6.5	52'			_
SCREENED INTERVAL - FI	ROM:	_				
	TO:		-		1.4.25	
TECT POLIDACENT COPOL		all depths me	asured from TOC.	or taken from installation	detail)	
TEST EQUIPMENT SPECI DATA LOGGER BRAND:	FICATIONS			TRANSDUCER RAT	TING (PSI):	
INSTRUMENT MODEL:			<u> </u>	SLUG/BAILER DIM		
TRANSDUCER BRAND:	_			SLUG/BAILER VOL		
						
TEST INFORMATION REFERENCE VALUE:		_		DATA LOGGER TE	ST NUMBER:	_
	SURFACE LEVE	EL or	TOC	TRANSDUCER DE		
STATIC WATER (START):	SOIG NOD BEVE	_		TRANSDUCER – L		
START TIME:		_		- s	SCALE:	_
END TIME:		_		- (OFFSET:	
STATIC WATER (END):		_			DELAY:	
ELAPSED TIME:				SATURATED SCRE	EEN LENGIH:	
NOTES:	TOP OF PVC GROUND SU TOP OF SCRE BOTTOM OF POINT OF WI	RFACE EEN: SCREE	650.90° 648.60° 645.10° 640.10° 639.60°		.8 feet of water — Not Er	•
	POINT OF WI	ELL:	039.00			
(ALL DEPTHS RELATIVE TO THE	TOP OF PVC CASIN	(G)				
COMMENTS: CONVERSION: 2.30667 FI YOU MUST RESET THE			OR TO BEGIN	NING EACH TEST!!!	!!!	

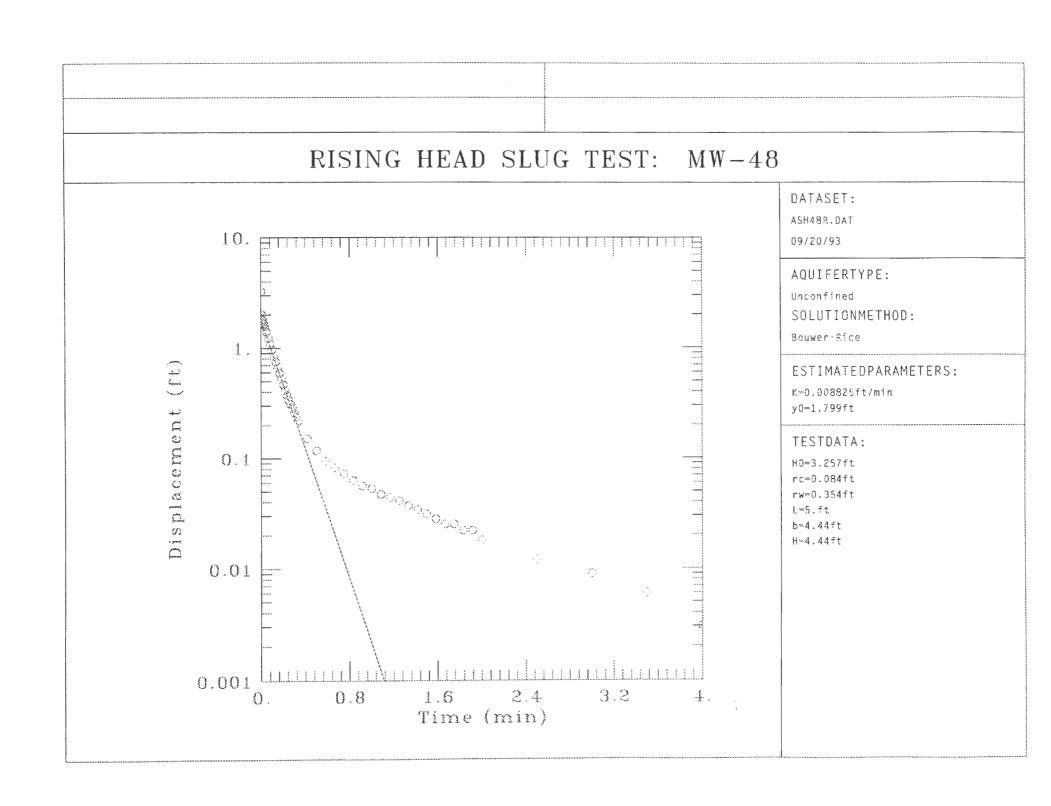
	SLUG TE	EST R	EPORT F	ORM	
ENGINEERING-SC	CIENCE, INC. CLIENT:	: .	ACOE	WELL #	:MW-46
PROJECT: ASH R	PHASE II		INSPECTOR:	PFM/LB	
LOCATION: SEAD			TEST DATE:	7/21/93	
WELL AND AQUIFER I	NFORMATION				
WELL POINT (installed):	11	.45	WELL SCREEN SLOT S	IZE:	
WELL CASING INNER DI	AMETER: 2,	00"	AQUIFER THICKNESS	:	_
BOREHOLE DIAMETER:			PRODUCT PRESENT (Y/N?)	
STATIC DEPTH TO WATE	ER:	57			
SCREENED INTERVAL -	FROM:				
	TO:	- TO	C, or taken from installation deta	:D	
TEGE COMPAGNE ORE		asured from 100	o, or taken from instanation deta	ш)	
TEST EQUIPMENT SPE			TD ANGDUCED DATING	C (BSI).	
DATA LOGGER BRAND: INSTRUMENT MODEL:	<u></u>		TRANSDUCER RATING SLUG/BAILER DIMEN	` '	
TRANSDUCER BRAND:	· · · · · · · · · · · · · · · · · · ·		SLUG/BAILER VOLUM		
TRANSDUCER BRAIND.			SECO/BAILER VOLUM		
TEST INFORMATION					
REFERENCE VALUE:			DATA LOGGER TEST		
TRANSDUCER MODE:	SURFACE LEVEL or	TOC	TRANSDUCER DEPTH		
STATIC WATER (START)):		TRANSDUCER - LINE		_
START TIME:			- SCA		
END TIME: STATIC WATER (END):			– OFF – DEL		
ELAPSED TIME:		·	SATURATED SCREEN		
					
NOTES:	TOP OF PVC RISER:	650.41'	3.9 fe	et of water - Not E	nough
			NO S	LUG TEST POSSIE	BLE
	GROUND SURFACE	648.10'			
			Can j While	possibly do this well i e here at base will ch	f water comes up a bit. eck on it later or in a week.
	TOP OF SCREEN:	644.60'			
	BOTTOM OF SCREE	639.60'			
	POINT OF WELL:	639.10'			
(ALL DEPTHS RELATIVE TO TH	HE TOP OF PVC CASING)				
COMMENTS:					
	FEET OF WATED BET				
CONVERSION: 2.30667					
YOU MUST RESET TH	E REFERENCE VALUE PRI	OR TO BEGI	NNING EACH TEST!!!!!		

		SLU	G TI	EST R	EPORT	FORM	
ENGINEERING	G-SCIE	NCE, INC.	CLIENT:		ACOE	WELL #:	MW-46
PROJECT:	ASH RI PH	IASE II			INSPECTOR:	PFM/LB	
LOCATION:	SEAD				TEST DATE:	7/22/93	
WELL AND AQUI		ORMATION	11	45	WELL SCREEN SLO	OT SIZE:	.010"
WELL CASING INN	-	ETER:	2.0	00"	AQUIFER THICKN	ESS:	_
BOREHOLE DIAM	ETER:				PRODUCT PRESEN	TT (Y/N?)	N
STATIC DEPTH TO			7.	.57			
SCREENED INTER							
		TO:	(all depths me	easured from TOC	or taken from installation	detail)	
TEST EQUIPMEN	T SPECIF	ICATIONS					
DATA LOGGER BR			He	rmit	TRANSDUCER RAT	ΓING (PSI):	10 (20 max)
INSTRUMENT MOI	DEL:		100	00 C	SLUG/BAILER DIM	ENSIONS:	2.86 x 1.66"
TRANSDUCER BRA	AND:		PTX	- 161	SLUG/BAILER VOL	LUME:	
TEST INFORMAT	ION					<u> </u>	
REFERENCE VAL			0.00		DATA LOGGER TE	ST NUMBER:	_
TRANSDUCER MO		SURFACE	E LEVEL OI	R TOC	TRANSDUCER DE	PTH:	_
STATIC WATER (S	TART):		_		TRANSDUCER - L	INEARITY:	.0024
START TIME:	_				- S	CALE:	10.0157
END TIME:						OFFSET:	.0082
STATIC WATER (E ELAPSED TIME:	:				SATURATED SCRE	DELAY: EEN LENGTH:	50 msec
NOTES:		TOP OF PV	C RISER:	650.41'	3	.8' of water — Not Enough	1
		GROUND ST	URFACE	648.10'	N	IO SLUG TEST POSSIBI	LE
		TOP OF SCR	EE N :	644.60'			
		BOTTOM O	F SCREE	639.60'			
		POINT OF W	VELL:	639.10'			
(ALL DEPTHS RELATIV	E TO THE TO	•					
COMMENTS: CONVERSION: YOU MUST RES				OR TO BEGIN	INING EACH TEST!!!	!!	

SL	UG TES	ST R	EPORT	FORM	
ENGINEERING-SCIENCE, I	NC. CLIENT:	A	COE	WELL	#: MW-47
PROJECT: ASH RI PHASE II			INSPECTOR:	PFM/LB	
LOCATION: SEAD ASH			TEST DATE:	7/23/93	
WELL AND AQUIFER INFORMAT WELL POINT (installed):	ION 8.56		WELL SCREEN SLO	OT SIZE:	0.010"
WELL CASING INNER DIAMETER:	2.00"		AQUIFER THICKN		- 0.010
BOREHOLE DIAMETER:			PRODUCT PRESEN		N
STATIC DEPTH TO WATER:	7.22		TRODUCTTREBE	(2/2)	
SCREENED INTERVAL - FROM:					
TO:	_				
	(all depths measure	ed from TOC.	or taken from installation	detail)	
TEST EQUIPMENT SPECIFICATION	NS				
DATA LOGGER BRAND:			TRANSDUCER RA		
INSTRUMENT MODEL:			SLUG/BAILER DIM		
TRANSDUCER BRAND:			SLUG/BAILER VOI	LUME:	
TEST INFORMATION					
REFERENCE VALUE:	_		DATA LOGGER TE	EST NUMBER:	_
TRANSDUCER MODE: SURFACE	ELEVEL or	TOC	TRANSDUCER DE	PTH:	
STATIC WATER (START):	_		TRANSDUCER - L	INEARITY:	
START TIME:	_		- 5	SCALE:	
END TIME:				OFFSET:	
STATIC WATER (END): ELAPSED TIME:			- I SATURATED SCRE	DELAY:	
ELAPSED TIME:			SATURATED SCRI	BEN EENOTTI.	
TOP OF	ND SURFACE 62 F SCREEN: 62 OM OF SCREE: 62	28.06' 25.30' 21.80' 20.30' 19.80'		3 feet of water — Not	
(ALL DEPTHS RELATIVE TO THE TOP OF PV	C CASING)				
COMMENTS: CONVERSION: 2.30667 FEET OF V YOU MUST RESET THE REFEREN	VATER/PSI	TO BEGIN	NING EACH TEST!!	!!!	

	SLU	G TE	EST R	EPORT	FORM	
ENGINEERIN	G-SCIENCE, INC.	CLIENT:		ACOE	WELL #	‡: MW−48
	ASH RI PHASE II			INSPECTOR:	PFM/LB	•
LOCATION:	SEAD ASH			TEST DATE:	7/23/93	
WELL AND ACT	IFER INFORMATION					
WELL POINT (insta		11	.5	WELL SCREEN SLO	OT SIZE:	.010"
WELL POINT (installed): 11.5 WELL CASING INNER DIAMETER: 2.00"				AQUIFER THICKN		
BOREHOLE DIAM	-			PRODUCT PRESEN		_
STATIC DEPTH TO WATER: 7.0)6		, ,	_
SCREENED INTER	RVAL – FROM:	5.8	32			
TO:		10.82				
		(all depths mea	asured from TOC	or taken from installation	detail)	
	NT SPECIFICATIONS					
DATA LOGGER B		Her		TRANSDUCER RATING (PSI):		10 (20 max)
INSTRUMENT MO	-	1000 C		SLUG/BAILER DIMENSIONS:		2.86 x 1.66"
TRANSDUCER BR	AND:	PTX -	- 101	SLUG/BAILER VOL	OME:	
TEST INFORMAT						
REFERENCE VAL		0.00		DATA LOGGER TE		1
REFERENCE POI				TRANSDUCER DEI		11.0'
STATIC WATER (START):	7.07		TRANSDUCER - L		.0024
START TIME:		10.07		1	SCALE: DFFSET:	10.0157
END TIME: STATIC WATER (END):	10.35 7.07			DELAY:	0082 50 msec
ELAPSED TIME:		7.07		SATURATED SCRE		Jo Misco
				<u> </u>		
NOTES:	TOP OF PV	CRISER:	648.32'	Т	ransducer Depth	11.00
NOTES.			0.10.102	Slug Depth		9.9'
	GROUND ST	IDEACE	646.00'	S	lugin 9:50 AM	
	OKOUND SI	JAI-ACE	040.00			
l						
l						
	TOP OF SCR	EEN:	642.50'			
1						
l						
l						
1	воттом о	F SCREE	637.50'			
	POINT OF W	VELL:	637.00'			
			05/100			
(ALL DEPTHS RELATI	VE TO THE TOP OF PVC CASI		C Stick Up =	2.32		
COMMENTS:						
CONVERSION	2.30667 FEET OF WATE	R/PSI				
1	SET THE REFERENCE V		חם דה שבהיי	NNING FACU TECTIO	***	
100 MUSI RE	SEI IME KEPEKENCE V	ALUE FRI	OK TO BEOII	MINU EACH TEST!!!	•••	
		Tra	ansducer lengt	h .64 feet		





SE1000C Environmental Logger 07/23 15:47

MONITORING WELL: MW-48 TEST TYPE: RISING HEAD DTW (TOC): 7.06

Unit# 01000 Test 1

Setups: Type Mode I.D.		INPUT 1: LEVEL F SURFACE 00000
Reference Linearity Scale factor Offset Delay mSEC		0.0000 0.0000 10.020 -0.010 50.000
Step 0	07/23/93	10:07:44
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.25 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333 0.4166 0.55 0.5833	Input 1 Relative Change (feet) -2.906 -3.257 -2.008 -1.831 -1.812 -1.774 -1.723 -1.682 -1.647 -1.616 -1.575 -1.394 -1.23 -1.088 -0.961 -0.847 -0.749 -0.667 -0.528 -0.468 -0.417 -0.373 -0.338 -0.309 -0.284 -0.259 -0.237 -0.218 -0.151 -0.117 -0.094 -0.082	Water Level Change from Static (feet) 9.966 10.317 9.068 8.891 8.872 8.834 8.783 8.742 8.707 8.676 8.635 8.454 8.29 8.148 8.021 7.907 7.809 7.727 7.654 7.588 7.528 7.477 7.433 7.398 7.369 7.344 7.319 7.297 7.278 7.211 7.177 7.154 7.142
0.75	-0.072	7.132

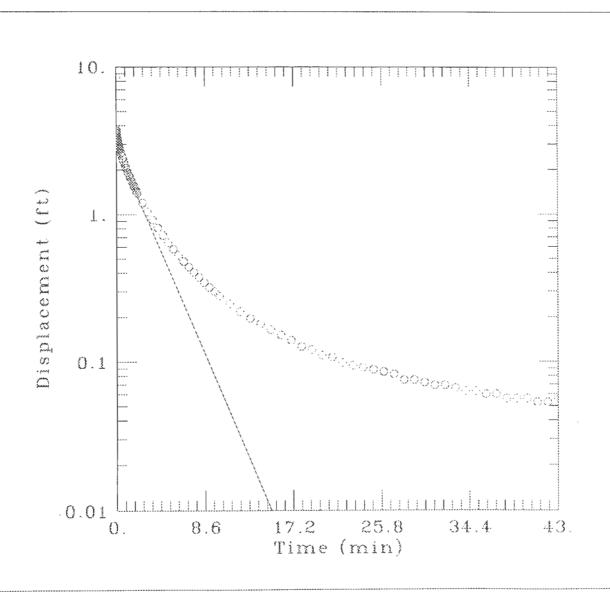
ASH48R.WK1 PAGE 1 OF 2

0.8333	~0.063	7.123
0.9166	-0.056	7.116
1	-0.053	7.113
1.0833	-0.047	7.107
1.1666	-0.044	7.104
1.25	-0.041	7.101
1.3333	-0.037	7.097
1.4166	-0.034	7.094
1.5	-0.031	7.091
1.5833	-0.028	7.088
1.6666	-0.025	7.085
1.75	-0.025	7.085
1.8333	-0.022	7.082
1.9166	-0.022	7.082
2	-0.018	7.078
2.5	-0.012	7.072
3	-0.009	7.069
3.5	-0.006	7.066
4	-0.003	7.063
4.5	0	7.06
5	0.003	7.057
5.5	0.003 0.003	7.057
6 6.5	0.003	7.057 7.057
0.5 7	0.003	7.057
7.5	0.003	7.057
7.5 8	0.003	7.054
8.5	0.006	7.054
9	0.006	7.054
9.5	0.003	7.057
10	0.006	7.054
11	0.006	7.054
12	0.003	7.057
13	0.003	7.057
14	0.003	7.057
15	0.003	7.057
16	0.003	7.057
17	0.003	7.057
18	0.003	7.057
19	0.003	7.057
20	0.003	7.057
21	0.006	7.054
22	0.003	7.057
23	0.006	7.054
24	0.006	7.054
25	0.003	7.057
26	0.006	7.054
27	0.006	7.054

ASH48R.WK1 PAGE 2 OF 2

		SLU	G TI	EST R	EPORT	FORM	
ENGINEERII	NG-SCI	ENCE, INC.	CLIENT:		ACOE	WELL #	:MW-49D
PROJECT:		PHASE II	·		INSPECTOR:	PFM/KKS/ES	
LOCATION:	SEAD				TEST DATE:	7/24/93	
WELL AND AQI	HEED IN	EODMATION					
WELL POINT (ins		FORMATION	37	7.54	WELL SCREEN SL	OT SIZE:	0.01"
WELL CASING INNER DIAMETER: 2.00"			AQUIFER THICK				
BOREHOLE DIAMETER: 3.78"			PRODUCT PRESE		N		
STATIC DEPTH TO WATER: 7.65 to 7.76					-		
SCREENED INTERVAL – FROM:			17	.80			-
TO: 36.			5.80				
			(all depths me	asured from TO	C. or taken from installatio	n detail)	
TEST EQUIPME	NT SPEC	<u>IFICATIONS</u>					
DATA LOGGER I				rmit	TRANSDUCER RA		10 (20 max)
INSTRUMENT M		-		00 C	SLUG/BAILER DII		5.38' x 1.66"
TRANSDUCER B	RAND:		PIX	- 161	SLUG/BAILER VO	DLUME:	
TEST INFORMA	TION						
REFERENCE VA			0.00		DATA LOGGER T	EST NUMBER:	2
REFERENCE POI	NT:	SURFACE LEV	EL IN WEL	L	TRANSDUCER DEPTH:		17
STATIC WATER	(START):		7.79'		TRANSDUCER -		.0024
START TIME:		4	2 degrees			SCALE:	10.0157
END TIME:	(END)		5:26 -0.02		l .	OFFSET:	<u>0082</u>
STATIC WATER ELAPSED TIME:			-0.02 Test Done		SATURATED SCR	DELAY: EEN LENGTH:	50 msec
			0000				
NOTES:	_	GROUND SI	ÜRFACE	650.50' 648.20' 632.70'		Transducer at 17' Slug at 13.3' 215 trans at 9.21 Slug in 416 trans at 9.25 DTW 7.5 Start test remove slug	79
		BOTTOM O		613.70'			
		POINT OF W	VELL:	613.70'			
(ALL DEPTHS RELAT	IVE TO THE	TOP OF PVC CASI	NG)		Transducer pulled up a	little in the beginning.	
COMMENTS:							
	1. 2 20 <i>44</i> 7 F	EET OF WATE	ופק/ ק				
				OD #0 ====	NAMES OF A COLUMNICATION	****	
YOU MUST RI	ESET THE	REFERENCE V	ALUE PRI	OK TO BEGI	NNING EACH TEST!	!!!!	





DATASET:

ASH49DR.DAT

09/20/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

K=0.0002405ft/min y0=2.839ft

TESTDATA:

H0=3.786ft

rc=0.084ft

rw=0.156ft

L=19.ft

b=369.5ft

H-29.78ft

SE1000C Environmental Logger 07/23 15:44

MONITORING WELL: MW-49D TEST TYPE: RISING HEAD DTW (TOC): 7.76

Unit# 01000 Test 0

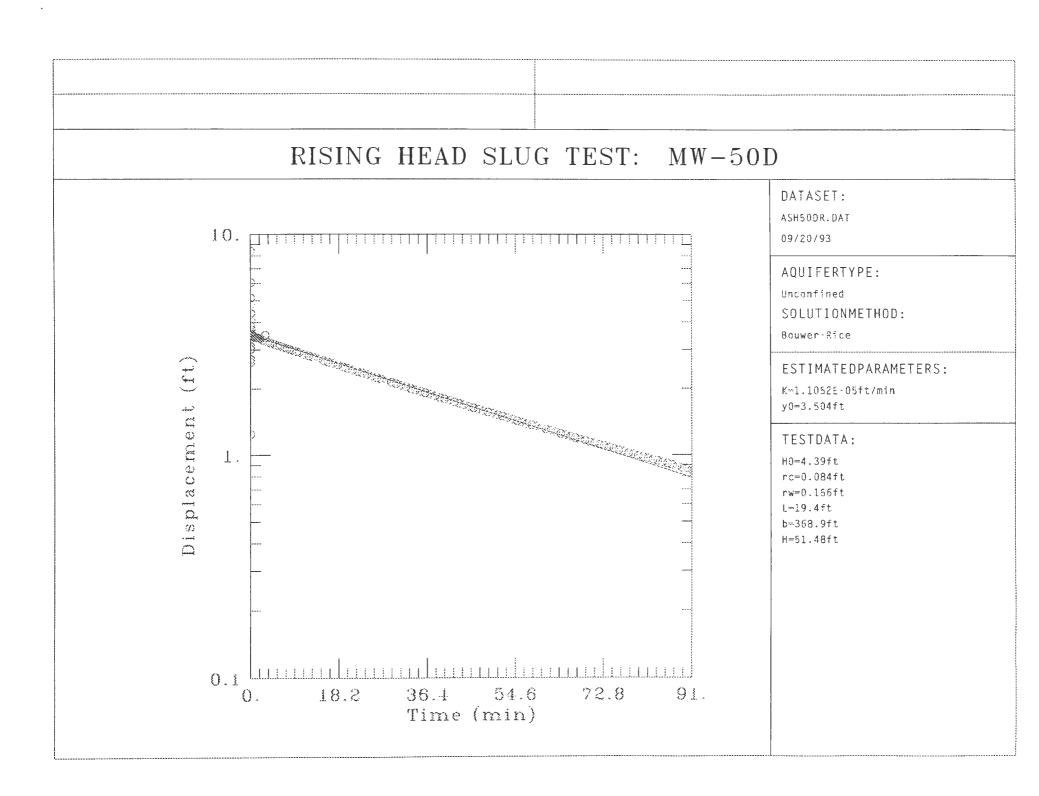
Setups: Type Mode I.D.		INPUT 1: Level F Surface 00000
Reference Linearity Scale factor Offset Delay mSEC		0.000 0.000 10.020 -0.010 50.000
Step 0	07/23/93	08:39:36
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333 0.4166 0.55 0.5833 0.6666	Input 1 Relative Change (feet) -6.439 -8.41 -3.46 -3.786 -3.694 -3.646 -3.583 -3.561 -3.548 -3.52 -3.447 -3.381 -3.314 -3.261 -3.21 -3.162 -3.118 -3.074 -3.039 -3.001 -2.966 -2.932 -2.897 -2.865 -2.837 -2.808 -2.78 -2.751 -2.618 -2.505 -2.403 -2.305	Water Level Change from Static (feet) 14.199 16.17 11.22 11.546 11.454 11.406 11.378 11.321 11.308 11.28 11.207 11.141 11.074 11.021 10.97 10.922 10.878 10.834 10.799 10.761 10.726 10.657 10.625 10.597 10.568 10.54 10.511 10.378 10.265 10.163 10.065
0.75	-2.22	9.98

ASH49DR.WK1 PAGE 1 OF 2

0.8333 0.9166 1 1.0833 1.1666 1.25 1.3333 1.4166 1.5 1.5833 1.6666 1.75 1.8333 1.9166 2 2.5 3	-2.138 -2.065 -1.995 -1.926 -1.866 -1.809 -1.752 -1.701 -1.651 -1.603 -1.559 -1.518 -1.477 -1.435 -1.398 -1.198 -1.043	9.898 9.825 9.755 9.686 9.626 9.569 9.512 9.461 9.411 9.363 9.319 9.278 9.237 9.195 9.158 8.958 8.803
3.5	-0.917	8.677
4 4.5	-0.809 -0.721	8.569 8.481
5 5.5	-0.645 -0.581	8.405 8.341
6	-0.528	8.288
6.5 7	-0.48 -0.439	8.24 8.199
7.5	-0.404	8.164
8 8.5	-0.373 -0.344	8.133 8.104
9	-0.319	8.079
9.5 10	-0.3 -0.278	8.06 8.038
11	-0.276 -0.246	8.006
12	-0.218	7.978 7.956
13 14	-0.196 -0.18	7.956 7.94
15 16	-0.164	7.924
16 17	-0.151 -0.139	7.911 7.899
18	-0.126	7.886
19 20	-0.12 -0.11	7.88 7.87
21	-0.107	7.867
22 23	-0.098 -0.094	7.858 7.854
24	-0.091	7.851
25 26	-0.088 -0.085	7.848 7.845
27	-0.082	7.842
28 29	-0.075 -0.075	7.835 7.835
30	-0.072	7.832
31 32	-0.069 -0.069	7.829 7.829
33	-0.066	7.826
34 35	-0.063 -0.063	7.823 7.823
36	-0.06	7.82
37 38	0.06 0.056	7.82 7.816
39	-0.056	7.816
40 41	-0.056 -0.053	7.816 7.813
42	-0.053	7.813
43	-0.056	7.816

ASH49DR.WK1 PAGE 2 OF 2

ENGINEERING – SCIENCE, INC. PROJECT: ASH RI PHASE II LOCATION: SEAD ASH WELL AND AQUIFER INFORMATION WELL POINT (installed): 59.66 WELL CASING INNER DIAMETER: 2.00" BOREHOLE DIAMETER: 3.78" STATIC DEPTH TO WATER: 8.18, trans = 1 SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured) TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit INSTRUMENT MODEL: 1000 C	8.66 I from TOC. c	COE INSPECTOR: TEST DATE: WELL SCREEN SLOT AQUIFER THICKNES PRODUCT PRESENT or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMER SLUG/BAILER VOLU	SS:	.010" N 10 (20 max) 5.38' x 1.66"
SEAD ASH WELL AND AQUIFER INFORMATION WELL POINT (installed): 59.66 WELL CASING INNER DIAMETER: 2.00° BOREHOLE DIAMETER: 3.78" STATIC DEPTH TO WATER: 8.18, trans = 1 SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured) TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	8.66 I from TOC, c	TEST DATE: WELL SCREEN SLOT AQUIFER THICKNES PRODUCT PRESENT or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMEI	7/22/93 SIZE: SS: (Y/N?)	N
WELL AND AQUIFER INFORMATION WELL POINT (installed): 59.66 WELL CASING INNER DIAMETER: 2.00" BOREHOLE DIAMETER: 3.78" STATIC DEPTH TO WATER: 8.18, trans = 1 SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured) TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	8.66 I from TOC. of 1	WELL SCREEN SLOT AQUIFER THICKNES PRODUCT PRESENT or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMER	SIZE: SS: (Y/N?) tail) NG (PSI): NSIONS:	N
WELL POINT (installed): 59.66 WELL CASING INNER DIAMETER: 2.00" BOREHOLE DIAMETER: 3.78" STATIC DEPTH TO WATER: 8.18, trans = 1 SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured) TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	8.66 I from TOC, o	AQUIFER THICKNES PRODUCT PRESENT or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMER	SS:	N
WELL POINT (installed): 59.66 WELL CASING INNER DIAMETER: 2.00" BOREHOLE DIAMETER: 3.78" STATIC DEPTH TO WATER: 8.18, trans = 1 SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured) TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	8.66 I from TOC, o	AQUIFER THICKNES PRODUCT PRESENT or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMER	SS:	N
WELL CASING INNER DIAMETER: 2.00" BOREHOLE DIAMETER: 3.78" STATIC DEPTH TO WATER: 8.18, trans = 1 SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	8.66 I from TOC, o	AQUIFER THICKNES PRODUCT PRESENT or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMER	SS:	N
STATIC DEPTH TO WATER: 8.18, trans = 1	8.66 I from TOC. c	PRODUCT PRESENT or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMER	(Y/N?) ctail) NG (PSI): NSIONS:	10 (20 max)
STATIC DEPTH TO WATER: 8.18, trans = 1 SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured) TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	8.66 from TOC, c	or taken from installation de TRANSDUCER RATII SLUG/BAILER DIMEI	ng (PSI):	10 (20 max)
SCREENED INTERVAL – FROM: 39.62' TO: 59.02' (all depths measured) TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	I from TOC, o	TRANSDUCER RATII SLUG/BAILER DIMEI	NG (PSI): NSIONS:	
TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	1 1	TRANSDUCER RATII SLUG/BAILER DIMEI	NG (PSI): NSIONS:	
TEST EQUIPMENT SPECIFICATIONS DATA LOGGER BRAND: Hermit	1 1	TRANSDUCER RATII SLUG/BAILER DIMEI	NG (PSI): NSIONS:	
DATA LOGGER BRAND: Hermit	1 S	SLUG/BAILER DIME	NSIONS:	
	1 S	SLUG/BAILER DIME	NSIONS:	
INSTRUMENT MODEL: 1000 C	1 .	•	_	5.38' x 1.66"
TO AMEDICED DO AND. DTV 141		SLUG/BAILER VOLU	IVIE:	
TRANSDUCER BRAND: PTX - 161				
TEST INFORMATION				
REFERENCE VALUE: 0.00	17	DATA LOGGER TEST	-	4
REFERENCE POINT: SURFACE WATER IN WELL		TRANSDUCER DEPT	_	27
STATIC WATER (START): 19.31 (trans) START TIME: 4:25	·	TRANSDUCER – LIN – SCA	-	.0024
END TIME: 4.25			FSET:	0082
STATIC WATER (END):86			LAY:	50 msec
ELAPSED TIME:	\$	SATURATED SCREE	N LENGTH:	
TOP OF PVC RISER: 649 GROUND SURFACE 648 TOP OF SCREEN: 610	3.10° 9.30°	Bot Slug tran	nsducer bottom 27' tom of slug 13.7 g in ns 22.04 W trans 19.76, 7' e—mete	er 305pm
).90'			
POINT OF WELL: 591	.00'			
(ALL DEPTHS RELATIVE TO THE TOP OF PVC CASING)	Pro	oblem – transducer cam	e up some when pulling	slug up at start of test.
COMMENTS: CONVERSION: 2.30667 FEET OF WATER/PSI YOU MUST RESET THE REFERENCE VALUE PRIOR T		NING EACH TEST!!!!! /C Stickup = 1.82		



SE1000C Environmental Logger 07/22 22:02

MONITORING WELL: MW-50D TEST TYPE: RISING HEAD DTW (TOC): 8.18

Unit# 01000 Test 4

Setups: Type Mode I.D.		INPUT 1: Level F Suface 00000
Reference Linearity Scale factor Offset Delay mSEC		0.000 0.000 10.020 -0.010 50.000
Step 0	07/22/93	16:26:20
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.5 0.5833 0.6666	Input 1 Relative Change (feet) -6.139 -8.397 -6.057 -3.109 -1.246 -2.72 -5.152 -4.823 -3.612 -2.634 -3.02 -3.9 -4.39 -4.39 -4.39 -3.529 -3.485 -3.498 -3.479 -3.517 -3.498 -3.526 -3.495 -3.485 -3.485 -3.486 -3.485 -3.486 -3.466 -3.454 -3.476	Water Level Change from Static (feet) 14.319 16.577 14.237 11.289 9.426 10.9 13.332 13.003 11.792 10.814 11.2 12.08 12.57 12.26 11.89 11.709 11.665 11.665 11.665 11.665 11.668 11.665 11.668 11.665 11.668 11.664 11.634 11.656
0.75	-3.428	11.608

ASH50DR.WK1 PAGE 1 OF 3

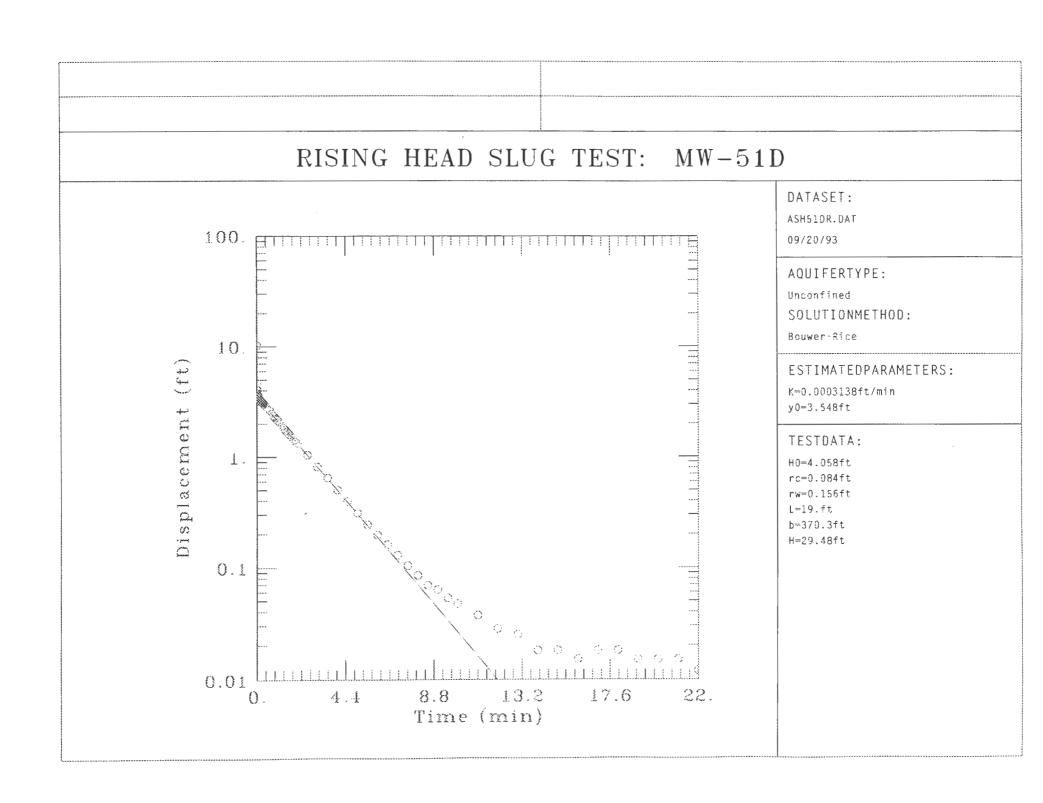
0.8333	-3.441	11.621
0.9166	-3.438	11.618
1		
	-3.4	11.58
1.0833	-3.419	11.599
1.1666	-3.412	11.592
1.25	-3.409	11.589
1.3333	-3.403	11.583
1.4166	-3.394	11.574
1.5	-3.394	11.574
1.5833	-3.387	11.567
1.6666	-3.384	11.564
1.75	-3.378	11.558
1.8333		
	-3.371	11.551
1.9166	-3.368	11.548
2	-3.365	11.545
2.5	-3.318	11.498
3	-3.498	11.678
3.5	-3.251	11.431
4	-3.22	11.4
4.5	-3.194	11.374
5	-3.166	11.346
5.5	-3.14	11.32
6	-3.115	11.295
6.5	-3.087	11.267
7	-3.067 -3.061	
-		11.241
7.5	-3.033	11.213
8	-3.011	11.191
8.5	-2.985	11.165
9	-2.96	11.14
9.5	-2.938	11.118
10	-2.913	11.093
11	-2.859	11.039
12	-2.815	10.995
13	-2.767	10.947
14	-2.726	10.906
15	-2.679	10.859
16	-2.634	10.814
17	-2.6	10.78
18	-2.562	10.742
19	-2.508	10.688
20	-2.47	10.65
21	-2.429	10.609
22	-2.391	10.571
23	-2.356	10.536
24	-2.318	10.498
2 5	-2.28	10.46
26	-2.242	10.422
27	-2.204	10.384
28	-2.173	10.353
29	-2.138	10.318
30	-2.106	10.286
31	-2.071	10.251
32	-2.04	10.22
33	-2.008	10.188
34	-1.973	10.153
35	-1.945	10.125
36	-1.916	10.096
37	-1.888	10.068
38	-1.856	10.036
-	1.500	10.000

ASH50DR.WK1 PAGE 2 OF 3

39	- 1.825	10.005
40	-1.799	9.979
41	-1.774	9.954
42	-1.742	9.922
43	-1.717	9.897
44	-1.692	9.872
45	-1.66	9.84
	-1.638	
46		9.818
47	-1.613	9.793
48	-1.587	9.767
49	-1.565	9.745
50	-1.546	9.726
51	-1.521	9.701
52	-1.499	9.679
53	-1.477	9.657
54	-1.452	9.632
55	-1.429	9.609
56	-1.407	9.587
57	-1.385	9.565
58	-1.366	9.546
59	-1.35	9.53
60	-1.325	9.505
	-1.309	
61		9.489
62	-1.293	9.473
63	-1.271	9.451
64	-1.249	9.429
65	-1.233	9.413
66	-1.214	9.394
67	-1.195	9.375
68	-1.176	9.356
	-1.164	
69		9.344
70	-1.145	9.325
71	-1.132	9.312
72	-1.113	9.293
73	-1.1	9.28
74	-1.081	9.261
75	-1.066	9.246
76	-1.05	9.23
77	-1.037	9.217
78	-1.018	9.198
79	-1.009	9.189
80	-0.993	9.173
81	-0.977	9.157
82	-0.964	9.144
83	-0.952	9.132
84	-0.939	9.119
85	-0.926	9.106
86	-0.914	9.094
87	-0.901	9.081
88	-0.888	9.068
89	-0.873	9.053
90	-0.869	9.049
91	-0.854	9.034

ASH50DR.WK1 PAGE 3 OF 3

	SLU	G TEST	REPORT	FORM	
ENGINEERI	NG-SCIENCE, INC.	CLIENT:	ACOE	WELL #	:MW-51D
PROJECT:	ASH RI PHASE II		INSPECTOR:	PFM/LB	
LOCATION:	SEAD ASH		TEST DATE:	7/23/93	
WELL AND AO	UIFER INFORMATION				
WELL POINT (ins		36.87	WELL SCREEN SLO	OT SIZE:	.010"
WELL CASING I	NNER DIAMETER:	2.00"	AQUIFER THICKN	IESS:	
BOREHOLE DIA	METER:	3.78"	PRODUCT PRESEN	NT (Y/N?)	N
STATIC DEPTH 7	TO WATER:	7.39'			
SCREENED INTE		17.86			
	TO:	36.16'	TOC, or taken from installation	detail)	
TEST EQUIPME	ENT SPECIFICATIONS	Tan depart memarka nom	100, 0, taken nom angenation		
DATA LOGGER		Hermit	TRANSDUCER RA	TING (PSI):	10 (20 max)
INSTRUMENT M	ODEL:	1000 C	SLUG/BAILER DIM	, ,	5.38' x 1.66"
TRANSDUCER B	RAND:	PTX - 161	SLUG/BAILER VOI	LUME:	
TEST INFORMA	ATION				
REFERENCE VA		0.00	DATA LOGGER TE	EST NUMBER:	3
REFERENCE PO			TRANSDUCER DE		17
STATIC WATER	(START):	7.40	TRANSDUCER – L	INEARITY:	.0024
START TIME:		2:10	- 9	SCALE:	10.0157
END TIME:		2:30	<u> </u>	OFFSET:	0082
STATIC WATER ELAPSED TIME:		01	I SATURATED SCRE	DELAY:	50 msec
ELAI SED TIME.			SATORATED SCR	SEN LENGTH.	
NOTES:	GROUND SI		ת ב	13 feet = slug depth Transducer depth = 17' Transducer 9.47 before slut:50 slug in	ug
	TOP OF SCR	EEN: 612.30'			
	BOTTOM OF W	/ELL: 593.40'			
(ALL DEPTHS RELAT	TIVE TO THE TOP OF PVC CASE	NG)	Cable pulled up slightl	ly at beginning of test dur	ing slug removal.
COMMENTS: CONVERSION: 2.30667 FEET OF WATER/PSI YOU MUST RESET THE REFERENCE VALUE PRIOR TO BEGINNING EACH TEST!!!!!					
			PVC Stickup = 2.76		



SE1000C Environmental Logger 07/23 15:57

MONITORING WELL: MW-51D TEST TYPE: RISING HEAD DTW (TOC): 7.39

Unit# 01000 Test 3

	Input 1: Level F Surface 0000
	0.000 0.000 10.020 0.010 50.000
07/23/92	14/09/27
Input 1 Relative Change (feet) -5.181 -10.216 -4.69 -4.058 -3.814 -3.801 -3.795 -3.741 -3.795 -3.767 -3.754 -3.627 -3.583 -3.548 -3.51 -3.472 -3.435 -3.435 -3.435 -3.435 -3.435 -3.156 -3.245 -3.213 -3.185 -3.156 -3.128 -3.099 -3.074 -3.045 -2.916 -2.792 -2.679	Water Level Change from Static (feet) 12.571 17.606 12.08 11.448 11.204 11.191 11.185 11.131 11.185 11.157 11.144 11.017 10.973 10.938 10.9 10.862 10.825 10.79 10.742 10.698 10.666 10.635 10.603 10.575 10.546 10.518 10.489 10.464 10.435 10.306 10.182 10.069
-2.615 -2.479	10.005 9.869
	Input 1 Relative Change (feet) -5.181 -10.216 -4.69 -4.058 -3.814 -3.801 -3.795 -3.741 -3.795 -3.767 -3.754 -3.627 -3.583 -3.548 -3.51 -3.472 -3.435 -3.435 -3.435 -3.435 -3.435 -3.156 -3.245 -3.213 -3.185 -3.128 -3.099 -3.074 -3.045 -2.916 -2.792 -2.679 -2.615

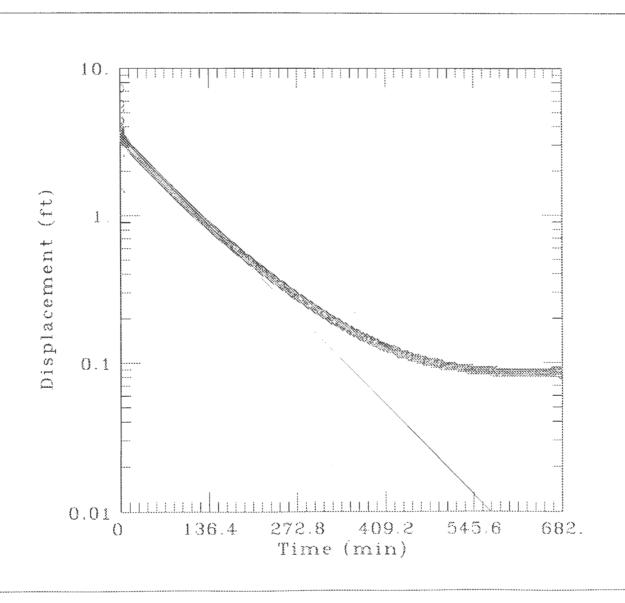
ASH51DR.WK1 PAGE 1 OF 2

0.8333	-2.362	9.752
0.9166	-2.258	9.648
1	-2.166	9.556
1.0833	-2.078	9.468
1.1666	-1.989	9.379
1.25	-1.91	9.3
1.3333	-1.831	9.221
1.4166	-1.755	9.145
1.5	-1.682	9.072
1.5833	-1.613	9.003
1.6666	-1.546	8.936
1.75	-1.483	8.873
1.8333	-1.423	8.813
1.9166	-1.363	8.753
2	-1.334	8.724
2.5	-1.043	8.433
3	-0.812	8.202
3.5	-0.645	8.035
4	-0.502	7.892
4.5	-0.395	7.785
5	-0.309	7.699
5.5	-0.243	7.633
6	-0.196	7.586
6.5	-0.161	7.551
7	-0.129	7.519
7.5	-0.104	7.494
8	-0.085	7.475
8.5	-0.069	7.459
9	-0.063	7.453
9.5	-0.053	7.443
10	-0.047	7.437
11	-0.037	7.427
12	-0.028	7.418
13	-0.025	7.415
14	-0.018	7.408
15	-0.018	7.408
16	-0.015	7.405
17	-0.018	7.408
18	-0.018	7.408
19	-0.015	7.405
20	-0.015	7.405
21	-0.015	7.405
22	-0.012	7.402

ASH51DR.WK1 PAGE 2 OF 2

	SLU	G TEST	TREPORT	FORM	
ENGINEERING	-SCIENCE, INC.	CLIENT:	ACOE	WELL #:	MW-52D
PROJECT: A	SH RI PHASE II		INSPECTOR:	PFM/LB	
LOCATION: SE	EAD ASH		TEST DATE:	7/28-29/93	
WELL AND AQUIF	FER INFORMATION				
WELL POINT (installe	ed):	59.36	WELL SCREEN S	LOT SIZE:	0.01"
WELL CASING INNE	ER DIAMETER:	2.00"	AQUIFER THICK	ENESS:	
BOREHOLE DIAME	TER:		PRODUCT PRES	ENT (Y/N?)	N
STATIC DEPTH TO V		8.25'			
SCREENED INTERV		39.24' 58.61'			
	TO:		om TOC, or taken from installat	ion detail)	
TEST EQUIPMENT	SPECIFICATIONS				
DATA LOGGER BRA		Hermit	TRANSDUCER R	RATING (PSI):	10
INSTRUMENT MOD		1000 C	SLUG/BAILER D	, ,	5.38' x 1.66"
TRANSDUCER BRA	ND:	PTX - 161	SLUG/BAILER V	OLUME:	
TEST INFORMATION	ON				
REFERENCE VALU		0.00	DATA LOGGER	TEST NUMBER:	0 Input 1
REFERENCE POINT			TRANSDUCER		17.0'
STATIC WATER (ST		66 on trans	TRANSDUCER -		0.0024
START TIME:		8:05 pm	<u> </u>	- SCALE:	10.0157
END TIME:		7:30 am	 1	- OFFSET:	-0.0082
STATIC WATER (EN ELAPSED TIME:		-0.08'		- DELAY:	50 msec
ELAPSED TIME: 23.5 hrs (trans) SATURATED SCREEN LENGTH:					
NOTES:	TOP OF PV	C RISER: 626.3	5,	Trans 17.0' Slug 13.7'	
	GROUND S	URFACE 625.30	0'		
	TOP OF SCR			at 3:40 pm — 6.93' DTW in to static at 8:10 pm 9.66' on trans *return to stop test in AM *will let test run all night of	
	POINT OF V	VELL: 568.6	U"		
(ALL DEPTHS RELATIVE	E TO THE TOP OF PVC CASI	NG)	pre stickup = 2.54		
COMMENTS: 2.9	94 - 0.4 = 2.54				
CONVERSION: 2.	.30667 FEET OF WATE	R/PSI			
			BEGINNING EACH TEST	CHIH	
TOO MOST RESE					
			PVC Stickup = 2.76		

RISING HEAD SLUG TEST: MW-52D



DATASET:

ASH52DR.DAT

09/20/93

AQUIFERTYPE:

Unconfined

SOLUTIONMETHOD:

Bouwer-Rice

ESTIMATEDPARAMETERS:

K=6.8992E-06ft/min

y0=3.47ft

TESTDATA:

H0=4.349ft

rc=0.084ft

rw=0.156ft

L-19.4ft

b-367.9ft

H-51.11ft

SE1000C Environmental Logger 07/28 12:18

MONITORING WELL: MW-52D TEST TYPE: RISING HEAD DTW (TOC): 8.25

Unit# 01000 Test 0

Setups: Type Mode I.D.		Input 1: Level F Surface 00000
Reference Linearity Scale factor Offset Delay mSEC		0.000 0.000 10.020 -0.020 50.000
Step 0	07/27/93	20:08:50
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.25 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333 0.4166 0.5 0.5833 0.6666	Input 1 Relative Change (feet) 0.003 -1.432 -5.747 -7.293 -5.272 -4.478 -2.53 -3.814 -4.349 -3.716 -3.055 -3.659 -3.941 -3.561 -3.397 -3.618 -3.561 -3.397 -3.526 -3.529 -3.526 -3.529 -3.522 -3.542 -3.523 -3.526 -3.533 -3.526 -3.533 -3.526 -3.533 -3.526 -3.533 -3.526 -3.534 -3.504 -3.588 -3.577 -3.526 -3.529 -3.542 -3.529 -3.542 -3.542 -3.542 -3.542 -3.542 -3.542 -3.548	Water Level Change from Static (feet) 8.247 9.682 13.997 15.543 13.522 12.728 10.78 12.064 12.599 11.966 11.305 11.909 12.191 11.811 11.647 11.868 11.919 11.776 11.774 11.83 11.827 11.776 11.779 11.802 11.779 11.802 11.773 11.776 11.783 11.776 11.783 11.776 11.784 11.784 11.754 11.754 11.755 11.735
0.6666 0.75	-3.485 -3.479	11.735 11.729

ASH52DR.WK1 PAGE 1 OF 8

0.8333	-3.472	11 722
		11.722
0.9166	-3.463	11.713
1	-3.46	11.71
1.0833	-3.453	11.703
1.1666	-3.447	
		11.697
1.25	-3.441	11.691
1.3333	-3.435	11.685
1.4166	-3.428	11.678
1.5	-3.425	11.675
1.5833	-3.419	11.669
1.6666	-3.412	11.662
1.75	-3.409	11.659
1.8333	-3.403	11.653
1.9166	-3.4	11.65
2	-3.393	11.643
2.5	-3.368	11.618
3	-3.34	11.59
3.5	-3.317	11.567
4	-3.295	11.545
4.5	-3.273	11.523
5	-3.251	11.501
5.5	-3.229	11.479
6	-3.207	11.457
6.5	-3.188	
		11.438
7	-3.169	11.419
7.5	-3.15	11.4
8	-3.131	11.381
8.5	-3.109	11.359
9	-3.09	11.34
9.5	-3.071	11.321
10	-3.052	11.302
12	-2.982	11.232
14	-2.913	11.163
16	-2.846	11.096
18	-2.78	11.03
		10.967
20	-2.717	
22	-2.66	10.91
24	-2.599	10.849
26	-2.543	10.793
28		
	-2.489	10.739
30	-2.435	10.685
32	-2.384	10.634
34	-2.331	10.581
36	-2.283	10.533
38	-2.236	10.486
40	-2.188	10.438
42	-2.144	10.394
44	-2.1	10.35
46	-2.055	10.305
48	-2.014	10.264
50	-1.973	10.223
52	-1.932	10.182
54	-1.894	10.144
56	-1.856	10.106
58	-1.818	10.068
60	-1.78	10.03
62	-1.745	9.995
64	-1.711	9. 9 61
66	-1.676	9.926
		2.020

ASH52DR.WK1 PAGE 2 OF 8

-1 644	9.894
	9.859
	9.828
	9.796
-1.518	9.768
	9.736
	9.704
	9.679
	9.651
	9.622
-1.347	9.597
-1.318	9.568
-1.293	9.543
	9.518
	9.493
	9.47
	9.448
	9.423
-1.151	9.401
-1.129	9.379
	9.357
	9.338
	9.315
	9.296
-1.027	9.277
	9.258
	9.24
	9.221
-0.952	9.202
-0.936	9.186
-0.92	9.17
	9.151
	9.135
	9.119
	9.104
	9.088
	9.072
	9.059
	9.043
-0.781	9.031
-0.765	9.015
-0.752	9.002
-0.74	8.99
-0.74 -0.727	8.99 8 977
-0.727	8.977
-0.727 -0.714	8.977 8.964
-0.727 -0.714 -0.702	8.977 8.964 8.952
-0.727 -0.714 -0.702 -0.689	8.977 8.964 8.952 8.939
-0.727 -0.714 -0.702 -0.689 -0.676	8.977 8.964 8.952 8.939 8.926
-0.727 -0.714 -0.702 -0.689	8.977 8.964 8.952 8.939 8.926 8.917
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654	8.977 8.964 8.952 8.939 8.926
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654	8.977 8.964 8.952 8.939 8.926 8.917
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.882
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632 -0.623	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.882 8.873
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632 -0.623 -0.61	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.882 8.873 8.86
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632 -0.623 -0.61 -0.6	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.882 8.873 8.86 8.85
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632 -0.623 -0.61 -0.6 -0.591	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.882 8.873 8.86 8.85 8.841
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632 -0.623 -0.61 -0.6 -0.591	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.873 8.86 8.85 8.841 8.828
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632 -0.623 -0.61 -0.6 -0.591 -0.578	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.873 8.86 8.85 8.841 8.828 8.822
-0.727 -0.714 -0.702 -0.689 -0.676 -0.667 -0.654 -0.642 -0.632 -0.623 -0.61 -0.6 -0.591	8.977 8.964 8.952 8.939 8.926 8.917 8.904 8.892 8.873 8.86 8.85 8.841 8.828
	-1.644 -1.609 -1.578 -1.546 -1.518 -1.486 -1.454 -1.429 -1.401 -1.372 -1.347 -1.318 -1.293 -1.268 -1.243 -1.22 -1.198 -1.173 -1.151 -1.129 -1.107 -1.088 -1.065 -1.046 -1.027 -1.008 -0.99 -0.971 -0.952 -0.901 -0.885 -0.99 -0.971 -0.952 -0.901 -0.885 -0.822 -0.809 -0.793 -0.793 -0.765 -0.752

ASH52DR.WK1 PAGE 3 OF 8

188	-0.544	8.794
190	-0.534	8.784
192	-0.525	8.775
194	-0.515	8.765
	0.510	
196	-0.509	8.759
198	-0.499	8.749
200	-0.493	8.743
202	-0.483	8.733
204	-0.477	8.727
206	-0.468	8.718
208	-0.461	8.711
	0.455	
210	-0.455	8.705
212	-0.449	8.699
214	-0.439	8.689
	-0.433	8.683
216		
218	-0.426	8.676
220	-0.417	8.667
222	-0.411	8.661
	0.411	
224	-0.404	8.654
226	-0.401	8.651
228	-0.395	8.645
230		8.639
	-0.389	
232	-0.382	8.632
234	-0.376	8.626
236	-0.37	8.62
238	-0.363	8.613
240	-0.357	8.607
242	-0.354	8.604
244	-0.347	8.597
246	-0.344	8.594
248	-0.338	8.588
250	-0.335	8.585
	0.000	
252	-0.328	8.578
254	-0.322	8.572
256	-0.319	8.569
	-0.313	8.563
258		
260	-0.309	8.559
262	-0.303	8.553
264	-0.3	8.55
266	-0.297	8.547
268	-0.29	8.54
270	-0.287	8.537
272	-0.281	8.531
274	-0.278	8.528
276	-0.275	8.525
278	-0.272	8.522
280	-0.268	8.518
282	0.265	8.515
284	-0.262	8.512
	-0.256	8.506
286		
288	-0.253	8.503
290	-0.249	8.499
292	-0.246	8.496
294	-0.243	8.493
296	-0.24	8.49
298	-0.237	8.487
300	-0.23	8.48
302	-0.23	8.48
304	-0.227	8,477
306	-0.224	8.474
300	-0.224	0.474

ASH52DR.WK1 PAGE 4 OF 8

308	-0.221	8.471
310	-0.218	8.468
312	-0.215	8.465
314	-0.211	8.461
316	-0.211	8.461
318	-0.208	8.458
320	-0.205	8.455
322	-0.202	8.452
324	-0.199	8.449
326	-0.196	8.446
328 330	-0.192 -0.192	8.442 8.442
332	-0.192 -0.189	8.439
334	-0.189	8.439
336	-0.186	8.436
338	-0.183	8.433
340	-0.18	8.43
342	-0.177	8.427
344	-0.177	8.427
346	-0.173	8.423
348	-0.173	8.423
350	-0.17	8.42
352	-0.167	8.417
354	−0.167 −0.164	8.417
356 358	-0.164 -0.161	8.414 8.411
360	-0.161 -0.161	8.411
362	-0.158	8.408
364	-0.158	8.408
366	-0.158	8.408
368	-0.154	8.404
370	-0.151	8.401
372	-0.151	8.401
374	-0.148	8.398
376	-0.148	8.398
378	-0.148	8.398
380	-0.145	8.395
382 384	−0.145 −0.142	8.395 8.392
386	-0.142 -0.142	8.392
388	-0.139	8.389
390	-0.139	8.389
392	-0.136	8.386
394	-0.136	8.386
396	-0.136	8.386
398	-0.132	8.382
400	-0.132	8.382
402	-0.129	8.379
404	-0.129	8.379
406	-0.129	8.379
408	-0.126	8.376
410 412	-0.126 -0.126	8.376 8.376
414	-0.128 -0.123	8.373
416	-0.123	8.373
418	-0.123	8.373
420	-0.12	8.37
422	-0.123	8.373
424	-0.12	8.37
426	-0.12	8.37

ASH52DR.WK1 PAGE 5 OF 8

428	-0.117	8.367
430	-0.117	8.367
432	-0.113	8.363
434	-0.113	8.363
436	-0.113	8.363
438	-0.113	8.363
440	-0.113	8.363
442	-0.113	8.363
444	-0.11	8.36
446	-0.11	8.36
448	-0.11	8.36
450	-0.107	8.357
452	-0.107	8.357
454	-0.107	8.357
456	-0.107	8.357
458	-0.104	8.354
460	-0.107	8.357
462	-0.104	8.354
464	-0.104	8.354
466	-0.104	8.354
468	-0.104	8.354
470	-0.101	8.351
472	-0.101	8.351
474	-0.101	8.351
476	-0.101	8.351
478	-0.101	8.351
480	-0.098	8.348
482	-0.101	8.351
484	-0.098	8.348
486	-0.101	8.351
488	-0.098	8.348
490	-0.098	8.348
492	-0.098	8.348
494	-0.098	8.348
496	-0.098	
		8.348
498	-0.094	8.344
500	-0.094	8.344
502	-0.094	8.344
504	-0.094	8.344
506	-0.094	8.344
508	-0.094	8.344
510	-0.094	8.344
512	-0.094	8.344
514	-0.094	8.344
516	-0.094	8.344
518	-0.091	8.341
520	-0.091	8.341
522	-0.091	8.341
524	-0.091	8.341
526	-0.091	8.341
528	-0.091	8.341
530	-0.091	8.341
532	-0.091	8.341
534	-0.091	8.341
536	-0.091	8.341
538	-0.088	8.338
540	-0.088	8.338
542	-0.091	8.341
544	-0.088	8.338
546	-0.088	8.338
340	-0.000	0,338

ASH52DR.WK1 PAGE 6 OF 8

548	-0.088	8.338
550	-0.088	8.338
552	-0.088	8.338
552 554	-0.088	
		8.338
556	-0.088	8.338
558	-0.088	8.338
560	-0.088	8.338
562	-0.088	8.338
564	-0.088	8.338
566	-0.088	8.338
568	-0.088	8.338
570	-0.088	8.338
572	-0.088	8.338
574	-0.088	8.338
57 - 576	-0.085	8.335
578	-0.085	8.335
580	-0.085	8.335
582	-0.088	8.338
584	-0.085	8.335
586	-0.085	8.335
588	-0.085	8.335
590	-0.085	8.335
592	-0.085	8.335
594	-0.085	8.335
596	-0.085	8.335
598	-0.085	8.335
600	-0.085	8.335
602	-0.085	8.335
604	-0.085	8.335
60 4	-0.085	8.335
-		
608	-0.085	8.335
610	-0.085	8.335
612	-0.085	8.335
614	-0.085	8.335
616	-0.085	8.335
618	-0.085	8.335
620	-0.085	8.335
622	-0.085	8.335
624	-0.085	8.335
626	-0.085	8.335
628	-0.085	8.335
630	-0.085	8.335
632	-0.085	8.335
634	-0.085	8.335
636	-0.085	8.335
638	-0.085	8.335
640	-0.085	8.335
642	-0.085	8.335
644	-0.085	8.335
646	-0.085	8.335
648	-0.085	8.335
650	-0.085	8.335
652	-0.085	8.335
654	-0.085	8.335
656	-0.085	8.335
6 58	-0.085	8.335
660	-0.085	8.335
662	-0.085	8.335
664	-0.085	8.335
666	-0.085	8.335
000	5.000	5.505

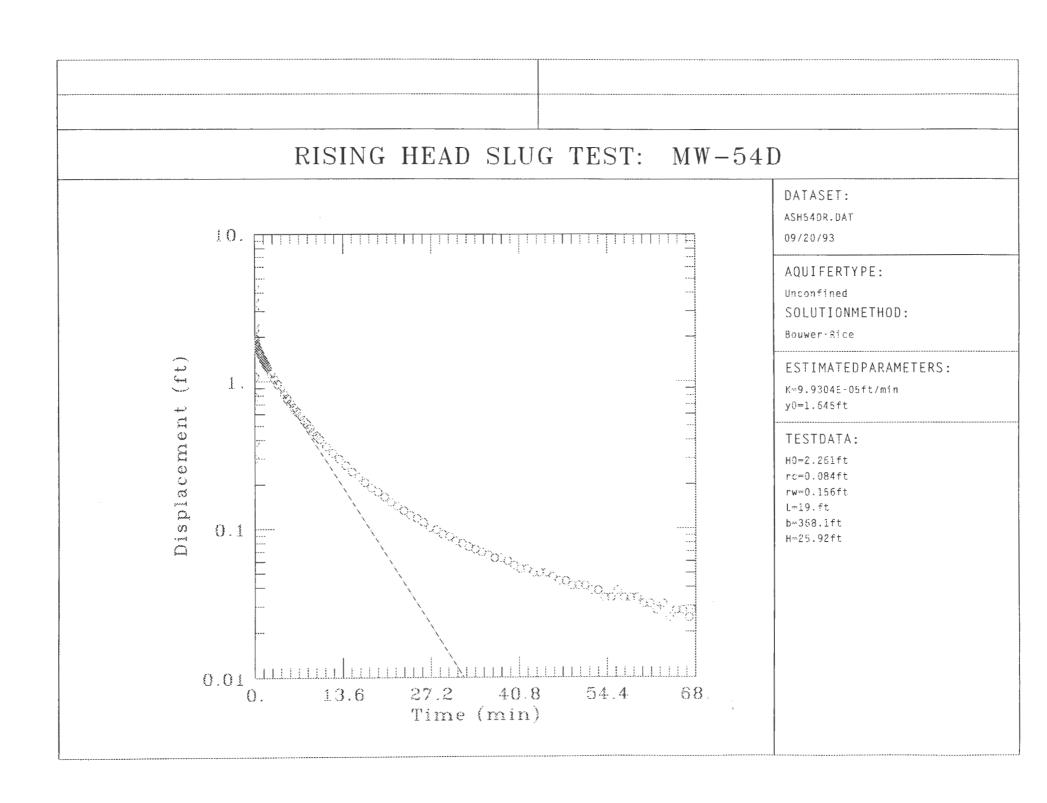
ASH52DR.WK1 PAGE 7 OF 8

668	-0.088	8.338
670	-0.088	8.338
672	-0.088	8.338
674	-0.088	8.338
676	-0.088	8.338
678	-0.088	8.338
680	-0.085	8.335
682	-0.082	8.332

ASH52DR.WK1 PAGE 8 OF 8

	SLU	G TE	EST R	REPORT	FORM	
ENGINEERIN	G-SCIENCE, INC.	CLIENT:		ACOE	WELL #	: MW-53
PROJECT:	ASH RI PHASE II			INSPECTOR:	PFM/LB	
LOCATION:	SEAD			TEST DATE:	7/21/93	
WELL AND AOLI	IFER INFORMATION					
WELL POINT (insta		10.3	35	WELL SCREEN SLO	T SIZE:	0.010"
WELL CASING IN		2.0		AQUIFER THICKNE		-
BOREHOLE DIAM				PRODUCT PRESENT		N
STATIC DEPTH TO	•	9.4	5		, , , ,	_
SCREENED INTER	RVAL – FROM:	_				_
	TO:	-				
		(all depths mea	sured from TO	C, or taken from installation of	detail)	
	NT SPECIFICATIONS			TED A MODILICED DIAT	TNG (BGI)	
DATA LOGGER B	•		•	TRANSDUCER RAT	, ,	-
INSTRUMENT MO			•	SLUG/BAILER DIMI		
TRANSDUCER BR	AND:			SLUG/BAILER VOL	UME:	
TEST INFORMAT				D		
REFERENCE VAL			TO C	DATA LOGGER TES		
TRANSDUCER M			TOC	TRANSDUCER DEP		
STATIC WATER (START):			TRANSDUCER – LI		
START TIME: END TIME:				•	CALE: FFSET:	
STATIC WATER (END):				ELAY:	
ELAPSED TIME:				SATURATED SCREE		
NOTES:	TOP OF PV	C RISER:	639.41'	0.9	9 feet of water - Not E	nough
	GROUND SI	JRFACE	637.00'	N	O SLUG TEST POSSI	BLE
	TOP OF SCR		633.00'			
	BOTTOM O	F SCREE	629.00'			
	POINT OF W	ÆLL:	629.50'			
(ALL DEPTHS RELATI	VE TO THE TOP OF PVC CASI	NG)				
	2.30667 FEET OF WATE SET THE REFERENCE V	•	PR TO BEGI	NNING EACH TEST!!!!	!	

	SLUG	TEST]	REPORT	FORM	
ENGINEERING-S	CIENCE, INC. CL	IENT:	ACOE	WELL #	: MW-54D
	RI PHASE II		INSPECTOR:	PFM/KKS/ES	
LOCATION: SEAD	ASH		TEST DATE:	7/24/93	
WELL AND AQUIFER	INFORMATION	A 400 A 400 A 400 A			
WELL POINT (installed):		34.99'	WELL SCREEN SI	LOT SIZE:	0.01"
WELL CASING INNER D	IAMETER:	2.00"	AQUIFER THICK	NESS:	_
BOREHOLE DIAMETER	k:	3.78"	PRODUCT PRESE	ENT (Y/N?)	N
STATIC DEPTH TO WAT	TER:	9.07	_		
SCREENED INTERVAL	- FROM:	15.44'			
	TO:	34.44	 FOC, or taken from installation	4-4-11)	
		pins measured from 1	OC, or taken from installation	on detail)	
TEST EQUIPMENT SP			mp + Map / Acc p p	ATTINIO (DGI)	10/00
DATA LOGGER BRAND): 	Hermit	TRANSDUCER RA	, ,	10 (20 max)
INSTRUMENT MODEL:		1000 C PTX - 161	_ SLUG/BAILER DI SLUG/BAILER VO		5.38' x 1.66"
TRANSDUCER BRAND:		P1X - 161	SLUG/BAILER VC	DLUME:	
TEST INFORMATION					
REFERENCE VALUE:	0.00		DATA LOGGER T		0
REFERENCE POINT:	SURFACE LEVEL IN		TRANSDUCER DI		18'
STATIC WATER (START			_ TRANSDUCER -	SCALE:	
START TIME:	11:1		-	OFFSET:	0082
END TIME: STATIC WATER (END):				DELAY:	50 msec
ELAPSED TIME:	Test D		_ SATURATED SCR		
NOTES:	TOP OF PVC RIS			Slug bottom 14.6' Transducer 18' 11:08 - 9.34' trans - 8.3 Begin Test 11:15	36'
				12:00 - 9.41 trans - 0. 12:06 - trans - 0.05' 12:13 - trans - 0.4'	06'
	TOP OF SCREEN:	623.60'			
	BOTTOM OF SCR	.EE: 588.10'			
	POINT OF WELL:	588.00'			
(ALL DEPTHS RELATIVE TO T	_	200,00	PVC stickup: 2.14		
COMMENTS					
COMMENTS:					
	67 FEET OF WATER/PSI				
YOU MUST RESET TO	HE REFERENCE VALU	E PRIOR TO BEC	GINNING EACH TEST!	!!!!	



SE1000C Environmental Logger 07/22 21:56

MONITORING WELL: MW-54D TEST TYPE: RISING HEAD DTW (TOC): 9.25

Unit# 01000 Test 2

Setups: Type Mode I.D.		Input 1: Level F Surface 00000
Reference Linearity Scale factor Offset Delay mSEC		0,000 0,000 10,020 -0,010 50,000
Step 0	07/21/93	17:23:16
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.3333 0.4166 0.5 0.5833 0.6666 0.75	Input 1 Relative Change (feet) -4.396 -4.431 -0.3 -0.784 -3.653 -2.444 -0.385 -1.954 -3.064 -1.673 -1.075 -2.261 -1.689 -1.942 -1.799 -1.853 -1.806 -1.809 -1.787 -1.78 -1.771 -1.764 -1.755 -1.749 -1.733 -1.726 -1.72 -1.711 -1.679 -1.647 -1.559	Water Level Change from Static (feet) 13.646 13.681 9.55 10.034 12.903 11.694 9.635 11.204 12.314 10.923 10.325 11.511 10.939 11.192 11.049 11.103 11.056 11.059 11.037 11.03 11.021 11.014 11.005 10.999 10.989 10.983 10.976 10.97 10.961 10.929 10.897 10.866 10.837 10.809

ASH54DR.WK1 PAGE 1 OF 3

0.8333	4.504	40.704
	-1.534	10.784
0.9166	-1.508	10.758
1	-1.48	10.73
1.0833	-1.458	10.708
1.1666	-1.432	
		10.682
1.25	-1.41	10.66
1.3333	-1.388	10,638
1.4166	-1.366	10.616
1.5	-1.344	10.594
1.5833	-1.325	10.575
1.6666	-1.306	10.556
1.75	-1.284	10.534
1.8333	-1.265	10.515
1.9166	-1.246	10.496
2	-1.227	10.477
2.5	-1.122	10.372
	-1.122	
. 3	-1.037	10.287
3.5	-0.958	10.208
4	-0.888	10.138
=		
4.5	-0.819	10.069
5	-0.762	10.012
5.5	-0.711	9.961
6	-0.664	9.914
6.5	-0.623	9.873
7	-0.581	9.831
7.5	-0.547	9.797
8	-0.515	9.765
8.5	-0.483	9.733
9	-0.455	9.705
9.5	-0.427	9.677
10	-0.404	
		9.654
11	-0.36	9.61
12	-0.325	9.575
13	-0.297	9.547
14	-0.268	9.518
15	-0.243	9.493
16	-0.224	9.474
17	-0.205	9.455
18	-0.189	9.439
19	-0.177	9.427
20	-0.164	9.414
21	-0.151	9.401
	-0.142	
22		9.392
23	-0.132	9.382
24	-0.123	9.373
25	-0.117	9.367
26	-0.11	9.36
27	-0.101	9.351
28	-0.098	9.348
29	-0.091	9.341
30	-0.088	9.338
31	-0.082	9.332
32	-0.079	9.329
33	-0.075	9.325
34	-0.072	9.322
35	-0.069	9.319
36	-0.066	9.316
37	-0.063	9.313
38	-0.063	9.313

ASH54DR.WK1 PAGE 2 OF 3

39	-0.06	9.31
40	-0.056	9.306
41	-0.053	9.303
42	-0.053	9,303
43	-0.05	9.3
44	-0.05	9.3
45	-0.05	9.3
46	-0.047	9.297
47	-0.044	9.294
48	-0.044	9.294
49	-0.041	9.291
50	-0.041	9.291
51	-0.041	9.291
52	-0.038	9.288
53	-0.038	9.288
54	-0.034	9.284
55	-0.034	9.284
56	-0.038	9.288
57	-0.034	9.284
58	-0.034	9.284
59	-0.034	9.284
60	-0.031	9.281
61	-0.031	9.281
62	-0.028	9.278
63	-0.031	9.281
64	-0.025	9.275
65	-0.028	9.278
66	-0.028	9.278
67	-0.025	9.275
68	-0.028	9.278

ASH54DR.WK1 PAGE 3 OF 3

SE1000C Environmental Logger 07/24 21:36

MONITORING WELL: MW-54D TEST TYPE: RISING HEAD (TEST 2) DTW (TOC): 9.07

Unit# 01000 Test 0

<u>Setups:</u> Type Mode I.D.		Input 1: Level F Surface 00000
Reference Linearity Scale factor Offset Delay mSEC		0.000 0.000 10.020 -0.010 50.000
Step 0	07/24/93	11:16:39
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.15 0.1666 0.1833 0.15 0.1666 0.1833 0.25 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3166 0.3333 0.4166 0.5 0.5833 0.6666	Input 1 Relative Change (feet) -1.679 -7.619 -9.125 -2.631 -2.865 -5.68 -2.966 -2.087 -4.725 -3.937 -2.486 -3.729 -3.558 -3.371 -3.466 -3.397 -3.359 -3.333 -3.314 -3.295 -3.276 -3.261 -3.242 -3.226 -3.213 -3.197 -3.185 -3.169 -3.099 -3.036 -2.973 -2.856	Water Level Change from Static (feet) 10.749 16.689 18.195 11.701 11.935 14.75 12.036 11.157 13.795 13.007 11.556 12.799 12.628 12.441 12.536 12.467 12.444 12.429 12.312 12.296 12.331 12.312 12.296 12.283 12.267 12.255 12.239 12.169 12.106 12.043 11.986
0.75	2.000	11.926

ASH54DR2.WK1 PAGE 1 OF 3

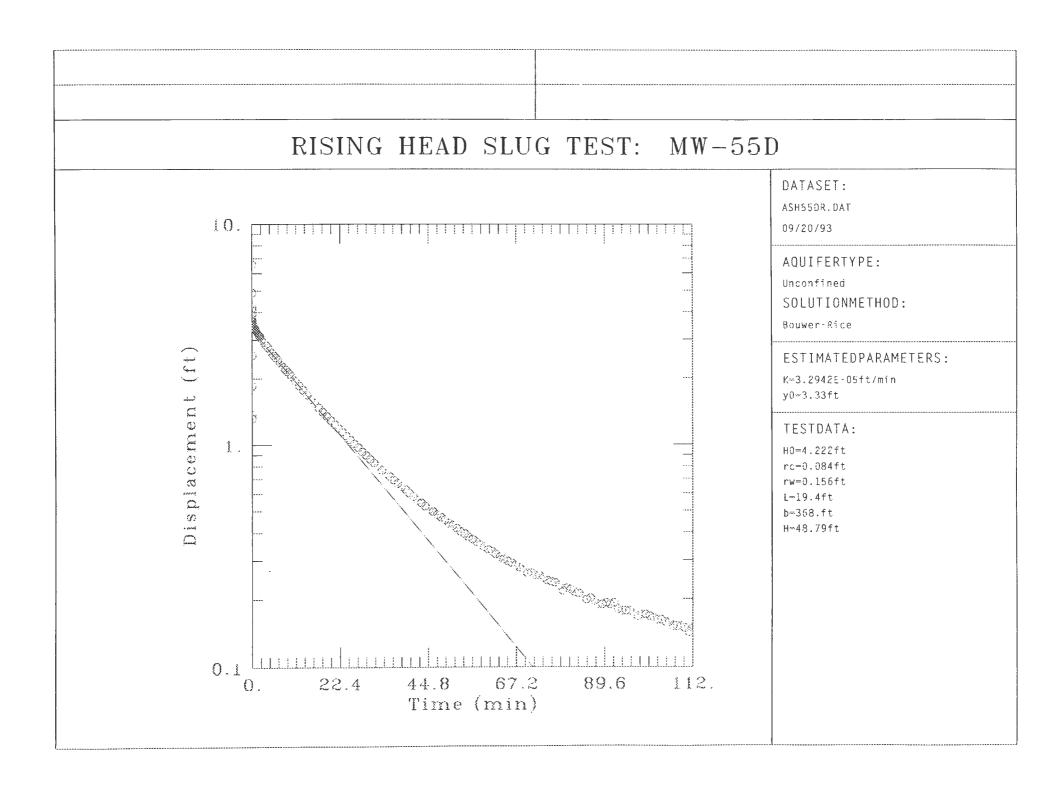
0.000	0.000	11 070
0.8333	-2.802	11.872
0.9166	-2.748	11.818
1	-2.698	11.768
1.0833	-2.647	11.717
1.1666	-2.599	11.669
1.25	-2.552	11.622
1.3333	-2.511	11.581
1.4166	-2.467	11.537
1.5	-2.426	11.496
1.5833	-2.388	11.458
1.6666	-2.346	11.416
1.75	-2.309	11.379
1.8333	-2.271	11.341
1.9166	-2.236	11.306
2	-2.198	11.268
2.5	-2.005	11.075
3	-1.834	10.904
3.5	-1.689	10.759
4	-1.556	10.626
_		
4.5	-1.439	10.509
5	-1.331	10.401
5.5	-1.236	10.306
	-1.151	10.221
6		
6.5	-1.075	10.145
7	-1.005	10.075
7.5	-0.942	10.012
	-0.882	
8		9.952
8.5	-0.828	9.898
9	-0.778	9.848
9.5	-0.737	9.807
10	-0.692	9.762
11	-0.619	9.689
12	-0.556	9.626
13	-0.499	9.569
14	-0.455	9.525
15	-0.414	9.484
16	-0.379	9.449
17	-0.347	9.417
18	-0.319	9.389
19	-0.294	9.364
20	-0.272	9.342
21	-0.256	9.326
22	-0.237	9.307
23	-0.224	9.294
24	-0.208	9.278
25	-0.196	9.266
26	-0.183	9.253
27	-0.177	9.247
28	-0.167	9.237
29	-0.154	9.224
30	-0.148	9.218
31	-0.142	9.212
32	-0.136	9.206
33	-0.129	9.199
34	-0.123	9.193
3 5	-0.117	9.187
36	-0.113	9.183
37	-0.107	9.177
38	-0.104	9.174

ASH54DR2.WK1 PAGE 2 OF 3

39	-0.094	9.164
40	-0.088	9.158
41	-0.088	9.158
42	-0.072	9.142
43	-0.066	9.136
44	-0.069	9.139
45	-0.063	9.133
46	-0.06	9.13
47	-0.06	9.13
48	-0.06	9.13
49	-0.053	9.123
50	-0.056	9.126
51	-0.05	9.12
52	-0.047	9.117
53	-0.047	9.117
54	-0.05	9.12
55	-0.05	9.12
56	-0.047	9.117
57	-0.044	9.114
58	-0.044	9.114
59	-0.044	9.114
60	-0.044	9.114
61	-0.041	9.111

ASH54DR2.WK1 PAGE 3 OF 3

SLUG TEST REPORT FORM					
ENGINEERING-SC	IENCE, INC. CLIENT	: A	ACOE	WELL #:	MW-55D
	PHASE II		INSPECTOR:	PFM/KKS/ES	
LOCATION: SEAD			TEST DATE:	7/24/93	
WELL AND ACTUEED !	NEODWATION				
WELL AND AQUIFER II WELL POINT (installed):		3.18'	WELL SCREEN SLO	OT SIZE:	0.01"
WELL FOINT (installed): WELL CASING INNER DIA		.00"	AQUIFER THICKN		-
BOREHOLE DIAMETER:		.78"	PRODUCT PRESEN		N
STATIC DEPTH TO WATE		0 = 8.98	I ROBOUT TREBE	12 (2/21)	
SCREENED INTERVAL -		2.24			_
	TO: 5	7.64			
	(all depths m	easured from TOC	c, or taken from installation	detail)	
TEST EQUIPMENT SPE				minic (nov)	46
DATA LOGGER BRAND:		ermit	TRANSDUCER RA	• •	10
INSTRUMENT MODEL:		00 C	SLUG/BAILER DIM		5.38' x 1.66"
TRANSDUCER BRAND:	PTX	<u> </u>	SLUG/BAILER VOI	LUME:	
TEST INFORMATION					
REFERENCE VALUE:	0.00		DATA LOGGER TE		1
REFERENCE POINT:	SURFACE LEVEL IN WEI	<u> </u>	TRANSDUCER DE		17'
STATIC WATER (START)			TRANSDUCER - L		.0024
START TIME:	2:35			SCALE:	10.0157
END TIME:	4:05 -0.13		1	OFFSET: DELAY:	0082 50 msec
STATIC WATER (END): ELAPSED TIME:	Test Done		SATURATED SCRI		JU IIISCC
(ALL DEPTHS RELATIVE TO T	TOP OF PVC RISER: GROUND SURFACE TOP OF SCREEN: BOTTOM OF SCREE: POINT OF WELL: HE TOP OF PVC CASING)	639.16' 636.80' 601.20' 581.20' 581.10'		Slug bottom 14.5' Transducer 17.0' 12:42 - 9.38' - Static Wa 7.37 - Transduce 12:50 - 7.41 - Transduce 9.34 - Static Wat Slug in - 12:55 pm at 2:30 - 9.16 - Static 7.61 - Transduce at 3:25 - 0.32 - transduce at 3:50 pm - 9.36 - 0.17 to at 4:10 pm - 9.32 - 0.13 to	r r der er, 9.47 cransducer
(ALL DEPTHS RELATIVE TO TH	HE TOP OF PVC CASING)				
COMMENTS:					
CONVERSION: 2.30667	FEET OF WATER/PSI				
YOU MUST RESET TH	E REFERENCE VALUE PR	IOR TO BEGI	NNING EACH TEST!!	!!!	



SE1000C Environmental Logger 07/22 21:58

MONITORING WELL: MW-55D TEST TYPE: RISING HEAD DTW (TOC): 9.39

Unit# 01000 Test 3

Setups: Type Mode I.D.		Input 1: Level F Surface 00000
Reference Linearity Scale factor Offset Delay mSEC		0.000 0.000 10.020 -0.010 50.000
Step 0	07/22/93	11:35:39
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.25 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.5 0.5833 0.6666 0.75	Input 1 Relative Change (feet) -10.472 -1.372 -1.318 -6.585 -3.719 -1.853 -4.899 -4.216 -2.549 -4.08 -4.222 -3.906 -3.643 -3.688 -3.488 -3.608 -3.567 -3.555 -3.542 -3.533 -3.555 -3.542 -3.533 -3.517 -3.504 -3.498 -3.488 -3.488 -3.488 -3.488 -3.488 -3.498 -3.488 -3.498 -3.488 -3.498 -3.488 -3.498 -3.498 -3.498 -3.498 -3.498 -3.498 -3.498 -3.498	Water Level Change from Static (feet) 19.862 10.762 10.708 15.975 13.109 11.243 14.289 13.606 11.939 13.47 13.612 13.296 13.033 13.078 12.878 12.998 12.976 12.957 12.945 12.932 12.913 12.907 12.888 12.879 12.771 12.749
01.0	0.000	12.770

ASH55DR.WK1 PAGE 1 OF 4

0.8333	-3.34	12.73
0.9166	-3.318	12.708
1	-3.302	12.692
1.0833	-3.286	12.676
	-3.267	12.657
1.1666		
1.25	-3.254	12.644
1.3333	-3.232	12.622
1.4166	-3.213	12.603
1.5	-3.197	12.587
1.5833	-3.182	12.572
1.6666	-3.172	12.562
1.75	-3.15	12.54
1.8333	-3.134	12.524
1.9166	-3.118	12.508
2	-3.106	12.496
2.5	-3.008	12.398
3	-2.925	12.315
3.5	-2.84	12.23
		12.16
4	-2.77	
4.5	-2.694	12.084
5	-2.622	12.012
5.5	-2.552	11.942
6	-2.492	11.882
6.5	-2.426	11.816
7	-2.365	11.755
7.5	-2.309	11.699
8	-2.255	11.645
8.5	-2.198	11.588
9	-2.144	11.534
9.5	-2.093	11.483
10	-2.043	11.433
11	-1.945	11.335
12	-1.853	11.243
13	-1.771	11.161
14	-1.689	11.079
15	-1.61	11
16	-1.543	10.933
17	-1.473	10.863
18	-1.41	10.8
19	-1.35	10.74
20	-1.293	10.683
21	-1.239	10.629
22	-1.189	10.579
23	-1.145	10.535
24	-1.097	10.487
25	-1.053	10.443
26	-1.009	10.399
27	-0.971	10.361
28	-0.929	10.319
29	-0.895	10.285
30	-0.86	10.25
31	-0.828	10.218
32	-0.8	10.19
33	-0.765	10.155
34	-0.74	10.13
35	-0.718	10.108
36	-0.692	10.082
37	-0.667	10.057
38	-0.645	10.035
-	3.0.0	

ASH55DR.WK1 PAGE 2 OF 4

39	0.000	40.010
	-0.626	10.016
40	-0.601	9.991
41	-0.582	9.972
42	-0.559	9.949
43	-0.544	9.934
44	-0.525	9.915
45	-0.509	9.899
46	-0.496	9.886
47	-0.48	9.87
48	-0.468	9.858
49	-0.455	9.845
50	-0.439	9.829
51	-0.43	9.82
52	-0.417	9.807
53	-0.404	9.794
54	-0.395	9.785
55	-0.382	9.772
56	-0.373	9.763
57	-0.363	9.753
58	-0.351	9.741
59		
	-0.344	9.734
60	-0.335	9.725
61	-0.329	9.719
62	-0.319	9.709
63	-0.309	9.699
64	-0.303	9.693
65	-0.297	9.687
66	-0.291	9.681
67	-0.284	9.674
68	-0.278	9.668
69	-0.268	9.658
70	-0.262	9.652
71	-0.262	9.652
72	-0.256	9.646
73	-0.256	9.646
74	-0.249	9.639
75	-0.243	9.633
76		9.63
	-0.24	
77	-0.237	9.627
78	-0.23	9.62
79	-0.218	9.608
80	-0.224	9.614
81	-0.221	9.611
82	-0.215	9.605
83	-0.212	9.602
84	-0.205	9.595
85	-0.199	9.589
86	-0.202	9.592
87	-0.196	9.586
88	-0.189	9.579
89	-0.189	9.579
90	-0.192	9.582
91	-0.189	9.579
92	-0.192	9.582
	-0.18	9.57
93		
94	-0.177	9.567
95	-0.177	9.567
96	-0.177	9.567
97	-0.17	9.56
98	-0.167	9.557

ASH55DR.WK1 PAGE 3 OF 4

99	-0.17	9.56
100	-0.17	9.56
101	-0.167	9.557
102	-0.164	9.554
103	-0.161	9.551
104	-0.161	9.551
105	-0.158	9.548
106	-0.158	9.548
107	-0.151	9.541
108	-0.151	9.541
109	-0.151	9.541
110	-0.148	9.538
111	-0.142	9.532
112	-0.148	9.538

ASH55DR.WK1 PAGE 4 OF 4

SE1000C Environmental Logger 07/24 21:40

MONITORING WELL: MW-55D TEST TYPE: RISING HEAD (TEST 2) DTW (TOC): 8.98

Unit# 01000 Test 1

Reference Linearity O.000	Setups: Type Mode I.D.		Input 1: Level F Surface 00000
Input 1 Relative Change from Change (min) (feet) (feet) (feet) 0 -3.34 12.32 12.209	Linearity Scale factor Offset		0.000 10.020 -0.010
Elapsed Time (min) (feet) (fee	Step 0	07/24/93	14:34:25
	(min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.25 0.2166 0.2333 0.25 0.2666 0.2833 0.31 0.3166 0.3333 0.4166 0.3333	Relative Change (feet) -3.34 -3.229 -3.937 -3.684 -3.52 -3.782 -3.653 -3.583 -3.7 -3.64 -3.589 -3.621 -3.596 -3.567 -3.542 -3.51 -3.52 -3.507 -3.501 -3.495 -3.485 -3.479 -3.444 -3.438 -3.409 -3.381 -3.355	Change from Static (feet) 12.32 12.209 12.917 12.664 12.5 12.762 12.633 12.563 12.569 12.576 12.576 12.547 12.522 12.49 12.5 12.487 12.481 12.475 12.465 12.459 12.452 12.446 12.444 12.434 12.427 12.424 12.438 12.389 12.361 12.335

ASH55DR2.WK1 PAGE 1 OF 3

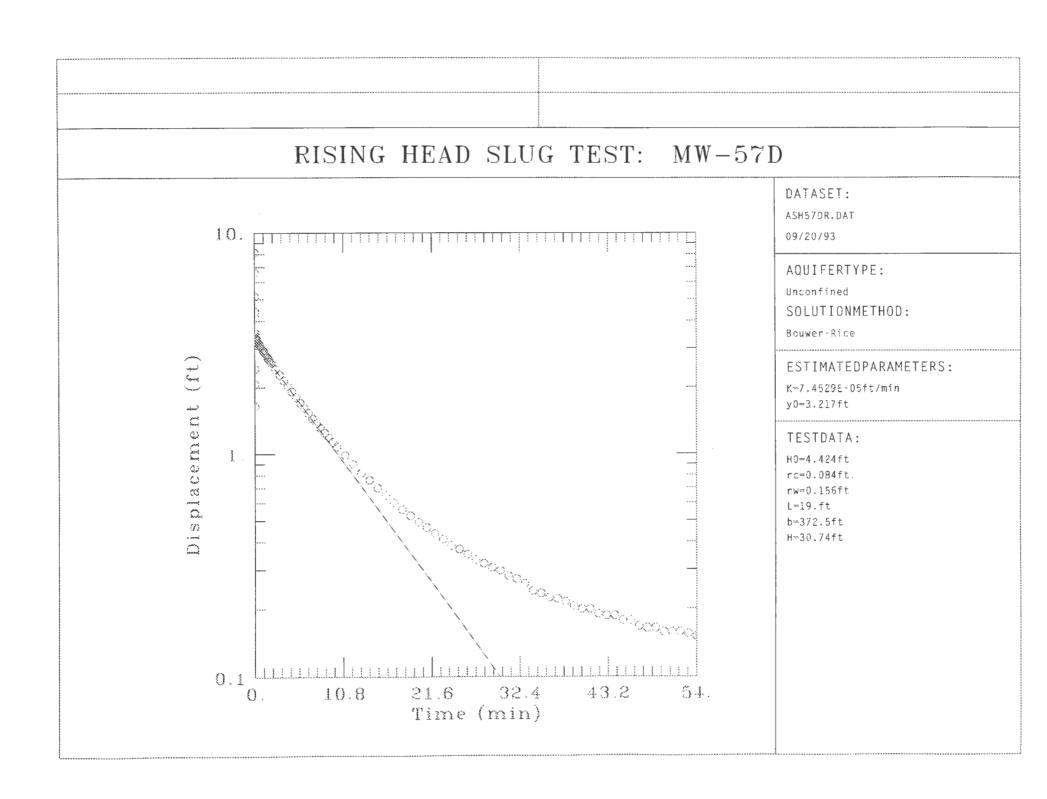
0.8333	-3.286	12.266
0.9166	-3.264	12.244
1	-3.242	12.222
1.0833		
1.1666	-3.219	12.199
	-3.2	12.18
1.25	-3.178	12.158
1.3333	-3.156	12.136
1.4166	-3.137	12.117
1.5	-3.118	12.098
1.5833	-3.096	12.076
1.6666	-3.077	12.057
1.75	-3.058	12.038
1.8333	-3.039	12.019
1.9166	-3.02	12
2	-3.001	11.981
2.5	-2.894	11.874
3	-2.796	11.776
3.5	-2.701	11.681
4	-2.612	11.592
4.5	-2.53	11.51
5	-2.451	11.431
5.5	-2.372	11.352
6	-2.299	11.279
6.5	-2.229	11.209
7	-2.25 -2.16	11.209
7.5	-2.097	11.077
8	-2.033	11.013
8.5	-1.973	10.953
9	-1.913	10.893
9.5	-1.859	10.839
10	-1.806	10.786
11	-1.704	10.684
12	-1.613	10.593
13	-1.524	10.504
14	-1.445	10.425
15	-1.369	10.349
16	-1.299	10.279
17	-1.233	10.213
18	-1.173	10.153
19	-1.116	10.096
20	-1.062	10.042
21	-1.009	9.989
22	-0.964	9.944
23	-0.917	9.897
24	-0.872	9.852
25	-0.831	9.811
26	-0.797	9.777
27	-0.762	9.742
28	-0.727	9.707
29	-0.699	9.679
30	-0.67	9.65
31	-0.638	9.618
32	-0.613	9.593
33	-0.591	9.571
34	-0.566	9.546
35	-0.544	9.524
36	-0.521	9.501
37	-0.502	9.482
38	-0.487	9.467

ASH55DR2.WK1 PAGE 2 OF 3

20	0.404	0.444
39	-0.464	9.444
40	-0.449	9.429
41	-0.433	9.413
42	-0.42	9.4
43	-0.404	9.384
44	-0.389	9.369
45	-0.379	9.359
	0.075	
46	-0.366	9.346
47	-0.351	9.331
48	-0.341	9.321
49	-0.332	9.312
50	-0.322	9.302
51	-0.309	9.289
52	-0.303	9.283
53	-0.297	9.277
54		
	-0.287	9.267
55	-0.278	9.258
56	-0.268	9.248
57	-0.262	9.242
58	-0.259	9.239
59	-0.249	9.229
60	-0.243	9.223
61	-0.24	9.22
	-0.234	9.214
62		
63	-0.227	9.207
64	-0.221	9.201
65	-0.215	9.195
66	-0.211	9.191
67	-0.205	9.185
68	-0.202	9.182
69	-0.199	9.179
70	-0.196	9.176
71	-0.189	9.169
72	-0.186	9.166
73	-0.186	9.166
74	-0.18	9.16
75	-0.173	9.153
76	-0.173	9.153
77	-0.167	9.147
78	-0.167	9.147
79	-0.167	9.147
80	-0.164	9.144
81	-0.161	9.141
82	-0.158	9.138
83	-0.151	9.131
84	-0.148	9.128
85	-0.151	9.131
86	-0.148	9.128
87	-0.142	9.122
88	-0.145	9.125
89	-0.142	9.122
90	-0.142	9.122
91	-0.142	9.122
92	-0.136	9.116

ASH55DR2.WK1 PAGE 3 OF 3

	SLU	G TE	EST R	EPORT	FORM	
ENGINEERI	NG-SCIENCE, INC.			ACOE	WELL #:	MW-56
PROJECT:	ASH RI PHASE II			INSPECTOR:	PFM/LB	
LOCATION:	SEAD			TEST DATE:	7/23/93	
WELL AND AO	UIFER INFORMATION					
WELL POINT (in		6.8	88	WELL SCREEN SI	OT SIZE:	.010"
	NNER DIAMETER:	2.0		AQUIFER THICK		
BOREHOLE DIA		8.5		PRODUCT PRESE		N
STATIC DEPTH	•	4.8				
	ERVAL – FROM:	4.8	81			
	TO:	6.:		·		
		(all depths me	asured from TOC	C. or taken from installation	on detail)	
	ENT SPECIFICATIONS			TO AMODILATE D	AETING (DOL)	
DATA LOGGER	-	Her		TRANSDUCER RA	, ,	10 (20 max)
INSTRUMENT M TRANSDUCER I		100 PTX		SLUG/BAILER DI SLUG/BAILER VO		-
TRANSDUCER	SKAND:	PIX	. 101	SLUG/BAILER VC	DLUME:	
TEST INFORM						
REFERENCE VA		0.00		DATA LOGGER T		
REFERENCE PO			}	TRANSDUCER DI		
STATIC WATER	(START):			TRANSDUCER -		.0024
START TIME: END TIME:	· · · · ·			1	SCALE: OFFSET:	<u>10.0157</u> 0082
STATIC WATER	(END):			1	DELAY:	50 msec
ELAPSED TIME	.:	_		SATURATED SCR		
	· · · · · · · · · · · · · · · · · · ·					
NOTES:	TOP OF PV	CRISER:	630.51'		2' feet of water - Not End	ough
						_
	GROUND ST	IREACE	627.90'		NO SLUG TEST POSSIB	LE
	OROGIND BY	ora neb	027.50			
	TOP OF SCR	EEN:	625.70'			
	воттом о	F SCREE	624.20'			
	POINT OF W	/ELL:	623.70'			
(ALL DEPTHS RELA	TIVE TO THE TOP OF PVC CASI	NG)				
COMMENTS:						· · · · · · · · · · · · · · · · · · ·
	N. 2 20447 EEET OF WATE	D/DÇT				
	N: 2.30667 FEET OF WATE					
YOU MUST R	RESET THE REFERENCE V	ALUE PRI	OR TO BEGI	NNING EACH TEST	!!!!!	



SE1000C Environmental Logger 07/23 15:51

MONITORING WELL: MW-57D TEST TYPE: RISING HEAD DTW (TOC): 4.35

Unit# 01000 Test 2

<u>Setups:</u> Type Mode I.D.		Input 1: Level F Surface 00000
Reference Linearity Scale factor Offset Delay mSEC		0.000 0.000 10.020 0.010 50.000
Step 0	07/23/93	12:36:23
Elapsed Time (min) 0 0.0033 0.0066 0.01 0.0133 0.0166 0.02 0.0233 0.0266 0.03 0.0333 0.05 0.0666 0.0833 0.1 0.1166 0.1333 0.15 0.1666 0.1833 0.2 0.2166 0.2333 0.25 0.2666 0.2833 0.25 0.2666 0.2833 0.3 0.3166 0.3333 0.4166 0.5 0.5833 0.6666	Input 1 Relative Change (feet) -0.006 -4.219 -8.135 -6.601 -2.068 -1.641 -5.142 -5.089 -2.422 -2.422 -4.424 -3.273 -3.384 -3.517 -3.327 -3.422 -3.355 -3.362 -3.346 -3.333 -3.321 -3.308 -3.298 -3.298 -3.299 -3.279 -3.27 -3.261 -3.251 -3.245 -3.159 -3.118 -3.08	Water Level Change from Static (feet) 4.356 8.569 12.485 10.951 6.418 5.991 9.492 9.439 6.772 6.772 8.774 7.623 7.734 7.867 7.677 7.772 7.705 7.712 7.696 7.683 7.671 7.658 7.648 7.639 7.629 7.62 7.611 7.601 7.595 7.55 7.509 7.468 7.43
0.75	-3.045	7.395

ASH57DR.WK1 PAGE 1 OF 3

0.000	0.011	7.004
0.8333	-3.011	7.361
0.9166	-2.976	7.326
1	-2.941	7.291
1.0833	-2.906	7.256
1.1666		
	-2.875	7.225
1.25	-2.843	7.193
1.3333	-2.811	7.161
1.4166	-2.783	7.133
1.5		
	-2.751	7.101
1.5833	-2.72	7.07
1.6666	-2.691	7.041
1.75	-2.663	7.013
1.8333	-2.634	6.984
1.9166	-2.606	6.956
2	-2.58	6.93
2.5	-2.419	6.769
3	-2.277	6.627
3.5	-2.147	6.497
4	-2.024	6.374
4.5	-1.913	6.263
5	-1.806	6.156
_	-1.707	
5.5		6.057
6	-1.619	5.969
6.5	-1.534	5.884
7	-1.451	5.801
7.5	-1.379	5.729
8	-1.312	5.662
8.5	-1.246	5.596
9	-1.186	5.536
9.5	-1.132	5.482
10	-1.078	5.428
11	-0.986	5.336
12	-0.898	5.248
13	-0.819	5.169
14	-0.759	5.109
15	-0.699	5.049
16	-0.648	4.998
17	-0.6	4.95
18	-0.559	4.909
19	-0.525	
		4.875
20	-0.49	4.84
21	-0.464	4.814
22	-0.436	4.786
23	-0.411	4.761
24	-0.385	4.735
25	-0.37	4.72
26	-0.351	4.701
27	-0.332	4.682
28	-0.319	4.669
29	-0.306	4.656
30	-0.297	4.647
31	-0.281	4.631
32	-0.272	4.622
33	-0.259	4.609
34	-0.24	4.59
35	-0.234	4.584
36	-0.224	4.574
37	-0.221	4.571
38	-0.215	4.565
00	-0,213	4.505

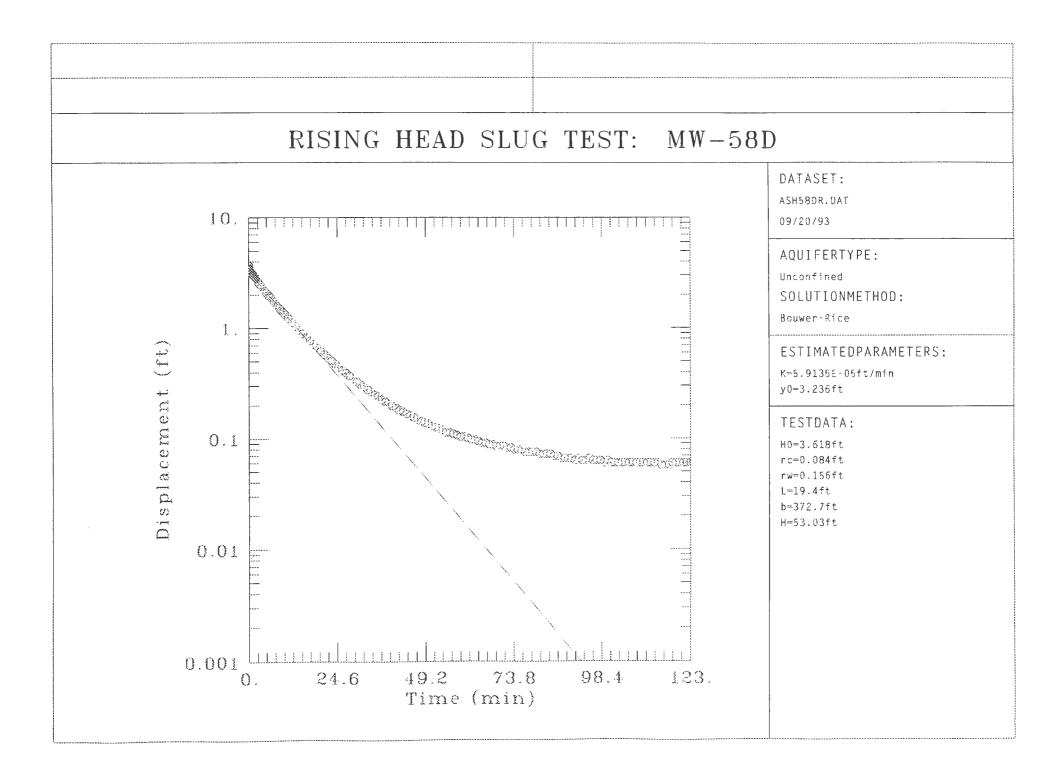
ASH57DR.WK1 PAGE 2 OF 3

-0.205	4.555
-0.199	4.549
-0.199	4.549
-0.189	4.539
-0.186	4.536
-0.186	4.536
-0.177	4.527
-0.177	4.527
-0.167	4.517
-0.164	4.514
-0.164	4.514
-0.158	4.508
-0.158	4.508
-0.158	4.508
-0.155	4.505
-0.151	4.501
	-0.199 -0.199 -0.189 -0.186 -0.186 -0.177 -0.177 -0.167 -0.164 -0.158 -0.158 -0.158 -0.155

ASH57DR.WK1 PAGE 3 OF 3

		SLU	GT	EST F	REPORT	FORM		
ENGINEERIN	IG-SCII	ENCE, INC.	CLIENT	:	ACOE	WELL	#:MW-57D	
PROJECT:	ASH RI I				INSPECTOR:	PFM/LB		
LOCATION:	SEAD AS	Н			TEST DATE:	7/23/93		
WELL AND AQU	IFER IN	ORMATION						
WELL POINT (insta	alled):	_	35	5.09	WELL SCREEN SLO	OT SIZE:	0.010"	
WELL CASING IN	NER DIAM	METER:	2.	.00"	AQUIFER THICKN	ESS:		
BOREHOLE DIAM	METER:			78"	PRODUCT PRESEN	NT (Y/N?)	N	
STATIC DEPTH TO	O WATER:	:	4	.35'	_			
SCREENED INTER	RVAL – FI	ROM:		5.20'	-			
		TO:		20'	C, or taken from installation	detail)		
TEGT FOLLIBATE	ATC CRECT		(ап перша ш	casujeu nom 10	C, or taken from instanation	detan)		
TEST EQUIPMEN		FICATIONS	***		TD A NODLICED DA	TING (PSI)	10 /20 may	
DATA LOGGER B		-		ermit 00 C	TRANSDUCER RA' SLUG/BAILER DIM	, ,	10 (20 max) 5.38' x 1.66	
TRANSDUCER BR		-		- 161	SLUG/BAILER VOI		J.J6 X 1.00	
					- 320 5,21112211 7 01			
TEST INFORMAT			0.00		DATA LOCCED TO	OT MI IMPED.	2	
REFERENCE VAL	-	CLIDEVOET	0.00	TOC	DATA LOGGER TE		2 15.0'	
TRANSDUCER M	_	SURFACE I		100	TRANSDUCER DE		.0024	
STATIC WATER (START TIME:	SIAKI): _	10):82 (trans) 12:37		-	SCALE:	10.0157	
END TIME:	-		1:32		-	OFFSET:	0082	
STATIC WATER (END):	(t	rans)15		-	DELAY:	50 msec	
ELAPSED TIME:	, -				SATURATED SCRE	EEN LENGTH:		
NOTES:		TOP OF PV	CRISER:	629.82'		Slug - 10'		
		GROUND ST	URFACE	628.00'	S ר ד	Fransducer — 15' Slug in Frans 10.68 stable Frans 10.82 (12:30) Frans — .28 at 1:10		
		BOTTOM OF POINT OF W	F SCREE. /ELL:	615.70' 596.70' 596.70'				
(ALL DEPTHS RELATI	VE TO THE	TOP OF PVC CASI	NG)		PVC stick up = 1.9'			
COMMENTS:								
CONVERSION:	2.30667 FI	EET OF WATE	R/PSI					
YOU MUST RE	SET THE I	REFERENCE V	'ALUE PRI	OR TO BEG	INNING EACH TEST!!!	!!!		
	2	3444 = 1.9						

				KEPORT	FORM	
ENGINEERING-S	CIENCE, INC.	CLIENT		ACOE	WELL :	⊭: MW-58D
	I PHASE II			INSPECTOR:	PFM/LB	
LOCATION: SEAD	ASH			TEST DATE:	7/27/93	
WELL AND ACTUEED	INCODMATION					
WELL AND AQUIFER WELL POINT (installed):	INFORMATION	57	7.29	WELL SCREEN SL	OT SIZE:	.010"
WELL FOINT (Installed). WELL CASING INNER D	IAMETER:		00"	AQUIFER THICKN		
BOREHOLE DIAMETER			78"	PRODUCT PRESE		N
STATIC DEPTH TO WAT		4.	26'	_	(=,)	
SCREENED INTERVAL -	- FROM:	37	.28	_		
	TO:		i.64		1	
TE OT FOLLING COL	CONTRACTIONS	(all depths me	easured from 10	C, or taken from installation	n detail)	
TEST EQUIPMENT SPE			:	TD ANCOLOGED DA	TING (Bay).	10
DATA LOGGER BRAND: INSTRUMENT MODEL:	;		rmit 00 C	TRANSDUCER RA	, ,	10 5.38' x 1.66"
TRANSDUCER BRAND:			- 161	SLUG/BAILER VO		
TEST INFORMATION		0.00		DATALOGGER	EGU MUMADED	0 *
REFERENCE VALUE: TRANSDUCER MODE:	SURFACE LEV	0.00		_ DATA LOGGER T		0, Input 1 15.0'
STATIC WATER (START		4.26	L	TRANSDUCER - I		.0026
START TIME:	<i>"</i>	7:30			SCALE:	10.0153
END TIME:		9:35 am		-	OFFSET:	0234
STATIC WATER (END):		-0.06			DELAY:	50 msec
ELAPSED TIME:		2:05 Hrs		_ SATURATED SCR	EEN LENGTH:	
NOTES:	TOP OF PV GROUND S TOP OF SCR	URFACE	629.82' 627.70' 592.41'		Transducer: 15.0' Slug: 9.7' Ash	
	BOTTOM O		573.05° 572.40°			
(ALL DEPTHS RELATIVE TO T	HE TOP OF PVC CASI	NG)		PVC stick up = 2.0'		
COMMENTS: CONVERSION: 2.3066 YOU MUST RESET TH			OR TO BEG	-	5 pm will stabilize overn	ight.
	<u> </u>			PVC Stickup = 2.76		



SE1000C Environmental Logger 07/27 16:56

MONITORING WELL: MW-58D TEST TYPE: RISING HEAD DTW (TOC): 4.26

Unit# 01000 Test 0

Setups: Type Mode I.D.		Input 1: Level F Surface 00000
Reference Linearity Scale factor Offset Delay mSEC		0.000 0.000 10.020 -0.020 50.000
Step 0	07/27/93	07:30:58
Elapsed Time (min) 0 0.0033 0.0066	Input 1 Relative Change (feet) 0.009 0	4.26 4.248
0.01 0.0133 0.0166 0.02	0.003 0.012 0.009 0.006	4.248 4.251 4.254
0.0233 0.0266 0.03 0.0333 0.05	0.006 0.006 0.006 0.006 -0.009	4.254 4.254 4.254
0.0666 0.0833 0.1 0.1166	-3.669 -3.602 -3.618 -3.558	7.929 7.862 7.878
0.1333 0.15 0.1666	-3.533 -3.51 -3.491	7.793 7.77 7.751
0.1833 0.2 0.2166 0.2333 0.25	-3.472 -3.46 -3.444 -3.431 -3.419	7.72 7.704 7.691
0.2666 0.2833 0.3 0.3166	-3.406 -3.397 -3.387 -3.378	7.666 7.657 7.647 7.638
0.3333 0.4166 0.5 0.5833 0.6666	-3.368 -3.321 -3.286 -3.248 -3.213	7.581 7.546 7.508
0.75	-3.213 -3.178	

ASH58DR.WK1 PAGE 1 OF 4

0.8333	-3.147	7.407
0.9166	-3.115	7.375
1	-3.083	
-		7.343
1.0833	-3.055	7.315
1.1666	-3.027	7.287
1.25	-2.998	7.258
1.3333	-2.97	7.23
1.4166	-2.941	7.201
1.5	-2.909	7.169
1.5833	-2.887	7.147
1.6666	-2.862	7.122
1.75	-2.837	7.097
1.8333	-2.811	7.071
1.9166	-2.786	7.046
2	-2.764	7.024
2.5		
	-2.622	6.882
3	-2.495	6.755
3.5	-2.375	6.635
4	-2.264	6.524
4.5	-2.16	6.42
5	-2.062	6.322
5.5	-1.97	6.23
6	-1.885	6.145
6.5	-1.799	6.059
7	-1.723	5.983
7.5	-1.647	5.907
8	-1.578	5.838
8.5	-1.511	5.771
9	-1.448	5.708
9.5	-1.388	5.648
10	-1.331	5.591
11	-1.227	5.487
12		
	-1.129	5.389
13	-1.043	5.303
14	-0.964	5.224
15	-0.895	5.155
16	-0.828	5.088
17	-0.768	5.028
18	-0.714	4.974
19	-0.664	4.924
20	-0.62	4.88
21	-0.578	4.838
22	-0.54	4.8
23	-0.506	4.766
24	-0.474	4.734
25	-0.446	4.706
26	-0.417	4.677
27	-0.395	4.655
28	-0.37	4.63
29	-0.347	4.607
		4.589
30 31	-0.329	
	-0.31	4.57
32	-0.294	4.554
33	-0.278	4.538
34	-0.265	4.525
35	-0.249	4.509
36	-0.24	4.5
37	-0.224	4.484
38	-0.215	4.475

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39	0.005	4 405
	-0.205	4.465
40	-0.196	4.456
41	-0.189	4.449
42	-0.18	4.44
43	-0.174	4.434
44	-0.167	4.427
45	-0.161	4.421
	-0.155	
46	-0.155	4.415
47	-0.148	4.408
48	-0.142	4.402
49	-0.139	4.399
50		
	-0.136	4.396
51	-0.129	4.389
52	-0.126	4.386
53	-0.123	4.383
5 4	-0.12	
		4.38
55	-0.113	4.373
56	-0.113	4.373
57	-0.11	4.37
58	-0.107	4.367
59	-0.104	4.364
60	-0.104	4.364
61	-0.101	4.361
62	-0.098	4.358
63	-0.098	4.358
64	-0.094	4.354
65	-0.091	4.351
66	-0.091	4.351
67	-0.088	4.348
68	-0.088	4.348
69	-0.085	4.345
70	-0.085	4.345
71	-0.085	4.345
72	-0.082	4.342
73	-0.082	4.342
-	0.002	
74	-0.079	4.339
75	-0.079	4.339
76	-0.079	4.339
77	-0.075	4.335
78	-0.075	4.335
79	-0.075	4.335
80	-0.075	4.335
81	-0.072	4.332
-	-	
82	-0.072	4.332
83	-0.072	4.332
84	-0.072	4.332
85	-0.069	4.329
86	-0.069	4.329
87	-0.066	4.326
88	-0.066	4.326
89	-0.066	4.326
90	-0.066	4.326
91	-0.063	4.323
92	-0.066	4.326
93	-0.063	4.323
94	-0.063	4.323
95	-0.066	4.326
96	-0.063	4.323
97	-0.063	4.323
98	-0.063	4.323

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99	-0.06	4.32
100	-0.063	4.323
101	-0.06	4.32
102	-0.06	4.32
103	-0.06	4.32
104	-0.06	4.32
105	-0.06	4.32
106	-0.06	4.32
107	-0.06	4.32
108	-0.06	4.32
109	-0.06	4.32
110	-0.06	4.32
111	-0.06	4.32
112	-0.06	4.32
113	-0.06	4.32
114	-0.06	4.32
115	-0.057	4.317
116	-0.057	4.317
117	-0.057	4.317
118	-0.06	4.32
119	-0.06	4.32
120	-0.06	4.32
121	-0.06	4.32
122	-0.06	4.32
123	-0.06	4.32

ASH58DR.WK1 PAGE 4 OF 4

SENECA ASH LANDFILL DRAFT RI REPORT

PACKER TESTING

October 20, 1993

CALCULATIONS FOR PACKER TESTING

HYDRAULIC CONDUCTIVITY VALUES

WELL NUMBER: MW-50D
TEST INTERVAL: 37.8-57.8
TEST DATE: JUNE 3, 1993

			11=81				
PARAMETERS	UNITS	1	2	3	4	5	
TEST PRESSURE	(psi)	10.0	15,0	20.0	15.0	10.0	
LENGTH OF TEST INTERVAL	(feet) (cm)	20.0 609.60	20.0 609.60	20. 0 609.60	20.0 609.60	20.0 609.60	
PADIUS OF BORHOLE	(inches) (cm)	1,875 4.76	1,875 4.76	1.875 4.76	1.875 4.76	1.875 4.76	
TEN TIMES THE BOREHOLE RADIUS	(cm)	47.63	47.63	47.63	47.63	47.63	
RATE OF FLOW INTO TEST INTERVAL	(gals./min.) (cub. cm/sec)	0.025 1.58	0.038 2.40	0.049 3.09	0.037	0.026 1.64	
HEAD (GRAVITY)	(feet of water) (cm)	33.9 1033.27	33.9 1033.27	33.9 1033.27	33,9 1033.27	33.9 1033.27	
HEAD (PRESSURE)	(psi) (feet of water) (cm of water)	10.0 23.1 704.09	15.0 34.65 1056.13	20.0 46.2 1408.18	15.0 34.65 1056.13	10.0 23.1 704.09	
DIFFERENTIAL HEAD OF WATER AT TEST INTERVAL	(cm)	1737.36	2089.404	2441.448	2089.404	1737.36	
HYDRAULIC CONDUCTIVITY	(cm/sec)	1.15E-06	1.45E-06	1.60E-06	1.42E-06	1.20E-06	

Note: H is the distance from the water table to the elevation of the pressure guage plus the applied pressure converted to linear units of water head.

EQUATION: K = q/(2 * pi * L * H) ln (L/r)

CONS	TANT H	IEAD H	YDRAU	LIC CON	NDUCTI	VITY PA	ACKER 7	ΓEST
ENGINE	RING-SCI	ENCE	CLIENT:	ACOE		DATE:	6/3/93	
PROJECT:		Ash Landfill				INSPECTOR		PFM
LOCATION		SEAD				CONTRACT		D.L. Maher
CORE HOL	-	MW-50D				TEST INTER		37.8-57.8
	FIELD COND		rd major chang	es)		 	MONITORIN	
WEATHER	FIELDCONL	MITONS (IECO	iu major chang	<u> </u>			MONTOKIN	
TIL CE	TTTI M	PREGIR	CROUND	SUBEACE COND	FTIONS	INSTRU	MENT	DETECTOR
TIME	TEMP	PRECIP.	GROUND	SURFACE COND	ITIONS		VM	PID
7:30	80's	_		Dry			V IVI	TID
ļ								
								L
CORE HOL	E/WELL SPEC	CS:		INSTRUMEN	IT SPECS:			
ELEVATION (GROUND SURFA		648.10	TYPE OF DATA	LOGGER:	Geocan		
DIAMETER C	ORE HOLE/WEL		3.78"	TRANSDUCER	TYPE(S):	Geocan		
LENGTH OF T	EST INTERVAL	(ft):	20.0'	TYPE OF PACK	ER(S):	Bim Bar 1		
DEPTH OF TE	ST INTERVAL (t):		MAXIMUM INF	LATABLE PACK	ER PRESSURE (P	ısi):	50 psi
TEMPERATU	RE OF GROUND	WATER (deg.C):	11 degree C	PUMP CAPACIT	Y (gal/min.):	50		
	TABILITY: GO			DIAMETER OF	FEED PIPE (in.):		1-inch	
			REMENTS IN	CORE HOLE	WELL PRIOF	TO TESTING):	
DATE	6-2-93	6-3-93						
TIME	7:30 a.m.	7:30 a.m.						
DEPTH	3.9	0.9'						
	E/WELL CLE		EDURE:	I .		I		
1	CLEANING (i.e. w		LDOKL					
	•	•						
	Washed water thro	ngu note wiru brim	unui ciean in 20 i	ninutes.				
				BELOW PACKE	R (gallons):			
TOTAL PRI	ESSURE TO B	E APPLIED I	O LEST IN LE	RVAL:				
					37.8	lb[/sq. in. (psi)		
]	Inflatable							
]	Packer — — —							
A = 37.8	ft		Top of test interv	al				
				FOR THE INTER	VAL A (37.8 FT)	TO B(57.8 FT) Th	E TOTAL PRESS	SURE
					. ,		SHOULD NOT EX	
				A(37.8 ft) X 1 lb				(CDDD
				A(3/20 II) A 1 IB	/sq. in. (psi) = 3	/.o ib//sq.in.(psi)	ļ	
								
	Open							
	Core							
]	Hole			Note: As a genera	rule, total pressur	e (static head plus ;	guage pressure) app	plied in the drill
				hole should not ex	eed 1 lbf/sq. in. (pr	i) per foot of overt	ourden at the top of	the test interval,
				provided the interv	al is greater than 1	0 feet. High pressu	res may artificially	fracture
				the formation mate	rials.			
		ļ						
	l							
B= 57.8	ft		Bottom of test int	enal				
D- 31.0	11 [Explicit of test int	AL VEN				

CONSTANT HEAD	HYDRALILICC	ONDLICTI	VITY PACKER	TEST
ENGINEERING-SCIENCE	CLIENT: ACOE	ONDUCTI	DATE: 6/3/93	ILOI
PROJECT: Ash Lan			INSPECTOR:	PFM
LOCATION: SEAD			CONTRACTOR:	D.L. Maher
CORE HOLE/WELL: MW-50	מו		TEST INTERVAL (ft):	37.8-57.8
DETERMINATION OF WATER HE		ERVAI -	TEST INTERVAL (II).	37.0-37.0
BEILKMINATION OF WATER III	CAD ABOVE THE TEST INT	LK VAL.		
METHOD 1 - DEPTH TO WATER TABLE	(ft): 3.9' Depth to	water bis		
(use electronic water level meter)	37.8' - 3.9' =			
(and discussion and d		by 2.31 = 14.6 psi		
	2012)		
METHOD 2 – PRESSURE ON PNEUMATIO	PRESSURE GUAGE (lbf/sq. ip. or r	si): 9.45 nai		
(To convert lbf/sq. in. (psi) to feet or head of wa		,		
(
9.45 psi + 10.5' (4.5 psi) + 1.8' ((6.77 psi) = 14.72 psi = 34.13			
21,83				
DETERMINATION OF MINIMUM	INFLATION PRESSURE TO	BE APPLIED TO	PACKER(S):	
Equation:			,	
SH + PP + F	PE = MINIUM INFLATION PRESSI	URE (1)		
		(-,		
WHERE: SH = STATI	IC PRESSURE AT THE MIDPOINT	ELEVATION OF THE	TEST INTERVAL, Ibf/sq. in. or k	.Pa
	E PRESSURE TO BE MAINTAINE			
	SURE NEEDED TO EXPAND PACK			E INSEPTION
	E DRILL HOLE BY EXPANDING T			
	E HOLE DIAMETER, 16f/sq. in. or k		TOTT OF FIRE HAVING A DIA	WETER SIMILAR
10 111	E HOLE DIAMETER, 100M, III. G K			
CALCULATIONS:				
or good in one.				
14.6 pm to top of packer + 10' (4	4.32 pai) = 18.92 pai			
	• • • •			
99 pai min inflation press. to pac	tes			
SH = 19 pmi				
PP = 20 psi (ACTUAL U	SED 115 PSI)			
PE = 60 pai				
DETERMINATION OF WATER HE	AD FOR THE TEST INTER	VAL:		
PRESSURE ON PNEUMATIC PRESSURE G	UAGE (lbf/sq. in. or psi):			
(To convert lbf/sq. in. (psi) to feet or head of wa		9.45 psi (stable) wit	th inflated packers	
	.,,,	•	system at this point)	
		•	, , , , , , , , , , , , , , , , , , , ,	
PIEZOMETER PRESSURE AFTER	FINAL PACKER INFLATIO	N PRIOR TO TES	T (lhf/sq. in or pei)	
. ILLOWING I RESURE AT TER	I I THE I ACKED INVENTIO		- (wad mot bat):	

CONS	STANT F	IEAD H	YDRAU	LIC CONDUC	TIVITY PACKER	TEST
	ERING-SC		CLIENT:		DATE: 6/3/93	
PROJECT:		Ash Landfill			INSPECTOR:	PFM
LOCATION	ł:	SEAD			CONTRACTOR:	D.L. Maher
CORE HOL	.E/WELL:	MW-50D			TEST INTERVAL (ft):	37.8-57.8
	Press. A		PDFCCIIDF	FOR TEST INTERVAL (1	bf./sq. in. or psi): 19.45 + 10) nsi
(STARTI		REQUIRED	IKLSSOKE	TOK IEST IN IEK TE (01./sq. 12. 01 psi/. 25.45 / 24	Por
·	FLOW (gal/min.):		0.03		BACK FLOW: YES	NO
		USED FOR TEST			BACK PRESSURE (lbf/sq. in. or	rpsi):
IOIAL VOL	WE OF WATER	OBED TOR IEE.	(ga.).		DECAY OF HOLDING PRESS	
INTERVAL 1						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
()	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
0	19.45	19.59	NA	NA	NA	0.03
0:30	19.45	19.59	NA	NA	NA	0.03
1:00	19.45	19.57	NA	NA	NA	0.03
1:30	19.45	19.56	NA	NA	NA	0.03
2:00	19.45	19.60	NA	NA	NA	0.03
2:30	19.45	19.59	NA	NA	NA	0.03
3:00	19.45	19.58	NA	NA	NA	0.03
3:30	19.45	19.57	NA	NA	NA	0.03
4:00	19.45	19.58	NA	NA	NA	0.025
4:30	19.45	19.60	NA	NA	NA	0.030
5:00	19.45	19.61	NA	NA	NA	0.030
		Testing Period		Starting reading:	1	
	ity read from w	_		Ending reading:		
INTERVAL 2						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	(gal/min.)	
` '	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
5:30	19.45	19.59	NA	NA	NA	0.025
6:00	19.45	19.57	NA	NA	NA	0.025
6:30	19.45	19.59	NA	NA	NA	0.025
7:00	19.45	19.53	NA	NA	NA	0.025
7:30	19.45	19.52	NA	NA	NA	0.025
8:00	19.45	19.53	NA	NA	NA	0.025
8:30	19.45	19.56	NA	NA	NA	0.025
9:00	19.45	19.55	NA	NA	NA	0.025
9:30	19.45	19.60	NA	NA	NA	0.025
10:00	19.45	19.58	NA	NA	NA	0.025
		Testing Period	_	Starting reading:	· · · · · · · · · · · · · · · · · · ·	
	ity read from w			Ending reading:		
INTERVAL 3						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
()	lbf/sq.in. or psi	Transducer (psi)	Guage (pai)	(ft)	(lbf/sq. in. or psi)	
10:30	19.45	19.60	NA	NA	NA	0.025
11:00	19.45	19.58	NA	NA	NA	0.025
11:30	19.45	19.56	NA	NA	NA	0.025
12:00	19.45	19.54	NA	NA	NA	0.025
12:30	19.45	19.53	NA	NA	NA	0.025
13:00	19.45	19.58	NA	NA	NA	0.025
13:30	19.45	19.56	NA	NA	NA	0.025
14:00	19.45	19.54	NA	NA NA	NA NA	0.025
14:30	19.45	19.56	NA	NA NA	NA NA	0.025
15:00	19.45	19.57	NA NA	NA NA	NA NA	0.025
		Testing Period		Starting reading:	11/12	0.020
		-	•	Ending reading:		
Total quant	ity read from w	rater meter)		Liding reading.		

	ERING-SC		CLIENT:		TIVITY PACKEI DATE: 6/3/93	
ROJECT		Ash Landfill	CLIENT.	ACOL	INSPECTOR:	PFM
OCATIO		SEAD			CONTRACTOR:	D.L. Maher
		MW-50D			TEST INTERVAL (ft):	37.8-57.8
	LE/WELL:	1				
	Press. B	REQUIRED	PRESSURE	FOR TEST INTERVAL (II	bf./sq. in. or psi): 24.5 psi +	- 15 psi
INCREA		<u> </u>	0.020			
	FLOW (gal/min.):		0.038 psi		BACK FLOW: YES	NO
OTAL VOL	UME OF WATER	USED FOR TEST	2 (gal.):		BACK PRESSURE (lbf/sq. in. o	• •
					DECAY OF HOLDING PRES	SURE: YES N
TERVAL 1	1			1		
TIME		URE IN TEST INT	ERVAL		OVE TEST INTERVAL	FLOW RATE
(nin)	Required	Actual		Feet of Water	Guage	(gal/min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	0.040
0	24.5	24.45	NA NA	NA	NA NA	0.040
0:30	24.5	24.38	NA NA	NA_	NA NA	0.040
1:00	24.5	24.35	NA	NA	NA	0.040
1:30	24.5	24.33	NA	NA	NA NA	0.040
2:00	24.5	24.72	NA	NA	NA	0.040
2:30	24.5	24.50	NA	NA	NA	0.040
3:00	24.5	24.48	NA	NA	NA	0.040
3:30	24.5	24.49	NA	NA	NA	0.040
4:00	24.5	24.51	NA	NA	NA	0.040
4:30	24.5	24.49	NA	NA	NA	0.040
5:00	24.5	24.49	NA	NA	NA	0.040
/ater Injec	ted into Hole in	Testing Period:	:	Starting reading:		
Total quan	tity read from w	vater meter)		Ending reading:		
TERVAL 2				· · · · · · · · · · · · · · · · · · ·		·
TIME	PRESSSURE IN TEST INTERVAL PR				OVE TEST INTERVAL	FLOW RATE
(nin)	Required	Required Actual Feet of Water Guage		Guage	(gal/min.)	
	lb{/sq.in. or psi	Transducer (psi)	Guage (pai)	(ft)	(lbf/sq. in. or psi)	
5:30	24.5	24.53	NA	NA	NA	0.040
6:00	24.5	24.50	NA	NA	NA	0.039
6:30	24.5	24.50	NA	NA	NA	0.039
7:00	24.5	24.49	NA	NA	NA	0.039
7:30	24.5	24.48	NA	NA	NA	0.039
8:00	24.5	24.49	NA	NA	NA	0.040
8:30	24.5	24.50	NA	NA	NA	0.039
9:00	24.5	24.48	NA	NA	NA	0.039
	24.5	24.49	NA	NA	NA	0.038
9:30	24.5	1 24.47				
9:30 10:00				<u> </u>		0.039
10:00	24.5	24.49	NA	NA	NA	0.039
10:00 ater Injec	24.5 ted into Hole in	24.49 Testing Period	NA	NA Starting reading:		0.039
10:00 /ater Injec Fotal quan	24.5 ted into Hole in tity read from w	24.49 Testing Period	NA	NA		0.039
10:00 /ater Injec Fotal quan /TERVAL 3	24.5 ted into Hole in tity read from w	24.49 Testing Period	NA	NA Starting reading: Ending reading:	NA	
10:00 /ater Injec Fotal quan /TERVAL 3	24.5 ted into Hole intity read from w	24.49 Testing Period: vater meter) URE IN TEST INT	NA	NA Starting reading: Ending reading: PRESSURE ABO	NA OVE TEST INTERVAL	FLOW RATE
10:00 /ater Injec Fotal quan /TERVAL 3	24.5 ted into Hole intity read from w PRESSS Required	24.49 Testing Period vater meter) URE IN TEST INT Actual	NA ERVAL	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water	NA OVE TEST INTERVAL Guage	
10:00 /ater Injec Fotal quan TERVAL 3 TIME (min)	24.5 ted into Hole in tity read from w PRESSS Required 1bf/sq.in. or psi	24.49 Testing Period vater meter) URE IN TEST INT Actual Transducer (psi)	NA ERVAL Guage (psi)	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft)	DVE TEST INTERVAL Guage (Ibt/sq. in. or psi)	FLOW RATE (gal/min.)
10:00 /ater Injec Fotal quan TERVAL 3 TIME (min)	24.5 ted into Hole in tity read from w PRESSS Required 1bf/sq.in. or psi 24.5	24.49 Testing Period vater meter) URE IN TEST INT Actual Transducer (psi) 24.47	NA ERVAL Guage (psi) NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA	DVE TEST INTERVAL Guage (Ibt/sq. in. or psi) NA	FLOW RATE (gal/min.)
10:00 Vater Inject Total quan TERVAL 3 TIME (min) 10:30 11:00	24.5 ted into Hole in tity read from w PRESSS Required lbt/sq.in. or psi 24.5 24.5	24.49 Testing Period vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47	NA ERVAL Guage (psi) NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA	OVE TEST INTERVAL Guage (Ibt/sq. in. or psi) NA NA	FLOW RATE (gal/min.) 0.040 0.035
10:00 /ater Injec /otal quan TERVAL 3 TIME (min) 10:30 11:00 11:30	24.5 ted into Hole in tity read from w PRESSS Required lbt/sq.in. or psi 24.5 24.5 24.5	24.49 Testing Period vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45	NA ERVAL Guage (psi) NA NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA	OVE TEST INTERVAL Guage (Ibt/sq. in. or psi) NA NA NA	FLOW RATE (gal/min.) 0.040 0.035 0.035
10:00 /ater Injec /otal quan /TERVAL 3 /TIME /min /10:30 /11:00 /11:30 /12:00	24.5 ted into Hole in tity read from w PRESSS Required lbt/sq.in. or psi 24.5 24.5 24.5 24.5	24.49 Testing Period: vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45 24.44	NA Guage (pri) NA NA NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA NA	OVE TEST INTERVAL Guage (Ibt/sq. in. or psi) NA NA NA NA	FLOW RATE (gal/min.) 0.040 0.035 0.035 0.038
10:00 /ater Injec /otal quan /TERVAL 3 TIME (min) 10:30 11:00 11:30 12:00 12:30	24.5 ted into Hole in tity read from w PRESSS Required lbt/sq.in. or psi 24.5 24.5 24.5 24.5 24.5 24.5	24.49 Testing Period vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45 24.44 24.45	NA Guage (phi) NA NA NA NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA NA NA	NA OVE TEST INTERVAL Guage (Ibt/sq. in. or psi) NA NA NA NA NA NA	FLOW RATE (gal/min.) 0.040 0.035 0.035 0.038 0.036
10:00 /ater Injec Fotal quan /TERVAL 3 TIME (min) 10:30 11:00 11:30 12:00 12:30 13:00	24.5 ted into Hole in tity read from w PRESSS Required lbt/sq.in. or psi 24.5 24.5 24.5 24.5 24.5 24.5 24.5	24.49 1 Testing Period: vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45 24.44 24.45 24.44	NA Guage (pri) NA NA NA NA NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA OVE TEST INTERVAL Guage (Ibt/sq. in. or psi) NA NA NA NA NA NA NA NA	FLOW RATE (gal/min.) 0.040 0.035 0.035 0.038 0.036 0.035
10:00 /ater Injec /otal quan /TERVAL 3 TIME (min) 10:30 11:00 11:30 12:00 12:30 13:00 13:30	24.5 ted into Hole in tity read from w PRESSS Required lbt/sq.in. or psi 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5	24.49 1 Testing Period: vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45 24.44 24.45 24.44 24.44	NA Guage (pri) NA NA NA NA NA NA NA NA NA N	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA OVE TEST INTERVAL Guage (Ibb/sq. in. or psi) NA NA NA NA NA NA NA NA NA N	FLOW RATE (gal/min.) 0.040 0.035 0.035 0.038 0.036 0.035 0.036
10:00 Vater Injec Fotal quan VTERVAL 3 TIME (min) 10:30 11:00 11:30 12:00 12:30 13:00 13:30 14:00	24.5 ted into Hole in tity read from w PRESSS Required 1bt/sq.in. or psi 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5	24.49 1 Testing Period: vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45 24.44 24.45 24.44 24.44	Ouage (pri) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA OVE TEST INTERVAL Guage (Ibl/sq. in. or psi) NA NA NA NA NA NA NA NA NA N	FLOW RATE (gal/min.) 0.040 0.035 0.035 0.038 0.036 0.036 0.036
10:00 Vater Injec Fotal quan TTERVAL 3 TIME (min) 10:30 11:00 11:30 12:00 12:30 13:00 13:30 14:00 14:30	24.5 ted into Hole in tity read from w PRESSS Required 1bt/sq.in. or psi 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5	24.49 1 Testing Period: vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45 24.44 24.45 24.44 24.43 24.43 24.45	Guage (psi) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA OVE TEST INTERVAL Guage (Ibb/sq. in. or psi) NA NA NA NA NA NA NA NA NA N	FLOW RATE (gal/min.) 0.040 0.035 0.035 0.038 0.036 0.036 0.036 0.037
10:00 /ater Injec /otal quan /TERVAL 3 TIME (min) 10:30 11:00 11:30 12:00 12:30 13:00 13:30 14:00 14:30 15:00	24.5 ted into Hole in tity read from w PRESSS Required 1bt/sq.in. or psi 24.5 24.5 24.5 24.5 24.5 24.5 24.5 24.5	24.49 1 Testing Period: vater meter) URE IN TEST INT Actual Transducer (psi) 24.47 24.47 24.45 24.44 24.45 24.44 24.44	NA Guage (psi) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA Starting reading: Ending reading: PRESSURE ABO Feet of Water (ft) NA NA NA NA NA NA NA NA NA NA NA NA NA	NA OVE TEST INTERVAL Guage (Ibl/sq. in. or psi) NA NA NA NA NA NA NA NA NA N	FLOW RATE (gal/min.) 0.040 0.035 0.035 0.038 0.036 0.036 0.036

CON	STANT I	HEAD H			TIVITY PACKER	R TEST	
ENGINE	ERING-SC		CLIENT:	ACOE	DATE: 6/3/93		
PROJECT:		Ash Landfill			INSPECTOR:	PFM	
LOCATIO	٧:	SEAD			CONTRACTOR:	D.L. Maher	
CORE HO	LE/WELL:	MW-50D			TEST INTERVAL (ft):	37.8-57.8	
TEST 3:	Press. C	REQUIRED	PRESSURE	FOR TEST INTERVAL	lbf./sq. in. or psi): 29.5 psi +	- 20 psi	
MAXIM		REGOINEE	IRLUSORE	TOR IEDI INTERVIE	ionisq. ia. or parj. 25.5 por 1	20 ps.	
`	FLOW (gal/min.):		0.049 psi		BACK FLOW: YES	NO	
		USED FOR TEST	•		BACK PRESSURE (lbf/sq. in. o	•	
IOTAL VOL	ME OF WATER	USED FOR IEST.	3 (gai.):		DECAY OF HOLDING PRES	' '	
					DECAT OF HOLDING FRES	SURE: YES NO	
NTERVAL 1							
TIME	DDDCCC	URE IN TEST INT	EDVAI	DD FCCI ID F AD	OVE TEST INTERVAL	FLOW RATE	
			ERVAL	Feet of Water	· · ·		
(min)	Required	Actual		┥	Guage	(gal./min.)	
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft) NA	(lbf/sq. in. or psi) NA	0.050	
0	29.5	29.50	NA NA				
0:30	29.5	29.49	NA NA	NA NA	NA NA	0.050	
1:00	29.5	29.48	NA	NA NA	NA NA	0.050	
1:30	29.5	29.48	NA_	NA	NA NA	0.049	
2:00	29.5	29.47	NA	NA NA	NA	0.049	
2:30	29.5	29.46	NA	NA	NA	0.048	
3:00	29.5	29.43	NA	NA	NA	0.048	
3:30	29.5	29.44	NA	NA	NA	0.049	
4:00	29.5	29.43	NA	NA	NA	0.048	
4:30	29.5	29.43	NA	NA	NA	0.049	
5:00	29.5	29.38	NA	NA	NA	0.049	
Water Injec	ted into Hole in	Testing Period:		Starting reading:			
Total quan	tity read from w	/ater meter)		Ending reading:			
NTERVAL 2					<u>-</u>		
TIME	PRESSSURE IN TEST INTERVAL PRESSURE ABO				OVE TEST INTERVAL	FLOW RATE	
(min)	Required	Actual		Feet of Water	Guage (gal./m		
	lbf/sq.in. or pai	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)		
5:30	29.5	29.38	NA	NA	NA	0.049	
6:00	29.5	29.39	NA	NA	NA	0.049	
6:30	29.5	29.39	NA	NA	NA	0.049	
7:00	29.5	29.40	NA	NA	NA	0.050	
7:30	29.5	29.38	NA	NA	NA	0.048	
8:00	29.5	29.38	NA	NA	NA	0.048	
8:30	29.5	29.35	NA	NA	NA	0.048	
9:00	29.5	29.36	NA	NA	NA	0.045	
9:30	29.5	29.63	NA	NA	NA NA	0.049	
10:00	29.5	29.60	NA	NA	NA NA	0.049	
		Testing Period:		Starting reading:	NA .	0.042	
•	ity read from w	_		Ending reading:			
NTERVAL 3	aty read from W	ater meter)		Enong reading.			
	BB Book	I ID C IN TECT IN	PDMAI	BD DOCTION AD	NOVE TEST INTERVAL	EL OWD ATT	
TIME		URE IN TEST INTI	DKANT	i		FLOW RATE	
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)	
10.00	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	0.040	
10:30	29.5	29.59	NA NA	NA	NA NA	0.049	
11:00	29.5	29.57	NA	NA	NA	0.049	
11:30	29.5	29.53	NA	NA	NA	0.048	
12:00	29.5	29.55	NA	NA	NA	0.048	
12:30	29.5	29.56	NA	NA	NA	0.049	
13:00	29.5	29.55	NA	NA	NA	0.048	
13:30	29.5	29.53	NA	NA	NA	0.047	
	29.5	29.53	NA	NA	NA	0.048	
14:00			NA	NA	NA	0.048	
14:00 14:30	29.5	29.54	1477	1417	418.4		
14:30				NA NA	NA NA		
14:30 15:00	29.5	29.53 Testing Period:	NA			0.048	

			YDRAU	LIC CONDUCT		R TEST
	ERING-SC		CLIENT:	ACOE	DATE: 6/3/93	
PROJECT:		Ash Landfill			INSPECTOR:	PFM
LOCATION	N:	SEAD			CONTRACTOR:	D.L. Maher
CORE HO	LE/WELL: MW-50D				TEST INTERVAL (ft):	37.8-57.8
TEST 4:	Press. B	REQUIRED	PRESSURE	FOR TEST INTERVAL (IM	f./sq. in. or psi): 24.5 psi -	+ 15 psi
DECRE						•
TABILIZED	FLOW (gal/min.):		0.037		BACK FLOW: YES	NO
TOTAL VOLU	UME OF WATER	USED FOR TEST	4 (gal.):		BACK PRESSURE (lbf/sq. in.	or pai):
					DECAY OF HOLDING PRES	SSURE: YES N
NTERVAL 1	DD DCCC	URE IN TEST INT	ERVAL	BRESSIBE ARO	VE TEST INTERVAL	FLOW RATE
		1	ERVAL	Feet of Water	Guage	
(min)	Required	Actual	Constant	╡		(gal/min.)
0	1bt/sq.in. or psi 24.5	Transducer (psi) 25.61	Guage (psi)	(ft) NA	(lbf/sq. in. or psi) NA	0.038
0:30	24.5	25.61	NA NA	NA NA	NA NA	0.039
1:00	24.5	25.61	NA NA	NA NA	NA NA	0.039
1:00	24.5	25.59	NA NA	NA NA	NA NA	0.039
	24.5	25.60	NA NA	NA NA	NA NA	0.039
2:00		25.59		NA NA	NA NA	
2:30	24.5		NA NA	_	NA NA	0.039
3:00		25.60	NA NA	NA NA		0.039
3:30	24.5	25.60	NA	NA	NA NA	0.039
4:00	24.5	25.59	NA	NA	NA	0.038
4:30	24.5	25.60	NA	NA	NA NA	0.038
5:00	24.5	25.58	NA	NA	NA	0.038
-	ted into Hole in tity read from w	Testing Period		Starting reading: Ending reading:		
NTERVAL 2						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABO	VE TEST INTERVAL	FLOW RATE
(min)	Required Actual		Feet of Water Guage		(gal/min.)	
()	lbf/sq.in. or psi	Transducer (psi)	Guage (pri)	(ft)	(lbf/sq. in. or psi)	(5-11-11)
5:30	24.5	25.57	NA	NA	NA NA	0.038
6:00	24.5	25.57	NA	NA	NA	0.038
6:30	24.5	25.56	NA	NA	NA	0.037
7:00	24.5	25.57	NA	NA	NA	0.037
7:30	24.5	25.57	NA	NA NA	NA NA	0.037
8:00	24.5	25.57	NA NA	NA NA	NA NA	0.037
8:30	24.5	25.55	NA NA	NA NA	NA NA	0.037
9:00	24.5	25.58	NA NA	NA NA	NA NA	0.037
	24.5	25.56	NA NA	NA NA	NA NA	0.037
9:30		25.56	NA NA			
10:00	24.5			NA Starting readings	NA	0.037
•		Testing Period		Starting reading:		
	tity read from w	ater meter)		Ending reading:		
NTERVAL 3	T					
TIME	_	URE IN TEST INT	ERVAL	†·	VE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
46.5-	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
10:30	24.5	25.56	NA	NA	NA	0.037
11:00	24.5	25.56	NA	NA	- NA	0.037
11:30	24.5	25.55	NA	NA	NA	0.037
	24.5	25.56	NA	NA	NA	0.037
12:00	24.5	25.56	NA	NA	NA	0.037
12:00 12:30	27.3		NA	NA	NA	0.037
12:30		25.55		1	NA	0.037
12:30 13:00	24.5	25.55 25.55		I NA	I INA	
12:30 13:00 13:30	24.5 24.5	25.55	NA	NA NA		
12:30 13:00 13:30 14:00	24.5 24.5 24.5	25.55 25.56	NA NA	NA	NA	0.037
12:30 13:00 13:30 14:00 14:30	24.5 24.5 24.5 24.5	25.55 25.56 25.49	NA NA NA	NA NA	NA NA	0.037 0.037
12:30 13:00 13:30 14:00 14:30 15:00	24.5 24.5 24.5 24.5 24.5 24.5	25.55 25.56	NA NA NA NA	NA	NA	0.037

CON	STANT I	HEAD H	YDRAL	LIC CONDUC	FIVITY PACKER	RTEST
ENGINE	ERING-SC	IENCE	CLIENT:	ACOE	DATE: 6/3/93	
PROJECT:	:	Ash Landfill			INSPECTOR:	PFM
LOCATION	N:	SEAD			CONTRACTOR:	D.L. Maher
CORE HO	LE/WELL:	MW-50D			TEST INTERVAL (ft):	37.8-57.8
	Press. A	REQUIRED	PRESSURE	FOR TEST INTERVAL (I	bf./sq. in. or psi): 19.5 psi +	10 psi
(STARTI		REGUIREE	INLOGONE	. OK 1201 2K*12K*1	on, of the party.	10 po.
	FLOW (gal./min.):		0.026		BACK FLOW: YES	
		USED FOR TEST			BACK PRESSURE (lbf/sq. in. o	r nei):
TOTAL VOL	DIME OF WATER	OSED FOR IEST	5 (gai.).		DECAY OF HOLDING PRESS	• /
					DECAT OF HOLDING FREE	JORE. TES
INTERVAL 1						
TIME	nn rece	URE IN TEST INT	EDVA!	DD ESCUEE AD	OVE TEST INTERVAL	FLOW RATE
		Actual	ERVAL	Feet of Water	Guage	—
(min)	Required		Guerr (pri)	-		(gal/min.)
0	lbt/sq.in. or psi 19.5	Transducer (psi)	Guage (psi) N/A	(ft) N/A	(lbl/sq. in. or psi) N/A	0.025
0:30	19.5	19.46	N/A	N/A N/A	N/A	0.025
1:00	19.5	19.46	N/A	N/A	N/A	0.025
1:30	19.5	19.46	N/A	N/A	N/A	0.025
2:00	19.5	19.46	N/A	N/A	N/A	0.025
2:30	19.5	19.45	N/A	N/A	N/A	0.025
3:00	19.5	19.45	N/A	N/A	N/A	0.025
3:30	19.5	19.45	N/A	N/A	N/A	0.025
4:00	19.5	19.45	N/A	N/A	N/A	0.025
4:30	19.5	19.45	N/A	N/A	N/A	0.026
5:00	19.5	19.45	N/A	N/A	N/A	0.026
-		Testing Period	:	Starting reading:		
	tity read from w	ater meter)		Ending reading:		
INTERVAL 2						
TIME	PRESSSURE IN TEST INTERVAL			PRESSURE ABO	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
5:30	19.5	19.45	N/A	N/A	N/A	0.025
6:00	19.5	19.44	N/A	N/A	N/A	0.025
6:30	19.5	19.44	N/A	N/A	N/A	0.025
7:00	19.5	19.43	N/A	N/A	N/A	0.026
7:30	19.5	19.44	N/A	N/A	N/A	0.026
8:00	19.5	19.44	N/A	N/A	N/A	0.026
8:30	19.5	19.44	N/A	N/A	N/A	0.026
9:00	19.5	19.44	N/A	N/A	N/A	0.026
9:30	19.5	19.44	N/A	N/A	N/A	0.026
10:00	19.5	19.44	N/A	N/A	N/A	0.026
		Testing Period:		Starting reading:	- 4	1 5.520
-	ity read from w			Ending reading:		
NTERVAL 3	,					
TIME	DD HSSSI	URE IN TEST INTI	RVAL	DD PCCI ID P ARA	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	
(11111)	lbf/sq.in. or psi	Transducer (psi)	Guans (nei)	┥		(gal/min.)
10:30	19.5	19.44	Guage (psi) N/A	(ft) N/A	(lbf/sq. in. or psi)	0.026
11:00	19.5	19.44	N/A N/A	N/A N/A	N/A N/A	0.026
	19.5					
11:30		19.43	N/A	N/A	N/A	0.026
12:00	19.5	19.43	N/A	N/A	N/A	0.026
12:30	19.5	19.43	N/A	N/A	N/A	0.026
13:00	19.5	19.43	N/A	N/A	N/A	0.025
40.55	19.5	19.44	N/A	N/A	N/A	0.025
13:30	40 -	10.42	N/A	N/A	N/A	0.025
14:00	19.5	19.42				
14:00 14:30	19.5	19.43	N/A	N/A	N/A	0.025
14:00				N/A	N/A N/A	0.025 0.025
14:00 14:30 15:00	19.5 19.5	19.43	N/A N/A			

CONS	TANT I	IEAD H	YDRAU	LIC CON	IDUCTI	VITY PA	ACKER '	TEST
ENGINE	ERING-SC	IENCE	CLIENT:	ACOE			6/3/93	
PROJECT:		Ash Landfill				INSPECTOR	:	PFM
LOCATION	l:	SEAD				CONTRACT	OR:	D.L. Maher
CORE HOL	.E/WELL:	MW-50D				TEST INTER	VAL (ft):	37.8-57.8
		C	ALCULATI	ON OF LUC	BEON VALU	JES		
						ted into Test		
Test		-				n Testing	_	
Interval		Times *	Guage P		Peri	od	Lugeon	
	Required	Actual	Required	Actual			For Each Test	Repres. Value
(meters)	(min)	(min)	(bars)	(bars)	(liter	5)		(choose one)
	15		10					
	15		10					
	15	}	15					
	13		13					
	15		20					
	20		20					
				-				
-	15		15					
	15		10	1				
Note: $* = 1$	testing time	consists of th	ree 5 minute	intervals				
Equation:								
1	.ugeon Value = w	rater taken in test (li	iters/meter/min.))	K 10 (bars) / test p	ressure(bars)	(2)		

CONSTANT	HEAD HYDRAULIC CONDUCT	VITY PACKER	TEST
ENGINEERING-SO	CIENCE CLIENT: ACOE	DATE: 6/3/93	
PROJECT:	Ash Landfill	INSPECTOR:	PFM
LOCATION:	SEAD	CONTRACTOR:	D.L. Maher
CORE HOLE/WELL:	MW-50D	TEST INTERVAL (ft):	37.8-57.8
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			1

CONS	TANT I	IEAD HY	DRAU	LIC CON	DUCTI	VITY PACKER	TEST
ENGINE	RING-SC	IENCE	CLIENT:	ACOE		DATE: 6/3/93	
PROJECT:		Ash Landfill				INSPECTOR:	PFM
LOCATION		SEAD				CONTRACTOR:	D.L. Maher
CORE HOL		MW-50D				TEST INTERVAL (ft):	37.8-57.8
CALCUL	ATION OF	HYDRAULIC	CONDUC	TIVITY:			
0.10002.							
CALCULATE	THE HYDRAUL	IC CONDUCTIVITY	Y OF THE SOIL	OR ROCK BY TH	E FOLLOWING I	EQUATION:	
(see page 1255 c	of the Earth Manua	al paper for an examp	ole calculation)				
l	pi = 3.1415						
í '	p. — 3.1413						
TEST RES	TT TS.						
TEST RES	OLIG.						
PRESS.	TEST	0	L	H	r	HYDRAULIC CONI	DUCTIVITY
I KLSS.	11.51	q	L	**	,	IIIDRAOLIC COM	JUCITATI
Α	1						
В	2						
C	3						
В	4						
	5						
Α	3	l					

CONSTANT	HEAD HYDRAULIC CONDUCT	IVITY PACKER	TEST
ENGINEERING-S	CLIENT: ACOE	DATE: 6/3/93	
PROJECT:	Ash Landfill	INSPECTOR:	PFM
LOCATION:	SEAD	CONTRACTOR:	D.L. Maher
CORE HOLE/WELL: CALCULATIONS (MW-50D	TEST INTERVAL (ft):	37.8 - 57.8
CALCULATIONS (continued):		
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			1
			i
			1
			1

CONSTANT	HEAD HYDRAULIC CONDUCT	IVITY PACKER	TEST
ENGINEERING-SO	CIENCE CLIENT: ACOE	DATE: 6/3/93	
PROJECT:	Ash Landfill	INSPECTOR:	PFM
LOCATION:	SEAD	CONTRACTOR:	D.L. Maher
CORE HOLE/WELL:	MW-50D	TEST INTERVAL (ft):	37.8-57.8
COMMENTS:			
			İ

CALCULATIONS FOR PACKER TESTING

HYDRAULIC CONDUCTIVITY VALUES

WELL NUMBER: MW-52D

(NO FLOW WAS MEASURED UP TO 20 PSI AND, THEREFORE NO CONDUCTIVITY WAS CALCULATED)

TEST INTERVAL: 36.4-57.4

TEST DATE:

JUNE 6, 1993

				TEST)
PARAMETERS	UNITS	1	2	3	4	5	
TEST PRESSURE	(psi)	10.0	15.0	20.0	15.0	10.0	
LENGTH OF TEST INTERVAL	(feet) (cm)	21.0 640.08	21.0 640.08	21.0 640.08	21.0 640.08	21.0 640.08	
RADIUS OF BORHOLE	(inches) (cm)	1.875 4.76	1.875 4.76	1.875 4.76	1. 8 75 4.76	1.875 4.76	
TEN TIMES THE BOREHOLE RADIUS	(cm)	47.63	47.63	47.63	47.63	47.63	
RATE OF FLOW INTO TEST INTERVAL	(gals./min.) (cub. cm/sec)	0.00	0.00	0.00	0.00	0 0.00	
HEAD (GRAVITY)	(feet of water) (cm)	9.1 277.37	9.1 277.37	9.1 277.37	9.1 277.37	9,1 277.37	
HEAD (PRESSURE)	(psi) (feet of water) (cm of water)	20.0 46.2 1408.18	NA 0 0.00	NA 0 0.00	NA 0 0.00	NA 0 0.00	
DIFFERENTIAL HEAD OF WATER AT TEST INTERVAL	(cm)	1685.544	277.368	277.368	277.368	277.368	
HYDRAULIC CONDUCTIVITY	(cm/sec)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Note: H is the distance from the water table to the elevation of the pressure guage plus the applied pressure converted to linear units of water head.

EQUATION: K = q/(2 * pi * L * H) ln (L/r)

CALCULATIONS FOR PACKER TESTING

HYDRAULIC CONDUCTIVITY VALUES

WELL NUMBER: MW-55D TEST INTERVAL: 35.4-55.9 TEST DATE: MAY 26, 1993

				TEST		
PARAMETERS	UNITS	1	2	3	4	5
TEST PRESSURE	(psi)	10.0	15.0	20.0	15.0	10.0
LENGTH OF TEST INTERVAL	(feet) (cm)	20,5 624.84	20.5 624.84	20.5 624.84	20.5 624.84	20.5 624.84
RADIUS OF BORHOLE	(inches) (cm)	1.875 4.76	1.875 4.76	1,875 4.76	1.875 4.76	1.875 4.76
TEN TIMES THE BOREHOLE RADIUS	(cm)	47.63	47.63	47.63	47.63	47.63
RATE OF FLOW INTO TEST INTERVAL	(gals./min.) (cub. cm/sec)	0,09 5.68	0,14 8.83	0.175 11.04	0.13 8.20	0.09 5.68
HEAD (GRAVITY)	(feet of water) (cm)	32.5 990.30	32.5 990.30	32.5 990.30	32.5 990.30	32.5 990.60
HEAD (PRESSURE)	(psi) (feet of water) (cm of water)	10.0 23.1 704.09	15.0 34.65 1056.13	20.0 46.2 1408.18	15.0 34.65 1056.13	10.0 23.1 704.09
DIFFERENTIAL HEAD OF WATER AT TEST INTERVAL	(cm)	1694.3832	2046.4272	2398.4712	2046.4272	1694.688
HYDRAULIC CONDUCTIVITY	(cm/sec)	4.16E-06	5.36E-06	5.72E-06	4.98E-06	4.16E-06

Note: H is the distance from the water table to the elevation of the pressure guage plus the applied pressure converted to linear units of water head.

EQUATION: K = q/(2 * pi * L * H) ln (L/r)

CONS	TANT H	EAD H	YDRAU	LIC CON	NDUCTI	VITY PA	CKER '	ΓEST
ENGINEE	RING-SCI	ENCE	CLIENT:	ACOE		DATE:		
PROJECT:	Ash RI					INSPECTOR	PFM/CRI	
LOCATION	SEAD					CONTRACT	OR:	Maher Eng.
CORE HOL		MW-55D				TEST INTER		35.4-55.9
	FIELD COND		md major chang	es)			MONITORIN	
WEATHER	TILLD COM	1110113 (1000)	major caung	(3)			MOM TOKE	
TIME	TEMP	PRECIP.	CROUND	SURFACE COND	TIONS	INSTRU	MENT	DETECTOR
					ITIONS	 	OVM	PID
0830	60s	-	Dry (slimy warm))		 	OVIVI	110
				1		<u> </u>		<u> </u>
CORE HOL	E/WELL SPEC	S:		INSTRUMEN	IT SPECS:			
ELEVATION (GROUND SURFA	()-	636.80	TYPE OF DATA	LOGGER:	Geocan		
DIAMETER C	ORE HOLE/WELL		3 7/8"	TRANSDUCER'	TYPE(S):	Geocan		
LENGTH OF T	EST INTERVAL	(ft):	20.5'	TYPE OF PACK	ER(S):	Bim Bar 1		
DEPTH OF TE	ST INTERVAL (R):	35.4-55.9	MAXIMUM INF	LATABLE PACK	ER PRESSURE (F	si):	50 psi
	RE OF GROUND		10.6	PUMP CAPACIT	Y (gal./min.):	50		
	TABILITY: GO			DIAMETER OF		1-inch		
			REMENTS IN	CORE HOLE):	
22	011001121111			, ,				
DATE	5/26/93							
TIME	0745							
DEPTH	5.04							
		ANTAIC DD OC	EDUDE.			<u> </u>		
	E/WELL CLE							
WEIHOD OF	CLEANING (i.e. w	ater jet, etc.):	Pumping water do	wn into hole until o	verflow is clean (al	l rock floor remove	d) 2.3 hour	
				BELOW PACKE	R (gallons):			
TOTAL PRI	ESSURE TO B	E APPLIED TO	O TEST INTE	RVAL:				
					35	lbf/sq. in. (psi)		
]	Inflatable							1
]	Packer — — —							
A= 3	35.4 ft	***************************************	Top of test interv	al				
A	,5.4 N		1 op ot teat interv	aı				
				DOD THE INTER		mo n / 66 A A \ m	E MORAL DE ECC	
				FOR THE INTER				
				APPLIED TO TH	E DRILL HOLE 1	EST INTERVAL	SHOULD NOT E	XCEED
				A (35.4 ft) X 1 lbf	$\log \sin (p \sin) = 35.$	4 lb{/sq. in. (psi)		
(Open	1						
	Core							
]	Hole			Note: As a general	rule, total pressur	e (static head plus	zuage pressure) api	plied in the drill
				hole should not exc	-			
							-	
				provided the interv	-	o teet. High presse	res may artificially	ir acture
		i		the formation mate	TIBLE.			
		ì						
_		!	}					
B= 55	i.9 ft [Bottom of test in	terval				

CONSTANT HEAD HYDRAULIC CONDUCTIVITY PACKER TEST ENGINEERING-SCIENCE | CLIENT: ACOE PROJECT: Ash RI INSPECTOR:PFM/CRI LOCATION SEAD CONTRACTOR: Maher Eng. CORE HOLE/WELL: MW-55D TEST INTERVAL (ft): 35.4 - 55.9DETERMINATION OF WATER HEAD ABOVE THE TEST INTERVAL: METHOD 1 - DEPTH TO WATER TABLE (ft): 5.04', 35.4-5.04 = 30.36' water (use electronic water level meter) 30.36 divided by 2.31 = 13.11 psi METHOD 2 - PRESSURE ON PNEUMATIC PRESSURE GUAGE (Ibl/sq. in. or psi): (To convert lbf/sq. in. (psi) to feet or head of water multiply by 2.31) NA DETERMINATION OF MINIMUM INFLATION PRESSURE TO BE APPLIED TO PACKER(S): Equation: SH + PP + PE = MINIUM INFLATION PRESSURE (1) WHERE: SH = STATIC PRESSURE AT THE MIDPOINT ELEVATION OF THE TEST INTERVAL, Ib(/sq. in. or kPa PP = GUAGE PRESSURE TO BE MAINTAINED DURING THE TEST, lbf/sq. in. or kPa PE = PRESSURE NEEDED TO EXPAND PACKER TO HOLE DIAMETER AS DETERMINED BEFORE INSERTION IN THE DRILL HOLE BY EXPANDING THE PACKER IN A LENGTH OF PIPE HAVING A DIAMETER SIMILAR TO THE HOLE DIAMETER, lbf/sq. in. or kPa CALCULATIONS: 115 psi was used by Maher for packer 17.4 + 30 + 60 = 107 psiSH = 17.4 40.3' to midpoint divided by 2.31 = 17.4 paiPP = 30PE = 60DETERMINATION OF WATER HEAD FOR THE TEST INTERVAL: Transducer - 8.74 PRESSURE ON PNEUMATIC PRESSURE GUAGE (Ibl/eq. in. or pei): (To convert lbf/sq. in. (psl) to feet or head of water multiply by 2.31) 8.74 psi + 5.32 psi = 14.06 psi Actual for same at top 10.5' + 1.8' 20.19' H20 + 12.3' = 32.49' H2O PIEZOMETER PRESSURE AFTER FINAL PACKER INFLATION PRIOR TO TEST (lbf/sq. in. or psi): Stabilized at 8.7 psi with the system water filled

CONS	STANT I	IEAD H	YDRAU	LIC CONDUCT	TIVITY PACKER	TEST
ENGINE	ERING-SC	IENCE	CLIENT:	ACOE	DATE:	
PROJECT :					INSPECTOR:PFM/CRI	
LOCATION	SEAD				CONTRACTOR:	Maher Eng.
CORE HOI	.E/WELL:	MW-55D			TEST INTERVAL (ft):	35.4-55.9
TEST 1:			DDESSIDE	EOR TEST INTERVAL (III	of./sq. in. or psi): 18.74 (+10) nsi)
(STARTI		REQUIRED	RESSURE	TOR ILST INTERVAL (II	7.73q. 12. 01 psi). 10.74 (7 10	, por
<u> </u>	FLOW (gal/min.):	.09			BACK FLOW: NO	
		USED FOR TEST	1 (mal): 1 35 mal		BACK PRESSURE (lbf/sq. in. or	nsi).
TOTAL VOLU	WE OF WATER	0.09 x 15 min			DECAY OF HOLDING PRESSI	
		0.07 x 13 iiiii	- 1.55 gai		been of nobblid name	, 110
INTERVAL 1						
TIME	DDDGGG	URE IN TEST INT	PDVAI	PRESSURE ARC	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual	ERVAC	Feet of Water	Guage	(gal/min.)
(ши)	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	(8-10-111)
0	18.74	18.5	NA	NA NA	NA NA	0.01
0:30	18.74	18.6	NA	NA	NA	0.01
1:00	18.74	18.7	NA	NA NA	NA	0.01
1:30	18.74	18.8	NA NA	NA NA	NA NA	0.01
2:00	18.74	18.7	NA NA	NA NA	NA NA	0.01
2:30	18.74	18.5	NA NA	NA NA	NA NA	0.09
3:00	18.74	18.9	NA NA	NA NA	NA NA	0.09
3:30	18.74	18.7	NA NA	NA NA	NA NA	0.09
4:00	18.74	18.6	NA NA	NA NA	NA NA	0.09
4:30	18.74	18.6	NA NA	NA NA	NA NA	0.09
5:00	18.74	18.6	NA NA	NA NA	NA NA	0.09
		Testing Period		Starting reading:	NA.	0.07
	tity read from w	_	•	Ending reading:		
	uty read from w	vater meter)		Ending reading.		
TIME	nn Recc	I IDE IN TEST INT	PRIVAL	DDESCUDE ADO	OVE TEST INTERVAL	FLOW RATE
	PRESSURE IN TEST INTERVAL			Feet of Water		
(min)	Required	Actual	Curry (mri)	-	Guage	(gal/min.)
5:30	lbf/sq.in. or psi 18.74	Transducer (psi)	Guage (psi)	(ft) NA	(lbf/sq. in. or psi) NA	0.08
6:00	18.74	18.6	NA NA	NA NA	NA NA	0.08
6:30	18.74	18.6	NA NA	NA NA	NA NA	0.08
7:00	18.74	18.6	NA NA	NA NA	NA NA	0.08
7:30	18.74	18.6	NA NA	NA NA	NA NA	0.09
8:00	18.74	18.6	NA NA	NA NA	NA NA	0.09
	18.74	18.7	NA NA	NA NA	NA NA	0.09
8:30 9:00	18.74	18.7	NA NA	NA NA	NA NA	0.09
	18.74	18.7	NA NA	NA NA	NA NA	0.09
9:30						0.09
10:00	18.74	18.6	NA	NA Starting reading:	NA	0.09
-		Testing Period	:	Starting reading:		
	ity read from w	vater meter)		Ending reading:		
NTERVAL 3	· · · · · · · · · · · · · · · · · · ·			T		
TIME		URE IN TEST INT	ERVAL	PRESSURE ABOVE TEST INTERVAL		FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
40.77	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
10:30	18.74	18.6	NA	NA NA	NA NA	0.09
11:00	18.74	18.7	NA	NA	NA NA	0.09
11:30	18.74	18.8	NA	NA	NA NA	0.09
12:00	18.74	18.8	NA	NA	NA	0.09
12:30	18.74	18.8	NA	NA	NA	0.09
13:00	18.74	18.7	NA	NA	NA	0.09
13:30	18.74	18.7	NA	NA	NA	0.09
14:00	18.74	18.7	NA	NA	NA	0.09
14:30	18.74	18.7	NA	NA	NA	0.09
15:00	18.74	18.7	NA	NA	NA_	0.09
	ted into Hole in	Testing Period		Starting reading:		
•	ity read from w	vater meter)		Ending reading:		
		(minimum di	ip fro "T" <	5 ml/min)		
			•			

	ERING-SC	IENCE	CLIENT:	ACOE	DATE:	
ROJECT	Ash RI				INSPECTOR:PFM/CRI	
OCATION	N SEAD				CONTRACTOR:	Maher Eng.
ORE HO	LE/WELL:	MW-55D		TEST INTERVAL (ft):	35.4-55.9	
TEST 2:	Press. B		PRESSURE	FOR TEST INTERVAL (III	f./sq. in. or psi): 23.74 (+15	5 psi)
INCREA		I NEQUINEE		(**	, , , , , , , , , , , , , , , , , , ,	F/
	FLOW (gal/min.):	0.15 gpm			BACK FLOW: NO	
		USED FOR TEST	2 (gal.): 2.1 gals		BACK PRESSURE (Ibf/sq. in. or	psi):
V112 102	, , , , , , , , , , , , , , , , , , ,	0.15 x 15 min			DECAY OF HOLDING PRESS	. ,
		0120 11 20 11111				
NTERVAL 1						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABO	VE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
()	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
0	23.74	23.6	NA	NA	NA	0.15
0:30	23.74	23.7	NA	NA	NA	0.15
1:00	23.74	23.7	NA	NA	NA	0.15
1:30	23.74	23.7	NA	NA	NA	0.15
2:00	23.74	23.6	NA	NA	NA	0.15
2:30	23.74	23.6	NA	NA	NA	0.15
3:00	23.74	23.6	NA	NA	NA	0.15
3:30	23.74	23.6	NA	NA	NA	0.14
4:00	23.74	23.5	NA	NA	NA	0.14
4:30	23.74	23.8	NA	NA	NA	0.14
5:00	23.74	23.8	NA	NA	NA	0.14
Vater Injec	ted into Hole in	Testing Period:		Starting reading:		
-	tity read from w	-		Ending reading:		
NTERVAL 2						
TIME	T	URE IN TEST INT	ERVAL	PRESSURE ABO	VE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water Guage		(gal/min.)
(/	lbf/sq.in. or pai	Transducer (psi)	Guage (psi)	(ft)	(lb[/sq. in. or psi)	
5:30	23.74	23.7	NA	NA	NA	0.14
6:00	23.74	23.7	NA	NA	NA	0.14
6:30	23.74	23.7	NA	NA	NA	0.14
7:00	23.74	23.7	NA	NA	NA	0.14
7:30	23.74	23.7	NA	NA	NA	0.14
8:00	23.74	23.7	NA	NA	NA	0.135
8:30	23.74	23.7	NA	NA	NA	0.135
9:00	23.74	23.7	NA	NA	NA	0.135
9:30	23.74	23.7	NA	NA	NA	0.135
10:00	23.74	23.7	NA	NA	NA	0.135
		Testing Period:		Starting reading:		
-	tity read from w	-		Ending reading:		
NTERVAL 3	aty read from v	atel metery		2		
TIME	PRESS	URE IN TEST INT	RRVAL	PRESSURE ARO	VE TEST INTERVAL	FLOW RATE
	Required	Actual		Feet of Water	Guage	(gal/min.)
(min)	lbf/aq.in. or pai	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	(84.71111.)
10:30	23.74	23.7	NA	NA NA	NA	0.135
11:00	23.74	23.6	NA NA	NA NA	NA	0.135
11:30	23.74	23.6	NA NA	NA NA	NA NA	0.135
12:00	23.74	23.7	NA NA	NA NA	NA NA	0.135
12:30	23.74	23.7	NA NA	NA NA	NA NA	0.135
	23.74	23.7	NA NA	NA NA	NA NA	0.135
13:00					NA NA	0.135
13:30	23.74	23.7	NA	NA NA		
14:00	23.74	23.7	NA NA	NA NA	NA NA	0.135
14:30	23.74	23.7	NA NA	NA NA	NA NA	0.135
		747	NΑ	NA	NA NA	0.135
15:00	23.74				-	
15:00 ater Inject		Testing Period		Starting reading: Ending reading:		

ENGINE	ERING-SC		CLIENT:		IVITY PACKER DATE:	
PROJECT:		BITOD	CLILLIA		INSPECTOR:PFM/CRI	
LOCATION					CONTRACTOR:	Maher Eng.
CORE HO		MW-55D			TEST INTERVAL (ft):	35.4-55.9
	Press. C		DDECCIDE	FOR TEST INTERVAL (IN	./sq. in. or psi): 28.74 (+20	
MAXIM		REQUIRES	/ I KESSUKE	TOK IEST IN TERVAL (IDI	,/sq. III. 01 psi). 20.74 (120	psi)
	FLOW (gal/min.):	0.185			BACK FLOW: NO	
		USED FOR TEST	3 (en) \: 2 63 en		BACK PRESSURE (lbf/sq. in. or	nei).
OTAL VOL	JULE OF WATER	$0.185 \times 15 =$			DECAY OF HOLDING PRESSI	
		0.105 R 15	2105 841		DESTR. OF HOLDING HELDS	orasi mo
NTERVAL 1						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABOV	VE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal√min.)
` '	lbf/sq.in. or psi	Transducer (psi)	Guage (pai)	(ft)	(lbf/sq. in. or psi)	
0	28.74	28.6	NA	NA	NA	0.18
0:30	28.74	28.6	NA	NA	NA	0.18
1:00	28.74	28.6	NA	NA	NA	0.18
1:30	28.74	28.6	NA	NA	NA	0.18
2:00	28.74	28.6	NA	NA	NA	0.18
2:30	28.74	28.6	NA	NA	NA	0.18
3:00	28.74	28.6	NA	NA	NA	0.18
3:30	28.74	28.6	NA	NA	NA	0.18
4:00	28.74	28.6	NA	NA	NA	0.18
4:30	28.74	28.6	NA	NA NA	NA	0.18
5:00	28.74	28.6	NA	NA	NA	0.175
		Testing Period	:	Starting reading:		
	tity read from w	ater meter)		Ending reading:		
VTERVAL 2				1		
TIME		URE IN TEST INT	ERVAL		VE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
F.20	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	0.175
5:30	28.74	28.6	NA NA	NA NA	NA NA	0.175
6:00	28.74	28.6	NA.	NA	NA	0.175
6:30 7:00	28.74 28.74	28.6 28.6	NA	NA	NA	0.175
7:30	28.74	28.7	NA NA	NA NA	NA NA	0.175
8:00	28.74	28.7	NA NA	NA NA	NA NA	0.175
8:30	28.74	28.6	NA NA	NA NA	NA NA	0.175
9:00	28.74	28.6	NA NA	NA NA	NA NA	0.170
9:30	28.74	28.6	NA NA	NA NA	NA NA	0.170
10:00	28.74	28.6	NA NA	NA NA	NA NA	0.170
		Testing Period		Starting reading:	IVA	0.170
-	ity read from w	_	•	Ending reading:		
TERVAL 3	aty read from w	ater meter)		Limit rouding.		
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABOV	VE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
(lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	(8
10:30	28.74	28.5	NA	NA NA	NA	0.170
11:00	28.74	28.5	NA	NA	NA	0.170
11:30	28.74	28.5	NA	NA	NA	0.170
12:00	28.74	28.8	NA	NA	NA	0.175
12:30	28.74	28.8	NA	NA	NA	0.175
	28.74	28.8	NA	NA	NA	0.175
13:00	28.74	28.8	NA	NA	NA	0.170
13:00 13:30	20.74			NA	NA	0.170
13:30		28.8	NA			
13:30 14:00	28.74	28.8 28.8	NA NA			
13:30 14:00 14:30	28.74 28.74	28.8	NA	NA NA	NA NA	0.170 0.170
13:30 14:00 14:30 15:00	28.74 28.74 28.74		NA NA	NA	NA	0.170

CONS	STANT I	IEAD H	YDRAU	LIC CONDUCT	IVITY PACKER	TEST
ENGINE	ERING-SC	IENCE	CLIENT:	ACOE	DATE:	
PROJECT:					INSPECTOR:PFM/CRI	
LOCATION					CONTRACTOR:	Maher Eng.
CORE HOI		MW-55D			TEST INTERVAL (ft):	35.4-55.9
			DD DGGI ID E			
TEST 4: (DECRE		REQUIRED	PRESSURE	FOR TEST INTERVAL (IBI	f./sq. in. or psi): 23.74 (+15	psi)
STABILIZED	FLOW (gal/min.):	0.130			BACK FLOW: NO	
		USED FOR TEST	(gal.): 1.95 gals		BACK PRESSURE (lbf/sq. in. or	psi):
		$0.130 \times 15 =$			DECAY OF HOLDING PRESS	•
TIME	DD EGGG	URE IN TEST INT	RDVAI	PRESSURE AROU	VE TEST INTERVAL	FLOW RATE
		Actual	ERVAL	Feet of Water	Guage	
(min)	Required		Correction (see)			(gal/min.)
0	1bf/sq.in. or psi 23.74	Transducer (psi)	Guage (psi) NA	(ft) NA	(lbf/sq. in. or psi) NA	0.130
<u>:_</u>						
0:30	23.74	23.7	NA	NA	NA NA	0.130
1:00	23.74	23.7	NA	NA NA	NA NA	0.130
1:30	23.74	23.7	NA	NA	NA	0.130
2:00	23.74	23.7	NA_	NA	NA	0.130
2:30	23.74	23.7	NA	NA	NA	0.130
3:00	23.74	23.7	NA	NA	NA	0.130
3:30	23.74	23.7	NA	NA	NA	0.130
4:00	23.74	23.7	NA	NA	NA	0.130
4:30	23.74	23.7	NA	NA	NA	0.130
5:00	23.74	23.6	NA	NA	NA	0.130
		Testing Period:		Starting reading:		
-	tity read from w	_		Ending reading:		
NTERVAL 2	uty read from w	ater meter)		Ending reading.		
	T			T		
TIME	$\overline{}$	URE IN TEST INT	ERVAL	PRESSURE ABO	FLOW RATE	
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
	lbf/sq.in. or pm	Transducer (psi)	Guage (pai)	(ft)	(lbf/sq. in. or psi)	
5:30	23.74	23.6	NA NA	NA	NA	0.130
6:00	23.74	23.6	NA	NA NA	NA	0.130
6:30	23.74	23.6	NA	NA	NA NA	0.130
7:00	23.74	23.6	NA	NA	NA	0.130
7:30	23.74	23.6	NA	NA	NA	0.130
8:00	23.74	23.6	NA	NA	NA	0.130
8:30	23.74	23.6	NA	NA	NA	0.130
9:00	23.74	23.6	NA	NA	NA	0.130
9:30	23.74	23.6	NA	NA	NA	0.130
10:00	23.74	23.6	NA	NA NA	NA NA	0.130
					11/1	0.130
•		Testing Period:		Starting reading:		
	ity read from w	ater meter)		Ending reading:		1.0 - 1.0 - 1.0 - 1.0
NTERVAL 3	,					
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABO	VE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
10:30	23.74	23.6	NA	NA	NA	01.25
11:00	23.74	23.6	NA	NA	NA	0.125
11:30	23.74	23.7	NA	NA	NA	0.135
12:00	23.74	24.00	NA	NA	NA NA	01.30
12:30	23.74	23.9	NA	NA NA	NA NA	0.130
13:00	23.74	23.9	NA	NA	NA	0.125
13:30	23.74	23.9	NA	NA	NA	0.125
14:00	23.74	23.8	NA	NA	NA	0.125
14:30	23.74	23.9	NA	NA	NA	0.125
		22.0	NA	NA	NA	0.125
15:00	23.74	23.9	_IAW		IVA	0.123
15:00		Testing Period:		Starting reading:	NA NA	0.123

CONS	STANT F	IEAD H	YDRAU	ILIC CONDUCT	TIVITY PACKER	TEST
	ERING-SC		CLIENT:	ACOE	DATE:	
PROJECT:					INSPECTOR PFM/CRI	
LOCATION					CONTRACTOR:	Maher Eng.
CORE HOI	LE/WELL:	MW-55D			TEST INTERVAL (ft):	35.4-55.9
	Press. A		PRESSURE	FOR TEST INTERVAL (III	f./sq. in. or psi): 18.74 (+10	0 psi)
(STARTI		REGUIRED	RESSURE	TOR ILDI INTERVIE (III	, ad. 12. o. par). 20 (· 2·	· Poi)
	FLOW (gal/min.):	0.09			BACK FLOW: NO	
		USED FOR TEST	5 (eal): 135 eal		BACK PRESSURE (lbf/sq. in. or	psi):
TOTAL VOLU	JUL OF WAILK	OSED FOR IDST	(gu.). 125 gu.		DECAY OF HOLDING PRESS	• •
INTERVAL 1						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABO	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal√min.)
(23.7)	lbf/sq.in. or pai	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
0	18.74	18.8	NA	NA	NA	0.09
0:30	18.74	18.7	NA	NA	NA	0.09
1:00	18.74	18.8	NA	NA	NA	0.09
1:30	18.74	18.8	NA	NA	NA	0.09
2:00	18.74	18.7	NA	NA NA	NA	0.09
2:30	18.74	18.7	NA	NA	NA	0.09
3:00	18.74	18.7	NA	NA NA	NA	0.09
3:30	18.74	18.7	NA	NA	NA	0.09
4:00	18.74	18.7	NA	NA NA	NA NA	0.09
4:30	18.74	18.7	NA	NA NA	NA	0.09
5:00	18.74	18.7	NA	NA	NA	0.09
		Testing Period		Starting reading:	1112	
-	tity read from w	_	•	Ending reading:		
INTERVAL 2	dty read from w	vater meter)		Ending reading.		
TIME	рриссс	URE IN TEST INT	PDVAI	DD POSITOE ARC	OVE TEST INTERVAL	FLOW RATE
	Required	Actual	ERVAL	Feet of Water	(gal/min.)	
(min)	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	Guage (Ibf/sq. in. or psi)	(garamin.)
5:30	18.74	18.7	NA	NA NA	NA	0.09
6:00	18.74	18.7	NA	NA NA	NA NA	0.09
6:30	18.74	18.8	NA	NA NA	NA NA	0.09
7:00	18.74	18.8	NA	NA NA	NA NA	0.09
7:30	18.74	18.7	NA	NA NA	NA NA	0.09
8:00	18.74	18.7	NA	NA NA	NA NA	0.09
8:30	18.74	18.7	NA	NA NA	NA NA	0.09
9:00	18.74	18.7	NA	NA NA	NA NA	0.09
9:30	18.74	18.7	NA	NA NA	NA NA	0.09
10:00	18.74	18.7	NA NA	NA NA	NA NA	0.09
					INA	0.09
		Testing Period	:	Starting reading:		
	tity read from w	vater meter)		Ending reading:		
INTERVAL 3	-					
TIME		URE IN TEST INT	ERVAL		OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal./min.)
40.70	lbf/sq.in. or psi	Transducer (psi)	Guage (pai)	(ft)	(lbf/sq. in. or psi)	0.00
10:30	18.74	18.7	NA	NA NA	NA NA	0.09
11:00	18.74	18.7	NA	NA NA	NA NA	0.09
11:30	18.74	18.7	NA	NA	NA NA	0.09
12:00	18.74	18.7	NA	NA	NA	0.09
12:30	18.74	18.7	NA	NA	NA	0.09
13:00	18.74	18.7	NA	NA	NA	0.09
13:30	18.74	18.7	NA	NA	NA	0.09
15:30	10.74	18.7	NA	NA	NA	0.09
14:00	18.74				27.4	0.00
	18.74	18.7	NA	NA	NA	0.09
14:00			NA NA	NA NA	NA NA	0.09
14:00 14:30 15:00	18.74 18.74	18.7	NA			

CONS	TANTI	IEAD H	YDRAU	LIC CO	NDUCTI	VITY PA	CKER	rest
ENGINE	RING-SCI	ENCE	CLIENT:	ACOE	TD C C I I	DATE:		1201
PROJECT	Ash RI	<u> Littor</u>	CDIDITI			INSPECTOR:	PFM/CRI	
LOCATION	SEAD					CONTRACTO	OR:	Maher Eng.
CORE HOL		MW-55D				TEST INTER		35.4-55.9
CORE HOL	E/WELL:	WI W - 33D	ALCIII ATI	ONOFILI	GEON VALU	TEST IN TER	* AL (11).	33.4-33.7
		C	ALCOLATI	ON OF LO				
					Water Injec	ted into Test		
Test					Interval i	n Testing		
Interval	Testing	Times *	Guage P	ressure	Peri	od	Lugeon	Value
	Required	Actual	Required	Actual			For Each Test	Repres. Value
(meters)	(min)	(min)	(bars)	(bars)	(liter	1)		(choose one)
	15		10					
	15		15					
	15		20					
	15		15					
	15		10					
Note: * -	testing time	consists of th	rea 5 minute	intervals	1			
Note. =	testing time	consists of th	ice 3 minute	intervals				
Equation:								
_	Lugeon Value = w	nt tokan in tast (I	litera/meter/min)	V 10 (harr) / test	neasure/hors)	(2)		
	Lugeon value – w	ates taken in test (i	ilog willeter/mile)	A TO (Gals) / Gest	pressure(oars)	(2)		

CONSTANT HEAD HYDRAULIC CONDUCT ENGINEERING-SCIENCE CLIENT: ACOE	IVITY PACKER	TEST
ENGINEERING-SCIENCE CLIENT: ACOE	DATE:	
PROJECT: Ash RI	INSPECTOR PFM/CRI	
LOCATION SEAD	CONTRACTOR:	Maher Eng.
CORE HOLE/WELL: MW-55D	TEST INTERVAL (ft):	35.4-55.9
		1
•		

CONS	TANT F	IEAD H'	YDRAU	LIC CON	NDUCTI	VITY PACKER DATE:	TEST
ENGINE	ERING-SCI	ENCE	CLIENT:	ACOE		DATE:	
PROJECT:	Ash RI		<u></u>			INSPECTOR:PFM/CRI	
LOCATION						CONTRACTOR:	Maher Eng.
CORE HOL		MW-55D				TEST INTERVAL (ft):	35.4 – 55.9
CALCIT	ATION OF I	HYDRAULI	C CONDITO	TIVITY		ILST INTERVAL (II).	33.4-33.9
CALCUL	ATION OF I	TIDRAULI	CCONDOC	JIIVII I.			
l		C CONDUCTIVI		OR ROCK BY TH	E FOLLOWING	EQUATION:	
(see page 1255 o	of the Earth Manua	al paper for an exam	aple calculation)				
							į
							ļ
	pi = 3.1415						
	pi = 3.1413						
weer ne	TH TC.						
TEST RES	SULTS:						
PRESS.	TEST	q]	L	Н	r	HYDRAULIC CON	DUCTIVTY
Α	1						
В	2						
С	3						
В	4						
A	5						
Λ							
							l l
							:
							'

CONSTANT HEAD HYDRAULIC CONDUCTI	VITY PACKER	TEST
ENGINEERING-SCIENCE CLIENT: ACOE	DATE:	
PROJECT: Ash RI	INSPECTOR:PFM/CRI	
LOCATION SEAD	CONTRACTOR:	Maher Eng.
CORE HOLE/WELL: MW-55D	TEST INTERVAL (ft):	35.4-55.9
CALCULATIONS (continued):	1221111211112 (11)	3011 3013
or Edoli 11 10110 (volumeta).		

ENGINERING-SCIENCE CLIENT: ACOE DATE: PROJECT: ASI I LOCATION SEAD CORE HOLEWELL: MW-55D TEST INTERVAL (ft): 35.4-55.9 COMMENTS:	CONSTANT	HEAD HYDRAULIC CONDUCT	IVITY PACKER	TEST
PROJECT: Ash RI LICOATION SEAD CORE HOLE-WELL: MW—5SD TEST INTERVAL (II): 35.4–55.9 COMMENTS:	ENGINEERING-SO	CIENCE CLIENT: ACOE	DATE:	
LOCATION SEAD CORE HOLEWELL: MW-55D TEST INTERVAL (II): Maker Eag. TEST INTERVAL (II): 35.4-55.9	PROJECT - Ash RI			
COMMENTS: TEST INTERVAL (II): 354-55.9 COMMENTS:	LOCATION SEAD			Mohar Eng
COMMENTS:		MW 55D		
	CORE HOLE/WELL:	MM-22D	IEST INTERVAL (II):	33.4-33.9
	COMMENTS:			
	}			
				l
				1
				i

CALCULATIONS FOR PACKER TESTING

HYDRAULIC CONDUCTIVITY VALUES

WELL NUMBER: MW-58D
TEST INTERVAL: 35.3-56.0
TEST DATE: JUNE 4, 1993

		TEST 1 2 3 4 5					
PARAMETERS	UNITS	1	1 2		4	5	
TEST PRESSURE	(psi)	10.0	15.0	20.0	15.0	10.0	
LENGTH OF TEST INTERVAL	(feet) (cm)	20.7 630.94	20.7 630.94	20.7 630.94	20.7 630.94	20.7 630.94	
RADIUS OF BORHOLE	(inches) (cm)	1,875 4.76	1.875 4.76	1.8 75 4.76	1.875 4.76	1. 875 4.76	
TEN TIMES THE BOREHOLE RADIUS	(cm)	47.63	47.63	47.63	47.63	47.63	
RATE OF FLOW INTO TEST INTERVAL	(gals./min.) (cub. cm/sec)	0.11 6.94	0.15 9.46	0.18	0.135 8.52	0.095 5.99	
HEAD (GRAVITY)	(feet of water) (cm)	34.1 1037.84	34.1 1037.84	34.1 1037.84	34.1 1037.84	34.1 1037.84	
HEAD (PRESSURE)	(psi) (feet of water) (cm of water)	10.2 23.4465 714.65	15.1 34.7655 1059.65	20:0 46.2693 1410.29	15.0 34.7193 1058.24	10.1 23.2155 707.61	
DIFFERENTIAL HEAD OF WATER AT TEST INTERVAL	(cm)	1752.49332	2097.49644	2448.13226	2096.08826	1745.45244	
HYDRAULIC CONDUCTIVITY	(cm/sec)	4.88E-06	5.56E-06	5.72E-06	5.01E-06	4.23E-06	

Note: H is the distance from the water table to the elevation of the pressure guage plus the applied pressure converted to linear units of water head.

EQUATION: K = q/(2 * pi * L * H) ln (L/r)

CONS	TANT I	IEAD H	YDRAU	LIC CON	NDUCTI	VITY PA	ACKER '	TEST	
	RING-SCI		CLIENT:	ACOE			6-4-93		
					INSPECTOR		CRL		
-						CONTRACT		D.L. Maher	
}	CORE HOLE/WELL: MW-58D					TEST INTER		35.3-56.0	
	FIELD CONE		nd major chang	ves)		LIESTINIER	MONITORIN		
W Est Land	TILLED COME	THOMB (1000	u major onang			1			
TIME	ТЕМР	PRECIP.	GROUND	SURFACE COND	TTIONS	INSTRU	IMENT	DETECTOR	
						 			
CORE HOL	E/WELL SPE	CS:		INSTRUMEN	IT SPECS:				
				1					
ELEVATION (GROUND SURFA		627.70	TYPE OF DATA	LOGGER:	GEOCAN			
DIAMETER C	ORE HOLE/WEL	_ ()	3.875	TRANSDUCER	TYPE(S):	GEOCAN	<u> </u>		
LENGTH OF T	EST INTERVAL	(**)	20.7	TYPE OF PACK	ER(S):	BIN BAR 1			
DEPTH OF TE	ST INTERVAL (f	t):	3	MAXIMUM INF	LATABLE PACE	ER PRESSURE (osi):	50 psi	
TEMPERATU	RE OF GROUND	WATER (deg.C):		PUMP CAPACIT	Y (gal./min.):	50			
CORE HOLES	TABILITY: FA	IR		DIAMETER OF	FEED PIPE (in.)	1-inch			
DEPTH TO	GROUNDWA	TER MEASU	REMENTS IN	CORE HOLE	WELL PRIO	R TO TESTING	3 :		
	4 00								
DATE	6-4-93					-			
TIME	8:00								
DEPTH	1:25				<u> </u>	<u> </u>	<u> </u>		
II .	E/WELL CLE		EDURE:						
METHOD OF	CLEANING (i.e. w	* ' '							
		Wash clean water t	brough bole.						
	SSURE TO B			BELOW PACKE	R (gallons):				
IOIALIKI	SORE TO B	E AFFEIED I	O IESI INTE	KVAL:	35.3	lbf/sq. in. (psi)			
					333	_ iousq. iii. (par)			
i		33.5			One highly fractu	red zone			
					46.4 - 48.2' zone				
	Inflatable								
	Packer								
A= 35.3	ft		Top of test interv	മി				l	
				FOR THE INTER	VAL A (35.3 ft) T	OB (56.0 ft) THE	TOTAL PRESSU	RE	
				APPLIED TO TH	E DRILL HOLE	TEST INTERVAL	SHOULD NOT E	XCEED	
]				A (35.3 ft) X 1 lbf/	(aq. in. (pai) = 35.	3 lbf/sq.in.(psi)			
	_								
'	Open								
'	Core								
]	Hole			Note: As a genera	l rule, total pressu	re (static head plus	guage pressure) ap	plied in the drill	
1				hole should not ex	eed 1 lbf/sq. in. (p	si) per foot of over	burden at the top o	of the test interval,	
				provided the interv	al is greater than	10 feet. High pressu	res may artificially	y fracture	
				the formation mate	xials.				
*55.3 due t	o caving								
	-								
B = 56.0	ft		Bottom of test in	terval					

CONSTANT I	HEAD H	YDRAULIC CONDUCT	VITY F	ACKER	TEST
ENGINEERING-SC	IENCE	CLIENT: ACOE	DATE:	6-4-93	
PROJECT:	Ash Landfil	RI - Bedrock wells	INSPECTO	R:	CRL
LOCATION:	SEAD - O	ff-site adjacent	CONTRAC	TOR:	D.L. Maher
CORE HOLE/WELL:	MW-58D		TEST INTE	ERVAL (ft):	35.3-56.0
DETERMINATION OF V	VATER HEAD	ABOVE THE TEST INTERVAL:			
METHOD 1 - DEPTH TO WAT					-
(use electronic water level meter)		35.3 - 1.25 = 34.05			
		34.05 divided by 2.31 = 14.74			
MOTUOD 2 - PRESSURE ON	DNDI IMATIC DDI	PSSLIDE GLIAGE (Ibf/ss. in or sei):			
(To convert lbf/sq. in. (psi) to feet		ESSURE GUAGE (lbf/sq. in. or psi):			
(10 convertible) in (pa) to teet	Or nead of water in	10.95 + 4.5 + 0.77 = 16.22			
		20170 1 100 1 0117 - 2022			
DETERMINATION OF M	AINIMUM INF	LATION PRESSURE TO BE APPLIED TO	PACKER(S):	
Equation:					
	SH + PP + PE =	MINIUM INFLATION PRESSURE (1))		
WHERE:		RESSURE AT THE MIDPOINT ELEVATION OF THI			à
		RESSURE TO BE MAINTAINED DURING THE TES	-		
		E NEEDED TO EXPANDING THE BACKER IN A LE			
		.ILL HOLE BY EXPANDING THE PACKER IN A LE DLE DIAMETER, 16(/sq. in. or kPa	NGIH OF PIPE	HAVING A DIAM	EIER SIMILAR
	10 Ing n	DEE DIMMETER, 101/19, 10. OF KP8			
CALCULATIONS:					
	14.74 + 4.32 = 19.	06			
	14.74 to bottom of	packs + 4.32			
CV 40.0					
SH = 19.0					
PP = 20 PE = 60/99 min.		Actual 110 psi			
PE = 60/99 min.					
DETERMINATION OF W	VATER HEAD	FOR THE TEST INTERVAL:			
PRESSURE ON PNEUMATIC P	RESSURE GUAC	GE (lbf/sq. in. or psi):			
(To convert lbf/sq. in. (psi) to feet					
		10.95 psi (stable) with packer inflated.			
DIEZOMETED DDECELID	E AETED EIN	AL PACKER INFLATION PRIOR TO TE	ST (lbf/ca i=	or nei):	
FIECUMETER FRESSUR	L AFIER FIR	TAL LACKER INTERTION FROM TO TE	or (ionad.m.	or par).	

CONS	STANT I	IEAD IT	YDRAU	LIC CONDUCT	TIVITY PACKER	TEST
	ERING-SC	IENCE	CLIENT:	ACOE	DATE: 6-4-93	
PROJECT:	CT: Ash Landfill RI – Bedrock wells				INSPECTOR:	CRL
LOCATION	N: SEAD - Off-site adjacent			ent	CONTRACTOR:	D.L. Maher
CORE HOL	E/WELL:	MW-58D	-		TEST INTERVAL (ft):	35.3-56.0
TEST 1:	Press. A	REQUIRED	PRESSURE	FOR TEST INTERVAL (II	of./sq. in. or psi): 10.95 + 10	
(STARTI		REQUIREE	/ I KESSUKE	TOK IEST INTERVAL (II	71./3q. 111. 01 ps1/3. 10.23 1 10	,
•	FLOW (gal/min.):		20.95		BACK FLOW: YES N	10
		USED FOR TEST			BACK PRESSURE (lbf/sq. in. or	_
			- (6)-		DECAY OF HOLDING PRESS	. ,
						120 110
INTERVAL 1			12: 400 - cc	omputer time		
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABO	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
0	21.0	21.09				0.125
0:30	21.0	21.05				0.125
1:00	21.0	21.15				0.125
1:30	21.0	12.01				0.125
2:00	21.0	21.10				0.125
2:30	21.0	21.11				0.125
3:00	21.0	21.13				0.120
3:30	21.0	21.10				0.120
4:00	21.0	21.08				0.120
4:30	21.0	21.09				0.120
5:00	21.0	21.10			-	0.120
		Testing Period:		Starting reading:		0.120
_	ity read from w	-		Ending reading:		
INTERVAL 2	ity read from w	ater meter)		Lifeting reading.		
TIME	DD Dece	URE IN TEST INT	PDVAL	DDECCUDE ADO	OVE TEST INTERVAL	E OW DATE
			ERVAL		FLOW RATE	
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
5:30	lbf/sq.in. or psi 21.0	Transducer (psi) 21.08	Guage (psi)	(ft)	(lbt/sq. in. or psi)	0.120
6:00	21.0	21.10		-		0.120
6:30	21.0	21.10				0.120
7:00	21.0	21.13				0.115
7:30	21.0	21.13				
8:00	21.0	21.08				0.120
8:30	21.0	21.08				
9:00		21.11				0.120
	21.0					0.120
9:30	21.0	21.10				0.115
10:00	21.0	21.05		Charting		0.115
		Testing Period:		Starting reading:		
-	ity read from w	ater meter)		Ending reading:		
INTERVAL 3				· · · · · · · · · · · · · · · · · · ·		
TIME		JRE IN TEST INT	ERVAL		OVE TEST INTERVAL	FLOW RATE
(nin)	Required	Actual		Feet of Water	Guage	(gal/min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
10:30	21.0	21.08				0.115
11:00	21.0	21.11				0.115
11:30	21.0	21.10				0.115
12:00	21.0	12.10				0.115
12:30	21.0	21.11				0.115
13:00	21.0	21.09				0.115
13:30	21.0	21.08				0.115
14:00	21.0	21.07				0.115
14:30	21.0	21.06				0.110
15:00	21.0	21.01				0.110
		Testing Period:		Starting reading:		
-	ity read from w			Ending reading:		
Tores desur	ity read from W	una metta)		200000000000000000000000000000000000000		

CON	STANT I	IEAD H			TIVITY PACKER	TEST
ENGINE	ERING-SC		CLIENT:		DATE: 6-4-93	
PROJECT:	: Ash Landfill RI - Bedrock wells				INSPECTOR:	CRL
LOCATION	٧:	SEAD - Of	f—site adjac	ent	CONTRACTOR:	D.L. Maher
CORE HO	LE/WELL:	MW-58D			TEST INTERVAL (ft):	35.3-56.0
TEST 2:	Press. B	REQUIRED	PRESSURE	FOR TEST INTERVAL (II	of./sq. in. or psi): 26.0	
(INCREA		REQUIRE	T I LLOUGH IL	10111201111121111121111	on, aq. tar of por,	
	FLOW (gal/min.):		2		BACK FLOW: YES	NO
		USED FOR TEST	2 (gal.):	1:00 computer time	BACK PRESSURE (lbf/sq. in. or	pai):
			- (B)		DECAY OF HOLDING PRESS	
INTERVAL 1						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE ABO	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
(=)	lb{/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq.in.orpsi)	(0 1 11)
0	26.0	25.98				.160
0:30	26.0	25.97				.160
1:00	26.0	25.97				.160
1:30	26.0	25.97				.160
2:00	26.0	25.96				.160
2:30	26.0	25.97				.155
3:00	26.0	25.96				.155
3:30	26.0	25.93				.155
4:00	26.0	25.96				.155
4:30	26.0	25.96				.155
5:00	26.0	25.97				.155
		Testing Period		Starting reading:		.133
	tity read from w	_	•	Ending reading:		
INTERVAL 2	aty read from w	ater meter)		Ending reading.		
TIME	DD Feec	IDE IN TECT INT	EDVAL	DDECCUDE ADO	WE TEST INTERVAL	FLOW RATE
	Required	PRESSSURE IN TEST INTERVAL		PRESSURE ABOVE TEST INTERVAL Feet of Water Guage		
(min)		Actual Transducer (psi)	Connectori)	┪	Guage	(gal√min.)
5:30	tbt/sq.in. or psi 26.0	26.00	Guage (psi)	(ft)	(lbt/sq. in. or psi)	0.155
6:00	26.0	26.01				0.155
6:30	26.0	25.99				0.155
7:00	26.0	26.01				0.155
7:30	26.0	25.98			 	0.150
8:00	26.0	25.98				0.150
8:30	26.0	25.95				
		25.93				0.150
9:00	26.0					0.155
9:30	26.0	26.05				0.150
10:00	26.0	26.03		Ctasting and dis-		0.150
,		Testing Period:		Starting reading:		
	ity read from w	ater meter)		Ending reading:		
INTERVAL 3						
TIME		URE IN TEST INT	ERVAL		OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(1)	(lbf/sq. in. or psi)	
10:30	26.0	26.03				0.150
11:00	26.0	26.05				0.150
11:30	26.0	26.05				0.150
12:00	26.0	26.04				0.150
12:30	26.0	26.05				0.150
13:00	26.0	26.04				0.150
13:30	26.0	26.01				0.150
14:00	26.0	26.03				0.150
14:30	26.0	26.05				0.150
15:00	26.0	26.05				0.150
		Testing Period:		Starting reading:		
	ity read from w	_		Ending reading:		
	7					

CONS	STANT I	HEAD H	YDRAU	LIC CONDUC	TIVITY PACKER	TEST	
	ERING-SC	IENCE	CLIENT:	ACOE	DATE: 6-4-93		
PROJECT: Ash Landfill RI - Bedrock wells				ock wells	INSPECTOR:	CRL	
LOCATION	٧:	SEAD - Of	-site adjac	ent	CONTRACTOR:	D.L. Maher	
CORE HOL	LE/WELL:	MW-58D	•		TEST INTERVAL (ft):	35.3-56.0	
TEST 3:			PRESSURE	FOR TEST INTERVAL (I			
(MAXIM)		l lingoine	· ILLOURD	· · · · · · · · · · · · · · ·			
	FLOW (gal/min.):	1			BACK FLOW: YES	NO	
		USED FOR TEST	3 (gal.):		BACK PRESSURE (lbf/sq. in. or		
10112 1020			(8-11)		DECAY OF HOLDING PRESS	. ,	
INTERVAL 1			13:20 comp	uter time			
TIME	PRESS	URE IN TEST INT	FRVAL.	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE	
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)	
(2)	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	(g-11-111)	
0	31.00	31.00	N/A	N/A	N/A	0.195	
0:30	31.00	30.99	N/A	N/A	N/A	0.195	
1:00	31.00	31.03	N/A	N/A	N/A	0.195	
1:30	31.00	31.00	N/A	N/A	N/A	0.190	
2:00	31.00	30.99	N/A	N/A	N/A	0.190	
2:30	31.00	31.01	N/A	N/A	N/A	0.190	
3:00	31.00	30.98	N/A	N/A	N/A	0.185	
3:30	31.00	30.99	N/A	N/A	N/A	0.185	
4:00	31.00	31.00	N/A N/A	N/A N/A	N/A N/A	0.185	
4:30	31.00	30.98	N/A	N/A	N/A N/A	0.185	
5:00	31.00	31.00	N/A	N/A	N/A N/A	0.185	
				Starting reading:	N/A	0.163	
-		Testing Period		Ending reading:			
*/ 	tity read from w	ater meter)		Ending reading.			
INTERVAL 2	PD POCCI	I I D I I I I I I I I I I I I I I I I I	CDMAN	BD DCCUBE AD	OVE TEST INTERVAL	E OW DATE	
		URE IN TEST INT	ERVAL		FLOW RATE		
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)	
5:30	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	0.100	
	31.00	30.98	N/A	N/A	N/A	0.180	
6:00	31.00	30.99	N/A	N/A	N/A	0.180	
6:30	31.00	30.97	N/A	N/A	N/A	0.180	
7:00	31.00	30.97	N/A	N/A	N/A	0.180	
7:30	31.00	30.95	N/A	N/A	N/A	0.180	
8:00	31.00	30.98	N/A	N/A	N/A	0.180	
8:30	31.00	30.95	N/A	N/A	N/A	0.180	
9:00	31.00	30.94	N/A	N/A	N/A	0.180	
9:30	31.00	30.98	N/A	N/A	N/A	0.180	
10:00	31.00	30.96	N/A	N/A	N/A	0.180	
		Testing Period:		Starting reading:			
	tity read from w	ater meter)		Ending reading:			
INTERVAL 3				T			
TIME	PRESSS	URE IN TEST INT	ERVAL		SOVE TEST INTERVAL	FLOW RATE	
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)	
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)		
10:30	31.00	31.00	N/A	N/A	N/A	0.180	
11:00	31.00	30.96	N/A	N/A	N/A	0.180	
11:30	31.00	30.98	N/A	N/A	N/A	0.180	
12:00	31.00	30.97	N/A	N/A	N/A	0.180	
12:30	31.00	30.97	N/A	N/A	N/A	0.175	
	31.00	30.96	N/A	N/A	N/A	0.175	
13:00		30.95	N/A	N/A	N/A	0.175	
13:00 13:30	31.00			N/A	N/A	0.175	
13:30	31.00 31.00	30.95	N/A	1 4/4 x	1 1/4 1		
13:30 14:00	31.00	30.95 30.94	N/A N/A				
13:30 14:00 14:30	31.00 31.00	30.94	N/A	N/A N/A	N/A	0.175	
13:30 14:00 14:30 15:00	31.00 31.00 31.00		N/A N/A	N/A			

<u>ENGINE</u>	ERING-SC		CLIENT:		DATE: 6-4-93	
PROJECT	r: Ash Landfill RI – Bedrock wells				INSPECTOR:	CRL
OCATIO	N:	SEAD - Of	f-site adjac	ent	CONTRACTOR:	D.L. Maher
ORE HO	LE/WELL:	MW-58D		_	TEST INTERVAL (ft):	35.3-56.0
TEST 4:	Press. B	REQUIRED	PRESSURE	FOR TEST INTERVAL (I	lbf./sq. in. or psi): 26.0	
DECRE					,	
	FLOW (gal/min.):				BACK FLOW: YES	NO
	1.0	USED FOR TEST	4 (gal.):		BACK PRESSURE (lbf/sq. in. or	psi):
			13:40 comp	iter time	DECAY OF HOLDING PRESS	. ,
			•			
VTERVAL 1						
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal√min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
0	26.00	26.03	N/A	N/A	N/A	0.135
0:30	26.00	26.00	N/A	N/A	N/A	0.135
1:00	26.00	26.00	N/A	N/A	N/A	0.135
1:30	26.00	25.99	N/A	N/A	N/A	0.135
2:00	26.00	25.99	N/A	N/A	N/A	0.135
2:30	26.00	26.01	N/A	N/A	N/A	0.135
3:00	26.00	25.98	N/A	N/A	N/A	0.135
3:30	26.00	25.99	N/A	N/A	N/A	0.135
4:00	26.00	25.98	N/A	N/A	N/A	0.135
4:30	26.00	25.99	N/A	N/A	N/A	0.135
5:00	26.00	25.98	N/A	N/A	N/A	0.135
		Testing Period:	:	Starting reading:		
	tity read from w	vater meter)		Ending reading:		
VTERVAL 2				T		
TIME				OVE TEST INTERVAL	FLOW RATE	
(min)	Required			Guage	(gal/min.)	
5.20	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	0.125
5:30 6:00	26.00 26.00	26.00	N/A	N/A	N/A	0.135
6:30	26.00	26.01	N/A N/A	N/A N/A	N/A N/A	0.135
7:00		25.96				_
7:30	26.00 26.00	25.98	N/A N/A	N/A N/A	N/A N/A	0.135
8:00	26.00	25.96	N/A N/A	N/A	N/A N/A	0.135
8:30	26.00	25.97	N/A	N/A	N/A	0.135
9:00	26.00	26.00	N/A	N/A	N/A	0.135
9:30	26.00	26.00	N/A	N/A	N/A	0.135
10:00	26.00	25.99	N/A	N/A	N/A	0.135
		Testing Period:		Starting reading:	14/1	0.155
-	Lity read from w	_		Ending reading:		
TERVAL 3	nty read from w	ater meter)		Ditting roading.		
TIME	PRESSS	URE IN TEST INT	ERVAL	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
(43113)	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	(80.74111.)
10:30	26.00	25.99	N/A	N/A	N/A	0.135
11:00	26.00	25.99	N/A	N/A	N/A	0.135
11:30	26.00	26.98	N/A	N/A	N/A	0.135
12:00	26.00	25.98	N/A	N/A	N/A	0.135
12:30	26.00	25.98	N/A	N/A	N/A	0.135
13:00	26.00	25.96	N/A	N/A	N/A	0.135
13:30	26.00	25.95	N/A	N/A	N/A	0.135
14:00	26.00	25.96	N/A	N/A	N/A	0.135
14:30	26.00	25.96	N/A	N/A	N/A	0.135
	26.00	25.94	N/A	N/A	N/A	0.130
15:00				- 1/4 -	* 1/* *	3.103
15:00		Testing Period:		Starting reading:		

					TIVITY PACKER	TEST
ENGINE	ERING-SC		CLIENT:		DATE: 6-4-93	
PROJECT:					INSPECTOR:	CRL
LOCATION	N:	SEAD - Of	f—site adjac	ent	CONTRACTOR:	D.L. Maher
CORE HO	LE/WELL:	MW-58D			TEST INTERVAL (ft):	35.3-56.0
TEST 5:	Press. A	REQUIRED	PRESSURE	FOR TEST INTERVAL (I	lbf./sq. in. or psi): 21.0	
STARTI					,	
	FLOW (gal./min.):				BACK FLOW: YES	NO
		USED FOR TEST	5 (gal.):		BACK PRESSURE (lbf/sq. in. or	nai):
			(B=11)1		DECAY OF HOLDING PRESS	• •
NTERVAL 1			Start 14:00 c	computer time		
TIME		URE IN TEST INT	PRVAL.	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual	<u> </u>	Feet of Water	Guage	(gal/min.)
(ш.11)	lbf/sq.in. or psi	Transducer (psi)	Guage (pai)	(ft)	(lbf/sq. in. or psi)	(801211111)
0	21.00	21.03	N/A	N/A	N/A	0.090
0:30	21.00	21.00	N/A	N/A	N/A	0.095
1:00	21.00	21.00	N/A	N/A	N/A	0.095
1:30	21.00	21.00	N/A	N/A	N/A	0.095
2:00	21.00	20.95	N/A	N/A	N/A	0.095
2:30	21.00	20.95	N/A	N/A	N/A	0.095
3:00	21.00	21.02	N/A	N/A	N/A	0.095
3:30	21.00	21.02	N/A	N/A N/A	N/A N/A	0.095
4:00	21.00	21.02	N/A N/A	N/A N/A	N/A N/A	0.095
4:30	21.00	20.98	N/A	N/A	N/A	0.095
5:00	21.00	20.98	N/A N/A	N/A N/A		
					N/A	0.095
_		Testing Period	:	Starting reading:		
	tity read from w	ater meter)		Ending reading:		
NTERVAL 2						
TIME	PRESSSURE IN TEST INTERVAL			OVE TEST INTERVAL	FLOW RATE	
(min)	Required	Actual		Feet of Water	Guage	(gal/min.)
5.20	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	0.005
5:30	21.00	20.97	N/A	N/A	N/A	0.095
6:00	21.00	20.97	N/A	N/A	N/A	0.095
6:30	21.00	21.01	N/A	N/A	N/A	0.095
7:00	21.00	21.01	N/A	N/A	N/A	0.095
7:30	21.00	21.03	N/A	N/A	N/A	0.095
8:00	21.00	21.03	N/A	N/A	N/A	0.095
8:30_	21.00	21.03	N/A	N/A	N/A	0.095
9:00	21.00	21.01	N/A	N/A	N/A	0.095
9:30	21.00	20.99	N/A	N/A	N/A	0.095
10:00	21.00	20.99	N/A	N/A	N/A	0.095
Vater Inject	ted into Hole in	Testing Period:	:	Starting reading:		
Total quant	ity read from w	ater meter)		Ending reading:		
VTERVAL 3						
TIME	PRESSSI	URE IN TEST INT	ERVAL	PRESSURE AB	OVE TEST INTERVAL	FLOW RATE
(min)	Required	Actual		Feet of Water	Guage	(gal./min.)
	lbf/sq.in. or psi	Transducer (psi)	Guage (psi)	(ft)	(lbf/sq. in. or psi)	
10:30	21.00	20.99	N/A	N/A	N/A	0.095
11:00	21.00	20.96	N/A	N/A	N/A	0.095
11:30	21.00	21.06	N/A	N/A	N/A	0.095
12:00	21.00	21.10	N/A	N/A	N/A	0.100
12:30	21.00	21.20	N/A	N/A	N/A	0.095
13:00	21.00	21.12	N/A	N/A	N/A	0.095
13:30	21.00	21.09	N/A	N/A	N/A	0.095
47.70	21.00	21.11	N/A	N/A	N/A	0.095
				N/A	N/A	0.095
14:00		2110	Pu / A			
14:00 14:30	21.00	21.18	N/A			
14:00 14:30 15:00	21.00 21.00	21.18 21.13 Testing Period:	N/A	N/A N/A Starting reading:	N/A	0.095

CONS	TANT I	HEAD H	YDRAU	LIC CO	<u>NDUCTI</u>	VITY PA	ACKER '	TEST
ENGINEE	RING-SC	IENCE	CLIENT:	ACOE		DATE:	6-4-93	
PROJECT:		Ash Landfi	II RI - Bedro	ock wells		INSPECTOR	:	CRL
LOCATION	:	SEAD - O	ff-site adjac	ent		CONTRACT	OR:	D.L. Maher
CORE HOL	E/WELL:	MW-58D				TEST INTER	VAL (ft):	35.3-56.0
		(CALCULAT	ION OF LUC	GEON VAL	UES		
					,			
						ted into Test		
Test						in Testing		
Interval		Times *	Guage P	ressure	Peri	od	Lugeon	Value
	Required	Actual	Required	Actual			For Each Test	Repres. Value
(meters)	(min)	(min)	(bars)	(bars)	(liter	s)		(choose one)
	15		10					
	15		15					
	15		20					
	15		15					
	15		10					
Note: * - 1	esting time	consists of the	hree 5 minute	intervals				1
11010. –	cotting time	COMBIBIES OF L	mee 5 mmac	intervals				
Equation:								
-	.ugeon Value = v	vater taken in test	(liters/meter/min.)	X 10 (bars) / test	pressure(bars)	(2)		

CONSTANT	HEAD HYDRAULIC CONDUCCIENCE CLIENT: ACOE	TIVITY PACKER	TEST
ENGINEERING-SO	CIENCE CLIENT: ACOE	DATE: 6-4-93	
PROJECT:	Ash Landfill RI - Bedrock wells	INSPECTOR:	CRL
LOCATION:	SEAD - Off-site adjacent	CONTRACTOR:	D.L. Maher
CORE HOLE/WELL:	MW-58D	TEST INTERVAL (ft):	35.3-56.0
100110000,110000,110000		1.222	
			,

CONS	TANT	IEAD H	YDRAU	LIC CON	IDUCTI	VITY PACKER	TEST	
ENGINE	ERING-SCI	ENCE	CLIENT:	ACOE		DATE: 6-4-93		
PROJECT:		Ash Landfill	RI - Bedro	ck wells		INSPECTOR:	CRL	
LOCATION	':	SEAD - Of	f-site adjace	ent		CONTRACTOR:	D.L. Maher	
CORE HOL	E/WELL:	MW-58D				TEST INTERVAL (ft):	35.3-56.0	
CALCULA	CALCULATION OF HYDRAULIC CONDUCTIVITY:							
		C CONDUCTIVIT		OR ROCK BY TH	E FOLLOWING	EQUATION:		
(see page 1255 o	of the Earth Manua	al paper for an exam	ple calculation)					
	pi = 3.1415							
1	pi = 3.1413							
TEST RES	SULTS.							
TEST ICE	octio.							
PRESS.	TEST	q	L	Н	r	HYDRAULIC CON	DUCTIVTY	
		1						
Α	1							
В	2							
С	3							
В	4							
Α	5						·	

CONSTANT	HEAD HYDRAULIC CONDUCT	IVITY PACKER	TEST
ENGINEERING-S	CIENCE CLIENT: ACOE	DATE: 6-4-93	
PROJECT:	Ash Landfill RI - Bedrock wells	INSPECTOR:	CRL
LOCATION:	SEAD - Off-site adjacent	CONTRACTOR:	D.L. Maher
CORE HOLE/WELL:	MW-58D	TEST INTERVAL (ft):	35.3-56.0
CALCULATIONS (continued):		
`	,		
		•	

CONSTANT	HEAD HYDRAULIC CONDUCT	IVITY PACKER	TEST
ENGINEERING-SO	CIENCE CLIENT: ACOE	DATE: 6-4-93	
PROJECT:	Ash Landfill RI - Bedrock wells	INSPECTOR:	CRL
LOCATION:	SEAD - Off-site adjacent	CONTRACTOR:	D.L. Maher
CORE HOLE/WELL:	MW-58D	TEST INTERVAL (ft):	35.3-56.0
COMMENTS:	AVE VI DOED	ILDI II I IDI (II)	33.3 30.0
COMMENTE.			
			:
			1

ADDITIONAL SLUG TEST REPORT FORMS TO BE INSERTED INTO APPENDIX G

	SLU	G TE	EST R	EPORT	FORM	
ENGINEERING-SC	IENCE, INC.	CLIENT:	A	COE	WELL	#:MW-34
	PHASE I			INSPECTOR:	RWD/AG	
LOCATION: SEAD				TEST DATE:	1/28/92	
WELL AND AQUIFER IN	FORMATION					
WELL POINT (installed):		18.	.08'	WELL SCREEN SLO	OT SIZE:	0.01"
WELL CASING INNER DIA	METER:	2.0	00"	AQUIFER THICKN	ESS:	
BOREHOLE DIAMETER:	-	8.	5"	PRODUCT PRESEN	NT (Y/N?)	N
STATIC DEPTH TO WATER	- R:	3.9	92'			_
SCREENED INTERVAL - I	_		.5'			
	TO:		5.1'			
				or taken from installation	detail)	
TEST EQUIPMENT SPEC	CIFICATIONS					
DATA LOGGER BRAND:		Her	rmit	TRANSDUCER RA	TING (PSI):	10
INSTRUMENT MODEL: SE 1000C		-	SLUG/BAILER DIM	, ,	5.38' X 1.66"	
TRANSDUCER BRAND: PTX-161			SLUG/BAILER VOI			
				SEC CIBINEDIC VOI		
TEST INFORMATION REFERENCE VALUE:		0.00		DATA LOGGER TE	EST NUMBER:	4
TRANSDUCER MODE:	SURFACE LEVI		TOC	TRANSDUCER DE		
STATIC WATER (START):		.18 (trans)	100	TRANSDUCER - L		0.00
START TIME:	10	1652			SCALE:	10.01
END TIME:		1725			OFFSET:	-0.03
STATIC WATER (END):		0.06 (trans)			DELAY:	50 msec
ELAPSED TIME:		33		SATURATED SCRE		
NOTES:	GROUND SU TOP OF SCRE	EEN:	631.0' 624.5'			
L	POINT OF W	ELL:	614.5'			
(ALL DEPTHS RELATIVE TO THE	E TOP OF PVC CASIN	IG)				
COMMENTS: CONVERSION: 2.30667 F YOU MUST RESET THE			OR TO BEGIN	NING EACH TEST!!!	!!	

	SLU	G TE	EST R	EPORT	FORM	
ENGINEERING-SC	IENCE, INC.	CLIENT:	A	COE	WELL	#: MW-35-D
	PHASE I			INSPECTOR:	RWD/AG	
LOCATION: SEAD	-			TEST DATE:	1/30/92	
WELL AND AQUIFER IN	FORMATION	F.C.	(A)	WELL SCREEN SL	OT SIZE.	0.01"
WELL POINT (installed):	METED.	56. 2.0		AOUIFER THICK		- 0.01
WELL CASING INNER DIA BOREHOLE DIAMETER:	IMETEK:	8.		PRODUCT PRESE		N
STATIC DEPTH TO WATER	_ 	2.8		RODUCTTRESE	241 (1/141)	
SCREENED INTERVAL - I	_	29				
SCREENED INTERVAL	TO:	54				
				or taken from installation	on detail)	
TEST EQUIPMENT SPEC	CIFICATIONS					
DATA LOGGER BRAND:	_	Her	mit	TRANSDUCER RA	ATING (PSI):	10
INSTRUMENT MODEL:	_	SE 10	000C	SLUG/BAILER DI	MENSIONS:	5.38' X 1.66"
TRANSDUCER BRAND:	_	PTX	-161	SLUG/BAILER VO	DLUME:	
TEST INFORMATION	3					
REFERENCE VALUE:		0.00		DATA LOGGER T	EST NUMBER:	4
TRANSDUCER MODE:	SURFACE LEVE	EL or	TOC	TRANSDUCER DI	EPTH:	
STATIC WATER (START):	9.9	99 (trans)		TRANSDUCER -	LINEARITY:	0.00
START TIME:		0750		_	SCALE:	10.01
END TIME:		0924			OFFSET:	-0.03
STATIC WATER (END):	0.	0 (trans)		SATURATED SCR	DELAY:	50 msec
ELAPSED TIME:		94		SATURATED SCR	EEN LENGTH:	
NOTES:	TOP OF PVC GROUND SU TOP OF SCRE	RFACE EEN: CREEN:	631.90' 629.6' 600.6'			
	POINT OF W	ELL:	575.1'			
(ALL DEPTHS RELATIVE TO THE	E TOP OF PVC CASIN	(G)	- 11000			
COMMENTS: CONVERSION: 2.30667 F YOU MUST RESET THE			OR TO BEGIN	NING EACH TE S T!	!!!!	

	SLUG TI	EST R	EPORT	FORM	
ENGINEERING-SCI	ENCE, INC. CLIENT	': A	COE	WELL	#: MW-36
	PHASE I		INSPECTOR:	RWD/AG	
LOCATION: SEAD			TEST DATE:	1/30/92	
WELL AND AQUIFER IN	FORMATION				
WELL POINT (installed):	16	5.58'	WELL SCREEN SLO	OT SIZE:	0.01"
WELL CASING INNER DIA	METER: 2	.00"	AQUIFER THICKN	ESS:	
BOREHOLE DIAMETER:	8	3.5"	PRODUCT PRESEN	NT (Y/N?)	N
STATIC DEPTH TO WATER		.82'			
SCREENED INTERVAL - F		1.7'			
		4.7'	or taken from installation	detail	
TOTAL POLITIMATE OF COLUMN		easured from TOC.	Of taken from instanation	detail)	
TEST EQUIPMENT SPEC		:	TD ANSDUCED DA	TING (BSI).	10
DATA LOGGER BRAND:		ermit 1000C	TRANSDUCER RA' SLUG/BAILER DIM		10 5.38' X 1.66"
INSTRUMENT MODEL: TRANSDUCER BRAND:		1000C (-161	SLUG/BAILER VOI		J.30 A 1.00
TRANSDUCER BRAIND.	117	<u> </u>	SLOG/BAILER VOI	- CONTE.	
TEST INFORMATION					
REFERENCE VALUE:	0.00		DATA LOGGER TE		4
TRANSDUCER MODE:	SURFACE LEVEL or	TOC	TRANSDUCER DE		
STATIC WATER (START):	10.27 (trans)		TRANSDUCER – L		0.00
START TIME:	0815			SCALE:	10.01
END TIME: STATIC WATER (END):	0843 -0.003 (trans)			OFF S ET: DELAY:	-0.03 50 msec
ELAPSED TIME:	28		SATURATED SCRE		
(ALL DEPTHS RELATIVE TO THE	TOP OF PVC RISER: GROUND SURFACE TOP OF SCREEN: BOTTOM OF SCREEN: POINT OF WELL: STOP OF PVC CASING)	631.73' 631.01' 625.3' 615.5' 615.3'			
COMMENTS: CONVERSION: 2.30667 F YOU MUST RESET THE	FEET OF WATER/PSI REFERENCE VALUE PRI	OR TO BEGIN	NING EACH TEST!!!	!!	

	SLUG TE	EST R	EPORT	FORM	
ENGINEERING-SC	ENCE, INC. CLIENT:	A	COE	WELL #	#: MW−37
	PHASE I		INSPECTOR:	RWD/AG	
LOCATION: SEAD			TEST DATE:	1/29/92	
WELL AND AQUIFER IN	IFORMATION				
WELL POINT (installed):	13.	.62'	WELL SCREEN SLC	OT SIZE:	0.01"
WELL CASING INNER DIAMETER: 2.00"			AQUIFER THICKN	ESS:	
BOREHOLE DIAMETER:	8.	5"	PRODUCT PRESEN	TT (Y/N?)	N
STATIC DEPTH TO WATER	R:3.7	18'			
SCREENED INTERVAL – I	FROM:6.	.7'			<u> </u>
		7'			
		asured from TOC,	or taken from installation	detail)	
TEST EQUIPMENT SPEC					
DATA LOGGER BRAND:	Her		TRANSDUCER RAT		10
INSTRUMENT MODEL:		000C	SLUG/BAILER DIM		5.38' X 1.66"
TRANSDUCER BRAND:	<u>PTX</u>	-161	SLUG/BAILER VOL	LUME:	
TEST INFORMATION	<u> </u>				
REFERENCE VALUE:	0.00		DATA LOGGER TE	ST NUMBER:	3
TRANSDUCER MODE:	SURFACE LEVEL or	TOC	TRANSDUCER DEF	PTH:	
STATIC WATER (START):	9.53 (trans)		TRANSDUCER LI	INEARITY:	0.00
START TIME:	1842		- s	CALE:	10.01
END TIME:	1910			OFFSET:	-0.03
STATIC WATER (END): ELAPSED TIME:	-0.03 (trans)			DELAY:	50 msec
ELAPSED TIME:	28		SATURATED SCRE	EN LENGIH:	
NOTES:	TOP OF PVC RISER: GROUND SURFACE TOP OF SCREEN: BOTTOM OF SCREEN: POINT OF WELL:	632.89' 631.0' 624.3' 619.5' 619.3'			
(ALL DEPTHS RELATIVE TO THE	ETOP OF PVC CASING)				
COMMENTS: CONVERSION: 2.30667 F YOU MUST RESET THE	FEET OF WATER/PSI REFERENCE VALUE PRIC	OR TO BEGIN	NING EACH TEST!!!!	!!	

	SLU	G TE	ST R	EPORT	FORM	
ENGINEERING	-SCIENCE, INC.	CLIENT:	Α	COE	WELL	#: MW-38-D
PROJECT: A	SH RI PHASE I			INSPECTOR:	RWD/AG	
LOCATION: SI	EAD			TEST DATE:	1/28/92	
WELL AND ACHIE	EED INCODMATION					
WELL POINT (install	FER INFORMATION	32.24	,	WELL SCREEN SLO	OT SIZE:	0.01"
WELL CASING INNE	· -	2.00"		AQUIFER THICKN		
BOREHOLE DIAME	-	8.5"		PRODUCT PRESEN		N
STATIC DEPTH TO	_	4.02'		FRODUCT FRESEI	41 (1/14!)	N
SCREENED INTERV	-	9.7'				
SCREENED INTERV	TO:	29.7'				
				or taken from installation	detail)	
TEST EQUIPMENT	SPECIFICATIONS					
DATA LOGGER BRA		Hermi	it	TRANSDUCER RA	TING (PSI):	10
INSTRUMENT MOD	_	SE 1000		SLUG/BAILER DIM	, ,	5.38' X 1.66"
TRANSDUCER BRA		PTX-1		SLUG/BAILER VOI		
TEST INFORMATI REFERENCE VALU		0.00		DATA LOGGER TE	EST NUMBED	5
TRANSDUCER MOI			TOC	TRANSDUCER DE		
STATIC WATER (ST		.28 (trans)	100	TRANSDUCER - I		0,00
START TIME:	AK1)	1842			SCALE:	10.01
END TIME:		1929			OFFSET:	-0.03
STATIC WATER (EN	ND): -0	.15 (trans)			DELAY:	50 msec
ELAPSED TIME:		47		SATURATED SCRI		
NOTES:	TOP OF PVC GROUND SU TOP OF SCRE BOTTOM OF S POINT OF W	JRFACE (635.4' 625.7' 605.4'			
(ALL DEPTHS RELATIVE	TO THE TOP OF PVC CASIN	√G)				
	.30667 FEET OF WATER ET THE REFERENCE V		to begin	NING EACH TEST!!!	!!!	

	SLUC	3 TE	EST R	EPORT	[FOR	M
ENGINEERING-SC	IENCE, INC.	CLIENT:	A	COE	V	VELL #: MW-39
PROJECT: ASH RI	PHASE I			INSPECTOR:	RW	D/AG
LOCATION: SEAD				TEST DATE:	1/28	/92
WELL AND ACHIEED I	NEODWATION					
WELL AND AQUIFER II WELL POINT (installed):	NFURMATION	11.8	39'	WELL SCREEN	SLOT SIZE:	0.01"
WELL CASING INNER DIA	AMETER:	2.0		AQUIFER THIC		
BOREHOLE DIAMETER:		8.5		PRODUCT PRES		N
STATIC DEPTH TO WATE		2.1		i reducer rec	3E111 (1/11.)	
SCREENED INTERVAL -		4.5				
SCREENED INTERVAL	TO:	9,5				
				or taken from installa	tion detail)	
TEST EQUIPMENT SPE	CIFICATIONS					-
DATA LOGGER BRAND:		Her	mit	TRANSDUCER I	RATING (PSI):	10
INSTRUMENT MODEL:		SE 10	000C	SLUG/BAILER D	DIMENSIONS:	5.38' X 1.66"
TRANSDUCER BRAND:	_	PTX-	-161	SLUG/BAILER V	OLUME:	
TEST INFORMATION						11 11 11 11 11 11 11 11 11 11 11 11 11
REFERENCE VALUE:		0.00		DATA LOGGER	TEST NUMBE	R: 6
TRANSDUCER MODE:	SURFACE LEVEL	or	TOC	TRANSDUCER I	DEPTH:	
STATIC WATER (START)	: 8.78	(trans)		TRANSDUCER -	- LINEARITY:	0.00
START TIME:		1850			- SCALE:	10.01
END TIME:		1902			- OFFSET:	-0.03
STATIC WATER (END):	-0.00	06 (trans)			- DELAY:	50 msec
ELAPSED TIME:		12	47	SATURATED SC	CREEN LENGT	H:
TOP OF PVC RISER: 659.76' GROUND SURFACE 657.80 TOP OF SCREEN: 651.3'						
(ALL DEPTHS RELATIVE TO TH	BOTTOM OF SCI POINT OF WE	LL:	646.3°			
	-13-36				· · · · · · · · · · · · · · · · · · ·	
COMMENTS: CONVERSION: 2.30667 YOU MUST RESET TH			OR TO BEGIN	NING EACH TES	TIIIII	

	SLU	G TI	EST R	EPORT	FORM	
ENGINEER	ING-SCIENCE, INC.	CLIENT	: A	COE	WELL #	≠: MW −40
PROJECT:	ASH RI PHASE I			INSPECTOR:	RWD/AG	
LOCATION:	SEAD			TEST DATE:	2/4/92	
WELL AND A	QUIFER INFORMATION					
WELL POINT (i	nstalled):	14	.71'	WELL SCREEN SI	OT SIZE:	0.01"
•	INNER DIAMETER:	2.	00"	AQUIFER THICK	NESS:	_
BOREHOLE DI	AMETER:	8	.5"	PRODUCT PRESE	ENT (Y/N?)	N
STATIC DEPTH			.15'		\(\frac{1}{2}\)	
	ΓERVAL – FROM:		.2'			-
	TO:		2.2'			
		(all depths me	easured from TOC	or taken from installation	on detail)	
TEST EQUIPM	IENT SPECIFICATIONS					
DATA LOGGER	R BRAND:	He	rmit	TRANSDUCER RA	ATING (PSI):	10
INSTRUMENT	MODEL:	SE 1	000C	SLUG/BAILER DI	MENSIONS:	5.38' X 1.66"
TRANSDUCER	BRAND:	PTX	Z−161	SLUG/BAILER VO	DLUME:	
TEST INFORM	IATION					
REFERENCE V	ALUE:	0.00		DATA LOGGER T	EST NUMBER:	1
TRANSDUCER	MODE: SURFACE LEV	/EL or	TOC	TRANSDUCER DI	EPTH:	
STATIC WATE	R (START): 1	0.18 (trans)		TRANSDUCER -	LINEARITY:	0.00
START TIME:		1433		_	SCALE:	10.01
END TIME:		1547		_	OFFSET:	-0.03
STATIC WATE		0.17 (trans)			DELAY:	50 msec
ELAPSED TIM	E:	74		SATURATED SCR	REEN LENGTH:	
	TOP OF SCE		657.0 651.8'			
	BOTTOM OF POINT OF V	WELL:	644.8'			
(ALL DEPTHS REL COMMENTS:	ATIVE TO THE TOP OF PVC CAS	ING)				
		an mar				
CONVERSIO	ON: 2.30667 FEET OF WATE	EK/PSI				
YOU MUST	RESET THE REFERENCE	VALUE PRI	OR TO BEGIN	INING EACH TEST!	11111	

SLUG	TEST R	EPORT FO	ORM	
ENGINEERING-SCIENCE, INC. CL.	IENT: A	COE	WELL #: MW-41-	·D
PROJECT: ASH RI PHASE I		INSPECTOR:	RWD/AG	
LOCATION: SEAD		TEST DATE:	1/29/92	
WELL AND AQUIFER INFORMATION				
WELL POINT (installed):	47.02'	WELL SCREEN SLOT SI	ZE: 0.0	01"
WELL CASING INNER DIAMETER:	2.00"	AQUIFER THICKNESS:		
BOREHOLE DIAMETER:	8.5"	PRODUCT PRESENT (Y	/N?)	٧
STATIC DEPTH TO WATER:	7.52'			
SCREENED INTERVAL – FROM:	14.5'			
TO:	44.5'	or taken from installation detail)	
TEST EQUIPMENT SPECIFICATIONS				
DATA LOGGER BRAND:	Hermit	TRANSDUCER RATING	(PSI): 1	.0
INSTRUMENT MODEL:	SE 1000C	SLUG/BAILER DIMENS		X 1.66"
TRANSDUCER BRAND:	PTX-161	SLUG/BAILER VOLUM		-
TEST INFORMATION				
REFERENCE VALUE: 0.00)	DATA LOGGER TEST N	UMBER:	1
TRANSDUCER MODE: SURFACE LEVEL	or TOC	TRANSDUCER DEPTH:		
STATIC WATER (START): 10.13(t		TRANSDUCER – LINEA		00
START TIME: 162		- SCAL		.01
END TIME: 182 STATIC WATER (END): -0.45 (1)		- OFFS - DELA		nsec
ELAPSED TIME: 120		SATURATED SCREEN		
TOP OF PVC RIS GROUND SURFA TOP OF SCREEN: BOTTOM OF SCRE POINT OF WELL (ALL DEPTHS RELATIVE TO THE TOP OF PVC CASING)	ACE 691.6' 677.1' EN: 647.1'			
COMMENTS: CONVERSION: 2.30667 FEET OF WATER/PSI YOU MUST RESET THE REFERENCE VALU		INING EACH TEST!!!!!		

	SLUC	TE	EST R	EPORT	FORM	
ENGINEERING-SCI				COE		#:MW-42-D
	PHASE I			INSPECTOR:	RWD/AG	
LOCATION: SEAD				TEST DATE:	1/29/92	
WELL AND AQUIFER IN	FORMATION					
WELL POINT (installed):		47.	38'	WELL SCREEN SL	OT SIZE:	0.01"
WELL CASING INNER DIA	METER:	2.0		AQUIFER THICK		
BOREHOLE DIAMETER:		8.		PRODUCT PRESE		N
STATIC DEPTH TO WATER	—		58'	11(0200111200	(- / - / /	
SCREENED INTERVAL - F		24				_
	TO:	44				
		depths me	asured from TOC	or taken from installation	n detail)	
TEST EQUIPMENT SPEC	<u>IFICATIONS</u>					
DATA LOGGER BRAND:		Her	rmit	TRANSDUCER RA	ATING (PSI):	10
INSTRUMENT MODEL:		SE 10	000C	SLUG/BAILER DI	MENSIONS:	5.38' X 1.66"
TRANSDUCER BRAND:	_	PTX		SLUG/BAILER VO	LUME:	
TEST INFORMATION						
REFERENCE VALUE:	C	0.00		DATA LOGGER T	EST NUMBER:	4
TRANSDUCER MODE:	SURFACE LEVEL	or	TOC	TRANSDUCER DE	EPTH:	
STATIC WATER (START):	10.04	(trans)		TRANSDUCER - I	LINEARITY:	0.00
START TIME:	1	632		_	SCALE:	10.01
END TIME:	1	747		_	OFFSET:	-0.03
STATIC WATER (END):		(trans)			DELAY:	50 msec
ELAPSED TIME: 75				SATURATED SCREEN LENGTH:		
	GROUND SUR	N:	680.7' 656.0'			
	BOTTOM OF SCI	REEN:	636.0'			
	POINT OF WEI	LL:	635.7'			
(ALL DEPTHS RELATIVE TO THE	TOP OF PVC CASING)				
COMMENTS: CONVERSION: 2.30667 F YOU MUST RESET THE			OR TO BEGIN	NING EACH TEST!	!!!!	

SERIECA ASH LANDFELL DRAFT RI REPORT

APPENDIX H

VERTICAL CONNECTION TEST RESULTS

VER	TICAL	CONN	EC	TION TEST RI	EPORT
ENGINEERING-SC		CLIENT:	Α		LL #:MW-38D/PT-16
PROJECT: Ash RI	Phase II			INSPECTOR: PFM	
LOCATION: SEAD				TEST DATE: 7-25-93	3
WELL AND AQUIFER I	NEORMATION	ī			
TILL/WEATHERED SH		<u>¶</u> PT−16		COMP. SHALE BEDROCK WELL	L: MW-38D
WELL POINT (installed):	نالانا ۱۷ سید	11.08		WELL POINT (installed):	32.24
STATIC DEPTH TO WATE	R:	5.97		STATIC DEPTH TO WATER:	6.52
SCREENED INTERVAL -		5.85		SCREENED INTERVAL - FROM:	12.23
	TO:	10.85	nom TOC	TO:	32.23
TECT EQUIDATES OF	CIEICATION	tan uepins measured fi	юш IOC	or taken from installation detail)	
TEST EQUIPMENT SPE	CIFICATIONS	Uarmi:		TD ANCHI ICED DATING (BOX)	10
DATA LOGGER BRAND: INSTRUMENT MODEL:		Hermit 1000C		TRANSDUCER RATING (PSI): TRANSDUCER BRAND:	PTK-161
				THE TOP COLK DIVING.	110-101
TEST INFORMATION F		THERED SHALE	WELL		_
REFERENCE VALUE:	0.00			DATA LOGGER TEST NUMBER:	0 Input 1
REFERENCE POINT:		VEL IN WELL		TRANSDUCER DEPTH:	10.0'
STATIC WATER (START)				TRANSDUCER - LINEARITY:	.0024
START TIME:	8:45) (trans)		- SCALE:	10.0157
END TIME: STATIC WATER (END):	9:45 (bail) 10:30 5.97	o(trans)		– OFFSET: – DELAY:	0082 50 msec
ELAPSED TIME:	1 hr bailing			DUAL	- moo
TEST INFORMATION F REFERENCE VALUE: REFERENCE POINT:	N/A SURFACE LE			DATA LOGGER TEST NUMBER: TRANSDUCER DEPTH:	N/A N/A
STATIC WATER (START)				TRANSDUCER – LINEARITY: – SCALE:	N/A N/A
START TIME: END TIME:	N/A N/A			- SCALE: - OFFSET:	N/A N/A
STATIC WATER (END):	N/A			- DELAY:	N/A
ELAPSED TIME:	N/A				
TEST INFORMATION F		COMPETENT SE	HALE V		
STATIC WATER (START)	′ ———			NEAR DRYNESS ?:	YES ND): 30.0'
PURGE METHOD TIME START PURGE:	BAILER 8:45 am			WATER DEPTH AFTER PURGE (EN ELAPSED TIME:	ND): 30.0' 1 hour bailing
TIME START FORGE.	9:45			_ 	
COMMENTS: CONVERSION: 2.30667 YOU MUST RESET TH *Near dryness at 20.5' 9:00 at 30 min near dryness at 30' at end of test 9:45 am Bailed for 1 hour Will run test until MW-38D at 10:00 am MW-38 DTW = at 10:30 am MW-38 DTW =	D recovers close to = 15.0'	VALUE PRIOR TO	BEGIN	INING EACH TEST!!!!!	
NOTES/DIAGRAMS:					

SE1000C Environmental Logger 07/25 11:34

Unit# 01000 Test 0

MW-16 AND MW-38D

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	00000
Reference	0.000
Linearity	0.000
Scale factor	10.020
Offset	-0.010
Delay mSEC	50.000
Step 0 07/25	08:43:01

Step	0	07/25	08:43:01
Elaps	sed	Time	INPUT 1
0 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9 10 11 12 13 13 14 15 16 16 16			-0.003 -0.006 -0.006 -0.006 -0.006 -0.006 -0.006 -0.006 -0.006 -0.006

17.5000 18.0000 19.5000 20.0000 21.5000 21.5000 22.5000 23.5000 24.5000 24.5000 25.5000 27.5000 27.5000 27.5000 28.5000 29.5000 30.5000 31.5000	-0.006 -0.006 -0.006 -0.006 -0.006 -0.006 -0.006 -0.006 -0.009
42.5000	-0.012
43.0000	-0.009
43.5000	-0.009

47.5000 48.0000 49.0000 50.0000 50.5000 51.50000 51.50000 52.50000 53.50000 54.50000 55.50000 57.50000 57.50000 57.50000 57.50000 60.50000 61.50000 62.00000 63.50000 64.50000 63.50000 64.50000 64.50000 65.50000 67.5000 67.50000 67.50000 67.50000 67.50000 67.50000 67	-0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.015
71.5000	-0.015
72.0000	-0.015
72.5000	-0.015
73.0000	-0.015

77.5000 78.0000 78.0000 79.5000 80.5000 81.0000 81.5000 82.5000 83.5000 84.50000 84.50000 85.0000 86.5000 87.5000 88.50000 88.50000 89.50000 90.50000 91.50000	-0000000000000	015555588888888885555588888888888888888
	-0.	018 018 015

TICAI	CONNEC	CTION TEST	REP	ORT
ENCE, INC.	CLIENT:	ACOE	WELL #	±:MW−36, 35D
hase II		INSPECTOR:	PFM/SF	
		TEST DATE:	7-26-93	
JEORMATION	1			
		COMP. SHALE REDROCK	K WELL:	MW-35D
ALB WEEL.				56.64
R:		' '	l:	6.14
	6.33'	·		31.30'
TO:	16.33'	Contakan from installation detail)	TO:	56.30'
PIEICATIONS	(all depths measured from 10	C, or taken from installation detail)		
IFICATIONS	Hermit	TRANSDUCER RATING (PS	21/-	10
			31).	PTK-161
	THERED SHALE WELI		nen.	
			BER:	0
	VEL IN WELL	•	TV.	10.0'
		•	IY:	.0024
	50 (trops)	•		10.0157 0082
	ou (trans)			50 msec
	hour trans			
OR SHALLOW	COMPETENT SHALE	WELL.		
N/A	OUNI DI DI DI DI DI DI DI DI DI DI DI DI DI		IBER:	N/A
	VEL or TOC	TRANSDUCER DEPTH:		N/A
		-	TY:	N/A N/A
				N/A
N/A		- DELAY:		N/A
N/A		-		
OR SHALLOW	COMPETENT SHALE	WELL MW-351	D	
6.19		NEAR DRYNESS ?:		YES
BAILER			RGE (END):	38.2'
		ELAPSED TIME:		1 hour purge
17:15		-		
E REFERENCE 6:32 6:43	•	NNING EACH TEST!!!!!		
	Phase II Phase II Phase II Phase II Phase II Phase II Phase II Phase II Phase II Phase II Phase II Phase II Phase II R: R: FROM: TO: CIFICATIONS Phase II OR TILL/WEA 0.00 SURFACE LE 6.30 16:13 17:13 (bail) 17:5 -0.08 1 hour bail 1.5 Phase II OR SHALLOW N/A N/A N/A N/A N/A N/A N/A N/	Phase II NFORMATION ALE WELL: MW-36 16.63 R: 6.30' FROM: 6.33' TO: 16.33' (all depths measured from TO CIFICATIONS Hermit 1000C OR TILL/WEATHERED SHALE WELL 0.00 SURFACE LEVEL IN WELL: 6.30 16:13 17:13 (bail) 17:50 (trans) -0.08 1 hour bail 1.5 hour trans OR SHALLOW COMPETENT SHALE N/A SURFACE LEVEL or TOC: N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DATE: INSPECTOR: TEST DEPTH TO WATER SCREENED INTERVAL — FEAT DATA LOGGER TEST NUM TRANSDUCER BRAND: INSPECTOR: TEANSDUCER RATING (P. T. T. T. T. T. T. T. T. T. T. T. T. T.	INSPECTOR: PFM/SF TEST DATE: 7-26-93

SE1000C Environmental Logger 07/26 22:03

Unit# 01000 Test 0

MW-3!	5D AND	MW-36
Setups: Type Mode I.D.		
Reference Linearit Scale fa Offset Delay ms	ce ty actor SEC	0.000 0.000 10.020 -0.010 50.000
Step 0	07/26	16:14:19
Elapsed		INPUT 10.009 -0.009 -0.009 -0.009 -0.009 -0.012 -0.015 -0.015 -0.015 -0.015 -0.022 -0.028 -0.022 -0.028 -0.031 -0.028 -0.031 -0.041 -0.037 -0.041 -0.037 -0.041 -0.041 -0.044 -0.050 -0.050 -0.050 -0.056 -0.056

35.0000 36.0000 37.0000 38.0000 40.0000 41.0000 42.0000 43.0000 44.0000 45.0000 47.0000 48.0000 50.0000 51.0000 52.0000 53.0000 54.0000 55.0000 56.0000 67.0000 67.0000 67.0000 67.0000 67.0000 67.0000 67.0000 71.0000 72.0000 73.0000 74.0000 75.0000 77.0000	$\begin{array}{c} -0.060 \\ -0.060 \\ -0.063 \\ -0.063 \\ -0.0663 \\ -0.0669 \\ -0.0669 \\ -0.0669 \\ -0.0669 \\ -0.0669 \\ -0.0669 \\ -0.0669 \\ -0.0669 \\ -0.0069 \\ -0.0069 \\ -0.0069 \\ -0.0077 \\ -0.$
86.0000	-0.079
87.0000	-0.079
88.0000	-0.075

95.0000 -0.088 96.0000 -0.082 97.0000 -0.082

VER'	TICAI	CONNE	CTION TEST	ΓREP	ORT
ENGINEERING-SCI	ENCE, INC.	CLIENT:	ACOE	WELL #	¢:MW−46,49D
PROJECT: Ash RI P	hase II		INSPECTOR:	PFM	
LOCATION: SEAD			TEST DATE:	7-26-93	
		•			
WELL AND AQUIFER IN		_			
TILL/WEATHERED SH	ALE WELL:	MW-46	COMP. SHALE BEDROC	K WELL:	MW-49D
WELL POINT (installed):		11.48'	WELL POINT (installed):	_	37.54
STATIC DEPTH TO WATER		7.93	_ STATIC DEPTH TO WATE		7.84
SCREENED INTERVAL – I		5.81'	_ SCREENED INTERVAL - 1		17.80'
	TO:	10.81' (all depths measured from T	OC, or taken from installation detail)	TO:	28.80'
TEST EQUIPMENT SPEC	TIFICATIONS				
DATA LOGGER BRAND:	, III TOTTIONIO	Hermit	TRANSDUCER RATING (F	PS17-	10
INSTRUMENT MODEL:		1000C	TRANSDUCER BRAND:	31).	PTK-161
INSTRUMENT MODEL:		1000C	TRAINSDUCER BRAIND.		11K-101
TEST INFORMATION FO	OR TILL/WEA	THERED SHALE WEL	<u>LL</u> MW-36		
REFERENCE VALUE:	0.00		DATA LOGGER TEST NUM	MBER:	0
REFERENCE POINT:	SURFACE LE	VEL IN WELL	TRANSDUCER DEPTH:		10.0
STATIC WATER (START):	7.93		TRANSDUCER - LINEAR	ITY:	.0024
START TIME:	10:10 (bail)		- SCALE:		10.0157
END TIME:	10:50 (bail) 11:	30 (trans)	– – OFFSET	`:	0082
STATIC WATER (END):			- DELAY:	:	50 msec
ELAPSED TIME:	1 hour 40 min to	rans	_		
TEST INFORMATION FO	OR SHALLOW	COMPETENT SHALE	WELL MW-46		
REFERENCE VALUE:	N/A		DATA LOGGER TEST NUM	MBER:	N/A
REFERENCE POINT:	SURFACE LE	VEL or TO	_	MDS /	N/A
STATIC WATER (START): START TIME:	N/A N/A		_ TRANSDUCER - LINEAR - SCALE:		N/A N/A
END TIME:	N/A		_ SCALE. - OFFSET		N/A
STATIC WATER (END):	N/A		- DELAY:		N/A
ELAPSED TIME:	N/A		_		
<u> TEST INFORMATION FO</u>	OR SHALLOW	COMPETENT SHALL	E WELL MW-49	D	
STATIC WATER (START):	7.84		NEAR DRYNESS ?:		NO
PURGE METHOD (BAILER		WATER DEPTH AFTER PU		20.0'
TIME START PURGE:	10:10		_ ELAPSED TIME: See note	below	40 minutes
TIME END PURGE:	10:50	8	_		
COMMENTS: CONVERSION: 2.306671 YOU MUST RESET THE A storm rolled in at 10:20, rain 0.0' DTW in MW – 49D at 10 0.0' DTW in MW – 49D at 10 0.0 DTW in MW – 49D at 10:	REFERENCE 10:50 with light :25 :40	VALUE PRIOR TO BEG	SINNING EACH TEST!!!!!		

SE1000C Environmental Logger 07/26 13:32

Unit# 01000 Test 1

MW-46 ANI	MW-49D
Setups:	INPUT 1
Type Mode I.D.	Level (F) Surface 00000
Reference Linearity Scale factor Offset Delay mSEC	0.000 0.000 10.020 -0.010 50.000
Step 0 07/2	26 10:10:01
Elapsed Time	e INPUT 1
0.0000 1.0000 2.0000 3.0000 4.0000 5.0000	0.000 -0.003 -0.009 -0.012 -0.012 -0.015

-0.022

-0.022

-0.025

-0.028

-0.031

-0.031

-0.031

-0.034

-0.034

-0.034

-0.037

-0.037

-0.041

-0.041 -0.041

-0.044

-0.044

-0.044

-0.044

-0.044

-0.044

-0.044

-0.047

-0.047

-0.050

-0.047

-0.047

-0.050

7.0000

8.0000

9.0000

10.0000

11.0000

12.0000

13.0000

14.0000

15.0000

16.0000

17.0000

18.0000

19.0000

20.0000

21.0000 22.0000

23.0000

24.0000

25.0000

26.0000

27.0000

28.0000

29.0000

30.0000

31.0000

32.0000

33.0000

34.0000

35.0000 36.0000 37.0000 38.0000 40.0000 41.0000 42.0000 43.0000 44.0000 45.0000 46.0000 47.0000 50.0000 51.0000 52.0000 53.0000 54.0000 55.0000 56.0000 57.0000 58.0000 59.0000 60.0000 61.0000 62.0000 63.0000 64.0000 65.0000 67.0000	-0.050 -0.053 -0.053 -0.053 -0.053 -0.053 -0.050 -0.047 -0.047 -0.047 -0.044 -0.041 -0.041 -0.041 -0.037 -0.037 -0.037 -0.037 -0.037 -0.034 -0.034 -0.034 -0.034 -0.034 -0.034 -0.034 -0.034 -0.034 -0.031 -0.031 -0.031 -0.031 -0.031 -0.031

VER'	TICAI	CONNE	CTION TEST	ΓREP	ORT
ENGINEERING-SCI	ENCE, INC.	CLIENT:	ACOE	WELL #	#:MW-46,49D,50D
PROJECT: Ash RI P	hase II		INSPECTOR:	PFM	
LOCATION: SEAD			TEST DATE:	7-25-93	
WELL AND AQUIFER IN	FORMATION				
TILL/WEATHERED SHA		MW-46	COMP. SHALE BEDROC	K WELL:	MW-49D
WELL POINT (installed):	WE WEEE.	11.48	WELL POINT (installed):		37.54
STATIC DEPTH TO WATER	2.	7.88	STATIC DEPTH TO WATER	₹.	7.81
SCREENED INTERVAL - I		5.81'	SCREENED INTERVAL -		17.80
TOCKED INTERVIE	TO:	10.81'	OC, or taken from installation detail)	TO:	36.80
TEST EQUIPMENT SPEC	TEICATIONS	tan depuis measured from Te	2 TRANSDUCERS		
DATA LOGGER BRAND:	AFICATIONS	Hermit	TRANSDUCER RATINGS (PSI).	10 + 10
INSTRUMENT MODEL:		1000C	TRANSDUCER BRANDS:	1 51).	PTK-161
					11K-101
TEST INFORMATION FO	OR TILL/WEA	THERED SHALE WEL	<u>L</u> MW-46		
REFERENCE VALUE:	0.00		DATA LOGGER TEST NUM	MBER:	0 Input 1
REFERENCE POINT:	SURFACE LE	VEL IN WELL	TRANSDUCER DEPTH:		10.0'
STATIC WATER (START):	7.88		TRANSDUCER - LINEAR	TY:	.0024
START TIME:	2:20 pm		- SCALE:		10.0157
END TIME:	3:20 (bailer) 4:0	0 (trans)	- OFFSET		0082
STATIC WATER (END): ELAPSED TIME:	58.6 1 hour		– DELAY:		50 Msec
ELAISED TIME.	Tiloui		-		
TEST INFORMATION FO	DR SHALLOW	COMPETENT SHALE	WELL MW-49)	
REFERENCE VALUE:	0.00	COMPETENT SHALE	DATA LOGGER TEST NUM		0 Input 2
REFERENCE POINT:	SURFACE LE	VEL IN WELL	TRANSDUCER DEPTH:		13.0'
STATIC WATER (START):			TRANSDUCER - LINEAR	ITY:	.0026
START TIME:	2:20	W (1-0-0)	SCALE: - OFFSET		10.0153 0234
END TIME: STATIC WATER (END):	3:20 (bailer) 4:0 58.0	o (trans)	OFFSET - DELAY:		50 msec
ELAPSED TIME:	1 hour		_		
		Will let MW-50	0D recharge save for test		
TEST INFORMATION FO	OR SHALLOW	COMPETENT SHALE	WELL	MW-50D	
STATIC WATER (START):			NEAR DRYNESS ?:		YES
PURGE METHOD	BAILER		WATER DEPTH AFTER PU		58.6'
TIME START PURGE: TIME END PURGE:	2.20 3.20		ELAPSED TIME: See note	below	1 hour
TIME END TORGE.	5.20		-		
COMMENTS: CONVERSION: 2.30667 YOU MUST RESET THE 41.0' DTW in MW-50D at 2:5 56.0 DTW in MW-50D at 3:2 58.6 DTW in MW-50D at 3:2 End bailing At 4:00 pm Input 1 - 0.01 In	E REFERENCE 35 pm 0 pm 0 pm	ER/PSI VALUE PRIOR TO BEG	INNING EACH TEST!!!!!		

SE1000C Environmental Logger 07/25 16:08

Unit# 01000 Test 0

MW-46, MW-49D AND MW-50D

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	Surface	Surface
I.D.	00000	00000
Reference	0.000	0.000
Linearity	0.000	0.000
Scale factor	10.020	10.020
Offset	-0.010	-0.020
Delay mSEC	50.000	50.000

Step 0 07/25 14:19:38

71		
Elapsed Time	INPUT 1	INPUT 2
0.0000	0.000	-0.015
1.0000	0.003	-0.015
2.0000	-0.003	-0.009
3.0000	-0.003	-0.012
4.0000	-0.003	-0.028
5.0000	0.000	-0.037
6.0000	-0.003	-0.053
7.0000	-0.003	-0.094
8.0000	-0.003	-0.113
9.0000	-0.003	-0.132
10.0000	-0.003	-0.161
11.0000	-0.003	-0.180
12.0000 13.0000	-0.003 -0.003	-0.196 -0.211
14.0000	-0.003	-0.211
15.0000	-0.003	-0.224
16.0000	-0.003	-0.218
17.0000	-0.006	-0.230
18.0000	-0.003	-0.246
19.0000	-0.006	-0.265
20.0000	-0.006	-0.287
21.0000	-0.006	-0.278
22.0000	-0.003	-0.278
23.0000	-0.006	-0.281
24.0000	-0.006	-0.319
25.0000	-0.009	-0.328
26.0000 27.0000	-0.009 -0.009	-0.357 -0.385
28.0000	-0.009	-0.398
29.0000	-0.006	-0.417
30.0000	-0.009	-0.426
31.0000	-0.009	-0.442
32.0000	-0.009	-0.452
33.0000	-0.009	-0.477
34.0000	-0.006	-0.480

42.0000 -0.006 -0.376 43.0000 -0.009 -0.379 44.0000 -0.009 -0.385 45.0000 -0.009 -0.395 47.0000 -0.009 -0.408 48.0000 -0.009 -0.414 49.0000 -0.009 -0.414 50.0000 -0.009 -0.411 51.0000 -0.009 -0.420 53.0000 -0.009 -0.433 54.0000 -0.009 -0.433 55.0000 -0.009 -0.439 56.0000 -0.009 -0.449 57.0000 -0.012 -0.458 58.0000 -0.009 -0.449 57.0000 -0.012 -0.477 60.0000 -0.012 -0.477 60.0000 -0.012 -0.474 61.0000 -0.012 -0.528 64.0000 -0.012 -0.544 65.0000 -0.012 -0.544 67.0000 -0.012 -0.554 69.0000 -0.012 -0.556 71.0000 -0.012
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VERTICAL CONNECTION TEST REPORT					
ENGINEERING-SCI	ENCE, INC.	CLIENT:	ACOE	WELL #	‡:MW−47, 51D
PROJECT: Ash RI P	hase II		INSPECTOR:	PFM/SF	
LOCATION: SEAD			TEST DATE:	7-28-93	
WELL AND AQUIFER IN	FORMATION				
TILL/WEATHERED SHA		MW-47	COMP. SHALE BEDROO	CK WELL:	MW-51D
WELL POINT (installed):		8.56	WELL POINT (installed):		36.87
STATIC DEPTH TO WATER	₹:	0.30' (trans)	STATIC DEPTH TO WATE	R:	7.71
SCREENED INTERVAL – F	FROM:	6.26'	SCREENED INTERVAL -	FROM:	15.94'
	TO:	7.76'	, or taken from installation detail)	TO:	34.94'
TEST POLITIMENT SPEC	TELCATIONS	(an depuis measured from 100	o, or taken from instantation detaily		
TEST EQUIPMENT SPECTOR DATA LOGGER BRAND:	IFICATIONS	Hermit	TRANSDUCER RATING (PSI).	10
INSTRUMENT MODEL:		1000C	TRANSDUCER BRAND:	131).	PTK-161
TEST INFORMATION FO		THERED SHALE WELL			
REFERENCE VALUE:	0.00		DATA LOGGER TEST NU	MBER:	2
REFERENCE POINT:	SURFACE LE	VEL IN WELL	TRANSDUCER DEPTH:	itv.	8.0' .0024
STATIC WATER (START): START TIME:	9:36		TRANSDUCER – LINEAR – SCALE:		10.0157
END TIME:	10:25 (bail) 11:0	M (trans)	- OFFSET		0082
STATIC WATER (END):	$\frac{10.25 \text{ (ball) 11.0}}{-0.26}$	o (trans)	- DELAY		50 msec
ELAPSED TIME:	1 hour bail				
TEST INFORMATION FO	DR SHALLOW	COMPETENT SHALE V	WELL.	*-1	
REFERENCE VALUE:	N/A	COMI BIBLY BINDS	DATA LOGGER TEST NU	MBER:	N/A
REFERENCE POINT:	SURFACE LE	VEL or TOC	TRANSDUCER DEPTH:		N/A
STATIC WATER (START): START TIME:				N/A N/A	
END TIME:	N/A		- OFFSET		N/A
STATIC WATER (END):	N/A		- DELAY:		N/A
ELAPSED TIME:	N/A				
					
TEST INFORMATION FO	OR DEEP CO	MPETENT SHALE WEL	<u>L</u>		
STATIC WATER (START):			NEAR DRYNESS?:		NO
PURGE METHOD	BAILER		WATER DEPTH AFTER PU ELAPSED TIME:	JRGE (END):	
TIME START PURGE: TIME END PURGE:	9:36 10:25		ELAPSED TIME:		
COMMENTS: CONVERSION: 2.30667; YOU MUST RESET THE DTW = 13.3' at 0950 Stop bailing at 9:55 until 10:00 DTW 13.9' at 10:06 DTW 16.5' at 10:21 DTW 7.9' at 11:00 am MW-5 DTW = 7.82 in MW-47 at 11	E REFERENCE am, resume bail	VALUE PRIOR TO BEGI			

SE1000C Environmental Logger 07/28 12:26

Unit# 01000 Test 2

MW-47 AND MW-51D

Setups: INPUT 1 Type Level (F Mode Surface I.D. 00000 Reference 0.000 Linearity 0.000 Scale factor 10.020 Offset -0.010 Delay mSEC 50.000 Step 0 07/28 09:37:43 Elapsed Time INPUT 1	1.144 1	MIND I	111)	עב		
Delay MSEC 50.000	Type Mode I.D.	· 	Lev Sur	el fac 00	(ce	F)
Step 0 07/28 09:37:43 Elapsed Time INPUT 1 0.0000 0.009 1.0000 -0.018 3.0000 -0.037 4.0000 -0.060 5.0000 -0.079 6.0000 -0.107 8.0000 -0.110 10.0000 -0.110 11.0000 -0.126 12.0000 -0.126 12.0000 -0.158 14.0000 -0.158 14.0000 -0.170 15.0000 -0.180 17.0000 -0.189 18.0000 -0.202	Reference Linearit Scale fa Offset Delay mS	, EC	5	0.0	0	U
Elapsed Time INPUT 1 0.0000 0.009 1.0000 0.000 2.0000 -0.018 3.0000 -0.037 4.0000 -0.060 5.0000 -0.079 6.0000 -0.107 8.0000 -0.113 9.0000 -0.110 10.0000 -0.110 11.0000 -0.126 12.0000 -0.126 12.0000 -0.158 14.0000 -0.170 15.0000 -0.180 17.0000 -0.189 18.0000 -0.202	Step 0	07/28	09:	37:	: 4	3
19.0000 -0.208 20.0000 -0.224 21.0000 -0.227 22.0000 -0.215 24.0000 -0.205 25.0000 -0.199 26.0000 -0.224 27.0000 -0.237 28.0000 -0.249 29.0000 -0.262 30.0000 -0.275 31.0000 -0.281	0.000 1.000 2.000 3.000 4.000 5.000 6.000 9.000 11.000 12.000 13.000 14.000 15.000 17.000 18.000 20.000 21.000 22.000 23.000 24.000 25.000 26.000 27.000 28.000 29.000 30.000			0.2 0.2 0.2 0.3 0.3 0.2 0.2	22 22 20 20 22 23 24 26 27	7455947925

35.0000 36.0000 37.0000 39.0000 40.0000 41.0000 41.0000 43.0000 45.0000 45.0000 47.0000 50.0000 51.0000 51.0000 51.0000 55.0000 55.0000 57.0000 61.0000 62.0000 63.0000 64.0000 65.0000 67.0000 67.0000 67.0000 71.0000	-0.328 -0.328 -0.328 -0.328 -0.328 -0.328 -0.328 -0.328 -0.328 -0.328 -0.325 -0.325 -0.325 -0.325 -0.325 -0.325 -0.325 -0.325 -0.325 -0.328 -0.325
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				ORT
ENCE, INC.	CLIENT: A	COE	WELL #	::MW-47, 51D, 52D
hase II		INSPECTOR:	PFM/SF	
		TEST DATE:	7-28-93	
FORMATION				
ALE WELL:	MW-47	COMP. SHALE BEDROC	K WELL:	MW-51D
	8.68	WELL POINT (installed):		36.87
₹:	7.56	_		7.70
ROM:	6.26'	SCREENED INTERVAL - I		15.94'
TO:		or taken from installation detail)	ТО:	34.94'
IFICATIONS				
	Hermit	TRANSDUCER RATING (P.	SI):	10
	1000C	TRANSDUCER BRAND:	,	PTK-161
R TILL/WEA	THERED SHALE WELL	MW-47		
-	TILIKED GITTED WEEL		(RFR·	1 Input 1
	VEL IN WELL		IBLK.	8.0
	VEE IN WELL		TY:	.0024
				10.0157
	(trans)			0082
-0.01		- DELAY:		50 msec
1 hour				
SURFACE LE' 7.70 0750		TRANSDUCER DEPTH: TRANSDUCER – LINEARI – SCALE:	TY:	1 Input 2 12.0' 0.0026 10.0153 0234 50 msec
R DEEP COL	MPETENT SHALE WELL	<u> </u>	MW-52D	
7.10'		NEAR DRYNESS ?:		YES
			RGE (END):	50.1'
0850		ELAPSED TIME:		1 hour
	· · · · · · · · · · · · · · · · · · ·	NING EACH TEST!!!!!		
	FORMATION ALE WELL: C: C: C: C: C: C: C: C: C: C: C: C: C	FORMATION ALE WELL: MW-47 8.68 8: 7.56 FROM: 6.26' TO: 7.76' (all depths measured from TOC) IFICATIONS Hermit 1000C OR TILL/WEATHERED SHALE WELL 0.00 SURFACE LEVEL IN WELL 7.56 0750 0850 (bail) 0930 (trans) -0.01 1 hour OR SHALLOW COMPETENT SHALE WELL 7.70 0750 0850 (bail) 0930 (trans) -0.09 1 hour OR DEEP COMPETENT SHALE WELL 7.10' BAILER 0750 0850 0850 FEET OF WATER/PSI REFERENCE VALUE PRIOR TO BEGIN 5 am 0 am 5 am 0 am 5 am	INSPECTOR: TEST DATE:	INSPECTOR: PFM/SF TEST DATE: 7-28-93

SE1000C Environmental Logger 07/28 12:24

Unit# 01000 Test 1

MW-47, MW-51D AND MW-52D

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	Surface	Surface
I.D.	00000	00000
Reference	0.000	0.000
Linearity	0.000	0.000
Scale factor	10.020	10.020
Offset	-0.010	-0.020
Delay mSEC	50.000	50.000

Step 0 07/28 07:48:24

Elapsed Time	INPUT 1	INPUT 2
0.0000	0.000	-0.003
1.0000	0.000	-0.003
2.0000	-0.003	-0.009
3.0000	-0.003	-0.009
4.0000	-0.003	-0.009
5.0000	-0.003	-0.012
6.0000	-0.003	-0.018
7.0000	-0.006	-0.022
8.0000	-0.006	-0.022
9.0000	-0.003	-0.028
10.0000	-0.006	-0.028
11.0000	-0.003	-0.031
12.0000	-0.006	-0.034
13.0000	-0.006	-0.037
14.0000	-0.006	-0.041
15.0000	-0.003	-0.047
16.0000	-0.009	-0.050
17.0000	-0.009	-0.047
18.0000	-0.009	-0.053
19.0000	-0.006 -0.009	-0.053 -0.056
20.0000 21.0000	-0.009	-0.060
22.0000	-0.009	-0.056
23.0000	-0.009	-0.056
24.0000	-0.009	-0.060
25.0000	-0.009	-0.060
26.0000	-0.009	-0.063
27.0000	-0.009	-0.066
28.0000	-0.009	-0.066
29.0000	-0.009	-0.066
30.0000	-0.012	-0.069
31.0000	-0.009	-0.069
32.0000	-0.009	-0.069
33.0000	-0.009	-0.072
34.0000	-0.009	-0.072

55.0000 -0.015 -0.085 56.0000 -0.015 -0.088 57.0000 -0.015 -0.088 58.0000 -0.015 -0.091 59.0000 -0.015 -0.088 60.0000 -0.015 -0.088 61.0000 -0.015 -0.088 62.0000 -0.015 -0.088 63.0000 -0.015 -0.091 64.0000 -0.015 -0.091 65.0000 -0.018 -0.091 66.0000 -0.018 -0.094 67.0000 -0.018 -0.094 68.0000 -0.018 -0.094 69.0000 -0.015 -0.094 70.0000 -0.015 -0.094 70.0000 -0.015 -0.094 72.0000 -0.015 -0.094 73.0000 -0.018 -0.094 76.0000 -0.018 -0.094 76.0000 -0.018 -0.094 76.0000 -0.018 -0.094 77.0000 -0.022 -0.098 81.0000 -0.018
--

95.0000	-0.022	-0.110
96.0000	-0.022	-0.110
97.0000	-0.018	-0.104
98.0000	-0.018	-0.098

INSPECTOR: PFM TEST DATE: 7-26-93 COMP. SHALE BEDROCK WELL: WELL POINT (installed): STATIC DEPTH TO WATER: SCREENED INTERVAL - FROM: TO: or taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI): FRANSDUCER BRAND:	MW-54D 34.99' 9.51 15.51 34.51
TEST DATE: 7-26-93 COMP. SHALE BEDROCK WELL: WELL POINT (installed): STATIC DEPTH TO WATER: SCREENED INTERVAL - FROM: TO: Or taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	34.99' 9.51 15.51 34.51
COMP. SHALE BEDROCK WELL: WELL POINT (installed): STATIC DEPTH TO WATER: SCREENED INTERVAL – FROM: TO: OF taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	34.99' 9.51 15.51 34.51
WELL POINT (installed): STATIC DEPTH TO WATER: SCREENED INTERVAL – FROM: TO: or taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	34.99' 9.51 15.51 34.51
WELL POINT (installed): STATIC DEPTH TO WATER: SCREENED INTERVAL – FROM: TO: or taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	34.99' 9.51 15.51 34.51
WELL POINT (installed): STATIC DEPTH TO WATER: SCREENED INTERVAL – FROM: TO: or taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	34.99' 9.51 15.51 34.51
STATIC DEPTH TO WATER: SCREENED INTERVAL – FROM: TO: Or taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	9.51 15.51 34.51
SCREENED INTERVAL – FROM: TO: or taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	15.51 34.51
r taken from installation detail) TRANSDUCERS FRANSDUCER RATING (PSI):	
TRANSDUCERS FRANSDUCER RATING (PSI):	10
TRANSDUCER RATING (PSI):	10
, ,	
IN ENDECER BIGERE.	PTK-161
	111 101
	-
	0 Input 1
	10.10'
	.0024
	10.0157 0082
	50 Msec
II.I.	
DATA LOGGER TEST NUMBER:	N/A
FRANSDUCER DEPTH:	N/A
	N/A N/A
- OFFSET:	N/A
– DELAY:	N/A
ELL MW-54D	
NEAR DRYNESS ?:	YES
VATER DEPTH AFTER PURGE (END):	29.0'
ELAPSED TIME: See note below	1 hour
ING EACH TEST!!!!!	
	CRANSDUCER BRAND: W-46 DATA LOGGER TEST NUMBER: CRANSDUCER DEPTH: - SCALE: - OFFSET: - DELAY: LL DATA LOGGER TEST NUMBER: CRANSDUCER DEPTH: CRANSDUCER DEPTH: - SCALE: - OFFSET: - DELAY: MW-54D MEAR DRYNESS ?: VATER DEPTH AFTER PURGE (END): SLAPSED TIME: See note below

SE1000C Environmental Logger 07/26 13:27

Unit# 01000 Test 0

MW-53 AND MW-54D

Setups:	INPUT 1
Time	Level (F)
Type Mode	Surface
I.D.	00000
Reference Linearity Scale factor Offset Delay mSEC	0.000 0.000 10.020 -0.010 50.000

Step 0 07/26 08:09:06

_	
Elapsed Time	INPUT 1
0.0000	0.000
1.0000	0.000
2.0000	-0.006
3.0000	-0.003
4.0000	-0.006
5.0000	-0.006
6.0000	-0.006
7.0000	-0.006
8.0000	-0.006
9.0000	-0.009
10.0000	-0.009
11.0000	-0.012
12.0000	-0.012
13.0000	-0.012
14.0000	-0.012
15.0000	-0.012
16.0000	-0.012
17.0000	-0.015
18.0000	-0.012
19.0000	-0.015
20.0000	-0.018
21.0000	-0.015
22.0000	-0.015
23.0000	-0.022
24.0000	-0.018
25.0000	-0.015
26.0000	-0.025
27.0000	-0.022
28.0000	-0.018
29.0000	-0.025
30.0000	-0.025
31.0000	-0.022
32.0000	-0.025
33.0000	-0.025
34.0000	-0.025
34.0000	-0.025

35.0000 36.0000 37.0000 38.0000 39.0000 40.0000 41.0000	-0.025 -0.028 -0.028 -0.028 -0.031 -0.028
42.0000 43.0000 44.0000 45.0000 46.0000 47.0000 48.0000 49.0000 50.0000 51.0000 52.0000 53.0000 54.0000	-0.031 -0.034 -0.034 -0.037 -0.037 -0.037 -0.037 -0.037 -0.037 -0.037
55.0000 56.0000 57.0000 58.0000 59.0000 60.0000 61.0000 62.0000 63.0000 64.0000 65.0000 66.0000	-0.041 -0.037 -0.041 -0.044 -0.044 -0.041 -0.041 -0.047 -0.044 -0.044
67.0000 68.0000 69.0000 70.0000 71.0000 72.0000 73.0000 74.0000 75.0000 76.0000 77.0000 79.0000	-0.050 -0.044 -0.041 -0.047 -0.047 -0.047 -0.047 -0.044 -0.044 -0.044 -0.037 -0.041
80.0000 81.0000 82.0000 83.0000 84.0000 85.0000 86.0000 87.0000 88.0000 89.0000 90.0000	-0.044 -0.044 -0.041 -0.041 -0.044 -0.044 -0.041 -0.044 -0.037 -0.044

VERTICAL CONNECTION TEST REPORT					
ENGINEERING-SCI	ENCE, INC	. CLIENT:	ACOE	WELL #	#:MW-53, 54D, 55D
PROJECT: Ash RI P	hase II		INSPECTOR:	PFM	
LOCATION: SEAD			_ TEST DATE:	7-25-93	
WELL AND AQUIFER IN	FORMATION	₹			
TILL/WEATHERED SH		MW-53	COMP. SHALE BEDRO	CK WELL:	MW-54D
WELL POINT (installed):		10.36	WELL POINT (installed):		34.99
STATIC DEPTH TO WATE	R:	9.68'	_ STATIC DEPTH TO WAT		9.44'
SCREENED INTERVAL -		6.41	_ SCREENED INTERVAL -	· FROM: TO:	15.51 34.51
	TO:		OC, or taken from installation detail)	10.	34.51
TEST EQUIPMENT SPEC	CIFICATIONS		2 TRANSDUCERS		
DATA LOGGER BRAND:		Hermit	TRANSDUCER RATINGS	(PSI):	10 + 10
INSTRUMENT MODEL:		1000C	TRANSDUCER BRAND:		PTK-161
TEST INFORMATION FO	OR TILL/WEA	THERED SHALE WEI	L MW-53		
REFERENCE VALUE:	0.00		DATA LOGGER TEST NU	JMBER:	0 Input 1
REFERENCE POINT:	SURFACE LE	VEL IN WELL	TRANSDUCER DEPTH:		10.10
STATIC WATER (START):	9.68'		TRANSDUCER - LINEA	RITY:	.0024
START TIME:	11:50		- SCALE	:	10.0157
END TIME:	12:50 (bailer) 1	:15 (trans)	- OFFSE		0082
STATIC WATER (END): ELAPSED TIME:	54.5 1 hour		_ – DELA	r :	50 msec
ELM GED TIME.	THOU		_		
TEST INFORMATION FO	OR SHALLOW	COMPETENT SHALE	WELL MW-5	54D	
REFERENCE VALUE:	0.00		_ DATA LOGGER TEST NU	JMBER:	0 Input 2
REFERENCE POINT:		VEL IN WELL	_ TRANSDUCER DEPTH: TRANSDUCER - LINEAL	DITY.	.0026
STATIC WATER (START): START TIME:	11:50		_ TRANSDUCER - LINEAR - SCALE		10.0153
END TIME:*	12:50 (bailer)		- OFFSE		0234
STATIC WATER (END): ELAPSED TIME:	54.5 1 hour		_ DELA	Υ:	50 msec
*Will wait for some recovery in MW-55D					
TEST INFORMATION FO		MPETENT SHALE WE	-	MW-55D	VEC
STATIC WATER (START): PURGE METHOD	BAILER		NEAR DRYNESS ?: WATER DEPTH AFTER P	LIRGE (END).	YES 54.5
TIME START PURGE:	11:50		ELAPSED TIME: See not		1 hour bailing
TIME END PURGE:	12:50		_		
COMMENTS: CONVERSION: 2.30667	FEET OF WAT	FR/PSI			
			SINNING EACH TEST!!!!!		
44 000 b	V 55D -+ 12-10				
41.30' draindown DTW in MV 46.4' draindown DTW in MW					
54.5' draindown DTW in MW	-55D at 12:30 p	m			
54.5 draindown DTW in MW	-55D at 12:50 pr	n			
end bailing 38.9 draindown DTW in MW	-55D at 1:00 pm				
ł	-				
Input (2) $XD = 1.39 \text{ max read}$	ling at 12:50 pm	in 54D in 53			
Input (1) $XD = 0.00$ max reading at 12:50 pm in 53					
l					

SE1000C Environmental Logger 07/25 13:31

Unit# 01000 Test 0

MW-53, MW-54D AND MW-55D

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	Surface	Surface
I.D.	00000	00000
Reference	0.000	0.000
Linearity	0.000	0.000
Scale factor	10.020	10.020
Offset	-0.010	-0.020
Delay mSEC	50.000	50.000

Step 0 07/25 11:51:31

Elapsed Time	INPUT 1	INPUT 2
0.0000	0.000	0.000
1.0000	0.000	-0.003
2.0000	-0.006	-0.018
3.0000 4.0000	-0.003 -0.006	-0.041 -0.069
5.0000	0.000	-0.098
6.0000	-0.006	-0.136
7.0000	-0.003	-0.173
8.0000	-0.003	-0.218
9.0000	-0.003	-0.262
10.0000 11.0000	-0.009 -0.006	-0.313 -0.357
12.0000	-0.006	-0.357
13.0000	-0.003	-0.449
14.0000	-0.006	-0.493
15.0000	-0.006	-0.537
16.0000	-0.009	-0.582
17.0000 18.0000	-0.003	-0.616
19.0000	-0.003 -0.003	-0.654 -0.689
20.0000	-0.009	-0.727
21.0000	-0.003	-0.755
22.0000	-0.006	-0.790
23.0000	-0.009	-0.822
24.0000	-0.006	-0.850
25.0000 26.0000	-0.009 -0.009	-0.882 -0.910
27.0000	-0.009	-0.939
28.0000	-0.009	-0.961
29.0000	-0.009	-0.986
30.0000	-0.009	-1.012
31.0000	-0.006	-1.027
32.0000	-0.006	-1.053
33.0000 34.0000	-0.012 -0.012	-1.075 -1.094
J = 10000	0.012	エ・リンチ

65.0000 -0.009 -1.458 66.0000 -0.012 -1.467 67.0000 -0.012 -1.473 68.0000 -0.009 -1.473 69.0000 -0.012 -1.480 70.0000 -0.012 -1.477 72.0000 -0.009 -1.473 73.0000 -0.009 -1.467 74.0000 -0.009 -1.467 75.0000 -0.009 -1.458 77.0000 -0.012 -1.458 78.0000 -0.012 -1.451	35.0000 36.0000 37.0000 38.0000 40.0000 41.0000 41.0000 42.0000 43.0000 44.0000 45.0000 46.0000 47.0000 50.0000 50.0000 51.0000 52.0000 53.0000 54.0000 55.0000 56.0000 57.0000 58.0000 59.0000 60.0000 61.0000 62.0000 63.0000 64.0000	-0.006 -0.009 -0.012 -0.009 -0.006 -0.009 -0.009 -0.003 -0.009 -0.003 -0.006 -0.006 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009	-1.110 -1.132 -1.154 -1.167 -1.179 -1.195 -1.211 -1.230 -1.243 -1.252 -1.268 -1.277 -1.293 -1.306 -1.309 -1.325 -1.337 -1.356 -1.369 -1.356 -1.369 -1.379 -1.388 -1.404 -1.413 -1.420 -1.420 -1.445 -1.445
80.0000 -0.015 -1.436	61.0000 62.0000 63.0000 64.0000 65.0000 66.0000 67.0000 68.0000 70.0000 71.0000 72.0000 73.0000 74.0000 75.0000 77.0000 78.0000 79.0000	-0.009 -0.012 -0.009 -0.009 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.012 -0.009 -0.009 -0.009 -0.009 -0.009 -0.009 -0.012 -0.012	-1.432 -1.445 -1.451 -1.458 -1.467 -1.473 -1.480 -1.480 -1.477 -1.467 -1.467 -1.467 -1.458 -1.458 -1.458

		V	CTION TI		
ENGINEERING-SC		. CLIENT:	ACOE	 \	#:MW-56, 57D
PROJECT: Ash RI	Phase II		INSPECTOR:	PFM/SF	
LOCATION: SEAD			TEST DATE:	7-27-93	
WELL AND AQUIFER I		<u>N</u> MW-56	COMP. SHALE BE	DROCK WELL.	MW-57D
WELL POINT (installed):	MLE WELL.	6.85	WELL POINT (install		35.09
STATIC DEPTH TO WATE	D.	5.00'	STATIC DEPTH TO	,	5.36 + Changing
SCREENED INTERVAL -		4.81'	SCREENED INTERV		15.12
SCREENED INTERVIE	TO:	6.31'		TO:	34.13
		(all depths measured from T	OC, or taken from installation	detail)	
TEST EQUIPMENT SPE	CIFICATIONS		2 TRANSDUCERS		
DATA LOGGER BRAND:		Hermit	TRANSDUCER RAT	TING (PSI):	10 Input 1
INSTRUMENT MODEL:		1000C	_ TRANSDUCER BRA	AND:	PTK-161
TEST INFORMATION F	OR TILL/WEA	THERED SHALE WEI	L <u>L</u> MW-56		
REFERENCE VALUE:	0.00		_ DATA LOGGER TE	ST NUMBER:	2
REFERENCE POINT:	SURFACE LE	VEL IN WELL	TRANSDUCER DEF	TH:	6.0'
STATIC WATER (START)	: 5.00'		TRANSDUCER – LI	INEARITY:	.0026
START TIME:	1:45 (bail)		S	CALE:	10.0153
END TIME:	2:45 (bail) 3:22	(trans)	_	FFSET:	0234
STATIC WATER (END): ELAPSED TIME:	-0.21 1 hour bail 4:45	min (trans)	_	DELAY:	50 msec
ELAISED TIME.	1 Hour ball 4.43	miii (traiis)			
TEST INFORMATION F REFERENCE VALUE:	OR SHALLOW	COMPETENT SHALE	B WELL DATA LOGGER TE	ST NI IMBED	N/A
REFERENCE POINT:	SURFACE LE	VEL or TOC	TRANSDUCER DEF		N/A
STATIC WATER (START)			TRANSDUCER – LI		N/A
START TIME:	N/A			CALE:	N/A
END TIME: STATIC WATER (END):	N/A N/A			OFFSET: DELAY:	N/A N/A
ELAPSED TIME:	N/A				- 12-2
TEST INFORMATION F	OR DEEP CO	MPETENT SHALE WE	<u>ILL</u>	MW-57D	
STATIC WATER (START)	: 5.26 + Changir	g	NEAR DRYNESS ?:		YES
PURGE METHOD	BAILER		WATER DEPTH AF		29.3
TIME START PURGE: TIME END PURGE:	1:45 2:45		ELAPSED TIME: S	ee note below	1 hour purge
TIME END FORGE:	2:43				
	E REFERENCE	VALUE PRIOR TO BEC	GINNING EACH TEST!!!!	!	
24.0' DTW in MW-57D at 2 29.3' DTW in MW-57D at 1		57D at 1410			
at 1:43 DTW 4.90' in MW -5: at 1:00 DTW 5.28' in MW -5: 12:30 pm water level fluctuati	8D/DTW in MW	-57D 5.01'	tion probably due to the fa	ct that the deep bedroc	k well has not fully recovered
Notes:					
DTW = 8.25 MW-52D Tra	ns 17' slug 13.7				

SE1000C Environmental Logger 07/27 17:03

Unit# 01000 Test 2

MW-56 AND MW-57D

Setups:	INPUT	1
Type Mode I.D.	Level (Surface 00000	F)
Reference Linearity Scale facto Offset Delay mSEC	0.00 0.00 or 10.02 -0.02 50.00	Ü
Step 0 07	/27 13:44:2	0
Elapsed Tital	me INPUT	0622854056074197077186045567011566

35.0000 36.0000 37.0000 38.0000 40.0000 41.0000 42.0000 43.0000 45.0000 46.0000 47.0000 48.0000 50.0000 51.0000 52.0000 53.0000 54.0000 55.0000 57.0000 58.0000 60.0000 61.0000 62.0000 63.0000 63.0000 64.0000 65.0000 67.0000 67.0000 70.0000 71.0000 71.0000 72.0000 73.0000 74.0000 75.0000 77.0000 87.0000	0.028 0.037 0.053 0.069 0.079 0.079 0.075 0.075 0.072 0.063 0.047 0.018 -0.107 -0.161 -0.230 -0.243 -0.244 -0.240 -0.234 -0.224 -0.240 -0.211 -0.221 -0.221 -0.221 -0.221 -0.221 -0.221 -0.221 -0.221 -0.221 -0.230 -0.211 -0.205 -0.167 -0.167 -0.167 -0.167 -0.167 -0.167 -0.167 -0.167 -0.211 -0.221 -0.221 -0.221 -0.205 -0.170 -0.173 -0.173 -0.173 -0.173 -0.173 -0.173 -0.173 -0.173 -0.063 -0.063 -0.063
85.0000	-0.044
86.0000	-0.022
87.0000	-0.018

95.0000 -0.196 96.0000 -0.224 97.0000 -0.211

VER'	TICAI	CONNE	C'	TION '	TEST	RE	POR	T
ENGINEERING-SCI	ENCE, INC.	. CLIENT:	Α	COE		WELL	#:MW-	56, 57D, 58D
PROJECT: Ash RI P	hase II			INSPECTOR:		PFM/SF		
LOCATION: SEAD			_	TEST DATE:		7-27-93		
WELL AND AQUIFER IN	FORMATION	V	T					
TILL/WEATHERED SH		MW-56		COMP. SHALE	BEDROCK	WELL:	MW-5	7D
WELL POINT (installed):		6.85	_	WELL POINT (in	nstalled):		35.09	
STATIC DEPTH TO WATER	₹:	4.96	_	STATIC DEPTH	TO WATER	:	4.50'	
SCREENED INTERVAL - I	FROM:	3.3	_	SCREENED INT	ERVAL – F	ROM:	15.12	
	TO:	4.8 (all depths measured from T	TOC	or taken from install	ation detail)	TO:	34.12	
TEST EQUIPMENT SPEC	IFICATIONS			TRANSDUCER				
DATA LOGGER BRAND:	<u> </u>	Hermit		TRANSDUCER		SI):	10 + 10	
INSTRUMENT MODEL:		1000C		TRANSDUCER	•	/-	PTK-1	
	NO THE T STIEL A	THE PED CHALL WE		170 FC				
TEST INFORMATION FO		THERED SHALE WEI			TECT MI IM	DED.	1	Innut 1
REFERENCE VALUE: REFERENCE POINT:	0.00 SURFACE LE	VEL IN WELL	_	DATA LOGGER TRANSDUCER		BEK:	6.0'	Input 1
		VEL IN WELL		TRANSDUCER	_	rv.	.0026	
STATIC WATER (START): START TIME:	10:05 (bail)			TRANSDUCER	- SCALE:		10.0153	
END TIME:	11:05 (bail)				- OFFSET:		0.0234	
STATIC WATER (END):	-0.01				- DELAY:		50 msec	:
ELAPSED TIME:								
TEST INFORMATION FOR REFERENCE VALUE:	OR SHALLOW	COMPETENT SHALE		ELL DATA LOGGER	MW-57D		1	Input 2
REFERENCE POINT:	SURFACE LE	VEL IN WELL		TRANSDUCER		DW 2	10.0'	
STATIC WATER (START): START TIME:	4.50' 10:05 (bail)			TRANSDUCER	- LINEARI:	l'Y:	.0024 10.0157	
END TIME:	11:05 (bail)				- OFFSET:		-0.0082	
STATIC WATER (END):	-2.83				- DELAY:		50 msec	;
ELAPSED TIME:								
TEST INFORMATION FO	DR DEEP/SHA	LLOW COMPETENT	r sh	ALE WELL (cir	le one)			
STATIC WATER (START):				NEAR DRYNES			NO	
PURGE METHOD	BAILER			WATER DEPTH				
TIME START PURGE:	1005		1	ELAPSED TIME	: See note b	elow	1 hour	
TIME END PURGE:	1105							
COMMENTS: CONVERSION: 2.306671 YOU MUST RESET THE 28.4' DTW in MW – 58D at 10: 37.5 DTW in MW – 58D at 11: 5top test 9.44 DTW in MW – 58D at 11:	E REFERENCE :20 35 05		GINN	IING EACH TES	Tuu			
Overburden well at +0.16 Shallow bedrock at -1.49								

SE1000C Environmental Logger 07/27 17:00

Unit# 01000 Test 1

MW-56, MW-57D AND MW-58D

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	Surface	Surface
I.D.	00000	00000
Reference	0.000	0.000
Linearity	0.000	0.000
Scale factor	10.020	10.020
Offset	-0.020	-0.010
Delay mSEC	50.000	50.000

Step 0 07/27 10:05:27

Elapsed Time	INPUT 1	INPUT 2
0.0000	-0.003	0.006
1.0000	-0.006	-0.015
2.0000	-0.015	-0.072
3.0000	-0.034	-0.142
4.0000	-0.053	-0.224
5.0000	-0.082	-0.316
6.0000		
	-0.110	-0.408
7.0000	-0.110	-0.496
8.0000	-0.120	-0.566
9.0000	-0.148	-0.632
10.0000	-0.205	-0.705
11.0000	-0.243	-0.774
12.0000	-0.249	-0.850
13.0000	-0.249	-0.926
14.0000	-0.227	-0.993
15.0000	-0.243	-1.065
16.0000	-0.259	-1.132
17.0000	-0.249	-1.195
18.0000	-0.253	-1.268
19.0000	-0.262	-1.334
20.0000	-0.259	-1.398
21.0000	-0.249	-1.464
22.0000	-0.230	-1.527
23.0000	-0.227	-1.584
24.0000	-0.221	-1.641
25.0000	-0.243	-1.708
26.0000	-0.240	-1.761
27.0000	-0.227	-1.815
28.0000	-0.218	-1.869
	-0.213	
29.0000		-1.916
30.0000	-0.208	-1.967
31.0000	-0.208	-2.017
32.0000	-0.205	-2.055
33.0000	-0.189	-2.093
34.0000	-0.199	-2.141

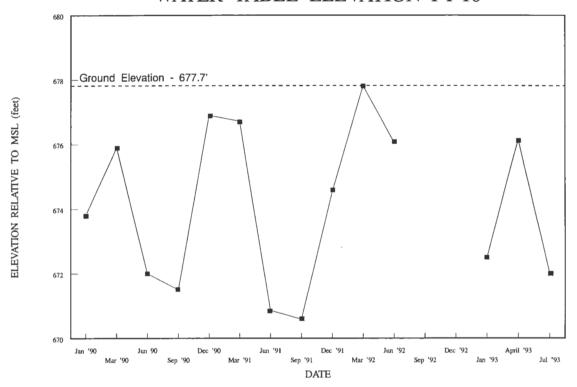
95.0000	0.009	-1.885
96.0000	0.015	-1.853
97.0000	0.025	-1.821
98.0000	0.037	-1.790
99.0000	0.047	-1.758
100.000	0.069	-1.727
101.000	0.082	-1.698
102.000	0.117	-1.670
103.000	0.139	-1.641
104.000	0.151	-1.613
105.000	0.161	-1.584
106.000	0.173	-1.559
107.000	0.186	-1.530
108.000	0.170	-1.508
109.000	0.154	-1.480

SENECA ASH LANDFUL DRAFT RI REPORT

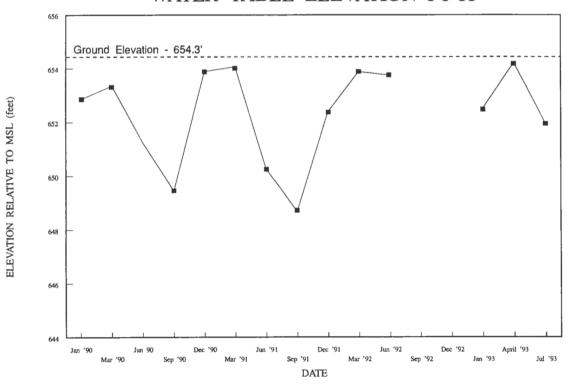
APPENDIX I

HISTORICAL WATER TABLE ELEVATIONS AND SATURATED THICKNESSES

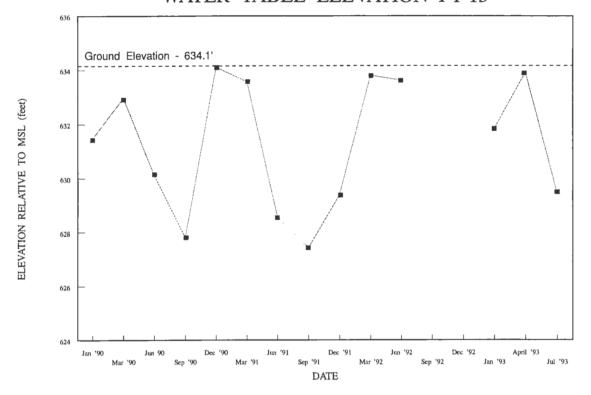
WATER TABLE ELEVATION PT-10



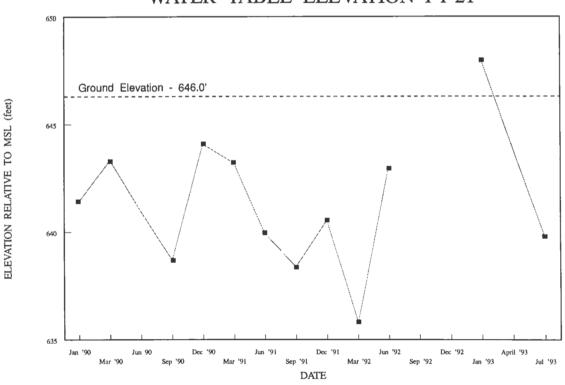
WATER TABLE ELEVATION PT-11



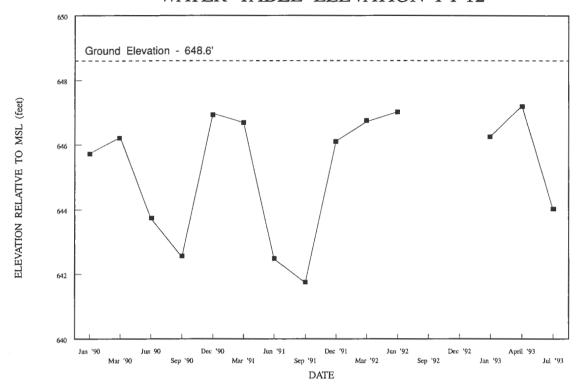
WATER TABLE ELEVATION PT-15



WATER TABLE ELEVATION PT-21



WATER TABLE ELEVATION PT-12



SATURATED THICKNESS PT-12

