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TECHNICAL MEMORANDUM NO. 9

GROUNDWATER SAMPLING - TASK 15, EVENTS 2 AND 3
METAMORA LANDFILL REMEDIAL INVESTIGATION/FEASIBILITY STUDY

Conducted December, 1987 (Event No. 2) and
January, 1988 (Event No. 3)

Contract No. 1525, E.C. Jordan Co. Project No. 4465-94

Prepared for
Michigan Department of Natural Resources

JUN 10 1988

TECHNICAL MEMORANDUM NO. 9

PROJECT: Contract No. 1525, Metamora Landfill Site
Remedial Investigation/Feasibility Study

SUBJECT: Groundwater Sampling - Task 15, Events 2 and 3

PREPARED BY: T. Cantwell, K. Kesler-Arnold / E.C. Jordan Co. (Jordan)

INTRODUCTION

The purpose of this Technical Memorandum is to describe groundwater sampling events 2 and 3, which took place at the Metamora Landfill during the Remedial Investigation/Feasibility Study (RI/FS). This work was performed for the Michigan Department of Natural Resources (MDNR) under Contract Agreement No. 1525. This task was performed as described in the Metamora Landfill Site Work Plan and the Quality Assurance Project Plan (QAPP).

SCHEDULE

Groundwater sampling event 2 began on November 30, 1987 and was completed on December 8, 1987. Event 3 commenced on January 18, 1988 and was completed on January 29, 1988.

PERSONNEL

Jordan collected groundwater samples and completed U.S. EPA Contract Laboratory Program (CLP) paperwork. Personnel present during sampling activities (not all simultaneously) were as follows:

Sampling Event 2

- J. Barkach, Jordan	- S. Phillips, MDNR
- T. Cantwell, Jordan	
- N. Gardner, Jordan	
- K. Kesler-Arnold, Jordan	
- C. Kielty, Jordan	
- J. Marzolino, Jordan	

Sampling Event 3

- J. Barkach, Jordan	- S. Phillips, MDNR
- T. Cantwell, Jordan	
- D. Dittmar, Jordan	
- K. Kesler-Arnold, Jordan	
- J. Marzolino, Jordan	

SAMPLING LOCATIONS

Twelve newly installed wells and 19 existing wells were sampled during event 2 (a total of 31 wells). By event 3, two more wells had been installed, and a

total of 33 wells were sampled. Figure TM9-1 shows monitoring well locations and Tables TM9-1 and TM9-17 provides sample designations for events number 2 and 3, respectively.

Although MW-7 is a multi-screen well, only the top screen (107 to 109 feet) could be sampled in both sampling events. The lower two screens could not be sampled because the lower portion of the well had silted in.

Due to a problem with well construction that stemmed from very difficult drilling conditions, well MW-29R was not sampled.

FIELD PROCEDURES

During both events, groundwater samples were collected in a specific order so that upgradient or background wells were sampled first, and downgradient or contaminated wells were sampled last. Prior to evacuation, each well was checked for proper identification and location. A photoionization meter was used to measure volatile organic chemicals at the well mouth and in ambient air. Ambient air was monitored before and after removing the well cap.

The static water level and the well depth was measured from top of the inner well casing with an electric water level indicator. Measurements were recorded to the nearest 0.01 foot (see Table TM9-2 and TM9-18). The volume of water standing inside the well casing was calculated, and the wells were evacuated of three times that volume before sampling (or until the well went dry). In wells where a packer was used, the evacuated volume was three times the volume of water below the packer.

Well evacuation was accomplished with a Keck model SP-84 mechanical pump or a bailer. If the concentration of volatile organic chemical measured at the well mouth was greater than background, ambient air monitoring continued during well evacuation. Groundwater temperature, pH and specific conductance were recorded with a Tripar Analyzer at the start of well evacuation, after evacuating one and one-half well volumes, and just before sampling (see Tables TM9-3 and TM9-19).

Groundwater samples from wells evacuated with the Keck pump were collected directly from the Teflon discharge tubing. Groundwater samples from wells evacuated with a stainless steel bailer were collected from a bottom-emptying device that attaches directly to the bailer.

Groundwater samples were filtered and preserved in the field, as appropriate. Samples to be analyzed for dissolved metals were pressure-filtered with nitrogen in a Geotech 2.4-liter barrel filter using a 0.45-micron membrane filter. Between samples, the filter assembly was rinsed with a dilute nitric acid solution followed by a distilled water rinse. The membrane filter was replaced between samples. Samples to be analyzed for metals were preserved to a pH of less than 2 with nitric acid, and samples to be analyzed for cyanide were preserved to a pH of greater than 13 with sodium hydroxide. Preservatives were provided by Jordan's laboratory.

The Keck pump was decontaminated between samples by pumping a solution of trisodium phosphate (TSP) and water through the pump, followed by distilled water. This was done by submerging the pump in a decon tube which consists of a 4-inch diameter, 4-foot long, PVC tube sealed at one end. The outside of the pump and the tubing were rinsed with TSP and water, and then rinsed with distilled water. The stainless steel bailer was decontaminated with TSP and water, followed by a distilled water rinse. Equipment (Tripar probes, water level recorder, etc.) that had come into contact with groundwater was rinsed with distilled water between wells.

Groundwater Field Sample Data Records for both events are appended to this technical memorandum.

SAMPLE HANDLING

Sample bottles were provided by MDNR through the U.S. EPA CLP. Sample labeling, handling, documentation and chain-of-custody protocols established by the CLP were followed. Samples were shipped each day via overnight delivery service to the appropriate laboratories.

During event 2, organic analyses were conducted by Gulf South Research Institute, New Orleans, Louisiana, and Environmental Monitoring and Services, Inc., Camarillo, California. Inorganic analyses were conducted by Rocky Mountain Analytical Laboratories, Arvada, Colorado.

During event 3, organic analyses were conducted by PEI Associates, Cincinnati, Ohio, and Rocky Mountain Analytical Laboratories, Arvada, Colorado. Inorganic analyses were conducted by Skinner and Sherman Incorporated, Waltham, Massachusetts.

QUALITY CONTROL

During event 2, four blind duplicate samples and ten sampler blanks were submitted for quality control purposes. During event 3, four blind duplicate samples and nine sampler blanks were submitted for analysis.

RESULTS

Sampling Event 2

Organic and inorganic data for groundwater samples collected during this sampling event are presented in Tables TM9-4 through TM9-16.

The organic data obtained during this sampling event indicates that background (upgradient) groundwater at the Metamora site does not contain organic chemicals at concentrations of concern.¹ Those detected, acetone,

¹Background wells are MW-1, -3, -7, -9, -10S, -10D, -11, -12, -18, -19 and -20.

bis(2-ethylhexyl)phthalate, and methylene chloride are common laboratory contaminants. Benzoic acid, which may be naturally occurring, was detected in MW-10S and MW-10D at very low concentrations of 7 ug/l and 9 ug/l, respectively. Very low concentrations of toluene (less than 2 ug/l) were found in MW-7-3, MW-12, and MW-19, but this chemical may also be attributable to laboratory contamination.

When compared to background groundwater quality, it appears that downgradient groundwater has been impacted by the landfill and the drum disposal areas. Affected wells include MW-4 (downgradient of disposal area 4); MW-17S (downgradient of disposal area 1); and MW-8, -14S, -15S, -15D, -23, -24, and -25 (downgradient of the landfill and disposal area 1).

Bedrock wells yielded samples of a quality similar to that found in background groundwater. Very low concentrations of toluene and methylene chloride were detected in MW-27R and MW-28R, although these may be due to laboratory contamination. No chemicals were found in MW-30R.

The inorganic data obtained during this sampling event indicated that background groundwater at the Metamora site is of good quality and comparable to the quality expected in similar geologic settings.

Many inorganic constituents were detected in downgradient groundwater at concentrations that exceeded background levels, which indicates that groundwater has been impacted by the landfill and the drum disposal areas. Arsenic, barium and lead appear to be the inorganic constituents of concern because they were detected in several wells at concentrations that exceed drinking water standards.

Downgradient of disposal area 4, elevated parameters include arsenic at 181 ug/l in MW-4 and barium at 1,770 ug/l in MW-16. MW-17S, located downgradient of disposal area 1, also exhibited elevated concentrations of several inorganic constituents. A notable concentration of arsenic (239 ug/l) was detected in this well. Downgradient of the landfill and disposal area 1, MW-8, -13, -14S, -14D, -15S, -15D, -23, -24, and -25 also exhibited elevated concentrations of several inorganic parameters.

Bedrock wells yielded groundwater samples of a quality similar to that found in background groundwater. The only exception was arsenic, which was found in concentrations higher than background (but below drinking water standards) in all three bedrock wells. This appears to be a natural condition characteristic of this aquifer.

Sampling Event 3

Organic and inorganic data for groundwater samples collected during this sampling event are presented in Tables TM9-20 through TM9-32.

The organic data obtained during this sampling event indicates that background (upgradient) groundwater at the Metamora site does not contain organic chemicals at concentrations above the limits of detection. The phthalates detected in many wells can probably be attributed to laboratory contamination.

Analogous to previous sampling events, the data collected during sampling event 3 indicates that downgradient groundwater has been impacted by the landfill and the drum disposal areas when compared to background levels.

Well MW-17I is notable because it is located in a lower aquifer that should be uncontaminated because it is protected by a till layer, but it was found to contain several organic chemicals. These chemicals included vinyl chloride at 47 ug/L; 1,2-dichloroethene at 97 ug/L; trichloroethene at 44 ug/L; toluene at 77 ug/L and xylene at 95 ug/L. Chemicals in this well may be attributed to cross-contamination during drilling because groundwater in the upper aquifer at this location is significantly contaminated with various organic chemicals. Contamination has been documented in MW-17S (78 feet deep), but little contamination was found in MW-17D (120 feet deep). This information supports the possibility of cross-contamination of MW-17I (150 feet deep) by groundwater from the upper aquifer. Future groundwater analyses should verify the quality of groundwater in this well.

Organic chemicals were not detected in the bedrock wells.

The inorganic data obtained during this sampling event indicates that background groundwater is good quality and comparable to the previous sampling events.

Analogous to previous groundwater sampling events, many inorganic constituents were detected in downgradient groundwater at elevated concentrations when compared to background. Arsenic and barium appear to be the inorganic constituents of concern. Concentrations of lead have decreased when compared to prior samples.

Downgradient of disposal area 4, elevated parameters included arsenic at 132 ug/l in MW-4, and barium at 2,170 ug/l in MW-16. MW-17S, located downgradient of disposal area 1, also exhibited elevated concentrations of several inorganic constituents. A notable concentration of arsenic (124 ug/l) was detected in this well.

Bedrock wells yielded groundwater samples of a quality similar to that found in background groundwater. Similar to sampling event 2, arsenic was again present at elevated concentrations compared to background. However, these concentrations are not above the drinking water standard, and because the parameter was found in all three wells at comparable concentrations, it is likely that this is a natural condition.

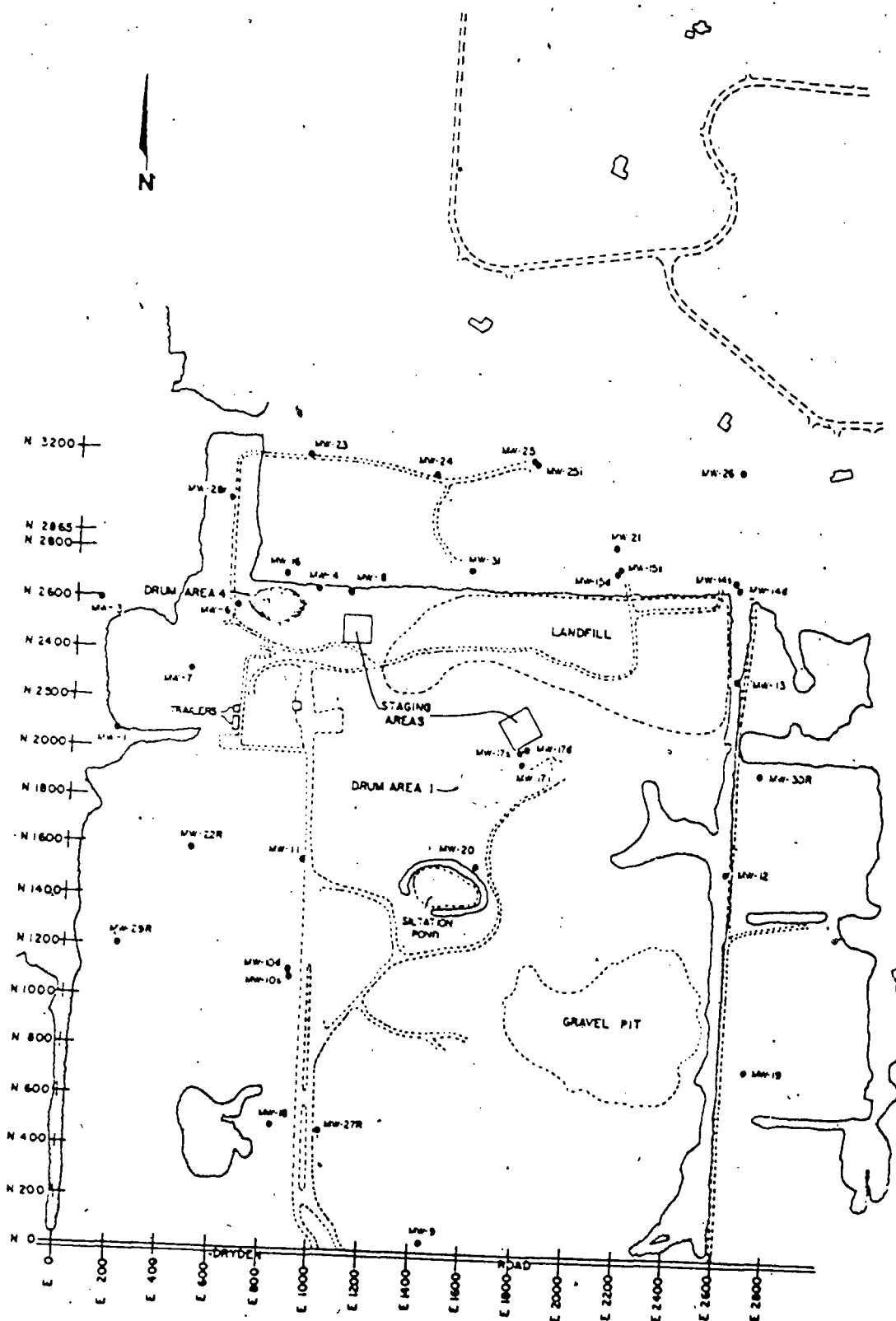


FIGURE TM9-1
MONITORING WELL LOCATIONS
METAMORA LANDFILL SITE

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TAB TH9-1.NK1
DH110

TABLE TH9-1

SUMMARY OF GROUNDWATER SAMPLING - DECEMBER, 1987
METAMORA LANDFILL SITE, METAMORA TOWNSHIP, MICHIGAN

SAMPLE DESIGNATION	DATE SAMPLED	TIME SAMPLED	SAMPLING EQUIPMENT	ORGANIC TRAFFIC REPORT	INORGANIC TRAFFIC REPORT	COMMENTS
MW-1	12-1-87	1100	BAILER	ES207	MEQ307	SILTY WATER
MW-3	12-4-87	0949	PUMP	EF405	MEQ340	PURGED DRY; SILTY
MW-4	12-2-87	1600	BAILER	ES223	MEQ323	PURGED DRY TWICE; VERY SILTY WATER; ODOR
MW-6-1	11-30-87	1456	PUMP	ES202	MEQ302	BLACK TINT - CLEAR
MW-6-2	11-30-87	1645	PUMP	ES203	MEQ303	CLEAR WATER
MW-6-3	12-1-87	1059	PUMP/BAILER	ES206	MEQ306	BLACK TINT - CLEAR
MW-7-3	12-3-87	1009	PUMP	EA055	MEQ329	ONLY ONE SCREEN SAMPLED; WATER CLEAR
MW-8	12-1-87	1350	PUMP/BAILER	ES209	MEQ309	CLEAR WATER
MW-9	12-2-87	1505	PUMP	ES222	MEQ322	SILTY BROWN WATER
MW-10S	12-1-87	1430	PUMP/BAILER	ES213	MEQ313	CLEAR WATER
MW-10D	12-1-87	1530	PUMP/BAILER	ES214	MEQ314	CLEAR WATER
MW-11	12-2-87	0940	PUMP	ES216	MEQ316	CLEAR WATER
MW-12	12-3-87	1126	PUMP	EA057	MEQ331	CLEAR WATER
MW-13	12-3-87	1200	BAILER	EA058	MEQ332	PURGED DRY
MW-14S	12-2-87	1630	BAILER	ES226	MEQ326	SILTY WATER
MW-14D	12-2-87	1450	BAILER	ES225	MEQ325	VERY SILTY WATER
MW-15S	12-1-87	0945	BAILER	ES205	MEQ305	GREY WATER; ODOR
MW-15D	12-1-87	1342	PUMP/BAILER	ES208	MEQ308	SILTY WATER
MW-16	11-30-87	1600	BAILER	ES204	MEQ304	---
MW-17S	12-3-87	1430	BAILER	EA060	MEQ334	BLACKISH WATER; SANDY AND FOAMY; ODOR
MW-17D	12-4-87	1457	PUMP	EF408	MEQ343	CLEAR WATER
MW-18	12-2-87	1250	PUMP	ES219	MEQ319	CLEAR WATER
MW-19	12-3-87	1200	PUMP	EA059	MEQ333	SILTY WATER
MW-20	12-3-87	1600	BAILER	EA062	MEQ336	SILTY BROWN WATER

TABLE TM9-1 (cont.)

SAMPLE DESIGNATION	DATE SAMPLED	TIME SAMPLED	SAMPLING EQUIPMENT	ORGANIC TRAFFIC REPORT	INORGANIC TRAFFIC REPORT	COMMENTS
MW-21	12-2-87	1412	PUMP	ES220	MEQ320	SLIGHTLY CLOUDY WATER
MW-23	12-1-87	1450	PUMP/BAILER	ES210	MEQ310	SLIGHTLY CLOUDY WATER
MW-24	12-1-87	1625	PUMP/BAILER	ES211	MEQ311	VERY SILTY WATER
MW-25	12-2-87	1340	PUMP	ES221	MEQ321	VERY SILTY BROWN WATER CLEARED UP TO CLOUDY
MW-26	12-3-87	0940	BAILER	EA054	MEQ328	---
MW-27R	12-7-87	1800	PUMP	EF412	MEQ347	EXTREMELY SILTY WATER
MW-28R	12-4-87	1239	PUMP	EF406	MEQ341	CLEAR WATER
MW-29R	12-4-87	1404	---	---	---	NOT SAMPLED; WELL TOO DEEP
MW-30R	12-7-87	1500	PUMP	EF411	MEQ346	CLEAR WATER
MW-31	12-2-87	1111	PUMP/BAILER	ES218	MEQ318	CLEAR WATER
MW-101	11-30-87	1315	PUMP	ES201	MEQ301	PUMP BLANK PRIOR TO SAMPLING
MW-102	12-1-87	1630	BAILER	ES212	MEQ312	BAILER BLANK AFTER MW-100
MW-103	12-2-87	1645	BAILER	ES227	MEQ327	BAILER BLANK AFTER MW-145
MW-104	12-3-87	1500	PUMP	EA063	MEQ337	PUMP BLANK AFTER MW-175
MW-201	12-1-87	1710	BAILER	ES215	MEQ315	BAILER BLANK AFTER MW-24
MW-202	12-2-87	1120	BAILER	ES217	MEQ317	BAILER BLANK AFTER MW-31
MW-203	12-2-87	1642	BAILER	ES224	MEQ324	BAILER BLANK AFTER MW-4
MW-204	12-3-87	1300	BAILER	EA064	MEQ338	BAILER BLANK AFTER MW-20
MW-205	12-4-87	1530	PUMP	EF410	MEQ345	PUMP BLANK AFTER MW-170
MW-206	12-7-87	1830	PUMP	EF413	MEQ348	PUMP BLANK AFTER MW-27R
MW-301	12-3-87	---	PUMP	EA056	MEQ330	DUPLICATE OF MW-7-3
MW-302	12-3-87	---	BAILER	EA061	MEQ335	DUPLICATE OF MW-175
MW-303	12-4-87	---	PUMP	EF407	MEQ342	DUPLICATE OF MW-28R
MW-304	12-4-87	---	PUMP	EF409	MEQ344	DUPLICATE OF MW-170

TABTH9-2.WK1
DH110

TABLE TH9-2 STATIC WATER LEVEL ELEVATIONS - DECEMBER, 1987
METAMORA LANDFILL SITE, METAMORA TOWNSHIP, MICHIGAN

WELL NO.	DEPTH TO WATER	TOP OF CASING	STATIC WATER LEVEL ELEVATION
MW-1	71.83	1076.48	1004.65
MW-3	66.40	1069.62	1003.22
MW-4	21.38	1101.65	1080.27
MW-6	63.85	1087.98	1004.13
MW-7	65.57	1089.36	1003.79
MW-8	94.98	1097.30	1002.32
MW-9	122.63	1131.13	1008.50
MW-10S	112.26	1120.13	1007.87
MW-10D	110.96	1118.79	1007.83
MW-11	107.18	1114.20	1007.02
MW-12	109.14	1114.24	1005.10
MW-13	132.42	1139.84	1007.42
MW-14S	147.00	1145.53	998.53
MW-14D	141.74	1147.61	1005.87
MW-15S	120.83	1125.83	1005.00
MW-15D	121.05	1126.95	1005.90
MW-16	100.25	1103.94	1003.69
MW-17S	64.98	1072.69	1007.11
MW-17D	67.55	1073.35	1005.80
MW-18	126.93	1136.15	1009.22
MW-19	143.36	1148.88	1005.52
MW-20	97.92	1103.02	1005.10
MW-21	118.67	1122.86	1004.19
MW-23	63.98	1064.75	1000.77
MW-24	86.81	1088.54	1001.73
MW-25	111.82	1113.92	1002.10
MW-26	147.68	1148.90	1001.22
MW-27R	155.19	1133.79	978.60
MW-28R	100.35	1075.82	975.47
MW-29R	139.54	1117.24	977.70
MW-30R	149.55	1126.26	976.71
MW-31	73.76	1072.13	998.37

Notes:

1. MW-6 and MW-7 have multiple screens.
2. All measurements are expressed in feet.

TABLE 9-3.WK1
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TABLE 9-3 INDICATOR PARAMETERS MEASURED DURING WELL EVACUATION-- DECEMBER, 1987
METAMORA LANDFILL SITE, METAMORA TOWNSHIP, MICHIGAN

WELL NO.	T(C)	COND	pH	T(C)	COND	pH	T(C)	COND	pH	T(C)	COND	pH
MW-1	6.8	560	7.9	6.4	560	7.9	---	---	---	---	---	---
MW-3	7.0	400	8.0	6.9	470	7.9	6.9	480	7.8	6.9	490	7.6
MW-4	---	---	---	---	---	---	---	2360	7.0	---	2310	6.9
MW-1	8.6	660	7.9	8.6	680	7.4	8.3	620	7.4	8.4	610	7.4
MW-2	8.4	600	7.74	8.3	590	7.6	8.2	590	7.6	8.2	590	7.6
MW-3	8.0	580	7.4	8.0	580	7.4	8.0	590	7.5	8.0	660	7.5
MW-3	6.2	520	8.2	7.7	570	8.2	5.9	590	8.1	5.8	590	8.1
MW-8	---	425	7.4	---	643	7.5	---	659	7.6	---	660	7.5
MW-9	---	350	7.3	---	678	7.2	---	657	7.2	---	598	7.2
MW-10S	8.1	620	7.7	8.1	580	7.8	8.4	550	7.9	8.3	550	7.9
MW-10D	8.2	580	7.6	8.2	570	7.7	8.0	570	7.7	8.0	570	7.7
MW-11	9.7	690	8.4	9.0	670	8.0	9.0	660	8.0	9.0	660	8.0
MW-12	6.9	390	9.7	6.9	390	9.1	6.8	420	8.3	6.8	420	8.2
MW-13	2.2	320	7.6	1.7	490	7.6	1.6	530	7.7	---	---	---
MW-14S	7.8	760	8.6	7.8	660	8.7	7.9	650	8.7	---	---	---
MW-14D	7.2	580	9.0	7.3	540	8.9	7.2	530	8.9	---	---	---
MW-15S	---	980	7.5	---	1278	7.4	---	1312	7.3	---	1298	7.3
MW-15D	---	928	7.3	---	974	7.4	---	---	---	---	---	---
MW-16	3.0	531	7.7	3.9	495	7.8	3.9	502	7.8	---	---	---
MW-17S	---	780	6.5	---	880	6.5	---	890	7.3	---	895	7.3
MW-17D	6.8	260	7.6	6.5	470	8.2	6.5	480	7.6	6.7	510	7.7
MW-18	7.5	730	8.8	8.0	680	9.1	8.0	630	9.0	8.0	630	9.0
MW-19	6.1	480	9.3	7.2	480	9.1	7.0	485	9.0	---	---	---
MW-20	6.0	480	7.0	8.0	500	7.9	7.9	520	8.0	7.0	530	8.3
MW-21	---	1055	7.0	---	1141	7.0	---	1150	7.1	---	1100	7.1
MW-23	---	110	7.6	---	671	7.4	---	683	7.4	---	692	7.4
MW-24	---	816	7.2	---	832	7.4	---	860	7.4	---	---	---
MW-25	---	1050	7.6	---	1078	7.5	---	1071	7.5	---	1098	7.5
MW-26	0.9	890	7.4	1.3	860	7.1	1.5	920	7.0	0.9	900	7.1
MW-27R	6.0	---	8.1	8.0	560	8.1	7.9	580	8.2	---	---	---
MW-28R	7.0	470	7.5	8.0	470	7.5	8.1	470	7.8	6.2	460	7.9
MW-29R	---	---	---	---	---	---	---	---	---	---	---	---
MW-30R	7.2	490	7.8	7.9	520	7.9	7.8	520	7.9	7.8	520	7.9
MW-31	---	632	7.6	---	681	7.5	---	625	7.4	---	672	7.4

1. T(C) - Temperature in degrees celsius
2. COND - Specific conductance in umhos/cm
3. pH is expressed in standard units
4. MW-29R was not sampled.

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-1DATE 2/1/87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 7.83☐ TOP WELL
☒ TOP CASINGWELL DEPTH 81WELL DIAM 2WELL MATERIAL CAI

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE _____ SAMPLE _____

NECK _____ NECK _____

QED _____ QED _____

SSBAIL ☒ SSBAIL ☒

OTHER _____ OTHER _____

PURGE TIME

START _____

END _____

SAMPLE TIME

START 1030END 1100WEATHER 5/00

85 FT. WATER X 63 (2"=.163gal/ft) X 3 CASING VOLUME = 4.5 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 2 GALTEMP 6.8 °CSP COND 560 @25°CPH 7.9

Eh _____

Q 4 GALTEMP 6.4 °CSP COND 560 @25°CPH 7.9

Eh _____

Q _____ GAL

TEMP _____ °C

SP COND _____ @25°C

PH _____

Eh _____

Q _____ GAL

TEMP _____ °C

SP COND _____ @25°C

PH _____

Eh _____

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

1+2	80ml	WATER	No	---	VOLATILES
3+4	2L	WATER	No	---	SEMI-VOLS
5	1L	WATER	YES	HANOR 2ml	METALS
6	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS See

SAMPLER

James R. Mayke

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MU2-3DATE 12/4/87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NOROLL NO/EXPOSURE NO 1

WELL DATA

WATER DEPTH 6.40 ☐ TOP WELL
☒ TOP CASINGWELL DEPTH 102
WELL DIAM 2"WELL MATERIAL Galv steel

WELL STICK-UP

WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
HECK ☒	HECK ☒
QED ☐	QED ☐
SSBAIL ☐	SSBAIL ☐
OTHER ☐	OTHER ☐

PURGE TIME

SAMPLE TIME

WEATHER ClearSTART 0932

START

END

END 0949

34 FT. WATER X 3 (2"=.163gal/ft)
3 (4"=.653gal/ft) X 3 CASING VOLUME = 17 GAL PURGED
 (6"=1.47gal/ft).

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION

HEADSPACE

SAMPLE PURGE DATA

Q 3 GALQ 8 GALQ 11 GALQ 17 GALTEMP 7.0 °CTEMP 6.9 °CTEMP 6.9 °CTEMP 6.9 °CSPEC COND 400 @25°CSPEC COND 470 @25°CSPEC COND 480 @25°CSPEC COND 490 @25°CPH 8.0PH 7.9PH 7.8PH 7.6

EN

EN

EN

EN

BOTTLE ID

VOL MATERIAL FILTERED PRES /VOL

ANALYSIS REQUESTED

7-8	80ml	WATER	No	✓	VOLATILES
9-10	2l	WATER	No	✓	SEMI-VOLS
11	1l	WATER	YES	HAZ 2ml	METALS
12	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Water Silty ; purged day - let recharge
 * (lost drop buzzer in well)

SAMPLER

DGA/CSK

EC JORDAN CO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-4DATE 12-2-87SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒ROLL NO/EXPOSURE NO WELL DATA 21-36WATER DEPTH 32☐ TCP WELL
☒ TOP CASINGWELL DEPTH 32WELL DIAM 2"WELL MATERIAL GALV.WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER SNOW

PURGE SAMPLE

KECK KECK QED QED SSBAIL X SSBAIL XOTHER OTHER START 1530END 1545START 1545END 1600

0 FT. WATER X .163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 5 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☒ IN BOTTLE

VCA LEVEL (PPM) AMBIENT

N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

Q GALQ GALQ 2.5 GALQ 20 GALTEMP 2 °CTEMP °CTEMP °CTEMP °CSP COND @25°CSP COND @25°CSP COND 2300 @25°CSP COND 2310 @25°CPH PH PH 7.0PH 6.9EN EN EN EN

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS
REQUESTED

13-14	80ml	WATER	No	—	VOLATILES
15-16	2L	WATER	No	—	SEMI-VOLS
17	1L	WATER	YES	HNO ₃ 2M	METALS
18	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Well surged dry twice, then sampled
 water was very silty and smelled like methane
 SAMPLER NEG/OGA

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MAL-6 - 1

(Bottom)

DATE 11/30/87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 83.85☐ TOP WELL

WELL DEPTH

149'

WELL MATERIAL

GALV.☒ TOP CASING

WELL DIAM

4"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER RAIN

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

START	END
<u>1456</u>	<u>1456</u>

START	END
<u>1456</u>	<u>1456</u>

30 FT. WATER X 653 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 60 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 10 GALQ 25 GALQ 40 GALQ 60 GALTEMP 8.6 °CTEMP 8.6 °CTEMP 8.3 °CTEMP 8.4 °CSP COND 360 @25°CSP COND 680 @25°CSP COND 620 @25°CSP COND 610 @25°CPH 7.9PH 7.4PH 7.4PH 7.4

EN _____

EN _____

EN _____

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL.

ANALYSIS REQUESTED

19420	80ml	WATER	No	==	VOLATILES
21422	2L	WATER	No	==	SEMI-VOLS
23	1L	WATER	YES	HAND 2ml	METALS
24	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Packed off @ 30' ; Black tint → clear

SAMPLER

NEG/CSK

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-62 DATE 11/30/87SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 83.85 ☐ TOP WELL WELL DEPTH 149' WELL MATERIAL GALV
☒ TOP CASING WELL DIAM 4"

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1509
END 1645

SAMPLE TIME

START _____
END _____WEATHER COLD
(RAIN)

50 FT. WATER X .63 (2"=.163gal/ft) X 3 CASING VOLUME = 100 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft) 140

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PPM) ABSENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

20 GAL	50 GAL	75 GAL	100 GAL
TEMP <u>8.4</u> °C	TEMP <u>8.3</u> °C	TEMP <u>8.2</u> °C	TEMP <u>8.2</u> °C
SP COND <u>600</u> @25°C	SP COND <u>590</u> @25°C	SP COND <u>590</u> @25°C	SP COND <u>590</u> @25°C
PH <u>7.74</u>	PH <u>7.6</u>	PH <u>7.6</u>	PH <u>7.6</u>
EN _____	EN _____	EN _____	EN _____

BOTTLE ID

VOL MATERIAL FILTERED PRES /VOL

ANALYSIS REQUESTED

25-26	80ml	WATER	No	—	VOLATILES
27-28	2L	WATER	No	—	SEMI-VOLS
29	1L	WATER	YES	HNO ₃ 2ml	METALS
30	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Reel off @ 50' ; Water Clear

SAMPLER

NEG/CSK

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-6-3DATE 12-1-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NOROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 83.85☐ TOP WELL
☒ TOP CASINGWELL DEPTH 149'WELL DIAM 4"WELL MATERIAL GALVWELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK <u> </u>
QED <u> </u>	QED <u> </u>
SSBAIL <u> </u>	SSBAIL ☒
OTHER <u> </u>	OTHER <u> </u>

PURGE TIME

SAMPLE TIME

WEATHER SNOWSTART 0847START END 1059END

06 FT. WATER X 653 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 132 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

Q 20 GALQ 65 GALQ 95 GALQ 130 GALTEMP 8.0 °CTEMP 3.0 °CTEMP 3.0 °CTEMP 8.0 °CSP COND 580 @25°CSP COND 5.1 @25°CSP COND 590 @25°CSP COND 600 @25°CPH 7.4PH 7.4PH 7.5PH 7.5Eh Eh Eh Eh BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

31-32	80ml	WATER	No	~~YES~~	VOLATILES
33-34	2L	WATER	No	~~YES~~	SEMI-VOLS
35	1L	WATER	YES	~~NO~~	METALS
36	1L	WATER	No	~~YES~~	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Black tint - Clear

SAMPLED

JHB/CSK

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-7-3 (TOP) DATE 12/3/07SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO. _____

WELL DATA

WATER DEPTH 114.55 ^{JEM} ☐ TOP WELL WELL DEPTH 85.57 ^{JEM} WELL MATERIAL GALV. ST.
☒ TOP CASING WELL DIAM 1"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE
KECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____

PURGE TIME

START 0945

END _____

SAMPLE TIME

START _____

END 1009

WEATHER

SA/2412
12 FT. WATER X 63 (2"=.163gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 24 GAL PURGED
(6"=1.4gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PFM) AMBIENT N/A
SAMPLE LOCATION _____

SAMPLE PURGE DATA

QAL	TEMP	SP COND	PH	EH
<u>4</u> GAL	<u>6.2</u> °C	<u>520</u> @25°C	<u>8.2</u>	
<u>12</u> GAL	<u>7.7</u> °C	<u>570</u> @25°C	<u>8.2</u>	
<u>16</u> GAL	<u>5.9</u> °C	<u>590</u> @25°C	<u>8.1</u>	
<u>24</u> GAL	<u>5.8</u> °C	<u>570</u> @25°C	<u>8.1</u>	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

49-50	80ml	WATER	No	-	VOLATILES
51-52	2l	WATER	No	-	SEMI-VOLS
53	1l	WATER	YES	HNO3 2ml	METALS
54	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Packed off @ 12' (Screen at 107-109) water clay
* LOG DEPTH SAYS 150' ?
We get 114' (went with it) - 50 only one screen can be sampled.
SAMPLER DAG/CSK

EC JORDAN CO.

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-0DATE 2-1-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NOROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 94.98☐ TOP WELLWELL DEPTH 100WELL MATERIAL GALV☒ TOP CASINGWELL DIAM 2"WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE SAMPLE KECK X KECK QED QED SSBAIL SSBAIL XOTHER OTHER

PURGE TIME

SAMPLE TIME

START 1312START 1335END 1335END 1350WEATHER SNOW 40°

45 FT. WATER X .163 (2"=.163gal/ft) X 3 CASING VOLUME = 23 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

Q 1 GALQ 6 GALQ 5 GALQ 23 GALTEMP °CTEMP °CTEMP °CTEMP °CSP COND 225 @25°CSP COND 243 @25°CSP COND 259 @25°CSP COND 660 @25°CPH 7.4PH 7.5PH 7.4PH 7.5Eh Eh Eh Eh

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

55, 56	80ml	WATER	No	—	VOLATILES
57, 58	2l	WATER	No	—	SEMI-VOLS
59	1l	WATER	YES	HNO3 2ml	METALS
60	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS WATER CLEAR

SAMPLER

James P. Mayhew

EC JORDAN CO.

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION-NO/LOCATION

MW-9DATE 12-2-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NOROLL NO/EXPOSURE NO.

WELL DATA

WATER DEPTH 122.5 ☐ TOP WELL ☒ TOP CASINGWELL DEPTH 133.5
WELL D.I.A. 2"WELL MATERIAL GALV.WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
KECK <u> </u>	KECK <u>X</u>
QED <u> </u>	QED <u> </u>
SSBAIL <u> </u>	SSBAIL <u> </u>
OTHER <u> </u>	OTHER <u> </u>

PURGE TIME

SAMPLE TIME

WEATHER SNOWSTART 1448START 500END 1500END 505

11 FT. WATER X 163 (2"=.163gal/ft) X 3 CASING VOLUME = 6 GAL PURGED
 (4"=.653gal/ft) X
 (6"=1.47gal/ft)

FIELD DATA

TEMP PROBE BROKE

FIELD DATA COLLECTION

☒ IN SITUVCA LEVEL (FFM) AMBIENT V/A☐ IN BOTTLESAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

① 0 GAL② 2 GAL③ 4 GAL④ 6 GALTEMP °CTEMP °CTEMP °CTEMP °CSPCOND 350 @25°CSPCOND 178 @25°CSPCOND 65 @25°CSPCOND 598 @25°CPH 7.3PH 7.2PH 7.2PH 7.2EN EN EN EN

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES/VOL

ANALYSIS REQUESTED

01 + 62	82ml	WATER	No	~~—~~	VOLATILES
3 + 64	2l	WATER	No	~~—~~	SEMI-VOLS
65	1l	WATER	YES	HNO3 2ml	METALS
66	1l	WATER	No	2ml	CYANIDE (CN ⁻)
				~~—~~	
				~~—~~	
				~~—~~	
				~~—~~	

REMARKS/OBSERVATIONS

Water is try (brown) cleared upSAMPLED NP/1/DAK

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4445-94STATION NO/LOCATION 110-105DATE 12/1/87SKETCH ☒ BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 1226☐ TOP WELL☐ TOP CASINGWELL DEPTH 123*WELL DIAM 2"WELL MATERIAL GALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE _____ SAMPLE _____

NECK ☒ NECKCED ☒ CEDSSBAIL ☒ SSBAIL

OTHER _____ OTHER _____

PURGE TIME

START 1405

END _____

SAMPLE TIME

START _____

END 430 pWEATHER Snow

PT. WATER X 63 (2"=1.63gal/ft) X 3 CASING VOLUME = 6 GAL PURGED
 (4"=.653gal/ft)
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

R 2 GALC 4 GALC 6 GALC - GALTEMP 8.1 °CTEMP 8.1 °CTEMP 8.4 °CTEMP 8.3 °CSPCOND 22 @25°CSPCOND 280 @25°CSPCOND 550 @25°CSPCOND 550 @25°CPH 7.7PH 7.8PH 7.9PH 7.9

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE NO

VOL

MATERIAL

FILTERED

PRES/VOL

ANALYSIS REQUESTED

6-168	80ml	WATER	No	/	VOLATILES
12-20	2l	WATER	No	/	SEMI-VOLS
7'	1l	WATER	YES	HNO ₃ 2ml	METALS
2	1l	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS Clear

SAMPLER

James R. May

EC JORDAN CO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-10DDATE 12-1-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NOROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 0.36☐ TOP WELL
☒ TOP CASINGWELL DEPTH 175'WELL DIAM 2"

WELL MATERIAL

GALV

WELL STICK-UP

WELL/CASING

EQUIPMENT USED

PURGE ☒ KECK ☒ QED ☐ SS BAIL ☐ OTHERSAMPLE ☐ KECK ☐ QED ☒ SS BAIL ☐ OTHER

PURGE TIME

START 1444

END

SAMPLE TIME

START 1514END 1530

WEATHER

50-60

65 FT. WATER X 163 (2"=.163gal/ft) X 3 CASING VOLUME = 33 GAL PURGED
(4"=.653gal/ft)
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ W BOTTLE

VCA LEVEL (PPM) ABSENT

N/A

SAMPLE LOCATION

HEADSPACE

SAMPLE PURGE DATA

BOTTLE NO 3-74TEMP 8.2 °CSP COND 570 @ 25°CPH 7.7

EN

BOTTLE NO 3-76TEMP 8.2 °CSP COND 570 @ 25°CPH 7.7

EN

BOTTLE NO 77TEMP 8.2 °CSP COND 570 @ 25°CPH 7.7

EN

BOTTLE NO 78TEMP 8.2 °CSP COND 570 @ 25°CPH 7.7

EN

BOTTLE NO

VOL

MATERIAL

FILTERED

PRES/VOL

ANALYSIS REQUESTED

3-74	80ml	WATER	No	/	VOLATILES
3-76	2l	WATER	No	/	SEMI-VOLS
77	1l	WATER	YES	HNO ₃ 2ml	METALS
78	1l	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS See

STUDIED

James R. Martin

ECUORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION 1MW-11DATE 12/2/07SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 107.18☐ TOP WELLWELL DEPTH 39 ±WELL MATERIAL GAL☒ TOP CASINGWELL DIA 2"

WELL STOCK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER SNOW

PURGE	SAMPLE
HECK	HECK
GED	GED
SSBAIL	SSBAIL
OTHER	OTHER

 START 0850
 END 0906

 START 0906
 END 0940

32 ft WATER X 163 (2"=1.63gal/ft) X 3 CASING VOLUME = 16 GAL PURGED
 (4"=1.653gal/ft)
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ WIS TOVCA LEVEL (PPM) AMBIENT N/A☐ NEEDLE

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

ID 5 GAL@ 8 GAL@ 12 GAL@ 16 GALTEMP 9.7 °CTEMP 9.0 °CTEMP 9.0 °CTEMP 9.0 °CSPCOND 690 @25°CSPCOND 170 @25°CSPCOND 660 @25°CSPCOND 660 @25°CPH 8.4PH 8.0PH 8.0PH 8.0

EN _____

EN _____

EN _____

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

79+80	80ml	WATER	No	~~7-1~~	VOLATILES
81+82	2L	WATER	No	~~7-1~~	SEMI-VOLS
83	1L	WATER	YES	HNO3 2ml	METALS
84	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Clear

STUDIED

James R. Martin

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION GW-12 DATE 2/3/87SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 109.14 ☐ TOP WELL WELL DEPTH 127 WELL MATERIAL ALU
☐ TOP CASING WELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER Row

PURGE	SAMPLE
NECK ☒	NECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

START 1116
END _____START _____
END 1126

20 FT. WATER X 1.63 (2" = 1.63 gal/ft) X 3 CASING VOLUME = 10 GAL PURGED
 (4" = 6.53 gal/ft) X
 (6" = 1.47 gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITUVCA LEVEL (PPM) AMBIENT N/A☐ IN BOTTLE

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q	TEMP	SP COND	PH	Q	TEMP	SP COND	PH	Q	TEMP	SP COND	PH	Q	TEMP	SP COND	PH
<u>2</u> GAL	<u>6.9</u> °C	<u>390</u> @ 25°C	<u>9.1</u>	<u>6</u> GAL	<u>6.9</u> °C	<u>390</u> @ 25°C	<u>9.1</u>	<u>8</u> GAL	<u>6.8</u> °C	<u>420</u> @ 25°C	<u>8.8</u>	<u>10</u> GAL	<u>6.8</u> °C	<u>420</u> @ 25°C	<u>8.2</u>
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

85-86	80ml	WATER	No	—	VOLATILES
87-88	2L	WATER	No	—	SEMI-VOLS
89	1L	WATER	YES	HNO3 2ml	METALS
90	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Water Clear

SAMPLER

DAG/CSK

ECJORDANCO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION NW-13 DATE 12-3-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 132.42 ☐ TOP WELL WELL DEPTH 163 WELL MATERIAL GALV.
☒ TOP CASING WELL DIAM 2"WELL STICK-UP WELL/CASING
EQUIPMENT USED
PURGE SAMPLE PURGE TIME SAMPLE TIME WEATHER SNOW
NECK NECK START 1100 START 1155
QED QED END 1150 END 1200
SSBAIL ☒ SSBAIL ☒
OTHER OTHER(2" = .163 gal/ft)
31 FT. WATER X .163 (4" = .653 gal/ft) X 3 CASING VOLUME = 16 GAL PURGED
(6" = 1.47 gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☒ IN BOTTLE VCA LEVEL (FFM) AMBIENT N/A
SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
TEMP <u>2.2</u>	°C	TEMP <u>5.1</u>	°C	TEMP <u>1.6</u>	°C	TEMP <u> </u>	°C
SPEC COND <u>320</u>	@25°C	SPEC COND <u>490</u>	@25°C	SPEC COND <u>530</u>	@25°C	SPEC COND <u> </u>	@25°C
pH <u>7.6</u>		pH <u>7.6</u>		pH <u>7.7</u>		pH <u> </u>	
EN <u> </u>		EN <u> </u>		EN <u> </u>		EN <u> </u>	

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL.

ANALYSIS REQUESTED

91-92	80ml	WATER	No	/	VOLATILES
93-94	2L	WATER	No	/	SEMI-VOLS
95	1L	WATER	YES	HNO3 2ml	METALS
96	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS PURGE ONLY @ 10 gpm.

James R. Mayhew

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT MEMMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-145 DATE 12/2/87SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 47 ☐ TOP WELL WELL DEPTH 139.86 WELL MATERIAL GALV
☒ TOP CASING WELL DIAM 2"

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE
KECK _____ KECK _____
QED _____ QED _____
SSBAIL ✓ SSBAIL ✓
OTHER _____ OTHER _____PURGE TIME SAMPLE TIME
START 1530 START _____
END 1605 END 1630WEATHER SNOW7.5 FT. WATER X .163 (2"=.163gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 4.5 GAL PURGED
(6"=1.47gal/ft).

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
TEMP <u>7.8</u> °C		TEMP <u>7.8</u> °C		TEMP <u>7.9</u> °C		TEMP _____ °C	
SPEED <u>700</u> @25°C		SPEED <u>660</u> @25°C		SPEED <u>650</u> @25°C		SPEED _____ @25°C	
PH <u>8.6</u>		PH <u>8.7</u>		PH <u>8.7</u>		PH _____	
EN _____		EN _____		EN _____		EN _____	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

97-98	80ml	WATER	No	✓	VOLATILES
99-100	2l	WATER	No	✓	SEMI-VOLS
101	1l	WATER	YES	HAZ 2ml	METALS
102	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Solar Silt14B 15K

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-11D DATE 12/2/87SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____WELL DATA (4) 7.4 158
WATER DEPTH 158 ☐ TOP WELL WELL DEPTH 158 WELL MATERIAL GALV
☒ TOP CASING WELL DIAM 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED
PURGE SAMPLE
KECK _____ KECK _____
QED _____ QED _____
SSBAIL ☒ SSBAIL ☒
OTHER _____ OTHER _____
PURGE TIME SAMPLE TIME
START 1357 START 1430
END _____ END 1450
WEATHER SNOW17 FT. WATER X 163 (2"=.163gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 8 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PPM) AMBIENT NA
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

PURGE	SAMPLE	PURGE	SAMPLE	PURGE	SAMPLE	PURGE	SAMPLE
2	GAL	4	GAL	8	GAL	1	GAL
TEMP 7.2 °C		TEMP 7.3 °C		TEMP 7.2 °C		TEMP _____ °C	
SP COND 580 @25°C		SP COND 540 @25°C		SP COND 530 @25°C		SP COND _____ @25°C	
PH 9.0		PH 8.9		PH 8.9		PH _____	
En _____		En _____		En _____		En _____	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

103+104	80ml	WATER	No	/	VOLATILES
105+106	2L	WATER	No	/	SEMI-VOLS
107	1L	WATER	YES	HAZ 2ml	METALS
108	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

Very Silty

SAMPLED

PSK UHB

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT MEMPHORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-15sDATE 12-1-87SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 120.25☐ TOP WELL
☒ TOP CASINGWELL DEPTH 120
WELL DIAM 2"WELL MATERIAL GALV. STEEL

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER SNOW - 32°

PURGE	SAMPLE
KECK _____	KECK _____
QED _____	QED _____
SSBAIL ☒	SSBAIL ☒
OTHER _____	OTHER _____

 START 0855
 END 0945

 START 0950
 END 1045

6 FT. WATER X .163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 3 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

 FIELD DATA COLLECTION ☒ IN SITU
☐ IN BOTTLE
VCA LEVEL (RPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL

② 3 GAL③ 5 GAL④ 6 GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND 907 @ 25°CSP COND 1218 @ 25°CSP COND 1312 @ 25°CSP COND 1298 @ 25°CPH 7.5PH 7.4PH 7.3PH 7.3

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES /VOL.

ANALYSIS
REQUESTED

<u>110</u>	<u>80ml</u>	<u>WATER</u>	<u>No</u>	<u>---</u>	<u>VOLATILES</u>
<u>111, 112</u>	<u>2L</u>	<u>WATER</u>	<u>No</u>	<u>---</u>	<u>SEMI-VOLS</u>
<u>113</u>	<u>1L</u>	<u>WATER</u>	<u>YES</u>	<u>HNO3 2M</u>	<u>METALS</u>
<u>114</u>	<u>1L</u>	<u>WATER</u>	<u>No</u>	<u>---</u>	<u>CYANIDE (CN⁻)</u>

REMARKS/OBSERVATIONS Water Gray in Color, w/odor. Temp 32°F. Not drinking
 James R. Mayhew
 ANALYST

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-15D DATE 12-1-87
4-30-87SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____WELL DATA 121-05
WATER DEPTH 121-05 ☐ TOP WELL WELL DEPTH 34.5 WELL MATERIAL 2ALV. STEEL
121-05 ☒ TOP CASING WELL DIAM 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED
PURGE SAMPLE
KECK ☒ KECK _____
QED _____ QED _____
SSBAIL _____ SSBAIL ☒
OTHER _____ OTHER _____
PURGE TIME SAMPLE TIME
START 1330 START _____
END 1342 END _____
WEATHER RAIN, 45°(2"=.163gal/ft)
2 FT. WATER X 103 (4"=.653gal/ft) X 3 CASING VOLUME = 10 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VOA LEVEL (PPM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
~~102-110~~	80ml	WATER	No	/	VOLATILES
~~112-111~~	2L	WATER	No	/	SEMI-VOLS
113	1L	WATER	YES	HNO ₃ 3ml	METALS
114	1L	WATER	No	3ml	CYANIDE (CN ⁻)

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
~~102-110~~	80ml	WATER	No	/	VOLATILES
~~112-111~~	2L	WATER	No	/	SEMI-VOLS
113	1L	WATER	YES	HNO ₃ 3ml	METALS
114	1L	WATER	No	3ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS TEMP PROBE NOT WORKING, WATER SILTYSAMPLER James R. May

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-16DATE 11-30-87SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 100.25☐ TOP WELLWELL DEPTH 113WELL MATERIAL GALV. STEEL☒ TOP CASINGWELL DIAM 2

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER RAIN, 45°

PURGE SAMPLE

KECK ☒

KECK _____

QED _____

QED _____

SSBAIL ☒SSBAIL ☒

OTHER _____

OTHER _____

START 15:00

START _____

END 1600END 1600

(2"=.163gal/ft)
13 FT. WATER X 163 (4"=.653gal/ft) X 3 CASING VOLUME = 6.4 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT 10/1.5

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 1 GALQ 3 GALQ 1 GAL

Q _____ GAL

TEMP 3.0 °CTEMP 3.9 °CTEMP 3.9 °C

TEMP _____ °C

SP COND 531 @25°CSP COND 795 @25°CSP COND 502 @25°C

SP COND _____ @25°C

PH 7.2PH 7.8PH 7.8

PH _____

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

115-116	80ml	WATER	No	✓	VOLATILES
117-118	2L	WATER	No	✓	SEMI-VOLS
119	1L	WATER	YES	HAZ 2ml	METALS
120	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS SMP. PROBEMAN NOT BE
WORKING

SAMPLER

James R. Mays

ECJORDANCO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-17DATE 12-3-87SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 64.98☐ TOP WELL
☒ TOP CASINGWELL DEPTH 72'
WELL DIAM 2"WELL MATERIAL GALV.WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
KECK <u> </u>	KECK <u> </u>
QED <u> </u>	QED <u> </u>
SSBAIL <u>X</u>	SSBAIL <u>X</u>
OTHER <u> </u>	OTHER <u> </u>

PURGE TIME

START 1400END 1420

SAMPLE TIME

START 1420END 1430WEATHER SNOW

8 FT. WATER X .163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 4 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☒ IN BOTTLE
VCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

② GALTEMP °CSP COND 780 @25°CPH 6.5Eh ② GALTEMP °CSP COND 870 @25°CPH 6.5Eh ② GALTEMP °CSP COND 890 @25°CPH 7.3Eh ② GALTEMP °CSP COND 895 @25°CPH 7.3Eh BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

LABELS NOT USED	80ml	WATER	No	<del> </del>	VOLATILES
	2L	WATER	No	<del> </del>	SEMI-VOLS
	1L	WATER	YES	HNO3 2ml	METALS
	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Water was blackish, sandy, and foamy
 smelled like organic chemicals

SAMPLER NEG/JHB

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-17DDATE 12/4/87SKETCH ON BACK ☐ ^{YES} ☒ ^{NO}PHOTOGRAPHS ☐ ^{YES} ☒ ^{NO}

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH

67.55☐ TOP WELL
☒ TOP CASING

WELL DEPTH

120'

WELL DIAM

6"

WELL MATERIAL

Galv

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE

KECK ☒KECK ☒

QED _____

QED _____

SSBAIL _____

SSBAIL _____

OTHER _____

OTHER _____

PURGE TIME

SAMPLE TIME

START 1407

START _____

END 1430END 1457

WEATHER

P. Cloudy

54 FT. WATER X 163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 27 CASING VOLUME = 27 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT

N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

② 3 GAL② 10 GAL② 20 GAL② 27 GALTEMP 6.8 °CTEMP 6.5 °CTEMP 6.5 °CTEMP 6.7 °CSP COND 260 @25°CSP COND 410 @25°CSP COND 480 @25°CSP COND 510 @25°CPH 7.6PH 8.2PH 7.6PH 7.7

En _____

En _____

En _____

En _____

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES./VOL.

ANALYSIS REQUESTED

27-128	80ml	WATER	No	/	VOLATILES
129-130	2L	WATER	No	/	SEMI-VOLS
131	1L	WATER	YES	HAZ. 3M	METALS
132	1L	WATER	No	2M	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

Purge log after testWater Clear

SAMPLER

James R. Mayhew

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MJ-18 DATE 12/2/87SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO. _____

WELL DATA

WATER DEPTH 126.93 ☐ TOP WELL WELL DEPTH 139 WELL MATERIAL GALV
☒ TOP CASING WELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE
KECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____PURGE TIME
START 1240 SAMPLE TIME
START 1250
END 1250 END 1250WEATHER P. Cloudy13 FT. WATER X 163 (2"=.163gal/ft) X 3 CASING VOLUME = 7 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VOA LEVEL (PPM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
2		4		8		10	
TEMP 7.5	°C	TEMP 8.0	°C	TEMP 8.6	°C	TEMP 8.0	°C
SP COND 730	@25°C	SP COND 680	@25°C	SP COND 630	@25°C	SP COND 630	@25°C
pH 8.5		pH 9.1		pH 9.0		pH 9.0	
En _____		En _____		En _____		En _____	

BOTTLE ID

VOL

MATERIAL

FILTERED PRES VOL

ANALYSIS REQUESTED

133-4	80ml	WATER	No	✓	VOLATILES
135-6	2l	WATER	No	✓	SEMI-VOLS
137	1l	WATER	YES	HAZ 5ml	METALS
138	1l	WATER	No	✓	CYANIDE (CN ⁻)
				✓	
				✓	
				✓	
				✓	

REMARKS/OBSERVATIONS ClearSAMPLER HB/CSK

EC JORDAN CO.

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-19 DATE 12/3/87SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 43.36 ☐ TOP WELL WELL DEPTH 152 WELL MATERIAL GALV
☐ TOP CASING WELL DIAM 21

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1154
END _____

SAMPLE TIME

START _____
END 1200

WEATHER

Now

10 FT. WATER X .163 (2"=.163gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 5 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

QAL	QAL	QAL	QAL
TEMP <u>6.1</u> °C	TEMP <u>7.2</u> °C	TEMP <u>7.0</u> °C	TEMP _____ °C
SP COND <u>480</u> @25°C	SP COND <u>480</u> @25°C	SP COND <u>485</u> @25°C	SP COND _____ @25°C
PH <u>9.3</u>	PH <u>9.1</u>	PH <u>9.0</u>	PH _____
En _____	En _____	En _____	En _____

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

139-140	80ml	WATER	No	☒	VOLATILES
141-142	2L	WATER	No	☒	SEMI-VOLS
143	1L	WATER	YES	☒	METALS
144	1L	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS

Water ~~Below~~ Sely (Bentonite)

SAMPLER

DAG (SL)

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-20 DATE 12-3-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 97.92 ☐ TOP WELL WELL DEPTH 105 WELL MATERIAL Galv
☒ TOP CASING WELL DIAM 2"WELL STOCK-UP WELL/CASING
EQUIPMENT USED
PURGE SAMPLE
PUMP PUMP
PUMP PUMP
SSBAIL ☒ SSBAIL ☒
OTHER OTHER
PURGE TIME SAMPLE TIME
START 1500 START 1545
END 1530 END 1600
WEATHER SNOW(2"=1.63gal/ft)
7 FT. WATER X .163 (4"=1.653gal/ft) X 3 CASING VOLUME = 4 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☒ IN BOTTLE SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

Q	Q	Q	Q
TEMP <u>6.0</u> °C	TEMP <u>8.0</u> °C	TEMP <u>7.9</u> °C	TEMP <u>7.0</u> °C
SPEED <u>470</u> @25°C	SPEED <u>500</u> @25°C	SPEED <u>520</u> @25°C	SPEED <u>530</u> @25°C
pH <u>7.0</u>	pH <u>7.9</u>	pH <u>8.0</u>	pH <u>8.3</u>
EN <u> </u>	EN <u> </u>	EN <u> </u>	EN <u> </u>

BOTTLE NO

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

~~80ml~~ LABELS NOT USED	80ml	WATER	No	<del> </del>	VOLATILES
	2l	WATER	No	<del> </del>	SEMI-VOLS
	1l	WATER	YES	HAZ 2ml	METALS
	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Water was very silty (brown)SAMPLER NEG - JHB

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-21DATE 12-2-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NOROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 118.67☐ TOP WELLWELL DEPTH 30WELL MATERIAL GALV☒ TOP CASINGWELL DIA 2"WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE SAMPLE KECK ☒ KECK ☒QED QED SSBAIL SSBAIL OTHER OTHER

PURGE TIME

SAMPLE TIME

WEATHER SnowSTART 1403START 1410END 1410END 1412

(2" = 1.63gal/ft)
12 FT. WATER @ .163 (4" = .653gal/ft) X 3 CASING VOLUME = 6 GAL PURGED
(6" = 1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION "HEADSPACE "

SAMPLE PURGE DATA

① GAL② GAL③ GAL④ GALTEMP °CTEMP °CTEMP °CTEMP °CSPEED 1055 @ 25°CSPEED 1141 @ 25°CSPEED 1150 @ 25°CSPEED 1100 @ 25°CPH 7.0PH 7.0PH 7.1PH 7.1E+ E+ E+ E+

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

151 + 152	80ml	WATER	No	—	VOLATILES
153 + 154	2L	WATER	No	—	SEMI-VOLS
155	1L	WATER	YES	HANOS 2ml	METALS
156	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Water slightly cloudy

SAMPLER

NEG/DGA

ECJORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-23DATE 2-1-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 9.8☐ TOP WELL
☒ TOP CASINGWELL DEPTH 25
WELL DIA 2"WELL MATERIAL G.S.

WELL STOCK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER SNOWPURGE
CHECK ☒ CHECK
LED ☒ LED
SSBAIL ☒ SSBAIL
THER ☒ THERSTART 1440
END 1450START 1445
END 1450

(2"=1.63gal/ft) X 3
(4"=6.53gal/ft) X 3 CASING VOLUME = 8 GAL PURGED
(5"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLEVGA LEVEL (PPM) ABSENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

QD 0 GALQD 2 GALQD 6 GALQD 8 GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SPEC COND _____ @ 25°C

SPEC COND 61 @ 25°CSPEC COND 93 @ 25°CSPEC COND 692 @ 25°CPH 7.4PH 7.4PH 7.4PH 7.4

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE NO

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

57-158	80ml	WATER	No	—	VOLATILES
159-160	2L	WATER	No	—	SEMI-VOLS
161-	1L	WATER	YES	HNO ₃ 2ml	METALS
162	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS _____

SAMPLER

James R. Mayhew

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW 1DATE 12-18-85SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 86.81☐ TOP WELL
☒ TOP CASINGWELL DEPTH 117WELL DIAM 21"WELL MATERIAL 6.5

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK _____
QED _____	QED _____
SSBAIL _____	SSBAIL ☒
OTHER _____	OTHER _____

PURGE TIME

START 1550END 1620

SAMPLE TIME

START 1620END 1625WEATHER Cloudy

30 FT. WATER X .163 (2"=.163gal/ft) X 3 CASING VOLUME = 15 GAL PURGED
 (4"=.653gal/ft) X
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① 0 GAL

TEMP _____ °C

SP COND 84 @ 25°CPH 7.2

EN _____

② 5 GAL

TEMP _____ °C

SP COND 832 @ 25°CPH 7.4

EN _____

③ 10 GAL

TEMP _____ °C

SP COND 860 @ 25°CPH 7.4

EN _____

④ 15 GAL

TEMP _____ °C

SP COND _____ @ 25°C

PH _____

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

1163-1164	80ml	WATER	No	—	VOLATILES
1165-1166	2L	WATER	No	—	SEMI-VOLS
1167	1L	WATER	YES	HAZ 2M	METALS
1168	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

WATER VERY SILTY

SAMPLER

James R. Murphy

EC JORDAN CO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-25 DATE 12-2-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 82 ☐ TOP WELL WELL DEPTH 135' WELL MATERIAL GALV.
☒ TOP CASING WELL DIAM 2"WELL STICK-UP WELL/CASING 2"EQUIPMENT USED
PURGE SAMPLE
NECK X NECK X
QED QED
SSBAIL SSBAIL X
OTHER OTHERPURGE TIME SAMPLE TIME
START 1325 START 1338
END 1337 END 1340WEATHER SNOW(2"=.163gal/ft)
24 FT. WATER X .163 (4"=.553gal/ft) X 3 CASING VOLUME = 12 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

TEMP PROBE BROKEN

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☒ IN BOTTLE SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

BOTTLE NO	VOL	MATERIAL	FILTERED	PRES./VOL	ANALYSIS REQUESTED
169 + 170	80ml	WATER	No	—	VOLATILES
171 + 172	2l	WATER	No	—	SEMI-VOLS
173	1l	WATER	YES	HNO3 2ml	METALS
174	1l	WATER	No	2ml	CYANIDE (CN ⁻)

BOTTLE NO VOL MATERIAL FILTERED PRES./VOL ANALYSIS REQUESTED

169 + 170	80ml	WATER	No	—	VOLATILES
171 + 172	2l	WATER	No	—	SEMI-VOLS
173	1l	WATER	YES	HNO3 2ml	METALS
174	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Water very silty (brown) caused up to cloudySAMPLER PGA/NEG

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MU-26 DATE 7-3-87SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 147.68 ☐ TOP WELL WELL DEPTH 158' WELL MATERIAL SALV.
☒ TOP CASING WELL DIAM 2"WELL STICK-UP WELL/CASING
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER Snow
PURGE SAMPLE START 0857 START 0925
KECK KECK END 0920 END 0940
QED QED
SSBAIL X SSBAIL X
OTHER OTHER (2"=1.63gal/ft) *
16 FT. WATER X 1.63 (4"=1.653gal/ft) X 3 CASING VOLUME = 5 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☒ IN BOTTLE SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
<u>0</u>		<u>1</u>		<u>3</u>		<u>5</u>	
TEMP <u>2.9</u> °C		TEMP <u>1.3</u> °C		TEMP <u>1.5</u> °C		TEMP <u>2.7</u> °C	
SPEC COND <u>890</u> @25°C		SPEC COND <u>880</u> @25°C		SPEC COND <u>720</u> @25°C		SPEC COND <u>900</u> @25°C	
PH <u>7.4</u>		PH <u>7.1</u>		PH <u>7.0</u>		PH <u>7.1</u>	
ED <u> </u>		ED <u> </u>		ED <u> </u>		ED <u> </u>	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

175-176	80ml	WATER	No	~~NO~~	VOLATILES
177-178	2L	WATER	No	~~NO~~	SEMI-VOLS
179	1L	WATER	YES	~~NO~~	METALS
180	1L	WATER	No	~~NO~~	CYANIDE (CN ⁻)
				~~NO~~	
				~~NO~~	
				~~NO~~	
				~~NO~~	

REMARKS/OBSERVATIONS WATER EXTREMELY SILTYSAMPLER NEG/JRM

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-27BDATE 12-8-87SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO. _____

WELL DATA

WATER DEPTH 55.19☐ TOP WELL
☒ TOP CASINGWELL DEPTH 412WELL DIAM 2"WELL MATERIAL GALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

SAMPLE TIME

WEATHER 30° CloudySTART 1520START 1755END 1750END 1800

57 FT. WATER X 163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 126 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) ABSENT J/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GALQ 75 GALQ 100 GALQ 125 GALTEMP 8 °CTEMP 8.0 °CTEMP 7.9 °C

TEMP _____ °C

SP COND _____ @25°C

SP COND 580 @25°CSP COND 580 @25°C

SP COND _____ @25°C

PH 8.1PH 8.1PH 8.2

PH _____

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

141-182	80ml	WATER	No	~~—~~	VOLATILES
183-184	2L	WATER	No	~~—~~	SEMI-VOLS
145	1L	WATER	YES	HNO ₃ 2ml	METALS
186	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS later 1 hour 2nd. Pumps Not Working

SAMPLER

James R. Mayhew

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MWS-28R

DATE

12/4/87SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH

00.35☐ TOP WELL☒ TOP CASING

WELL DEPTH

318

WELL DIAM

2"

WELL MATERIAL

3" PVC

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

SAMPLE TIME

START 1045

START _____

END _____

END 1239

WEATHER

P. Cloudy
Bitter

~~180~~ FT. WATER X 63 (2"=.163gal/ft)
~~218~~ (4"=.653gal/ft) X 3 CASING VOLUME = ~~80~~ GAL PURGED
 (6"=1.47gal/ft) 114

FIELD DATA

FIELD DATA COLLECTION

☐ IN SITU☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT _____

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

@ 30 GALTEMP 7.0 °CSP COND 470 @25°CPH 7.5

Eh _____

@ 75 GALTEMP 8.0 °CSP COND 470 @25°CPH 7.5

Eh _____

@ 100 GALTEMP 8.1 °CSP COND 470 @25°CPH 7.8

Eh _____

@ 114 GALTEMP 8.2 °CSP COND 460 @25°CPH 7.9

Eh _____

BOTTLE ID

VOL MATERIAL FILTERED PRES /VOL

ANALYSIS REQUESTED

87-188	80ml	WATER	No	7-	VOLATILES
189-190	2L	WATER	No	7-	SEMI-VOLS
91	1L	WATER	YES	HNO3 2ml	METALS
192	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Packed off @ 160 (compressor)
160 (compressor)

SAMPLER

DGA/CSK

ECJORDANCO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-29 RDATE 2/4/87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NOROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 139.54 ☐ TOP WELL
☐ TOP CASINGWELL DEPTH 288.
WELL DIAM 2"WELL MATERIAL GALV.WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED ☐	QED ☐
SSBAIL ☐	SSBAIL ☐
OTHER ☐	OTHER ☐

PURGE TIME

SAMPLE TIME

WEATHER PartlySTART 4:04START END END

150 FT. WATER X 163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 15 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU
☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT SAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

① GAL② GAL③ GAL④ GALTEMP °CTEMP °CTEMP °CTEMP °CSP COND @25°CSP COND @25°CSP COND @25°CSP COND @25°CPH PH PH PH Eh Eh Eh Eh BOTTLE ID VOL MATERIAL FILTERED PRES./VOL. ANALYSIS REQUESTED

	80ml	WATER	No	/	VOLATILES
	2L	WATER	No	/	SEMI-VOLS
	1L	WATER	YES	HANOS 2ml	METALS
	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

Purge dry after 1 min (to deep for pump)
 Could not SAMPLE.

SAMPLER

James R. M. [Signature]

EC JORDAN CO.

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-302DATE 12-8-87SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 149.55☐ TOP WELL
☒ TOP CASINGWELL DEPTH 401WELL DIAM 5"WELL MATERIAL GALV.

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1210END 1440

SAMPLE TIME

START 1450END 1500WEATHER 30°F
2nd + Clear

251 FT. WATER X 163 (2"=1.63gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 123 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT

N/A

SAMPLE LOCATION

HEADSPACE

SAMPLE PURGE DATA

P 0 GALTEMP 22 °CSPEED 720 @ 25°CPH 7.0

EN _____

P 75 GALTEMP 19 °CSPEED 520 @ 25°CPH 7.9

EN _____

P 100 GALTEMP 7.1 °CSPEED 520 @ 25°CPH 7.9

EN _____

P 125 GALTEMP 1.8 °CSPEED 520 @ 25°CPH 7.9

EN _____

BOTTLE NO

VOL

MATERIAL

FILTERED, PRES/VOL

ANALYSIS REQUESTED

	80ml	WATER	No	☒	VOLATILES
	2l	WATER	No	☒	SEMI-VOLS
	1l	WATER	YES	☒	METALS
	1l	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS Water Clear

SAMPLER

James R. Mayhew

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-31DATE 12-2-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 73.76☐ TOP WELLWELL DEPTH 157WELL MATERIAL GALV☒ TOP CASINGWELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER 2ND

PURGE SAMPLE

KECK X

KECK _____

START 0945START 030

QED _____

QED _____

END 027END 11

SSBAIL _____

SSBAIL X

OTHER _____

OTHER _____

(2"=.163gal/ft)

54 FT. WATER X .163 (4"=.653gal/ft) X 3 CASING VOLUME = 42 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

EMP BR PROBE BROKEN

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLE

VCA-LEVEL (PPM) AMBIENT

N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① 0 GAL② 15 GAL③ 30 GAL④ 42 GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND 32 @25°CSP COND 25 @25°CSP COND 225 @25°CSP COND 672 @25°CpH 7.6pH 7.5pH 7.4pH 7.4

ED _____

ED _____

ED _____

ED _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

205 + 206	80ml	WATER	No	~~---~~	VOLATILES
207 + 208	2L	WATER	No	~~---~~	SEMI-VOLS
209	1L	WATER	YES	HNO ₃ 2ml	METALS
210	1L	WATER	No	~~---~~	CYANIDE (CN ⁻)
				~~---~~	
				~~---~~	
				~~---~~	
				~~---~~	

REMARKS/OBSERVATIONS

Water was clear

SAMPLER

James R. May

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO / LOCATION MW-101 (BLANK)DATE 11/30/87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO / EXPOSURE NO. _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL

WELL DEPTH _____

WELL MATERIAL _____

☐ TOP CASING

WELL DIAM _____

WELL STICK-UP _____

WELL / CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

SAMPLE TIME

WEATHER Overcast

START _____

START 1310

END _____

END 1315

0 FT. WATER X 0 (2"=.163gal/ft)
0 (4"=.653gal/ft) X 0 CASING VOLUME = 0 GAL PURGED
0 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT N/A.

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL

② _____ GAL

③ _____ GAL

④ _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

EN _____

EN _____

EN _____

EN _____

BOTTLE NO

VOL

MATERIAL

FILTERED PRES / VOL

ANALYSIS REQUESTED

218	80ml	WATER	No	—	VOLATILES
219 220	2L	WATER	No	—	SEMI-VOLS
221	1L	WATER	YES	HNO3 2M	METALS
222	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Blank taken @ start of sampling day
 Purge water in decon tube had an oily? film on the surface
 HNU NOT WORKING
 SAMPLER WEG / CSK

EC JORDAN CO.

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-102 (BLANK) DATE 12/1/87SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH ☐ TOP WELL WELL DEPTH WELL MATERIAL
☐ TOP CASING WELL DIAM

WELL STICK-UP

EQUIPMENT USED

PURGE SAMPLE
KECK KECK
QED QED
SSBAIL SSBAIL ☒
OTHER OTHER

WELL/CASING

PURGE TIME

SAMPLE TIME

WEATHER START START END END 16300 FT. WATER X 0 (2"=.163gal/ft)
0 (4"=.653gal/ft) X 0 CASING VOLUME 0 GAL PURGED
0 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN-SITU
☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT SAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

①	GAL	②	GAL	③	GAL	④	GAL
TEMP	°C	TEMP	°C	TEMP	°C	TEMP	°C
SP COND	@25°C	SP COND	@25°C	SP COND	@25°C	SP COND	@25°C
pH		pH		pH		pH	
En		En		En		En	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

223-224	80ml	WATER	No	☒	VOLATILES
225-226	2L	WATER	No	☒	SEMI-VOLS
227	1L	WATER	YES	☒	METALS
228	1L	WATER	No	☒	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Blank taken @ Sampling days end
after MW-102/KEA

SAMPLER

James R. Mays

ECJORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-103 (BLANK) DATE 12-2-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL
☐ TOP CASING WELL DIAM WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER _____

PURGE	SAMPLE	START	END	WEATHER
KECK	KECK			
QED	QED			
SSBAIL	SSBAIL ☒			
OTHER	OTHER			

FT. WATER X (2"=.163gal/ft) X CASING VOLUME = GAL PURGED
 (4"=.653gal/ft) X
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU ☐ IN BOTTLE VCA LEVEL (PPM) AMBIENT _____SAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

TEMP	SP COND	PH	En	TEMP	SP COND	PH	En	TEMP	SP COND	PH	En	TEMP	SP COND	PH	En

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL

ANALYSIS REQUESTED

229-230	80ml	WATER	No	✓	VOLATILES
231-232	2L	WATER	No	✓	SEMI-VOL'S
233	1L	WATER	YES	✓	METALS
234	1L	WATER	No	✓	CYANIDE (CN ⁻)
				✓	
				✓	
				✓	
				✓	

REMARKS/OBSERVATIONS

Blank taken @ end of sampling day after MW-103

SAMPLER

James L. Mayhew

KKE

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

11W-104 (BLANK)DATE 12/3/87SKETCH ON BACK ☐ ^{YES} ☒ ^{NO}PHOTOGRAPHS ☐ ^{YES} ☒ ^{NO}

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH ☐ TOP WELLWELL DEPTH WELL MATERIAL ☐ TOP CASINGWELL DIAM WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE SAMPLE KECK KECK ☒QED QED SSBAIL SSBAIL OTHER OTHER

PURGE TIME

SAMPLE TIME

WEATHER START START END END 1500

(2"=.163gal/ft)
 _____ FT. WATER X _____ (4"=.653gal/ft) X _____
 (6"=1.47gal/ft)

CASING VOLUME = _____ GAL PURGED

FIELD DATA

FIELD DATA COLLECTION

☐ IN SITU☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT SAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

② _____ GAL

② _____ GAL

② _____ GAL

② _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH ☒

PH _____

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

231-239	80ml	WATER	No	—	VOLATILES
239-240	2L	WATER	No	—	SEMI-VOLS
241	1L	WATER	YES	HNO ₃ 2M	METALS
242	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

BLANK

SAMPLER

James R. Mayhew

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-201 (BLANK) DATE 12-1-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☒ TOP CASING WELL DIAM _____WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE SAMPLE PURGE TIME SAMPLE TIME WEATHER _____
KECK _____ KECK _____ START _____ START 1700
QED _____ QED _____ END _____ END 1710
SSBAIL ☒ SSBAIL ☒
OTHER _____ OTHER __________ FT. WATER X (2"=.163gal/ft)
(4"=.653gal/ft) X CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PPM) AMBIENT _____
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES /VOL.	ANALYSIS REQUESTED
241-242	80ml	WATER	No	/	VOLATILES
243-244	2L	WATER	No	/	SEMI-VOLS
245	1L	WATER	YES	HNO ₃ 3ml	METALS
246	1L	WATER	No	3ml	CYANIDE (CN ⁻)

BOTTLE ID VOL MATERIAL FILTERED PRES /VOL. ANALYSIS REQUESTED

241-242	80ml	WATER	No	/	VOLATILES
243-244	2L	WATER	No	/	SEMI-VOLS
245	1L	WATER	YES	HNO ₃ 3ml	METALS
246	1L	WATER	No	3ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS DI BLANK THRU BAILERtaken at end of the day
after MW-24/KKA

SAMPLER

James R. Mayhew

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION NW-202 (BLANK) DATE 12-2-87SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH ☐ TOP WELL WELL DEPTH WELL MATERIAL
☐ TOP CASING WELL DIAM WELL STICK-UP WELL/CASING
EQUIPMENT USED
PURGE SAMPLE PURGE TIME SAMPLE TIME WEATHER
NECK NECK START START 1115
QED QED END END 1120
SSBAIL SSBAIL X
OTHER OTHER FT. WATER X (2"=.163gal/ft)
(4"=.653gal/ft) X CASING VOLUME = GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION

SAMPLE PURGE DATA

HEADSPACE
① GAL ② GAL ③ GAL ④ GAL
TEMP °C TEMP °C TEMP °C TEMP °C
SP COND @25°C SP COND @25°C SP COND @25°C SP COND @25°C
PH PH PH PH
EN EN EN EN

BOTTLE ID VOL MATERIAL FILTERED PRES/VOL ANALYSIS REQUESTED

247 + 248	80ml	WATER	No	/	VOLATILES
249 + 250	2l	WATER	No	/	SEMI-VOLS
251	1l	WATER	YES	HNO ₃ 2ml	METALS
252	1l	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS sampler blank after MW-31 /KPASAMPLER NEG/DGA

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-203 (BLANK) DATE 12-2-83SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☒ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIAM _____WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER _____
PURGE SAMPLE
KECK _____ KECK _____
QED _____ QED _____
SSBAIL _____ SSBAIL ☒ X
OTHER _____ OTHER _________ FT. WATER X _____ (2"=.163gal/ft)
____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
____ (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☒ IN BOTTLE SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
TEMP	°C	TEMP	°C	TEMP	°C	TEMP	°C
SP COND	@25°C	SP COND	@25°C	SP COND	@25°C	SP COND	@25°C
PH		PH		PH		PH	
EN		EN		EN		EN	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

	80ml	WATER	No	—	VOLATILES
	2l.	WATER	No	—	SEMI-VOLS
	1l	WATER	YES	HNO3 2ml	METALS
	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Sampler blank
End of day after mw-4 /KKA

SAMPLER

NEG/DGA

EC JORDAN CO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-204 (BLANK) DATE 12-3-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH ☐ TOP WELL WELL DEPTH WELL MATERIAL STEEL
☐ TOP CASING WELL DIAM WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
KECK <u> </u>	KECK <u> </u>
QED <u> </u>	QED <u> </u>
SSBAIL <u> </u>	SSBAIL <u> </u>
OTHER <u> </u>	OTHER <u> </u>

PURGE TIME

START
END

SAMPLE TIME

START
END WEATHER

FT. WATER X (2"=.163gal/ft)
(4"=.653gal/ft) X CASING VOLUME = GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU
☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT SAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
TEMP <u> </u> °C		TEMP <u> </u> °C		TEMP <u> </u> °C		TEMP <u> </u> °C	
SP COND <u> </u> @25°C		SP COND <u> </u> @25°C		SP COND <u> </u> @25°C		SP COND <u> </u> @25°C	
PH <u> </u>		PH <u> </u>		PH <u> </u>		PH <u> </u>	
EN <u> </u>		EN <u> </u>		EN <u> </u>		EN <u> </u>	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

	80ml	WATER	No	/	VOLATILES
	2l	WATER	No	/	SEMI-VOLS
	1l	WATER	YES	HNO3 2ml	METALS
	1l	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

Blank of stainless steel liner
collected at end of day after MW-20 /KKA

SAMPLER NEG/JHB

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-~~17D~~ 205 (BLANK) DATE 12/4/87SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH / ☐ TOP WELL WELL DEPTH / WELL MATERIAL 1"
☐ TOP CASING WELL DIAM /WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER _____
PURGE SAMPLE
KECK _____ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____ST. WATER X (2"=1.163gal/ft)
(4"=.653gal/ft) X CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU VCA LEVEL (PPM) AMBIENT _____
☐ IN BOTTLE SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL	② _____ GAL	③ _____ GAL	④ _____ GAL
TEMP _____ °C	TEMP _____ °C	TEMP _____ °C	TEMP _____ °C
SP COND _____ @25°C	SP COND _____ @25°C	SP COND _____ @25°C	SP COND _____ @25°C
pH _____	pH _____	pH _____	pH _____
En _____	En _____	En _____	En _____

BOTTLE ID

VOL MATERIAL FILTERED PRES./VOL.

ANALYSIS REQUESTED

265-266	80ml	WATER	No	/	VOLATILES
267-268	2L	WATER	No	/	SEMI-VOLS
269	1L	WATER	YES	HNO3 2M	METALS
270	1L	WATER	No	2M	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

Blanks taken thru keck @ end of sampling day
after MW-17D/KKA

SAMPLER

James R. Morrison

EC JORDAN CO.

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT MEMMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION AW-206 (BLANK) DATE 12-7-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIAM _____

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER _____

PURGE SAMPLE
KECK X KECK X
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____(2"=.163gal/ft)
_____ FT. WATER X (4"=.653gal/ft) X CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____

SAMPLE PURGE DATA

GAL GAL GAL GAL
TEMP. °C TEMP. °C TEMP. °C TEMP. °C
SP COND @25°C SP COND @25°C SP COND @25°C SP COND @25°C
PH PH PH PH
En En En En

BOTTLE ID VOL MATERIAL FILTERED PRES/VOL ANALYSIS REQUESTED

271-272	80ml	WATER	No	—	VOLATILES
273-274	2L	WATER	No	—	SEMI-VOLS
275	1L	WATER	YES	HNO ₃ 2ml	METALS
275	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS DI BLANKEnd of day afterMW-272
KKA
SAMPLERJames R. Mayhew

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-301 (Dup of 7-3) DATE 12/3/87SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIAM _____WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER Snow
PURGE SAMPLE
KECK _____ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____(2"=.163gal/ft)
_____ FT. WATER X (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU VCA LEVEL (PPM) AMBIENT _____
☐ IN BOTTLE SAMPLE LOCATION _____

SAMPLE PURGE DATA

HEADSPACE _____
@ _____ GAL @ _____ GAL @ _____ GAL @ _____ GAL
TEMP _____ °C TEMP _____ °C TEMP _____ °C TEMP _____ °C
SP COND _____ @25°C SP COND _____ @25°C SP COND _____ @25°C SP COND _____ @25°C
PH _____ PH _____ PH _____ PH _____
En _____ En _____ En _____ En _____

BOTTLE ID VOL MATERIAL FILTERED PRES./VOL. ANALYSIS REQUESTED

800-801	80ml	WATER	No	—	VOLATILES
802-803	2L	WATER	No	—	SEMI-VOLS
804	1L	WATER	YES	HNO ₃ 2ml	METALS
805	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Dup of 7-3, Sampled thru KeckSAMPLER DAG/CSK

EC JORDAN CO

PAGE 1 OF 1

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION NW-302 (DUP OF 17s) DATE 12-3-87SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH ☐ TOP WELL WELL DEPTH WELL MATERIAL GALV
☐ TOP CASING WELL DIAM WELL STICK-UP WELL/CASING
EQUIPMENT USED
PURGE SAMPLE
NECK KECK
QED QED
SSBAIL X SSBAIL X
OTHER OTHER
PURGE TIME SAMPLE TIME
START START
END END 1630
WEATHER (2"=.163gal/ft)
 FT. WATER X (4"=.653gal/ft) X CASING VOLUME = GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU ☐ IN BOTTLE
VCA LEVEL (PPM) AMBIENT
SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
TEMP	°C	TEMP	°C	TEMP	°C	TEMP	°C
SP COND	@25°C	SP COND	@25°C	SP COND	@25°C	SP COND	@25°C
pH		pH		pH		pH	
En		En		En		En	

BOTTLE ID VOL MATERIAL FILTERED PRES/VOL ANALYSIS REQUESTED

LABELS NOT USED	80ml	WATER	No	/	VOLATILES
	2L	WATER	No	/	SEMI-VOLS
	1L	WATER	YES	HNO3 2ml	METALS
	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS SEE SAMPLE SHEET FOR MW-17s

SAMPLER

NEG/JHB

EC JORDAN CO.

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-303 (Dup of 28R)DATE 12/4/87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL

WELL DEPTH _____

WELL MATERIAL _____

☐ TOP CASING

WELL DIAM _____

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE _____ SAMPLE _____

RECK _____ RECK _____

QED _____ QED _____

SSBAIL _____ SSBAIL _____

OTHER _____ OTHER _____

PURGE TIME

SAMPLE TIME

START _____

START _____

END _____

END _____

WEATHER P. Cloudy

_____ FT. WATER X

(2"=.163gal/ft)

(4"=.653gal/ft) X

CASING VOLUME =

_____ GAL PURGED

(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☐ IN SITU☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT _____

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL

② _____ GAL

③ _____ GAL

④ _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE ID

VOL.

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

812-813	80ml	WATER	No	—	VOLATILES
814-815	2L	WATER	No	—	SEMI-VOLS
816	1L	WATER	YES	HNO ₃ 2M	METALS
817	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Dup of MW-28R

SAMPLER

BA/CK

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-304 (dup of MW-17D)DATE 12/4/87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL
☐ TOP CASING

WELL DEPTH _____

WELL DIAM _____

WELL MATERIAL _____

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

SAMPLE TIME

WEATHER _____

START _____

START _____

END _____

END _____

_____ FT. WATER X (2"=.163gal/ft)
(4"=.653gal/ft) X CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLE

VOC LEVEL (PPM) AMBIENT _____

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

② _____ GAL

② _____ GAL

② _____ GAL

② _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

En _____

En _____

En _____

En _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

818-819	80ml	WATER	No	/	VOLATILES
820-821	2L	WATER	No	/	SEMI-VOLS
822	1L	WATER	YES	HAZ 2ml	METALS
823	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

Dup of MW-17D

SAMPLER

James R. Martin

MOGAMMIL, H. K. M.
D. M. F. I.

TABLE TM9-1

ORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

[illegible]

TABLE MW-1 (cont.)
MOGHHW1.WK1
DM111

Sample No.	MW-1	MW-3	MW-4	MW-203 (Blank after MW-4)	MW-6-1	MW-6-2	MW-6-3	MW-7-3	MW-301 (Dup of MW-7-3)
Traffic Report No:	ES-207	EF-405	ES-223	ES-224	ES-202	ES-203	ES-206	EA-055	EA-056
2-METHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ
BENZOIC ACID	50 u	50 uJ	50 u	50 u	50 u	50 u	50 u	50 u	50 u
PENTACHLOROPHENOL	50 u	50 u	50 uJ	50 uJ	50 u	50 u	50 u	50 u	50 u
BIS(2-ETHYLAEXYL)PHTHALATE	270 BE	22	44	2 J	90 uJB	90 uJB	90 uJB	10 u	2 J
DELTA-BHC	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.
9. E - Concentration of compound exceeded the calibration range of the GC/MS instrument.

TABLE TN9-5

[illegible]

TABLE TM3-5 (cont.)
HOGANWEL MK1
DM111

Sample No.	MW-8	MW-9	MW-10S	MW-100	MW-102 (Blank after MW-100 ES-212)	MW-11	MW-12	MW-13
Traffic Report No:	ES-209	ES-222	ES-243	ES-214	ES-212	ES-216	EA-057	EA-058 RE
2-METHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 u
BENZOIC ACID	50 u	50 u	7 J	9 J	50 u	50 u	50 u	50 u
PENTACHLOROPHENOL	50 uJ	50 u	50 u	50 u	50 u	50 u	50 u	50 u
BIS(2-ETHYLHEXYL)PHTHALATE	100 uJB	100 uJB	390 BE	280 BE	90 uJB	100 uJB	10 u	77 B
DELTA-BHC	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.
9. E - Concentration of compound exceeded the calibration range of the GC/MS instrument.
10. Sample EA-058 was reanalyzed (RE) because of low surrogate recoveries in the semivolatile fraction. Reanalysis results have been included when applicable.
11. Dashed line indicates the analysis was not applicable.

MOGMMH14S.WK1
DM112

TABLE TN9-6

ORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-14S	MW-103 (Blank after MW-14S)	MW-140	MW-15S	MW-15S	MW-150	MW-16	MW-17S
Traffic Report No:	ES-226	ES-227	ES-225	ES-205	ES-205 DL	ES-200	ES-204	EA-060
VINYL CHLORIDE	2 J	10 u	10 u	6 J	100 uJ	10 u	10 u	10 u
CHLOROETHANE	5 J	10 u	10 u	17 J	100 uJ	6 J	10 u	10 u
METHYLENE CHLORIDE	4 J	30 uJB	2 u	20 uJB	200 uJB	60 uJB	40 uJB	10 uJB
ACETONE	4 J	20 uJB	6 J	70 uJB	700 uJB	60 uJB	10 uJ	21 B
1,1-DICHLOROETHANE	15	5 uJ	5 u	21	19 uJ	11	5 u	35 J
1,2-DICHLOROETHENE (total)	5 u	5 u	5 u	5 u	50 u	5 u	5 u	5
CHLOROFORM	5 u	5	5 u	5 u	50 u	5 u	5 u	5 u
1,2-DICHLOROETHANE	5 u	5 u	5 u	5 u	50 u	5 u	5 u	12
4-METHYL-2-PENTANONE	10 uJ	1 uJ	10 uJ	10 u	100 u	10 u	10 u	2 J
2-BUTANONE	10 uR	10 uR	10 uR	10 uR	100 uR	10 uR	10 uR	10 J
1,1,1-TRICHLOROETHANE	17	5 u	5 u	3 J	50 u	5 u	5 u	5 u
BROMODICHLOROMETHANE	5 uJ	4 J	5 uJ	5 u	50 u	5 u	5 u	5 u
TRICHLOROETHENE	5 u	5 u	5 u	5 u	50 u	5 u	5 u	5 u
DIBROMOCHLOROMETHANE	5 uJ	2 J	5 uJ	5 u	50 u	5 u	5 u	5 u
1,1,2-TRICHLOROETHANE	5 u	5 u	5 u	5 u	50 u	5 u	5 u	5 u
BENZENE	5 u	5 u	5 u	5 u	50 u	5 u	5 u	10
2-HEXANONE	10 uJ	10 uJ	10 uJ	10 u	100 u	10 u	10 u	1 J
TETRACHLOROETHENE	5 u	5 uJ	5 u	5 u	50 u	5 u	5 u	5 u
TOLUENE	5 u	1 J	5 u	5 u	50 u	5 u	5 u	500 B
CHLOROBENZENE	5 u	5 u	5 u	5 u	50 u	5 u	5 u	2 J
ETHYLBENZENE	5 u	5 u	5 u	5 u	50 u	5 u	5 u	1000 B
XYLENE (total)	5 u	5 u	5 u	5 u	50 u	5 u	5 u	12000 B

TABLE TM3-6 (cont.)
MOGMMW145.WK1
DM112

Sample No.	MW-145	MW-103 (Blank after MW-145)	MW-140	MW-155	MW-155	MW-150	MW-16	MW-175	MW-175
Traffic Report No:	ES-226	ES-227	ES-225	ES-205	ES-205 DL	ES-208	ES-204	EA-060	EA-060 DL
2-METHYLPHENOL	10 u	10 uJ	10 uJ	10 u	---	10 u	10 u	9 J	---
2,4-DIMETHYLPHENOL	10 uJ	10 uJ	10 uJ	10 uJ	---	10 uJ	10 uJ	13 J	---
BENZOIC ACID	50 uJ	50 uJ	50 uJ	50 u	---	50 u	50 u	50 uJ	---
PENTACHLOROPHENOL	50 u	50 uJ	50 uJ	50 u	---	50 u	50 u	5 J	---
BIS(2-ETHYLHEXYL)PHTHALATE	15	27 J	46 J	240 BE	---	180 BE	90 uJB	15 uJB	---
DELTA-BHC	0.05 u	0.05 u	0.05 u	0.05 u	---	0.05 u	0.071	0.05 u	---

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.
9. E - Concentration of compound exceeded the calibration range of the GC/MS instrument.
10. Samples ES-205 and EA-060 were reanalyzed at a secondary dilution factor (DL). Diluted results have been included when applicable. Compounds identified in these analyses are flagged D.
11. Dashed line indicates the analysis was not applicable.

MOGHW302.WK1
DM112

TABLE TM9-7 ORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-302 (Duplicate of MW-17S) EA-061	MW-104 (Blank after MW-17S) EA-063	MW-17D EF-408	MW-304 (Duplicate of MW-17D) EF-409	MW-205 (Blank after MW-17D) EF-410	MW-18 ES-219	MW-19 EA-059	MW-20 EA-062
Traffic Report No:								
VINYL CHLORIDE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
CHLOROETHANE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
METHYLENE CHLORIDE	10 uJB	30 uJB	3 J	10 uJB	10 uJB	70 uJB	30 uJB	50 uJB
ACETONE	21 BJ	20 uJB	4 J	20 uJB	20 uJB	80 uJB	20 uJB	120 uJB
1,1-DICHLOROETHANE	30 J	5 uJ	5 u	5 uJ	5 uJ	5 u	5 uJ	5 u
1,2-DICHLOROETHENE (total)	5	5 u	5 u	5 u	5 u	5 u	5 u	5 u
CHLOROFORM	5 u	6	5 u	5 u	2 J	5 u	5 u	5 u
1,2-DICHLOROETHANE	11	5 u	5 u	5 u	5 u	5 u	5 u	5 u
2-BUTANONE	10 J	5 J	10 uR	10 uR	10 uR	10 uR	10 uR	10 uR
1,1,1-TRICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 uR	5 u
BROMODICHLOROMETHANE	5 u	5	5 uJ	5 u	1 J	5 u	5 u	5 u
TRICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
DIBROMOCHLOROMETHANE	5 u	2 J	5 uJ	5 u	5 u	5 u	5 uJ	5 u
1,1,2-TRICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
BENZENE	8	5 u	5 u	5 u	5 u	5 u	5 u	5 u
4-METHYL-2-PENTANONE	2 J	1 J	10 uJ	10 uJ	10 uJ	10 u	10 uJ	10 uJ
2-HEXANONE	1 J	10 uJ	10 uJ	10 uJ	10 uJ	10 u	10 uJ	10 uJ
TETRACHLOROETHENE	5 u	5 uJ	5 u	5 u	5 u	5 u	5 uJ	5 u
TOLUENE	560 DJ	2 J	1 J	5 u	5 u	5 u	2 J	5 u
CHLOROBENZENE	1 J	5 u	5 u	5 u	5 u	5 u	5 u	5 u
ETHYLBENZENE	1700 D	5 u	5 u	5 u	5 u	5 u	5 u	5 u
XYLENE (total)	12000 D	5 u	5 u	5 u	5 u	5 u	5 u	5 u

TABLE TM9-7 (cont.)
MOGMH302.WK1
DM112

Sample No.	MW-302 (Duplicate of MW-17S) EA-061	MW-302 (Duplicate of MW-17S) EA-061 DL	MW-104 (Blank after MW-17S) EA-063	MW-17D EF-403	MW-304 (Duplicate of MW-17D) EF-409	MW-205 (Blank after MW-17D) EF-410	MW-18 ES-249	MW-19 EA-059	MW-20 EA-062
Traffic Report No:									
2-METHYLPHENOL	8 J	---	10 u	10 u	10 uJ	10 u	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	21 uJ	---	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 u
BENZOIC ACID	50 u	---	50 u	50 uJ	50 uJ	50 u	50 u	50 u	50 u
PENTACHLOROPHENOL	50 u	---	50 u	50 u	50 uJ	50 u	50 u	50 u	50 u
BIS(2-ETHYLHEXYL)PHTHALATE	44	---	10 u	10 u	15 uJB	3 J	100 uJB	2 J	37 B
DELTA-BHC	0.05 u	---	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.
9. E - Concentration of compound exceeded the calibration range of the GC/MS instrument.
10. Sample EA-061 was reanalyzed at a secondary dilution factor (DL). Diluted results have been included when applicable. Compounds identified in this analysis are flagged D.
11. Dashed line indicates the analysis was not applicable.

08113

METAMORA LAURELL, METAMORA TOWNSHIP, MICHIGAN

[illegible]

TABLE TM3-8 (cont.)
MOGAM204.WK1
DH113

Sample No.	MW-204 (Blank after MW-20)	MW-21	MW-23	MW-24	MW-201 (Blank after MW-24)	MW-25	MW-26	MW-26	MW-27R
Traffic Report No:	EA-064	ES-220	ES210	ES211	ES-215	ES-221	EA-054	EA-054 RE	EF-412
2-METHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 uR	10 uJ	10 uJ
2,4-DIMETHYLPHENOL	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uR	10 uJ	10 uJ
BENZOIDIC ACID	50 u	50 u	50 u	50 u	50 u	50 u	50 uR	50 uJ	50 uJ
PENTACHLOROPHENOL	50 u	50 u	50 uJ	50 u	50 u	50 u	50 uR	50 uR	50 uJ
BIS(2-ETHYLHEXYL)PHTHALATE	10 u	100 uJB	100 uJB	90 uJB	90 uJB	100 uJB	6 u	150 uJ	30 uJB
DELTA-EHM	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	---	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. R - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.
9. Sample EA-054 was reanalyzed (RE) because of low surrogate recoveries in the semivolatile fraction. Reanalysis results have been included when applicable.
10. Dashed line indicates the analysis was not applicable.

MOGMM206.WK1
0M113

TABLE TH9-9

ORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-206 (Blank after MW-27R EF-413)	MW-28R EF-406	MW-303 (Duplicate of MW-28R) EF-407	MW-30R EF-411	MW-31 ES-218	MW-202 (Blank after MW-31 ES-217)	MW-101 (Blank prior to sampling) ES-201
Traffic Report No:							
VINYL CHLORIDE	10 u	10 u	10 u	10 u	10 u	10 u	10 u
CHLOROETHANE	10 u	10 u	10 u	10 u	10 u	10 u	10 u
METHYLENE CHLORIDE	20 uJB	10 uJB	4 J	3 J	70 uJB	70 uJB	44 B
ACETONE	10 J	20 uJB	13 J	3 uJ	80 uJB	80 uJB	78 J
1,1-DICHLOROETHANE	5 u	5 uJ	5 u	5 u	5 u	5 u	5 u
1,2-DICHLOROETHENE (total)	5 u	5 u	5 u	5 u	5 u	5 u	5 u
CHLOROFORM	7	5 u	5 u	5 u	5 u	6	11
1,2-DICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u
4-METHYL-2-PENTANONE	10 uJ	10 uJ	10 uJ	10 uJ	10 u	10 u	10 u
2-BUTANONE	6 J	10 uR	10 uR	10 uR	10 uR	10 uR	10 uR
1,1,1-TRICHLOROETHANE	5 uJ	5 u	5 u	5 u	5 u	5 u	5 u
BROMODICHLOROMETHANE	4 J	5 u	5 uJ	5 uJ	5 u	5 u	5 u
TRICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u
DIBROMOCHLOROMETHANE	2 J	5 u	5 uJ	5 uJ	5 u	5 u	5 u
1,1,2-TRICHLOROETHANE	5 uJ	5 u	5 u	5 u	5 u	5 u	5 u
BENZENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u
2-HEXANONE	10 uJ	10 uJ	10 uJ	10 uJ	10 u	10 u	10 u
TETRACHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u
TOLUENE	2 J	1 J	2 J	5 u	5 u	5 u	5 u
CHLOROBENZENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u
ETHYLBENZENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u
XYLENE (total)	5 u	5 u	5 u	5 u	5 u	5 u	5 u

TABLE TM9-9 (cont.)
MOGMW206.WK1
DH113

Sample No.	MW-206 (Blank after MW-27R EF-413)	MW-28R EF-406	MW-303 (Duplicate of MW-28R) EF-407	MW-30R EF-411	MW-31 ES-218	MW-202 (Blank after MW-31 ES-217)	MW-101 (Blank prior to sampling) ES-201
2-METHYLPHENOL	10 uJ	10 u	10 u	10 uJ	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ	10 uJ
BENZOIC ACID	50 uJ	50 u	50 uJ	50 uJ	12 J	50 u	50 u
PENTACHLOROPHENOL	50 uJ	50 u	50 u	50 uJ	160	50 u	50 u
BIS(2-ETHYLHEXYL)PHTHALATE	30 uJB	10 u	10 u	30 uJB	100 uJB	100 uJB	90 uJB
DELTA-BHC	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.

MICHIGAN1.WK1
DM114

TABLE TM9-10

INORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	NW-1	NW-3	NW-4	NW-203 (Blank after NW-4)	NW-6-1	NW-6-2	NW-6-3
Traffic Report No:	NEQ-307	NEQ-340	NEQ-323	NEQ-324	NEQ-302	NEQ-303	NEQ-306
ALUMINUM	[26.6] J	20.0 u	20.0 u	20.0 u	[35.1] J	[34.4]	[41.5]
ANTIMONY	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u
ARSENIC	4.0 u	4.0 u	181	4.0 u	[8.1]	[7.0]	[5.6]
BARIUM	[47.6]	[41.5]	339	3.0 u	[33.2]	[36.3]	[29.6]
BERYLLIUM	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u
CADMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
CALCIUM	86,200	76,400	133,000	[112]	88,200	92,500	79,200
CHROMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
COBALT	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u
COPPER	[10.6]	9.0 u	9.0 u	[23.8]	[11.3]	[11.3]	[13.4]
IRON	31.0 u	160	7230	31.0 u	1,790	1,720	1,190
LEAD	[3.3] J	1.0 uJ	[1.9] J	[2.8]	1.0 uJ	[3.0] J	[1.7] J
MAGNESIUM	31,300	30,000	65,700	90.0 u	31,200	32,700	30,900
MANGANESE	496	83.4	216	5.0 u	27.7	70.0	90.0
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	7.0 u	7.0 u	47.0	7.0 u	7.0 u	7.0 u	7.0 u
POTASSIUM	[3,670] J	[1,060]	86,700	111 u	[1,120] J	[1,180] J	[3,700] J
SELENIUM	1.0 uJ	1.0 uJ	10.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ
SILVER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	21.2
SODIUM	6,050	5,480 J	111,000 J	1,500 uJ	[3,570]	[4,060]	5,650
THALLIUM	2.0 uJ	2.0 uJ	2.0 uJ	2.0 u	2.0 uJ	2.0 uJ	2.0 uJ
VANADIUM	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	[2.2]
ZINC	4,420	1,390	2,260	13.0 u	[13.6]	13.0 u	617
CYANIDE	10.0 uJ	10.0 u	10.0 u	10.0 u	10.0 uJ	10.0 uJ	10.0 uJ

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
6. s - value determined by method of standard addition.

MICHIGAN
DM114

TABLE TM9-11

INORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MU-7-3	MU-301 (Dup of MU-7-3) NEQ-330	MU-8	MU-9	MU-105	MU-100	MU-102 (Blank after MU-100 NEQ-312)
Traffic Report No:	NEQ-329	NEQ-330	NEQ-309	NEQ-322	NEQ-313	NEQ-314	
ALUMINUM	[25.5]	20.0 u	[23.6] J	[22.0] J	20.0 uJ	[26.9] J	20.0 uJ
ANTIMONY	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u
ARSENIC	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
BARIUM	[39.1]	[38.0]	[24.3]	[33.1]	[20.9]	[6.0]	3.0 u
BERYLLIUM	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	[1.2]
CADMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
CALCIUM	91,500	89,400	21,600	82,500	63,700	9,240	92.0 u
CHROMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
COBALT	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u
COPPER	9.0 u	9.0 u	[9.7]	9.0 u	[9.3]	[19.0]	104
IRON	[47.5]	[47.5]	31.0 u	[43.8]	31.0 u	31.0 u	31.0 u
LEAD	1.0 u	1.0 u	[2.4] J	1.0 u	15.0 Js	6.4 Js	1.0 uJ
MAGNESIUM	33,500	32,600	39,700	28,400	25,600	11,700	90.0 u
MANGANESE	5.0 u	5.0 u	22.0	5.0 u	5.0 u	5.0 u	5.0 u
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	[9.8]
POTASSIUM	[1,260]	[1,220]	[4,070] J	[818]	[2,070] J	15,000 J	111 uJ
SELENIUM	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ
SILVER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
SODIUM	5,990 J	5,870 J	9,690	[2,040] J	5,970	72,400	1,500 u
THALLIUM	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ
VANADIUM	2.0 u	2.0 u	2.0 u	2.0 u	[2.9]	2.0 u	2.0 u
ZINC	51.6	[19.7]	648	714	2,600	381	70.3
CYANIDE	10.0 u	10.0 u	10.0 uJ	10.0 u	10.0 uJ	10.0 uJ	10.0 uJ

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
6. s - value determined by method of standard addition.

MIGM11.WK1
DN114

TABLE TM9-12

INORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1997)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MW-11	MW-12	MW-13	MW-145	MW-103 (Blank after MW-145 MEQ-327)	MW-140	MW-155
Traffic Report No:	MEQ-316	MEQ-331	MEQ-332	MEQ-326		MEQ-325	MEQ-305
ALUMINUM	[26.0]	[25.9]	[32.7]	20.0 u	20.0 u	20.0 u	[24.7] J
ANTIMONY	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u
ARSENIC	4.0 u	4.0 u	4.0 u	[4.4]	4.0 u	4.0 u	11.6
BARIUM	[36.2]	[16.3]	[60.1]	[54.8]	3.0 u	[18.5]	[101]
BERYLLIUM	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u
CADMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
CALCIUM	89,900	60,700	57,500	130,000	92.0 u	70,800	243,000
CHROMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
COBALT	6.0 u	6.0 u	6.0 u	[14.1]	6.0 u	6.0 u	6.0 u
COPPER	29.6	9.0 u	9.0 u	9.0 u	93.7	9.0 u	[10.3]
IRON	[81.4]	[32.5]	[40.8]	31.0 u	31.0 u	31.0 u	749
LEAD	[2.2] J	1.0 u	17.3	10.6	[1.9]	[4.8]	[1.49] J
MAGNESIUM	36,000	31,600	28,200	48,600	90.0 u	29,700	54,900
MANGANESE	5.0 u	[11.8]	149	234	5.0 u	62.7	152
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	7.0 u	7.0 u	7.0 u	85.7	7.0 u	7.0 u	[17.1]
POTASSIUM	[1,090] J	[779]	7,600	[1,570]	111 u	[1,340]	6,800 J
SELENIUM	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	10.0 uJ
SILVER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
SODIUM	7,140	[3,080] J	[3,150] J	9,150 J	1,500 uJ	10,100 J	14,100
THALLIUM	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ
VANADIUM	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u
ZINC	538	605	3,910	32,200	35.8	8,560	47,500
CYANIDE	10.0 uJ	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 uJ

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
6. s - value determined by method of standard addition.

MGM150.WK1
0M114

TABLE TMS-13

INORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MU-15D	MU-16	MU-17S	MU-302 (Dup of MU-17S) MEQ-335	MU-104 (Blank after MU-17S) MEQ-337	MU-17D MEQ-343	MU-304 (Dup of MU-17D) MEQ-344
Traffic Report No:	MEQ-308	MEQ-304	MEQ-334				
ALUMINUM	[28.0] J	[27.5] J	20.0 u	20.0 u	20.0 u	[34.1] J	20.0 uJ
ANTIMONY	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u
ARSENIC	[4.3]	11.0	239	242 s	4.0 u	4.0 u	4.0 u
BARIUM	[56.7]	1,770	[132]	[130]	3.0 u	[29.5]	[30.8]
BERYLLIUM	1.0 u	[1.2]	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u
CADMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
CALCIUM	134,000	22,200	108,000	108,000	[119]	81,000 J	80,600 J
CHROMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
COBALT	6.0 u	6.0 u	[11.1]	[12.0]	6.0 u	6.0 u	6.0 u
COPPER	[10.2]	[12.4]	9.0 u	9.0 u	93.3	[10.6]	[9.8]
IRON	[31.4]	31.0 u	9,470	8,190	31.0 u	31.0 u	31.0 u
LEAD	[4.2] J	[2.5] J	1.0 u	1.0 u	[1.9] J	1.0 u	1.0 uJ
MAGNESIUM	51,900	40,900	37,100	37,100	90.0 u	29,800	29,800
MANGANESE	164	90.9	70.6	63.7	5.0 u	5.0 u	5.0 u
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	[18.6]	[11.6]	99.1	124	7.0 u	7.0 u	7.0 u
POTASSIUM	18,100 J	8,200 J	[3,520]	[3,680]	111 u	[976]	[948]
SELENIUM	1.0 uJ	1.0 uJ	1.0 uJ	10.0 u	1.0 uJ	1.0 uJ	1.0 uJ
SILVER	5.0 u	14.7	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
SODIUM	32,900	11,100	17,300 J	17,000 J	2,280 J	[3,870]	[3,740]
THALLIUM	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 u	2.0 uJ	2.0 uJ
VANADIUM	[3.7]	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u
ZINC	34,000	745	5,160	6,040	38.6	412	405
CYANIDE	10.0 uJ	10.0 uJ	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
6. s - value determined by method of standard addition.

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TABLE TM9-14

INORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.:	MU-205 (Blank after MU-170) MEQ-345	MU-18 MEQ-319	MU-19 MEQ-333	MU-20 MEQ-336	MU-204 (Blank after MU-20) MEQ-338	MU-21 MEQ-320	MU-23 MEQ-310
Traffic Report No.:							
ALUMINUM	[21.6] J	20.0 uJ	[40.5]	20.0 u	[21.0]	20.0 uJ	20.0 uJ
ANTIMONY	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u
ARSENIC	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	[6.5]	4.0 u
BARIUM	3.0 u	[38.1]	[65.0]	[65.7]	3.0 u	[85.2]	[36.4]
BERYLLIUM	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u
CAESIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
CALCIUM	[134] J	97,700	87,700	68,700	[148]	192,000	80,200
CHROMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
COBALT	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u
COPPER	27.8	29.6	9.0 u	9.0 u	29.3	[10.5]	9.0 u
IRON	31.0 u	31.0 u	31.0 u	31.0 u	[40.0]	3160	31.0 u
LEAD	1.0 u	[3.1] J	[1.1] J	[1.7] J	1.0 uJ	18.7 J	26.3 J
MAGNESIUM	90.0 u	36,400	37,500	29,400	90.0 u	61,300	32,000
MANGANESE	5.0 u	5.0 u	192	199	5.0 u	714	[12.2]
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	[16.3]	7.0 u
POTASSIUM	111 u	[943] J	[1,320]	[3,980]	111 u	[1,310] J	[2,830] J
SELENIUM	1.0 u	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	10.0 uJ	1.0 uJ
SILVER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
SODIUM	8,030	[4,910]	6,260 J	[3,790] J	1,500 uJ	[2,730]	6,220
THALLIUM	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 u	2.0 uJ	2.0 uJ
VANADIUM	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u
ZINC	38.6	815	1,840	3,670	13.0 u	5,600	6,810
CYANIDE	10.0 u	10.0 uJ	10.0 u	10.0 u	10.0 u	10.0 uJ	10.0 uJ

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
6. - value determined by method of standard addition.

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08114

TABLE TMS-15

INORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METHUEN LANDFILL, METHUEN TOWNSHIP, MICHIGAN

Sample No:	MU-24	MU-201 (Blank after MU-24)	MU-25	MU-26	MU-27R	MU-206 (Blank after MU-27R)
Traffic Report No:	MEQ-311	MEQ-315	MEQ-321	MEQ-328	MEQ-347	MEQ-348
ALUMINUM	20.0 uJ	[23.0] J	20.0 u	[23.3]	[27.2] J	[50.9] J
ANTIMONY	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u
ARSENIC	4.0 u	4.0 u	4.0 u	4.0 uJ	15.1	4.0 uJ
BARIUM	[44.8]	3.0 u	[70.4]	[75.0]	[59.2]	3.0 u
BERYLLIUM	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u
CADMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
CALCIUM	112,000	[183]	174,000	114,000	61,200 J	[1,280] J
CHROMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
COBALT	6.0 u	6.0 u	6.0 u	[7.7]	6.0 u	6.0 u
COPPER	[11.1]	96.0	[12.0]	[12.4]	[11.4]	83.0
IRON	[31.7]	31.0 u	31.0 u	31.0 u	270	174
LEAD	5.1 Js	[1.5] J	[1.7]	6.4	1.0 uJ	12.6
MAGNESIUM	43,300	90.0 u	61,600	52,200	25,900	[558]
MANGANESE	220	5.0 u	46.9	1140	40.0	5.0 u
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	[9.1]	[8.3]	7.0 u	[12.0]	7.0 u	7.0 u
POTASSIUM	[2,480] J	111 uJ	[1,260]	[4,500]	[1,610]	118 u
SELENIUM	1.0 uJ	1.0 uJ	10.0 uJ	1.0 uJ	1.0 uJ	1.0 u
SILVER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
SODIUM	10,800	1,500 u	8,660 J	19,700 J	31,200	[4,660]
THALLIUM	2.0 uJ	2.0 u	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ
VANADIUM	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u
ZINC	16,500	34.0	1,200	17,500	532	482
CYANIDE	10.0 uJ	10.0 uJ	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
6. s - value determined by method of standard addition.

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TABLE TM9-16

INORGANIC CHEMICAL DATA (GROUNDWATER, DECEMBER 1987)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MW-28R	MW-303 (Dup of MW-28R)	MW-30R	MW-31	MW-202 (Blank after MW-31)	MW-101 (Blank prior to sampling)
Traffic Report No:	MEQ-341	MEQ-342	MEQ-346	MEQ-318	MEQ-317	MEQ-301
ALUMINUM	[33.8]	[27.9] J	[30.4] J	20.0 uJ	[23.7] J	[42.3] J
ANTIMONY	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u	31.0 u
ARSENIC	26.1	24.3 s	14.3	4.0 u	4.0 u	4.0 u
BARIUM	[114]	[116]	[107]	[59.4]	3.0 u	3.0 u
BERYLLIUM	1.0 u	1.0 u	1.0 u	1.0 u	1.0 u	[1.2]
CADMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
CALCIUM	58,500	61,900 J	57,100 J	81,700	[159]	[198]
CHROMIUM	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
COBALT	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u
COPPER	9.0 u	9.0 u	[9.8]	[23.5]	100	95.1
IRON	378	337	213	194	[56.0]	31.0 u
LEAD	1.0 uJ	1.0 u	1.0 uJ	[3.6] J	1.0 uJ	1.0 uJ
MAGNESIUM	27,200	26,300	25,200	32,600	90.0 u	90.0 u
MANGANESE	40.8	39.2	32.4	44.4	5.0 u	5.0 u
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	7.0 u	7.0 u	7.0 u	7.0 u	[10.7]	[9.8]
POTASSIUM	[1,310]	[1,470]	[1,500]	7,330 J	111 uJ	[162] J
SELENIUM	10.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ	1.0 uJ
SILVER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	[5.3]
SODIUM	15,100 J	17,500	16,200	6,200	1,500 u	1,500 u
THALLIUM	2.0 uJ	2.0 uJ	2.0 uJ	2.0 uJ	2.0 u	2.0 u
VANADIUM	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u	2.0 u
ZINC	485	442	580 J	2,270	26.9	51.8
CYANIDE	10.0 u	10.0 u	10.0 u	10.0 uJ	10.0 uJ	10.0 uJ

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
6. s - value determined by method of standard addition

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TABLE TM9-17 SUMMARY OF GROUNDWATER SAMPLING - JANUARY, 1988
METAMORA LANDFILL SITE, METAMORA TOWNSHIP, MICHIGAN

SAMPLE DESIGNATION	DATE SAMPLED	TIME SAMPLED	SAMPLING EQUIPMENT	ORGANIC TRAFFIC REPORT	INORGANIC TRAFFIC REPORT	COMMENTS
MW-1	1-27-1988	0910	BAILER	ES-243	MES-091	SILTY WATER; RUST COLORED
MW-3	1-19-1988	0845	PUMP	ER-627	MES-061	SILTY WATER
MW-4	1-25-1988	1130	PUMP	ES-241	MES-089	PURGED DRY AFTER 3 GALLONS; FOAMY; SLIGHT ODOR; SLIGHT TINT
MW-6-1	1-18-1988	1105	PUMP	ER-625	MES-059	BLACK TINTED WATER
MW-6-2	1-18-1988	1156	PUMP	ER-626	MES-060	BLACK TINTED WATER
MW-6-3	1-18-1988	1305	PUMP	ER-622	MES-056	BLACK TINTED WATER
MW-7-3	1-18-1988	1450	PUMP	ER-623	MES-057	ONLY ONE SCREEN SAMPLED; WATER CLEAR
MW-8	1-20-1988	1355	PUMP	ES-230	MES-078	CLEAR WATER
MW-9	1-19-1988	0930	PUMP	ER-628	MES-062	SILTY WATER
MW-10S	1-19-1988	1515	PUMP	ER-635	MES-069	SILTY WATER; CLEARING AS IT PURGED
MW-10D	1-19-1988	1450	PUMP	ER-634	MES-068	CLEAR WATER
MW-11	1-19-1988	1345	PUMP	ER-632	MES-066	CLEAR WATER
MW-12	1-19-1988	1305	PUMP	ER-633	MES-067	CLEAR WATER
MW-13	1-20-1988	0900	PUMP	ER-637	MES-071	PURGED DRY AFTER 8 GALLONS; CLOUDY WATER
MW-14S	1-20-1988	1010	PUMP	ER-039	MES-073	CLEAR WATER
MW-14D	1-20-1988	0945	PUMP	ER-638	MES-072	CLEAR WATER
MW-15S	1-20-1988	1115	PUMP	ER-641	MES-075	SILTY WATER
MW-15D	1-20-1988	1055	PUMP	ER-640	MES-074	SILTY WATER
MW-16	1-20-1988	1255	PUMP	ES-228	MES-076	SILTY WATER
MW-17S	1-28-1988	1200	BAILER	ES-247	MES-095	FOAMY WATER; SLIGHT COLOR AND ODOR
MW-17I	1-25-1988	0957	PUMP	ES-239	MES-087	CLEAR WATER
MW-17D	1-25-1988	1047	PUMP	ES-240	MES-088	CLEAR WATER
MW-18	1-19-1988	1045	PUMP	ER-629	MES-063	CLEAR WATER
MW-19	1-19-1988	1130	PUMP	ER-630	MES-064	SILTY WATER

TABLE TH9-17 (cont.)

SAMPLE DESIGNATION	DATE SAMPLED	TIME SAMPLED	SAMPLING EQUIPMENT	ORGANIC TRAFFIC REPORT	INORGANIC TRAFFIC REPORT	COMMENTS
MW-20	1-20-1988	1445	PUMP	ES-231	MES-079	SILTY WATER
MW-21	1-21-1988	1255	PUMP	ES-236	MES-084	SILTY WATER
MW-23	1-20-1988	1515	PUMP	ES-232	MES-080	CLEAR WATER
MW-24	1-21-1988	1000	PUMP	ES-234	MES-082	CLEAR WATER
MW-25	1-21-1988	1035	PUMP	ES-235	MES-083	VERY SILTY WATER
MW-251	1-28-1988	1504	PUMP	ES-248	MES-096	SILTY WATER
MW-26	1-27-1988	1030	BAILER	ES-244	MES-092	VERY SILTY WATER
MW-27R	1-29-1988	1530	PUMP	EB-557	MES-102	CLEAR WATER
MW-28R	1-29-1988	1005	PUMP	EB-553	MES-098	CLEAR WATER
MW-30R	1-29-1988	1311	PUMP	EB-555	MES-100	CLEAR WATER
MW-31	1-25-1988	0837	PUMP	ES-238	MES-086	SILTY WATER; CLEARING AS IT PURGED
MW-101	1-18-1988	1030	PUMP	ER-621	MES-055	PUMP BLANK PRIOR TO SAMPLING
MW-102	1-18-1988	1505	PUMP	ER-624	MES-058	PUMP BLANK AFTER MW-7-3
MW-103	1-19-1988	1535	PUMP	ER-636	MES-070	PUMP BLANK AFTER MW-105
MW-104	1-20-1988	1540	PUMP	ES-233	MES-081	PUMP BLANK AFTER MW-23
MW-105	1-21-1988	1320	PUMP	ES-237	MES-085	PUMP BLANK AFTER MW-21
MW-106	1-25-1988	1200	PUMP	ES-242	MES-090	PUMP BLANK AFTER MW-4
MW-107	1-27-1988	1230	BAILER	ES-245	MES-093	BAILER BLANK AFTER MW-26
MW-108	1-28-1988	1530	PUMP	ES-249	MES-097	PUMP BLANK AFTER MW-251
MW-109	1-29-1988	1530	PUMP	EB-556	MES-101	PUMP BLANK AFTER MW-27R
DUP-1	1-19-1988	---	PUMP	ER-631	MES-065	DUPLICATE OF MW-19
DUP-2	1-20-1988	---	PUMP	ES-229	MES-077	DUPLICATE OF MW-16
DUP-3	1-28-1988	---	BAILER	ES-246	MES-094	DUPLICATE OF MW-175
DUP-4	1-29-1988	---	PUMP	EB-554	MES-099	DUPLICATE OF MW-28R

TABTH9-18.WK1
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TABLE TH9-18 STATIC WATER LEVEL ELEVATIONS - JANUARY, 1988
METAMORA LANDFILL SITE, METAMORA TOWNSHIP, MICHIGAN

WELL NO.	DEPTH TO WATER	TOP OF CASING	STATIC WATER LEVEL ELEVATION
MW-1	72.17	1076.48	1004.31
MW-3	65.55	1069.62	1004.07
MW-4	20.30	1101.65	1081.35
MW-6	83.99	1087.98	1003.99
MW-7	84.62	1089.36	1004.74
MW-8	93.04	1097.30	1004.26
MW-9	120.59	1131.13	1010.54
MW-10S	112.69	1120.13	1007.44
MW-10D	111.15	1118.79	1007.64
MW-11	107.41	1114.20	1006.79
MW-12	106.45	1114.24	1007.79
MW-13	132.52	1139.84	1007.32
MW-14S	140.12	1145.53	1005.41
MW-14D	142.06	1147.61	1005.55
MW-15S	120.34	1125.83	1005.49
MW-15D	121.34	1126.95	1005.61
MW-16	100.40	1103.94	1003.54
MW-17S	66.45	1072.09	1005.64
MW-17I	70.50	1068.81	998.31
MW-17D	66.65	1073.35	1006.70
MW-18	127.19	1136.15	1008.96
MW-19	140.68	1148.88	1008.20
MW-20	95.11	1103.02	1007.91
MW-21	117.80	1122.86	1005.06
MW-23	62.18	1064.75	1002.57
MW-24	85.93	1088.54	1002.61
MW-25	110.89	1113.92	1003.03
MW-25I	114.38	1113.94	999.56
MW-26	148.48	1148.90	1000.42
MW-27R	154.82	1133.79	978.97
MW-28R	99.39	1075.82	976.43
MW-30R	148.88	1126.26	977.38
MW-31	72.60	1072.13	999.53

Notes:

1. MW-6 and MW-7 have multiple screens.
2. All measurements are expressed in feet.
3. MW-29 was not sampled.

TABTH9-19.WK1
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TABLE TH9-19 INDICATOR PARAMETERS MEASURED DURING WELL EVACUATION - JANUARY, 1988
METADRA LANDFILL SITE, METAMORA TOWNSHIP, MICHIGAN

WELL NO.	T(C)	COND	pH	T(C)	COND	pH	T(C)	COND	pH	T(C)	COND	pH
MM-1	---	---	---	---	---	---	---	---	---	1.2	470	5.5
MM-3	3.2	670	6.7	2.3	720	6.7	2.7	740	7.0	1.0	760	6.7
MM-4	1.0	1980	8.7	---	1880	6.4	---	---	---	---	---	---
MM6-1	1.3	410	6.4	2.6	1110	6.5	1.9	930	6.5	1.4	910	6.5
MM6-2	2.4	850	6.5	2.5	850	6.5	2.9	850	6.5	3.0	840	6.6
MM6-3	2.4	830	6.4	3.0	860	6.4	3.3	860	6.4	3.3	870	6.5
MM7-3	3.2	800	6.4	3.0	940	6.4	3.4	940	6.4	4.0	970	6.4
MM-8	5.0	882	6.8	4.0	960	6.8	4.7	966	6.5	4.1	973	6.7
MM-9	3.3	---	7.4	---	---	---	---	---	---	---	---	---
MM-10S	---	900	7.2	---	910	6.8	---	950	6.7	---	950	6.7
MM-10D	---	790	6.9	---	870	6.8	---	880	6.8	---	910	6.8
MM-11	---	940	6.8	---	940	6.8	---	940	6.8	---	950	6.7
MM-12	---	677	7.0	---	695	6.9	---	780	6.9	---	800	6.9
MM-13	4.2	658	7.0	3.3	688	7.0	---	---	---	---	---	---
MM-14S	3.3	1046	6.8	3.5	1072	6.9	2.3	1075	6.8	3.3	1066	6.9
MM-14D	2.5	394	7.1	3.5	1013	6.8	2.7	1025	6.8	3.2	996	6.9
MM-15S	7.4	915	6.6	3.3	1303	6.6	3.2	1293	6.2	3.1	1302	6.4
MM-15D	2.4	1185	6.6	2.4	1197	5.8	3.2	1190	6.6	2.6	1210	6.5
MM-16	2.9	763	6.7	3.5	785	6.7	4.1	783	7.2	3.6	785	6.8
MM-17S	---	---	---	---	---	---	---	---	---	---	---	---
MM-17I	2.8	1110	7.1	2.1	770	7.4	1.9	920	7.3	2.1	860	7.3
MM-17D	6.2	510	7.9	2.6	450	7.9	2.4	820	7.6	2.6	810	7.7
MM-18	---	990	6.8	---	1000	6.8	---	980	6.8	---	1000	6.8
MM-19	---	1002	7.5	---	872	6.8	---	884	6.7	---	902	6.7
MM-20	1.0	495	6.7	1.7	789	6.8	2.2	821	6.7	2.0	830	6.5
MM-21	2.9	1151	6.2	1.0	1175	6.2	2.5	1250	6.1	---	1260	6.2
MM-23	3.1	935	6.6	2.7	948	6.7	3.1	937	6.7	2.6	947	6.8
MM-24	5.2	930	6.3	2.6	999	6.5	2.0	1037	6.4	2.8	1060	6.4
MM-25	2.2	1129	6.3	2.0	1168	6.3	1.7	1167	6.3	2.3	1146	6.3
MM-25I	3.8	660	5.7	2.6	810	5.7	2.8	810	5.9	2.7	800	5.9
MM-26	1.0	1090	5.5	---	---	---	---	---	---	---	---	---
MM-27R	3.2	980	6.0	3.6	980	6.3	3.3	960	6.2	3.4	970	6.2
MM-28R	2.7	630	6.0	3.2	840	5.9	4.1	870	6.0	4.2	880	610.0
MM-29R	---	---	---	---	---	---	---	---	---	---	---	---
MM-30R	---	---	7.0	5.0	900	6.7	4.7	850	6.1	4.4	910	6.1
MM-31	2.6	740	7.1	2.6	810	7.1	2.3	810	7.1	2.5	530	7.1

1. T(C) - Temperature in degrees celsius
2. COND - Specific conductance in uahos/cm
3. pH is expressed in standard units
4. MM-29R was not sampled.

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-1DATE 1-27-88SKETCH ON BACK ☐

YES NO

PHOTOGRAPHS ☐

YES NO

ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 72.17☐ TOP WELLWELL DEPTH 81WELL MATERIAL GALV☒ TOP CASINGWELL ID. # 2WELL STOCK-UP WELL/CASING

EQUIPMENT USED

PURGE

SAMPLE

NECK

NECK

CED

CED

SSBAIL ☒SSBAIL ☒OTHER OTHER

PURGE TIME

SAMPLE TIME

START 0915START 0910END 0900END 0910WEATHER overcast, cold

9 FT. WATER X .163 (2"=1.63 gal/ft) X 3 CASING VOLUME = 5 GAL PURGED
(4"=1.65 gal/ft)
(5"=1.7 gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ WET☐ W-BOTTLEVCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

BOTTLE NO. 1BOTTLE NO. 2BOTTLE NO. 3BOTTLE NO. 5TEMP. °CTEMP. °CTEMP. °CTEMP. 1.2 °CSPEED RPMSPEED RPMSPEED RPMSPEED 470 RPMPH PH PH PH 5.52EN EN EN EN

BOTTLE NO.

VOL.

MATERIAL

FILTERED PRES/VOL.

ANALYSIS REQUESTED

12	80ml	WATER	No	/	VOLATILES
213	2L	WATER	No	/	SEMI-VOLS
4	1L	WATER	YES	HNO3 2M	METALS
5	1L	WATER	No	2M	CYANIDE (CN-)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS WATER SILTY & RUSTY COLOREDORGANIC TRAFFIC REPORT # ES 243INORGANIC TRAFFIC REPORT # MES 091SAMPLER JRM/DMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO / LOCATION W-3DATE 11-87SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO / EXPOSURE NO _____

WELL DATA

WATER DEPTH 65.55☐ TOP WELLWELL DEPTH 102'WELL WATER LEVEL GLV☒ TOP CASINGWELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK <u>X</u>	NECK <u>X</u>
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 0834END 0840

SAMPLE TIME

START 0840END 0845WEATHER overcast, foggy, cool

36 FT. WATER X .63 (2"=.163gal/ft) X 3 CASING VOLUME = 18 GAL PURGED
 (4"=.553gal/ft) X 3 CASING VOLUME = 18 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GALTEMP 3.2 °CSP COND .70 @25°CPH 6.72

EN _____

Q 6 GALTEMP 3.3 °CSP COND .720 @25°CPH 6.72

EN _____

Q 12 GALTEMP 2.7 °CSP COND .44 @25°CPH 7.0

EN _____

Q 18 GALTEMP 1.0 °CSP COND .760 @25°CPH 6.70

EN _____

BOTTLE ID _____

*

VOL MATERIAL FILTERED PRES / VOL

ANALYSIS REQUESTED

7 and 8	80ml	WATER	No	~~1~~ VOLATILES
9 and 10	2L	WATER	No	~~1~~ SEMI-VOLS
11	1L	WATER	YES	~~2ml~~ HNO ₃ METALS
12	1L	WATER	No	~~2ml~~ CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS H₂O level meter lost in well, lost sampling round. H₂O appears silty. 9:40 Pump and logORGANIC TRAFFIC REPORT ER 627INORGANIC TRAFFIC REPORT MES 061SAMPLER JRM, DMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION 4W 4 DATE 7-25-82SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 20.30 ☐ TOP WELL WELL DEPTH 32 WELL MATERIAL 642V
☒ TOP CASING WELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE
NECK ☒ NECK ☒
CED ☒ CED ☒
SSBAIL ☐ SSBAIL ☐
OTHER ☐ OTHER ☐

PURGE TIME

SAMPLE TIME

START 113
END 119START 1117
END 1128WEATHER overcast cold12 FT. WATER X .163 (2"=.163gal/ft)
X 3 (4"=.653gal/ft) CASING VOLUME = 6 GAL PURGED
(5"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU
☐ NEEDLEVGA LEVEL (FFM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

ID 2 GAL @ 2 GAL TEMP _____ °C
TEMP 1.0 °C SPEED 950 @ 25°C SP. COND. 115 @ 25°C PH 6.42
PH 8.23 EN _____

BOTTLE ID

VOL MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

13 and 114	80ml	WATER	No	☒	VOLATILES
115 and 116	2L	WATER	No	☒	SEMI-VOLS
117	1L	WATER	YES	☒	NO ₃ METALS
118	1L	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS Purged dry aft. 3 gallons WATER HAS SLIGHT TINT, FOAMY
SLIGHT ODOOR.
ORGANIC TRAFFIC REPORT # ES241
INORGANIC TRAFFIC REPORT # MES 089 SAMPLER JRM/DM D

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-6-1 DATE 1-18-88SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 83.99 ☐ TOP WELL WELL DEPTH 140' WELL MATERIAL GALV.
☒ TOP CASING WELL DIAM 4"

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE
NECK ☒ NECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____

PURGE TIME

START 1055
END 1059

SAMPLE TIME

START 1059
END 1105WEATHER CLOUDY 30°F. $(2" = .163 \text{ gal/ft})$
2 FT. WATER X .653 (4" = .653 gal/ft) X 3 CASING VOLUME = 4 GAL PURGED
 $(6" = 1.47 \text{ gal/ft})$

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

BOTTLE ID	VOL	MATERIAL	FILTERED PRES/VOL.	ANALYSIS REQUESTED
19	0	GAL		
TEMP	1.3	°C		
SP COND	.41	@25°C		
PH	6.42			
20	1	GAL		
TEMP	2.6	°C		
SP COND	1.11	@25°C		
PH	6.52			
21	2	GAL		
TEMP	1.9	°C		
SP COND	.93	@25°C		
PH	6.44			
22	1.4	GAL		
TEMP	1.4	°C		
SP COND	.90	@25°C		
PH	6.48			

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL.

ANALYSIS REQUESTED

19 and 20	80ml	WATER	No	☒	VOLATILES
21 and 22	2L	WATER	No	☒	SEMI-VOLS
23	1L	WATER	YES	☒	NO ₃ METALS
24	1L	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS USE 4" PACKER @ 2' 4" has black tint.ORGANIC TRAFFIC REPORT EL 625INORGANIC TRAFFIC REPORT MES 059SAMPLER JRM / OMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW6-2DATE 1-18-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☒ TOP WELL
☐ TOP CASINGWELL DEPTH 140'WELL DIAM 4"WELL MATERIAL galvanized

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 11:16aEND 11:46

SAMPLE TIME

START 11:50END 11:56

WEATHER

overcast cloudy

15' FT. WATER X 653 (2"=.163gal/ft) X 3 CASING VOLUME = 30 GAL PURGED
 (4"=.653gal/ft) X
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① 0 GALTEMP 2.4 °CSP COND 85 @25°CPH 6.51

EN _____

② 5 GALTEMP 2.5 °CSP COND 85 @25°CPH 6.50

EN _____

③ 10 GALTEMP 2.9 °CSP COND 85 @25°CPH 6.48

EN _____

④ 15 GALTEMP 3.0 °CSP COND 84 @25°CPH 6.54

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

25 and 26	80ml	WATER	No	—	VOLATILES
27 and 28	2L	WATER	No	—	SEMI-VOLS
29	1L	WATER	YES	11NO3 2ml	METALS
30	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Well Has Black Tint.ORGANIC TRAFFIC REPORT ER 626INORGANIC TRAFFIC REPORT MES 060SAMPLER JRM/DMD

EC JORDAN CO.

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-6-3DATE 1-18-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☒ TOP WELL
☐ TOP CASINGWELL DEPTH 140'WELL DIAM 4"WELL MATERIAL 6xV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
GED _____	GED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 12:05END 12:56

SAMPLE TIME

START 12:56END 1:05WEATHER overcast, cool

26 FT. WATER X .653 (2"=.163 gal/ft) X 3 CASING VOLUME = .51 GAL PURGED
 (4"=.653 gal/ft) (6"=1.47 gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT _____

N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GAL
 TEMP 2.4 °C
 SP COND .43 @ 25°C
 PH 6.38
 EN _____

Q 5 GAL
 TEMP 3.0 °C
 SP COND .46 @ 25°C
 PH 6.38
 EN _____

Q 35 GAL
 TEMP 3.2 °C
 SP COND .48 @ 25°C
 PH 6.38
 EN _____

Q 50 GAL
 TEMP 3.3 °C
 SP COND .47 @ 25°C
 PH 6.45
 EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

31 and 32	80ml	WATER	No	—	VOLATILES
33 and 34	2L	WATER	No	—	SEMI-VOLS
35	1L	WATER	YES	HAZAR 2ml	METALS
36	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS WATER ~~Clear~~ HAS BLACK TINT.ORGANIC TRAFFIC REPORT ER 622INORGANIC TRAFFIC REPORT MES 056SAMPLER JRM/DMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-7-3DATE 1-18-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 83.55 ± 1.07
(84.62) ☐ TOP WELL
☒ TOP CASINGWELL DEPTH 114'
WELL DIAM 4"WELL MATERIAL GLV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE
NECK ☒ NECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____

PURGE TIME

START 1340END 1440

SAMPLE TIME

START 1445END 1450WEATHER Partly sunny, cool

(2"=.163gal/ft)
29 FT. WATER X .653 (4"=.653gal/ft) X 3 CASING VOLUME = 58 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU
☐ INJECTILEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GALTEMP 3.2 °CSP COND 100 @25°CPH 6.35

EN _____

Q 20 GALTEMP 3.0 °CSP COND 940 @25°CPH 6.4

EN _____

Q 40 GALTEMP 3.4 °CSP COND 940 @25°CPH 6.4

EN _____

Q 58 GALTEMP 4.0 °CSP COND 970 @25°CPH 6.4

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES /VOL

ANALYSIS REQUESTED

<u>49 and 43</u>	<u>80ml</u>	<u>WATER</u>	<u>No</u>	<u>---</u>	<u>VOLATILES</u>
<u>51 and 52</u>	<u>2L</u>	<u>WATER</u>	<u>No</u>	<u>---</u>	<u>SEMI-VOLS</u>
<u>53</u>	<u>1L</u>	<u>WATER</u>	<u>YES</u>	<u>HNO3</u>	<u>2M METALS</u>
<u>54</u>	<u>1L</u>	<u>WATER</u>	<u>No</u>	<u>---</u>	<u>CYANIDE (CN⁻)</u>

REMARKS/OBSERVATIONS Water CurvesORGANIC TRAFFIC REPORT EQ 623INORGANIC TRAFFIC REPORT MES 057SAMPLER TRM / DMO

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-4DATE 1-20-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 93.04☐ TOP WELL
☒ TOP CASINGWELL DEPTH 140WELL DIAM 2"WELL MATERIAL 6ALVWELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
QED ☐	QED ☐
SSBAIL ☐	SSBAIL ☐
OTHER ☐	OTHER ☐

PURGE TIME

START 1320END 1350

SAMPLE TIME

START 1350END 1355WEATHER overcast, cold

47 FT. WATER X .163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 24 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

Q 6 GALTEMP 5.0 °CSP COND 842 @25°CPH 6.30EH Q 8 GALTEMP 4.0 °CSP COND 960 @25°CPH 6.50EH Q 16 GALTEMP 4.7 °CSP COND 966 @25°CPH 6.50EH Q 24 GALTEMP 4.1 °CSP COND 973 @25°CPH 6.74EH

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

55 and 56	80ml	WATER	No	☒	VOLATILES
57 and 58	2L	WATER	No	☒	SEMI-VOLS
59	1L	WATER	YES	☒	NO ₃ METALS
60	1L	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS

Water ClearJRM/DMDORGANIC TRAFFIC REPORT #5230INORGANIC TRAFFIC REPORT #HES 018

SAMPLER

JRM/DMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION NW-9 DATE 1-19-88SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 120.5' ☐ TOP WELL WELL DEPTH 133.5' WELL MATERIAL GLV
☒ TOP CASING WELL DIAM. 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER Overcast, foggy, 40°/50°
PURGE SAMPLE
KECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____
START 0915 START 0925
END 0925 END 0930 $(2" = .163 \text{ gal/ft})$
13 FT. WATER X .163 $(4" = .653 \text{ gal/ft})$ X 3 CASING VOLUME = 7 GAL PURGED
 $(6" = 1.47 \text{ gal/ft})$

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____

SAMPLE PURGE DATA

BOTTLE ID _____ VOL _____ MATERIAL _____ FILTERED PRES/VOL _____ ANALYSIS REQUESTED _____
① 0 GAL ② 2 GAL ③ 5 GAL ④ 7 GAL
TEMP. 33 °C TEMP. _____ °C TEMP. _____ °C TEMP. 50 °C
SP COND. _____ @25°C SP COND. 4E @25°C SP COND. 100 @25°C SP COND. REMARKS @25°C
PH 7.38 PH _____ PH _____ PH _____
EN _____ EN _____ EN _____ EN _____

61:62	80ml	WATER	NO	~~---~~	VOLATILES
63:64	2L	WATER	NO	~~---~~	SEMI-VOLS
65	1L	WATER	YES	~~---~~	METALS
66	1L	WATER	NO	~~---~~	CYANIDE (CN ⁻)
				~~---~~	
				~~---~~	
				~~---~~	
				~~---~~	

REMARKS/OBSERVATIONS Believe probes on tripper freezing up. Will get backup tripper on next well. WATER SATORGANIC TRAFFIC REPORT EE 628INORGANIC TRAFFIC REPORT MPS 012

JRM / WMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO. 4465-924STATION NO/LOCATION MW-105DATE 1-19-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒ROLL NO/EXPOSURE NO 1

WELL DATA

WATER DEPTH 112.69☐ TOP WELL
☒ TOP CASINGWELL DEPTH 123WELL DIAM 2"WELL MATERIAL GALVWELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
QED ☒	QED ☒
SSBAIL ☐	SSBAIL ☐
OTHER ☐	OTHER ☐

PURGE TIME

START 1504
END 1510

SAMPLE TIME

START 1510
END 1515WEATHER cloudy, cold

11 FT. WATER X .163 (2"=.163gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 6 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

① 0 GALTEMP °CSPEC COND 900 @25°CPH 7.23EN ② 2 GALTEMP °CSPEC COND 910 @25°CPH 6.76EN ③ 4 GALTEMP °CSPEC COND 950 @25°CPH 6.74EN ④ 6 GALTEMP °CSPEC COND 950 @25°CPH 6.74EN

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

67 and 68	80ml	WATER	No	☒	VOLATILES
69 and 70	2L	WATER	No	☒	SEMI-VOLS
71	1L	WATER	YES	☒	METALS
72	1L	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS

WATER SILTY CLEARED AS PURGEDORGANIC TRAFFIC REPORT ER 635INORGANIC TRAFFIC REPORT MES 069SAMPLER JRA/DMP

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-100 DATE 1-19-81SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 111.15 ☐ TOP WELL WELL DEPTH 175' WELL MATERIAL GAU
☒ TOP CASING WELL DIAM 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER cloudy, cold
PURGE SAMPLE
KECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____* (10) (2"=.163gal/ft) (5)
64 FT. WATER X .163 (4"=.653gal/ft) X 3 CASING VOLUME = 32 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____

SAMPLE PURGE DATA

① 0 GAL ② 10 GAL ③ 20 GAL ④ 30 GAL
TEMP _____ °C TEMP _____ °C TEMP _____ °C TEMP _____ °C
SP COND 790 @25°C SP COND 870 @25°C SP COND 810 @25°C SP COND 910 @25°C
PH 6.90 PH 6.83 PH 6.84 PH 6.81
EN _____ EN _____ EN _____ EN _____

BOTTLE ID

VOL MATERIAL FILTERED PRES./VOL.

ANALYSIS REQUESTED

73 and 74	80ml	WATER	No	☒	VOLATILES
75 and 76	2L	WATER	No	☒	SEMI-VOLS
77	1L	WATER	YES	☒	HEAVY METALS
78	1L	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS Packer off at 105L. unable to inflate packer. WATER CLEARORGANIC TRAFFIC REPORT # ERL634INORGANIC TRAFFIC REPORT # MES068SAMPLER SRM / DMD

ECUORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-11DATE 1-19-88SKETCH ON BACK ☐ ☒ YES NOPHOTOGRAPHS ☐ ☒ YES NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 107.41☐ TOP WELL
☒ TOP CASINGWELL DEPTH 139'
WELL DIAM. 2"WELL MATERIAL SALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER overcast, fog, cold

PURGE SAMPLE

KECK ☒ KECK ☒

QED _____ QED _____

SSBAIL _____ SSBAIL _____

OTHER _____ OTHER _____

START 1325START 1341END 1341END 1345

32 FT. WATER X 1.63 (2" = .163 gal/ft)
 (4" = .653 gal/ft) X 3 CASING VOLUME = 16 GAL PURGED
 (6" = 1.47 gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GALQ 15 GALQ 10 GALQ 16 GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND 940 @ 25°CSP COND 940 @ 25°CSP COND 940 @ 25°CSP COND 450 @ 25°CPH 6.78PH 6.72PH 6.70PH 6.74

EN _____

EN _____

EN _____

EN _____

BOTTLE ID _____

VOL. MATERIAL FILTERED PRES./VOL.

ANALYSIS REQUESTED

77.50	80m	WATER	No	☒	VOLATILES
81.82	2L	WATER	No	☒	SEMI-VOLS
83	1L	WATER	YES	☒	METALS
84	1L	WATER	No	☒	CYANIDE (CN ⁻)
				☒	
				☒	
				☒	
				☒	

REMARKS/OBSERVATIONS WATER CLEARORGANIC TRAFFIC REPORT EX-632INORGANIC TRAFFIC REPORT NES 066

TRM/AMN

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDELLJOB NO 4465-94

STATION NO/LOCATION

MW-12DATE 1-19-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 106.45☐ TOP WELLWELL DEPTH 127WELL MATERIAL GLV☒ TOP CASINGWELL DIAM 2"WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER cloudy, fog, cold

PURGE SAMPLE

KECK X KECK XQED QED SSBAIL SSBAIL OTHER OTHER START 1247START 1300END 1300END 1305

(2"=.163gal/ft)
21 FT. WATER X .163 (4"=.653gal/ft) X 3 CASING VOLUME = 11 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

① 0 GAL② 4 GAL③ 5 GAL④ 11 GALTEMP °CTEMP °CTEMP °CTEMP °CSP COND 677 @25°CSP COND 675 @25°CSP COND 780 @25°CSP COND 800 @25°CPH 6.96PH 6.90PH 6.92PH 6.92EN EN EN EN BOTTLE ID

VOL MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

85 : 86	80ml	WATER	No	/	VOLATILES
87 : 88	2L	WATER	No	/	SEMI-VOLS
89	1L	WATER	YES	HNO ₃ 2ml	METALS
90	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS WATER CLEARORGANIC TRAFFIC REPORT MES 067INORGANIC TRAFFIC REPORT ER 633SAMPLER JRM/DMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORPHIC LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-133 DATE 1-20-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 132.52 ☐ TOP WELL WELL DEPTH 163 WELL MATERIAL GALV
☒ TOP CASING WELL DIAM 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER partly cloudy 45°
PURGE SAMPLE START 0840 START 0855
NECK ☒ NECK ☒ END 0855 END 0900
QED QED
SSBAIL SSBAIL
OTHER OTHER31 FT. WATER X .163 (2"=.163gal/ft) 3 CASING VOLUME = 16 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
0		5		10		16	
TEMP <u>4.2</u> °C		TEMP <u>3.3</u> °C		TEMP _____ °C		TEMP _____ °C	
SPEED <u>654</u> @25°C		SPEED <u>648</u> @25°C		SPEED _____ @25°C		SPEED _____ @25°C	
PH <u>7.04</u>		PH <u>7.04</u>		PH _____		PH _____	
EN _____		EN _____		EN _____		EN _____	

BOTTLE NO

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

91 and 92	80ml	WATER	No	—	VOLATILES
93 and 94	2L	WATER	No	—	SEMI-VOLS
95	1L	WATER	YES	HNO3 2M	METALS
96	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Purged dry w/ 8 gallons WATER CORONORGANIC TRAFFIC REPORT ** ER 637INORGANIC TRAFFIC REPORT ** MEG 071SAMPLER JRM/DMJ

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-145DATE 1-20-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 140.12☐ TOP WELL
☒ TOP CASINGWELL DEPTH 147WELL DIA 2"WELL MATERIAL GALV

WELL STOCK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER overcast cool

PURGE _____ SAMPLE _____

NECK ☒ NECK ☒

CED _____ CED _____

SSBAIL _____ SSBAIL _____

OTHER _____ OTHER _____

START 1000START 1015END 1005END 1010

7' WATER X 163 (2" = .163 gal/ft) X 3 CASING VOLUME = 4 GAL PURGED
 (4" = .653 gal/ft)
 (6" = 1.147 gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITUVCA LEVEL (PPM) AMBIENT N/A☐ IN BOTTLE

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

ID 0 GALID 1 GALID 3 GALID 4 GALTEMP 3.3 °CTEMP 3.5 °CTEMP 2.3 °CTEMP 3.3 °CSP COND 1046 @ 25°CSP COND 1072 @ 25°CSP COND 1075 @ 25°CSP COND 1066 @ 25°CPH 6.82PH 6.90PH 6.83PH 6.87

ED _____

ED _____

ED _____

ED _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

92 ml 98	80ml	WATER	No	—	VOLATILES
99 ml 100	2L	WATER	No	—	SEMI-VOLS
101	1L	WATER	YES	HNO ₃ 2ml	METALS
102	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Water Clear.ORGANIC TRAFFIC REPORT # ER 039INORGANIC TRAFFIC REPORT # MES 073SAMPLER TCM / DMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

1w-14 DDATE 1-20-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 142.06☐ TOP WELL
☒ TOP CASINGWELL DEPTH 158'WELL Casing 2"WELL MATERIAL Galv

WELL STOCK-UP

WELL CASING

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER cloudy, 40°

PURGE SAMPLE

START 09:30START 09:40HECK ☒ HECK ☒END 09:40END 09:45

QED QED

SSBAIL SSBAIL

OTHER OTHER

(16 FT. WATER X .163 (44" = .653 gal/ft) X 3 CASING VOLUME = 8 GAL PURGED
(5" = 1.47 gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITUVCA LEVEL (PPM) AMBIENT N/A☐ IN BOTTLE

SAMPLE LOCATION

HEADSPACE

SAMPLE PURGE DATA

ID 0 GALID 3 GALID 6 GALID 8 GALTEMP 2.5 °CTEMP 3.5 °CTEMP 2.7 °CTEMP 3.2 °CSPCOND 394 @25°CSPCOND 012 @25°CSPCOND 1025 @25°CSPCOND 796 @25°CPH 7.14PH 7.44PH 7.84PH 6.88

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL.

ANALYSIS REQUESTED

103 and 104	80ml	WATER	No	~~---~~	VOLATILES
105 and 106	2L	WATER	No	~~---~~	SEMI-VOLS
107	1L	WATER	YES	HNO ₃ 2ml	METALS
108	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Water ClearORGANIC TRAFFIC REPORT # ER 638INORGANIC TRAFFIC REPORT # MES 072SAMPLER SRM/MD

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MN-153DATE 1-20-98SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 120.34☐ TOP WELL
☒ TOP CASINGWELL DEPTH 126WELL DIAM 2"WELL MATERIAL GALVWELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED ☐	QED ☐
SSBAIL ☐	SSBAIL ☐
OTHER ☐	OTHER ☐

PURGE TIME

START 1105END 1110

SAMPLE TIME

START 1110END 1115WEATHER overcast, cold

6 FT. WATER X .163 (2"=.163gal/ft) X 3 CASING VOLUME = 3 GAL PURGED
 (4"=.653gal/ft) X 3 CASING VOLUME = 3 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT N/ASAMPLE LOCATION HEADSPACE

SAMPLE PURGE DATA

Q 6 GALTEMP 3.4 °CSPEC COND 915 @25°CPH 6.57Eh Q 1 GALTEMP 3.3 °CSPEC COND 1303 @25°CPH 6.56Eh Q 2 GALTEMP 3.2 °CSPEC COND 1292 @25°CPH 6.21Eh Q 3 GALTEMP 3.1 °CSPEC COND 1302 @25°CPH 6.40Eh

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

109 ml 110	80ml	WATER	No	—	VOLATILES
111 ml 112	2L	WATER	No	—	SEMI-VOLS
113	1L	WATER	YES	HNO3 2ml	METALS
114	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS WATER SALTYORGANIC TRAFFIC REPORT # EL 641INORGANIC TRAFFIC REPORT # MES 075SAMPLER JRM/DM P

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-150DATE 1-20-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 121.34 ☐ TOP WELL
☒ TOP CASINGWELL DEPTH 134
WELL DIAM 2"WELL MATERIAL CACT

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 10:40
END 10:50

SAMPLE TIME

START 10:50
END 10:55WEATHER overcast, cool

13 FT. WATER X .163 (2"=.163gal/ft)
3 CASING VOLUME = 7 GAL PURGED
(4"=.553gal/ft) X
(5"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT

N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GAL
TEMP 2.4 °C
SP COND 1145 @25°C
PH 6.60
EN _____

Q 2 GAL
TEMP 2.4 °C
SP COND 1197 @25°C
PH 5.78
EN _____

Q 4 GAL
TEMP 3.2 °C
SP COND 1190 @25°C
PH 6.58
EN _____

Q 7 GAL
TEMP 2.6 °C
SP COND 1210 @25°C
PH 6.54
EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

211 and 212	80ml	WATER	No	~~YES~~	VOLATILES
213 and 214	2L	WATER	No	~~YES~~	SEMI-VOLS
215	1L	WATER	YES	~~NO~~	METALS
216	1L	WATER	No	~~YES~~	CYANIDE (CN ⁻)
				~~YES~~	
				~~YES~~	
				~~YES~~	
				~~YES~~	

REMARKS/OBSERVATIONS Water SILTYORGANIC TRAFFIC REPORT **ER 640INORGANIC TRAFFIC REPORT **MES074

TOM/NAH

EC JORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-16 DATE 1-20-84SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO _____WELL DATA 100.40
WATER DEPTH 113' ☐ TOP WELL WELL DEPTH 113' WELL MATERIAL GALV
☒ TOP CASING WELL DIA 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED
PURGE SAMPLE
KECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____
PURGE TIME SAMPLE TIME
START 1240 START 1250
END 1247 END 1255
WEATHER overcast, cold13 FT. WATER X .163 (2"=.163gal/ft) X 3 CASING VOLUME = 7 GAL PURGED
(4"=.653gal/ft)
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE
VCA LEVEL (FFM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	TEMP	SP COND	pH	Q	TEMP	SP COND	pH	Q	TEMP	SP COND	pH	Q	TEMP	SP COND	pH
0 GAL	2.9 °C	763 @25°C	6.70	2 GAL	3.5 °C	785 @25°C	6.74	4 GAL	4.1 °C	783 @25°C	7.20	7 GAL	3.6 °C	795 @25°C	6.80

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

115 and 116	80ml	WATER	No	—	VOLATILES
117 and 118	2L	WATER	No	—	SEMI-VOLS
119	1L	WATER	YES	HNO ₃ 2ml	METALS
120	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS 4.2 is siltyORGANIC TRAFFIC REPORT ES 020INORGANIC TRAFFIC REPORT HS 076SAMPLER JRM / DMJ

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-175DATE 1-29-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 6.5☐ TOP WELL
☒ TOP CASINGWELL DEPTH 78WELL DIAM 2"WELL MATERIAL GALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK _____	NECK _____
QED _____	QED _____
SSBAIL ☒	SSBAIL ☒
OTHER _____	OTHER _____

PURGE TIME

START 1145
END 1145

SAMPLE TIME

START 1145
END 1200WEATHER partly cloudy, cold

(2"=.163gal/ft)
12 FT. WATER X .163 (4"=.653gal/ft) X 3 CASING VOLUME = 6 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT _____

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL

② _____ GAL

③ _____ GAL

④ _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP 1 °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

Eh _____

Eh _____

Eh _____

Eh _____

BOTTLE ID _____

VOL _____

MATERIAL _____

FILTERED PRES/VOL _____

ANALYSIS REQUESTED _____

21-222	82ml	WATER	No	/	VOLATILES
123-124	2l	WATER	No	/	SEMI-VOLS
125	1l	WATER	YES	HNO3 2ml	METALS
126	1l	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS Triplet broken WATER SLIGHT COLOR, FROTHY AND SLIGHT ODO.ORGANIC TRAFFIC REPORT # ES247INORGANIC TRAFFIC REPORT # MES045SAMPLER IRM/DMD

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-17D DATE 1-25-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 66.65 ☐ TOP WELL WELL DEPTH 120' WELL MATERIAL CALV
☒ TOP CASING WELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE SAMPLE
KECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____

PURGE TIME

START 10:15
END 10:42

SAMPLE TIME

START 10:42
END 10:47WEATHER overcast, c. 1053 FT. WATER X 163 (2"=.163gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 27 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① 0 GALTEMP 6.7 °CSP COND 510 @25°CPH 7.19

EN _____

② 3 GALTEMP 21.6 °CSP COND 450 @25°CPH 7.93

EN _____

③ 9 GALTEMP 2.4 °CSP COND 420 @25°CPH 7.63

EN _____

④ 27 GALTEMP 2.6 °CSP COND 810 @25°CPH 7.68

EN _____

BOTTLE ID

VOL MATERIAL FILTERED PRES./VOL.

ANALYSIS REQUESTED

127 and 128	80ml	WATER	No	~~---~~	VOLATILES
129 and 130	2L	WATER	No	~~---~~	SEMI-VOLS
131	1L	WATER	YES	~~HAZ~~	METALS
132	1L	WATER	No	~~---~~	CYANIDE (CN ⁻)
				~~---~~	
				~~---~~	
				~~---~~	
				~~---~~	

REMARKS/OBSERVATIONS WATER CLEARORGANIC TRAFFIC REPORT ** ES240INORGANIC TRAFFIC REPORT ** MES088SAMPLER JRM/MD

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-17E DATE 1-25-88SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 70.50 ☐ TOP WELL WELL DEPTH 150' WELL MATERIAL GALV
☒ TOP CASING WELL DIAM 2"WELL STICK-UP WELL/CASING

EQUIPMENT USED

PURGE ☒ SAMPLE ☒
KECK ☒ KECK ☒
QED ☐ QED ☐
SSBAIL ☐ SSBAIL ☐
OTHER ☐ OTHER ☐

PURGE TIME

START 0912
END 0952

SAMPLE TIME

START 0952
END 0957WEATHER overcast, cold80 FT. WATER X 2.163 (2"=.163gal/ft) X 3 CASING VOLUME = 40 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLEVCA LEVEL (FFM) AMBIENT N/A
SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
<u>0</u>		<u>5</u>		<u>30</u>		<u>40</u>	
TEMP <u>2.8</u> °C		TEMP <u>2.1</u> °C		TEMP <u>1.9</u> °C		TEMP <u>2.1</u> °C	
SP COND <u>110</u> @25°C		SP COND <u>770</u> @25°C		SP COND <u>920</u> @25°C		SP COND <u>460</u> @25°C	
pH <u>7.12</u>		pH <u>7.36</u>		pH <u>7.28</u>		pH <u>7.28</u>	
En <u> </u>		En <u> </u>		En <u> </u>		En <u> </u>	

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES/VOL

ANALYSIS REQUESTED

~~43~~ and ~~44~~	80ml	WATER	No	/	VOLATILES
~~45~~ and ~~46~~	2L	WATER	No	/	SEMI-VOLS
47	1L	WATER	YES	HAZ 2ml	METALS
~~48~~ 48	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS WATER CLEARORGANIC TRAFFIC REPORT ES239INORGANIC TRAFFIC REPORT MES087SAMPLER JRM (DM)

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-18 DATE 1-19-88SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 127.19 ☐ TOP WELL WELL DEPTH 139' WELL MATERIAL SS
☒ TOP CASING WELL DIAM 2"

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE TIME SAMPLE TIME WEATHER overcast fog, cold
PURGE SAMPLE START 1033 START 1040
KECK ☒ KECK ☒ END 1040 END 1045
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____ 12 FT. WATER X $.163$ (2"=.163gal/ft) X 3 CASING VOLUME = 6 GAL PURGED
(4"=.653gal/ft) (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____

SAMPLE PURGE DATA

@ 0 GAL @ 2 GAL @ 4 GAL @ 6 GAL
TEMP _____ °C TEMP _____ °C TEMP _____ °C TEMP _____ °C
SP COND 990 @25°C SP COND 1000 @25°C SP COND 990 @25°C SP COND 1000 @25°C
PH 6.79 PH 6.83 PH 6.83 PH 6.75
EN _____ EN _____ EN _____ EN _____

BOTTLE ID VOL MATERIAL FILTERED PRES./VOL. ANALYSIS REQUESTED

133 and 134	80ml	WATER	No	—	VOLATILES
135 and 136	2L	WATER	No	—	SEMI-VOLS
137	1L	WATER	YES	HNO ₃ 3M	METALS
138	1L	WATER	No	3M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS WATER CLEAR.ORGANIC TRAFFIC REPORT ER 629INORGANIC TRAFFIC REPORT MES 063

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-19 DATE 1-19-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 140.64 ☐ TOP WELL WELL DEPTH 152' WELL MATERIAL SS
☒ TOP CASING WELL DIAM 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER cloudy, fog, cold
Purge X Sample X
HECK X QED X
QED QED
SSBAIL SSBAIL
OTHER OTHER(2"=.163gal/ft)
12 FT. WATER X 163 (4"=.653gal/ft) X 7 CASING VOLUME = 6 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	Q	Q	Q
0 GAL	2 GAL	4 GAL	6 GAL
TEMP _____ °C	TEMP _____ °C	TEMP _____ °C	TEMP _____ °C
SP COND 1002 @25°C	SP COND 872 @25°C	SP COND 884 @25°C	SP COND 902 @25°C
PH 7.50	PH 6.71	PH 6.71	PH 6.72
En _____	En _____	En _____	En _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

139 and 140	80ml	WATER	No	---	VOLATILES
141 and 142	2L	WATER	No	---	SEMI-VOLS
143	1L	WATER	YES	HAZ	METALS
144	1L	WATER	No	---	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS WATER SILTYORGANIC TRAFFIC REPORT MES 064INORGANIC TRAFFIC REPORT EL 630SAMPLER JRM/DMD

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-20DATE 1/10/94SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO 1

WELL DATA

WATER DEPTH 95.11 ☐ TOP WELL ☒ TOP CASING WELL DEPTH 105' WELL MATERIAL GALV
WELL DIAM 2"

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1433
END 1440

SAMPLE TIME

START 1440
END 1445WEATHER overcast, 68°F

10 FT. WATER X 163 (2"=1.63gal/ft)
 (4"=6.53gal/ft) X 3 CASING VOLUME = 5 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT N 1/4SAMPLE LOCATION 1

HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
0		1		3		5	
TEMP <u>1.0</u> °C		TEMP <u>1.7</u> °C		TEMP <u>2.2</u> °C		TEMP <u>2.0</u> °C	
SPEED <u>495</u> @25°C		SPEED <u>789</u> @25°C		SPEED <u>721</u> @25°C		SPEED <u>830</u> @25°C	
PH <u>6.74</u>		PH <u>6.76</u>		PH <u>6.74</u>		PH <u>6.50</u>	
EN _____		EN _____		EN _____		EN _____	

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

145 and 146	80ml	WATER	No	/	VOLATILES
147 and 148	2L	WATER	No	/	SEMI-VOLS
149	1L	WATER	YES	HNO3 2ml	METALS
150	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS 120 is siltyORGANIC TRAFFIC REPORT # ES231INORGANIC TRAFFIC REPORT # ME5079

ECJORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METHUEN LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-21 DATE 1-21-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 17.80 ☐ TOP WELL ☒ TOP CASING WELL DEPTH 130 WELL MATERIAL GALV
WELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE ☒ KECK ☒ QED ☐ SSBAIL ☐ OTHER ☐
SAMPLE ☒ KECK ☒ QED ☐ SSBAIL ☐ OTHER ☐

PURGE TIME

SAMPLE TIME

WEATHER overcast, coldSTART 1241
END 1250START 1250
END 125512 FT. WATER X 163 (2"=1.63gal/ft.)
(4"=1.653gal/ft.) X 3 CASING VOLUME = 6 GAL PURGED
(6"=1.47gal/ft.)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GALQ 2 GALQ 4 GALQ 6 GALTEMP 2.9 °CTEMP 1.0 °CTEMP 2.5 °CTEMP — °CSP COND 1157 @25°CSP COND 1175 @25°CSP COND 1250 @25°CSP COND 1260 @25°CPH 6.24PH 6.22PH 6.07PH 6.17

En _____

En _____

En _____

En _____

BOTTLE ID _____

VOL _____

MATERIAL _____

FILTERED PRES/VOL _____

ANALYSIS REQUESTED _____

51 ~ 152	80ml	WATER	No	—	VOLATILES
153 ~ 154	2L	WATER	No	—	SEMI-VOLS
155	1L	WATER	YES	HNO ₃	METALS
156	1L	WATER	No	—	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

Water SIFTORGANIC TRAFFIC REPORT ES 236INORGANIC TRAFFIC REPORT ME3084SAMPLER JRM/DMD

EC JORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-23DATE 1-20-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 62.14☐ TOP WELL
☒ TOP CASINGWELL DEPTH 75WELL DIAM 2"WELL MATERIAL GALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1508END 1518

SAMPLE TIME

START 1512END 1515WEATHER cloudy, cold

13 FT. WATER X .163 (2"=.163gal/ft) X 7 CASING VOLUME = 7 GAL PURGED
 (4"=.653gal/ft) X 3
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q 0 GALTEMP 3.1 °CSP. COND 935 @25°CPH 6.64

ED _____

Q 3 GALTEMP 2.7 °CSP. COND 944 @25°CPH 6.73

ED _____

Q 5 GALTEMP 3.1 °CSP. COND 937 @25°CPH 6.67

ED _____

Q 7 GALTEMP 2.6 °CSP. COND 944 @25°CPH 6.77

ED _____

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES/VOL.

ANALYSIS REQUESTED

157 and 158	80ml	WATER	No	/	VOLATILES
159 and 160	2L	WATER	No	/	SEMI-VOLS
161	1L	WATER	YES	HNO ₃ 3M	METALS
162	1L	WATER	No	2M	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

WATER CLEARORGANIC TRAFFIC REPORT # ES232INORGANIC TRAFFIC REPORT # ME5080SAMPLER JRM / DMD

EC JORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION 4W-24DATE 1-21-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 95.95☐ TOP WELL
☒ TOP CASINGWELL DEPTH 17'WELL DIA 2"WELL WATER AL GALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 0937END 1155

SAMPLE TIME

START 0155END 1200WEATHER cloudy, snow

31 FT. WATER X 163 (2"=.163gal/ft) X 3 CASING VOLUME = 16 GAL PURGED
 (4"=.553gal/ft) X
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PFM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

P 0 GALTEMP 5.2 °CSPCND 930 @25°CPH 6.29

EN _____

BOTTLE ID

P 4 GALTEMP 2.6 °CSPCND 999 @25°CPH 6.49

EN _____

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

163 and 164	80ml	WATER	No	—	VOLATILES
165 and 166	2L	WATER	No	—	SEMI-VOLS
167	1L	WATER	YES	HNO ₃ 2ml	METALS
168	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS Water ClearORGANIC TRAFFIC REPORT # ES-234INORGANIC TRAFFIC REPORT # HES-082SAMPLER JPM / DMD

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-25DATE 1-21-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 110.9'☐ TOP WELL
☒ TOP CASINGWELL DEPTH 135'WELL DIAM 2"WELL MATERIAL CALI

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
RECK ☒	RECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1010END 1050

SAMPLE TIME

START 1030END 1055WEATHER cloudy, snow

24 FT. WATER X 163 (2"=.163gal/ft) X 3 CASING VOLUME = 12 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU
☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT _____

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

ID 0 GALTEMP 2 °CSP COND 129 @25°CPH 3.2

EN _____

ID Y GALTEMP 2.0 °CSP COND 1168 @25°CPH 6.30

EN _____

ID Y GALTEMP 1.7 °CSP COND 167 @25°CPH 6.27

EN _____

ID 12 GALTEMP 2.3 °CSP COND 1146 @25°CPH 6.30

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

169' and 170'	80ml	WATER	No	—	VOLATILES
171' and 172'	2L	WATER	No	—	SEMI-VOLS
173'	1L	WATER	YES	HNO3 2ml	METALS
174'	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS H₂O is very siltyORGANIC TRAFFIC REPORT # ES 835INORGANIC TRAFFIC REPORT # MES.083

SAMPLER

JRM/DMD

ECUORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO. 4465-94

STATION NO/LOCATION

MW-251DATE 1-23-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 114.38☐ TOP WELL
☒ TOP CASINGWELL DEPTH 216.5
WELL DIA 2"WELL MATERIAL GALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
CEO ☐	CEO ☐
SSBAIL ☐	SSBAIL ☐
OTHER ☐	OTHER ☐

PURGE TIME

 START 1404
 END 1459

SAMPLE TIME

 START 1459
 END 1504
WEATHER Sunny, cold

102 FT. WATER X .163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 551 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLE

WCA LEVEL (PPM) AMBIENT

N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

ID 0TEMP 2.8 °CSPEED 440PM 5.07

EN _____

ID 15TEMP 2.8 °CSPEED 410PM 5.30

EN _____

ID 30TEMP 2.8 °CSPEED 810PM 5.93

EN _____

ID 57TEMP 2.7 °CSPEED 800PM 5.93

EN _____

BOTTLE ID

VOL.

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

193-194	80ml	WATER	No	—	VOLATILES
195-196	2L	WATER	No	—	SEMI-VOLS
197	1L	WATER	YES	HNO ₃	METALS
198	1L	WATER	No	—	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS water siltyORGANIC TRAFFIC REPORT ES248INORGANIC TRAFFIC REPORT ME3096SAMPLER JRM/DAD

EC JORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-26 DATE 1-27-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 144.44 ☐ TOP WELL WELL DEPTH 154' WELL MATERIAL GALV
☒ TOP CASING WELL DIA 2"WELL STICK-UP ✓ WELL/CASING ✓
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER partly cloudy, cold
PURGE SAMPLE
KECK _____ KECK _____
QED _____ QED _____
SSBAIL ☒ SSBAIL ☒
OTHER _____ OTHER _____
START 0945 START 1015
END 1015 END 1030 10 FT. WATER X $.163$ (2"=.163gal/ft) X 3 CASING VOLUME = 5 GAL PURGED
(4"=.653gal/ft)
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECT ON ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PFM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

QD	QD	QD	QD
<u>0</u>	<u>1</u>	<u>3</u>	<u>5</u>
TEMP <u>1.0</u>	TEMP <u>1</u>	TEMP <u>1</u>	TEMP <u>1</u>
SPEED <u>100%</u>	SPEED <u>1</u>	SPEED <u>1</u>	SPEED <u>1</u>
<u>5.5</u>	PH <u>1</u>	PH <u>1</u>	PH <u>1</u>
	EH <u>1</u>	EH <u>1</u>	EH <u>1</u>

BOTTLE D

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

175 and 176	82ml	WATER	No	✓	VOLATILES
177 and 178	22	WATER	No	✓	SEMI-VOLS
179	12	WATER	YES	HAZ 2ml	METALS
180	12	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

WATER VERY SILTY, TRIPOR NOT WORKINGORGANIC TRAFFIC REPORT # ES 244INORGANIC TRAFFIC REPORT # YES 092SAMPLER JRM / DMD

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MN-272DATE 1-29-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 154.82☐ TOP WELL
☒ TOP CASINGWELL DEPTH 412'
WELL DIAM 2"WELL MATERIAL GALV

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1:30
END 5:25

SAMPLE TIME

START 1525
END 1530WEATHER overcast, cold

257 FT. WATER X .163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = 129 GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU
☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q @ 0 GALTEMP 5.2 °CSP COND 960 @25°CPH 6.00

Eh _____

Q @ 60 GALTEMP 3.6 °CSP COND 150 @25°CPH 6.29

Eh _____

Q @ 80 GALTEMP 3.3 °CSP COND 960 @25°CPH 6.23

Eh _____

Q @ 120 GALTEMP 3.4 °CSP COND 970 @25°CPH 6.22

Eh _____

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES /VOL

ANALYSIS REQUESTED

181-182	80ml	WATER	No	—	VOLATILES
183-184	2L	WATER	No	—	SEMI-VOLS
185	1L	WATER	YES	HNO ₃ 2M	METALS
186	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS

WATER CLEAR.OTR # EB557ITR # ME3102

SAMPLED

JRM / DMJ

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-28R DATE 1-29-88SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO

WELL DATA

WATER DEPTH 71.39 ☐ TOP WELL WELL DEPTH 518' WELL MATERIAL GRV
☒ TOP CASING WELL DIAM 2"WELL STICK-UP WELL/CASING
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER overcast, cold
PURGE SAMPLE
HECK ☒ KECK ☒
QED ☐ QED ☐
SSBAIL ☐ SSBAIL ☐
OTHER ☐ OTHER ☐219 FT. WATER X 165 (2"=.163gal/ft) X 3 CASING VOLUME = 105 GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PPM) AMBIENT N/A
SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

Q	Q	Q	Q
<u>0</u> GAL	<u>25</u> GAL	<u>35</u> GAL	<u>105</u> GAL
TEMP <u>2.7</u> °C	TEMP <u>3.2</u> °C	TEMP <u>4.1</u> °C	TEMP <u>4.2</u> °C
SPEED <u>30</u> @25°C	SPEED <u>840</u> @25°C	SPEED <u>770</u> @25°C	SPEED <u>410</u> @25°C
PH <u>6.0</u>	PH <u>5.9</u>	PH <u>6.01</u>	PH <u>6.10</u>
EN <u> </u>	EN <u> </u>	EN <u> </u>	EN <u> </u>

BOTTLE ID VOL MATERIAL FILTERED PRES/VOL ANALYSIS REQUESTED

~~181-114~~	<u>181-114</u>	<u>80ml</u>	<u>WATER</u>	<u>No</u>	<u>—</u>	<u>VOLATILES</u>
~~181-110~~	<u>181-110</u>	<u>2L</u>	<u>WATER</u>	<u>No</u>	<u>—</u>	<u>SEMI-VOLS</u>
~~191~~	<u>191</u>	<u>1L</u>	<u>WATER</u>	<u>YES</u>	<u>HAZ 2ml</u>	<u>METALS</u>
~~192~~	<u>192</u>	<u>1L</u>	<u>WATER</u>	<u>No</u>	<u>2ml</u>	<u>CYANIDE (CN⁻)</u>

REMARKS/OBSERVATIONS WATER CLEARORGANIC TRAFFIC REPORT #EB553INORGANIC TRAFFIC REPORT #HES098

SAMPLED JRM/m n

EC JORDAN CO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-392 DATE 1-29-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 148.88 ☐ TOP WELL WELL DEPTH 401 WELL MATERIAL GALV
☒ TOP CASING WELL DIAM 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED
PURGE _____ SAMPLE _____
NECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____
PURGE TIME • SAMPLE TIME
START 1100 START 1306 WEATHER overcast, cool
END 1306 END 1311252 FT. WATER X .163 (2"=.163gal/ft)
(4"=.653gal/ft) X 3 CASING VOLUME = 126 GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	Q	Q	Q
0 GAL	40 GAL	50 GAL	126 GAL
TEMP _____ °C	TEMP <u>5.0</u> °C	TEMP <u>4.7</u> °C	TEMP <u>4.4</u> °C
SPEED <u>1</u> @ 25°C	SPEED <u>900</u> @ 25°C	SPEED <u>850</u> @ 25°C	SPEED <u>910</u> @ 25°C
PH <u>7.00</u>	PH <u>6.30</u>	PH <u>6.08</u>	PH <u>6.05</u>
EN _____	EN _____	EN _____	EN _____

BOTTLE ID

VOL MATERIAL • FILTERED PRES /VOL

ANALYSIS REQUESTED

199-200	80ml	WATER	No	~~---~~	VOLATILES
201-202	2L	WATER	No	~~---~~	SEMI-VOLS
203	1L	WATER	YES	~~---~~	METALS
204	1L	WATER	No	~~---~~	CYANIDE (CN ⁻)
				~~---~~	
				~~---~~	
				~~---~~	
				~~---~~	

REMARKS/OBSERVATIONS WATER CLEAR.ORGANIC TRAFFIC REPORT # EB 555INORGANIC TRAFFIC REPORT # MES 100SAMPLER JRM / DMH

ECJORDANCO

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GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-31 DATE 1-25-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH 72.60 ☐ TOP WELL ☒ TOP CASING WELL DEPTH 157' WELL MATERIAL GALV
WELL DIAM. 2"WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED
PURGE SAMPLE
NECK ☒ KECK ☒
QED _____ QED _____
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER _____
PURGE TIME SAMPLE TIME
START 0750 START 0852
END 0932 END 0837
WEATHER overcast, cold 84 FT. WATER X $.163$ (2"=.163gal/ft) X 3 CASING VOLUME = 42 GAL PURGED
(4"=.653gal/ft)
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PPM) AMBIENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
0		5		30		42	
TEMP <u>2.6</u> °C		TEMP <u>2.6</u> °C		TEMP <u>2.3</u> °C		TEMP <u>2.5</u> °C	
SPEED <u>740</u> @25°C		SPEED <u>810</u> @25°C		SPEED <u>810</u> @25°C		SPEED <u>730</u> @25°C	
PH <u>7.11</u>		PH <u>7.10</u>		PH <u>7.13</u>		PH <u>7.14</u>	
EN _____		EN _____		EN _____		EN _____	

BOTTLE ID

VOL

MATERIAL

FILTERED PRES/VOL

ANALYSIS REQUESTED

205 and 206	80ml	WATER	No	~~---~~	VOLATILES
207 and 208	2L	WATER	No	~~---~~	SEMI-VOLS
209	1L	WATER	YES	~~---~~	METALS
210	1L	WATER	No	~~---~~	CYANIDE (CN ⁻)
				~~---~~	
				~~---~~	
				~~---~~	
				~~---~~	

REMARKS/OBSERVATIONS WATER SILTY CLAYEY AS PURGEDORGANIC TRAFFIC REPORT ES238INORGANIC TRAFFIC REPORT MES 086SAMPLER IRM/DMD

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94STATION NO/LOCATION MW-101 (BLANK)DATE 1-18-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELLWELL DEPTH 235

WELL MATERIAL _____

☐ TOP CASING

WELL DIAM _____

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER Clear - Cool

PURGE SAMPLE

NECK ☒ KECK ☒

QED _____ QED _____

SSBAIL _____ SSBAIL _____

OTHER _____ OTHER _____

START _____

START 1005

END _____

END 1030

_____ FT. WATER X _____ (2"=.163gal/ft)
 _____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
 _____ (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

② _____ GAL

② _____ GAL

② _____ GAL

② _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

ED _____

ED _____

ED _____

ED _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES /VOL

ANALYSIS REQUESTED

217-218	80ml	WATER	No	—	VOLATILES
219-220	200	WATER	No	—	SEMI-VOLS
221	100	WATER	YES	HNO ₃ 2ml	METALS
222	100	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS DI BLANK START OF SAMPLINGORGANIC TRAFFIC REPORT # 62621INORGANIC TRAFFIC REPORT # ME8055SAMPLER IRM-DMD

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MN-102 (BLANK) DATE 1-18-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL S
☒ TOP CASING WELL DIAM _____

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
NECK ☒	NECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START 1
END _____

SAMPLE TIME

START 1500
END 1505WEATHER CLEAR! COLD

(2"=.163gal/ft)
 _____ FT. WATER X _____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLEVCA LEVEL (PPM) ABSENT N/A
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

@ _____ GAL
 TEMP _____ °C
 SPEED _____ @ 25°C
 PH _____
 EN _____

@ _____ GAL
 TEMP _____ °C
 SPEED _____ @ 25°C
 PH _____
 EN _____

@ _____ GAL
 TEMP _____ °C
 SPEED _____ @ 25°C
 PH _____
 EN _____

@ _____ GAL
 TEMP _____ °C
 SPEED _____ @ 25°C
 PH _____
 EN _____

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

223-224	80ml	WATER	No	—	VOLATILES
225-226	2L	WATER	No	—	SEMI-VOLS
227-	1L	WATER	YES	HNO ₃ 2M	METALS
228	1L	WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS DI BLANK END OF THE DAY AFTER MW7-3ORGANIC TRAFFIC REPORT ER 624INORGANIC TRAFFIC REPORT MES 058SAMPLER IRM/DMD

ECJORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-103 (DT. BLAN).DATE 1-19-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL

WELL DEPTH _____

WELL MATERIAL _____

☐ TOP CASING

WELL DIAM _____

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER _____

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

START _____

START 1530

END _____

END 1535

_____ FT. WATER X (2"=.163gal/ft)
 _____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
 _____ (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (FFW) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

② _____ GAL

② _____ GAL

② _____ GAL

② _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

EH _____

EH _____

EH _____

EH _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES /VOL.

ANALYSIS REQUESTED

229-230	80ml	WATER	No	—	VOLATILES
231-232	2L	WATER	No	—	SEMI-VOLS
233	1L	WATER	YES	HNO3 2ml	METALS
234	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS BANK @ END OF DAY AFTER MW-103.ORGANIC TRAFFIC REPORT # ER636INORGANIC TRAFFIC REPORT # NES 070SAMPLER JRM/DMD

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-104 (DI BLANK)DATE 1-20-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL

WELL DEPTH _____

WELL MATERIAL _____

☐ TOP CASING

WELL DIAM _____

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK ☒	KECK ☒
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

SAMPLE TIME

WEATHER _____

START _____

START 535

END _____

END 1540

_____ FT. WATER X (2"=.163gal/ft)
(4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL

② _____ GAL

③ _____ GAL

④ _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

EN _____

EN _____

EN _____

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES./VOL.

ANALYSIS REQUESTED

235-236	80ml	WATER	No	/	VOLATILES
237-238	2L	WATER	No	/	SEMI-VOLS
239	1L	WATER	YES	HNO ₃ 2M	METALS
240	1L	WATER	No	2M	CYANIDE (CO ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS DI BLANK END OF THE DAY AFTER MW-23ORGANIC TRAFFIC REPORT #B 233INORGANIC TRAFFIC REPORT #HES 081SAMPLER JRM / PMD

ECJORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-105 (DI BLANK) DATE 1-21-88SKETCH ON BACK ☐ ☒ PHOTOGRAPHS ☐ ☒ ROLL NO/EXPOSURE NO 1

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIAM _____

WELL STACK-UP

EQUIPMENT USED

PURGE SAMPLE
NECK ☒ NECK ☒
QED ☐ QED ☐
SSBAIL ☐ SSBAIL ☐
OTHER ☐ OTHER ☐

WELL/CASING

PURGE TIME

START _____

END _____

SAMPLE TIME

START 1315END 1320

WEATHER

_____ FT. WATER X (2"=.163gal/ft)
(4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT

SAMPLE LOCATION

HEADSPACE

SAMPLE PURGE DATA

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
241-242	80ml	WATER	No	—	VOLATILES
243-244	2L	WATER	No	—	SEMI-VOLS
245	1L	WATER	YES	HNO3	METALS
246	1L	WATER	No	—	CYANIDE (CN ⁻)

BOTTLE ID

VOL

MATERIAL

FILTERED

PRES./VOL.

ANALYSIS REQUESTED

REMARKS/OBSERVATIONS DI BLANK @ END OF THE DAYORGANIC TRAFFIC REPORT ES237INORGANIC TRAFFIC REPORT MES OBSSAMPLER JRM / DMD

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-106 (DI BLANK) DATE 1-25-88SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH ☐ TOP WELL ☐ TOP CASING WELL DEPTH WELL MATERIAL
WELL DIAM. WELL STICK-UP WELL/CASING WEATHER
EQUIPMENT USED
PURGE SAMPLE
NECK ☒ KECK ☒
QED ☐ QED ☐
SSBAIL ☐ SSBAIL ☐
OTHER ☐ OTHER ☐
PURGE TIME SAMPLE TIME
START START 1157
END END 1200____ FT. WATER X (2"=.163gal/ft) X CASING VOLUME = GAL PURGED
(4"=.653gal/ft) X
(6"=1.47gal/ft) X

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PPM) AMBIENT NA
SAMPLE LOCATION
HEADSPACE

SAMPLE PURGE DATA

BOTTLE ID	VOL	MATERIAL	FILTERED PRES/VOL	ANALYSIS REQUESTED
247-248	80ml	WATER	No	VOLATILES
249-250	2L	WATER	No	SEMI-VOLS
251	1L	WATER	YES	NO ₃ METALS
252	1L	WATER	No	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS DI BLANK THRU NECK PUMPORGANIC TRAFFIC REPORT # ES 242INORGANIC TRAFFIC REPORT # MES 090SAMPLE IRM / DMD

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-107 (DI BLANK) DATE 1-27-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIAM _____WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER _____
NECK _____ NECK _____
QED _____ QED _____
SSBAIL ☒ SSBAIL ☒
OTHER _____ OTHER _____(2"=.163gal/ft)
FT. WATER X 163 (4"=.653gal/ft) X 3 CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VOA LEVEL (PPM) AMBIENT _____
SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	Q	GAL	Q	GAL	Q	GAL
TEMP	°C	TEMP	°C	TEMP	°C	TEMP	°C
SP COND	@25°C	SP COND	@25°C	SP COND	@25°C	SP COND	@25°C
PH		PH		PH		PH	
EH		EH		EH		EH	

BOTTLE ID _____ VOL _____ MATERIAL _____ FILTERED PRES./VOL. _____ ANALYSIS REQUESTED _____

253 W 254	12	80m	WATER	No	—	VOLATILES
255 W 256	2L		WATER	No	—	SEMI-VOLS
257	1L		WATER	YES	HNO3 2M	METALS
258	1L		WATER	No	2M	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS DI BLANK THRU THE S.S. BAILER.ORGANIC TRAFFIC REPORT # ES 245INORGANIC TRAFFIC REPORT # MES 093SAMPLER JRM/1010

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION MW-103 (DI BANK) DATE 1-28-88SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIAM _____

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED PURGE TIME SAMPLE TIME WEATHER _____

PURGE	SAMPLE	START	END
KECK ☒	KECK ☒	START <u>1520</u>	END <u>153</u>
QED _____	QED _____		
SSBAIL _____	SSBAIL _____		
OTHER _____	OTHER _____		

_____ FT. WATER X _____ (2"=.163gal/ft)
_____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
_____ (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU ☐ IN BOTTLE VCA LEVEL (PPM) AMBIENT N/A SAMPLE LOCATION _____

SAMPLE PURGE DATA

QAL	QAL	QAL	QAL
TEMP _____ °C	TEMP _____ °C	TEMP _____ °C	TEMP _____ °C
SP COND _____ @25°C	SP COND _____ @25°C	SP COND _____ @25°C	SP COND _____ @25°C
pH _____	pH _____	pH _____	pH _____
En _____	En _____	En _____	En _____

BOTTLE ID VOL MATERIAL FILTERED PRES./VOL. ANALYSIS REQUESTED

283-284	80ml	WATER	No	/	VOLATILES
285-286	2.0l	WATER	No	/	SEMI-VOLS
287	1l	WATER	YES	HNO3 2ml	METALS
288	1l	WATER	No	2ml	CYANIDE (CN-)

REMARKS/OBSERVATIONS DI BANK AFTER MW-252.ORGANIC TRAFFIC REPORT # ES 249INORGANIC TRAFFIC REPORT # HES097SAMPLER IRM/DMD

ECJORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

MW-109 (DI BLANK)DATE 1-29-88SKETCH ON BACK ☐ ☒PHOTOGRAPHS ☐ ☒

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL
☐ TOP CASING

WELL DEPTH _____

WELL DIA _____

WELL MATERIAL _____

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE
KECK _____	KECK _____
QED _____	QED _____
SSBAIL _____	SSBAIL _____
OTHER _____	OTHER _____

PURGE TIME

START _____
END _____

SAMPLE TIME

START 1225
END 1530

WEATHER _____

_____ FT. WATER X _____ (2"=.163gal/ft)
_____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
_____ (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT

N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

Q	GAL	TEMP	°C	SP COND	°C	PH	En
/	/	/	/	/	/	/	/

Q	GAL	TEMP	°C	SP COND	°C	PH	En
/	/	/	/	/	/	/	/

Q	GAL	TEMP	°C	SP COND	°C	PH	En
/	/	/	/	/	/	/	/

Q	GAL	TEMP	°C	SP COND	°C	PH	En
/	/	/	/	/	/	/	/

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

289-290	80ml	WATER	No	/	VOLATILES
291-292	2L	WATER	No	/	SEMI-VOLS
293	1L	WATER	YES	HNO3 2ml	METALS
294	1L	WATER	No	2ml	CYANIDE (CN-)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS DI BLANK THRU KECK PUMP AT END OF DAYOTR # EB550ITR # ME3101SAMPLER JRM/DMD

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

Dup. #1 (MW-19)DATE 1-19-88SKETCH ON BACK ☐ YES ☒ NOPHOTOGRAPHS ☐ YES ☒ NO

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL

WELL DEPTH _____

WELL MATERIAL _____

☐ TOP CASING

WELL DIAM _____

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER overcast, fog, cold

PURGE SAMPLE

NECK ☒ KECK ☒

QED _____ QED _____

SSBAIL _____ SSBAIL _____

OTHER _____ OTHER _____

START _____

START _____

END _____

END _____

_____ FT. WATER X _____ (2"=.163gal/ft)
 _____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
 _____ (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLE

VCA LEVEL (PPM) AMBIENT _____

N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL

② _____ GAL

③ _____ GAL

④ _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

En _____

En _____

En _____

En _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

259 and 260	80ml	WATER	No	/	VOLATILES
261 and 262	2L	WATER	No	/	SEMI-VOLS
263	1L	WATER	YES	HNO ₃ 2M	METALS
264	1L	WATER	No	2M	CYANIDE (CN ⁻)
				/	
				/	
				/	
				/	

REMARKS/OBSERVATIONS

MW-19 (Dup #1)ORGANIC TRAFFIC REPORT # HES 065INORGANIC TRAFFIC REPORT # ER 631

SAMPLER

JMR/DMD

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILLJOB NO 4465-94

STATION NO/LOCATION

Day #2 (MW-16)DATE 1-20-88SKETCH ON BACK ☐ ^{YES} ☒ ^{NO}PHOTOGRAPHS ☐ ^{YES} ☒ ^{NO}

ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____

☐ TOP WELL

WELL DEPTH _____

WELL MATERIAL GALV☒ TOP CASINGWELL DIAM 2"

WELL STICK-UP _____

WELL/CASING _____

EQUIPMENT USED

PURGE TIME

SAMPLE TIME

WEATHER overcast, cold

PURGE

SAMPLE

NECK ✓NECK ✓

QED _____

QED _____

SSBAIL _____

SSBAIL _____

OTHER _____

OTHER _____

START _____

START _____

END _____

END _____

_____ FT. WATER X .163 (2"=.163gal/ft)
 (4"=.653gal/ft) X 3 CASING VOLUME = _____ GAL PURGED
 (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION

☒ IN SITU☐ IN BOTTLEVCA LEVEL (PPM) AMBIENT N/A

SAMPLE LOCATION _____

HEADSPACE _____

SAMPLE PURGE DATA

① _____ GAL

② _____ GAL

③ _____ GAL

④ _____ GAL

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

TEMP _____ °C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

SP COND _____ @25°C

PH _____

PH _____

PH _____

PH _____

EN _____

EN _____

EN _____

EN _____

BOTTLE ID

VOL

MATERIAL

FILTERED PRES./VOL.

ANALYSIS REQUESTED

265 and 266	80ml	WATER	No	~~✓~~	VOLATILES
267 and 268	2L	WATER	No	~~✓~~	SEMI-VOLS
269	1L	WATER	YES	HAZ 2ml	METALS
270	1L	WATER	No	2ml	CYANIDE (CN ⁻)
				~~✓~~	
				~~✓~~	
				~~✓~~	
				~~✓~~	

REMARKS/OBSERVATIONS MW-16 (Pump #2)ORGANIC TRAFFIC REPORT # ES 229INORGANIC TRAFFIC REPORT # MES 077

EC JORDAN CO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION DUP-3 (MW-175.) DATE 1-29-88SKETCH ON BACK ☐ YES ☒ NO PHOTOGRAPHS ☐ YES ☒ NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIA _____

WELL STICK-UP _____ WELL/CASING _____

EQUIPMENT USED

PURGE	SAMPLE	PURGE TIME	SAMPLE TIME	WEATHER
NECK _____	NECK _____	START _____	START _____	
QED _____	QED _____	END _____	END _____	
SSBAIL ☒	SSBAIL ☒			
OTHER _____	OTHER _____			

_____ FT. WATER X _____ (2"=.163gal/ft)
 _____ (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
 _____ (6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☐ IN SITU ☐ IN BOTTLE
 VCA LEVEL (PPM) AMBIENT _____
 SAMPLE LOCATION _____
 HEADSPACE _____

SAMPLE PURGE DATA

BOTTLE ID	VOL	MATERIAL	FILTERED	PRES./VOL.	ANALYSIS REQUESTED
271 and 272	80ml	WATER	No	—	VOLATILES
273 and 274	2l	WATER	No	—	SEMI-VOLS
275	1l	WATER	YES	HNO ₃ 2ml	METALS
276	1l	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS DUP TO MW-175.ORGANIC TRAFFIC REPORT # ES246INORGANIC TRAFFIC REPORT # HE3094SAMPLER JRM / DMH

EC JORDANCO

PAGE _____ OF _____

GROUNDWATER FIELD SAMPLE DATA RECORD

PROJECT METAMORA LANDFILL JOB NO 4465-94STATION NO/LOCATION Dup-4 (MW-282) DATE 1-29-88SKETCH ON BACK ☐ ☒ YES NO PHOTOGRAPHS ☐ ☒ YES NO ROLL NO/EXPOSURE NO _____

WELL DATA

WATER DEPTH _____ ☐ TOP WELL WELL DEPTH _____ WELL MATERIAL _____
☐ TOP CASING WELL DIAM _____WELL STICK-UP _____ WELL/CASING _____
EQUIPMENT USED PURGE SAMPLE PURGE TIME SAMPLE TIME WEATHER _____
NECK _____ KECK _____ START _____ START 1000
QED _____ QED _____ END _____ END 1005
SSBAIL _____ SSBAIL _____
OTHER _____ OTHER __________ FT. WATER X (2"=.163gal/ft) (4"=.653gal/ft) X _____ CASING VOLUME = _____ GAL PURGED
(6"=1.47gal/ft)

FIELD DATA

FIELD DATA COLLECTION ☒ IN SITU VCA LEVEL (PPM) AMBIENT N/A
☐ IN BOTTLE SAMPLE LOCATION _____
HEADSPACE _____

SAMPLE PURGE DATA

QED	GAL	QED	GAL	QED	GAL	QED	GAL
TEMP	°C	TEMP	°C	TEMP	°C	TEMP	°C
SP COND	@25°C	SP COND	@25°C	SP COND	@25°C	SP COND	@25°C
pH		pH		pH		pH	
EN		EN		EN		EN	

BOTTLE ID

VOL MATERIAL FILTERED PRES/VOL

ANALYSIS REQUESTED

277-284	80ml	WATER	No	---	VOLATILES
279-280	2L	WATER	No	---	SEMI-VOLS
281	1L	WATER	YES	HNO3 2ml	METALS
282	1L	WATER	No	2ml	CYANIDE (CN ⁻)

REMARKS/OBSERVATIONS ~~THE~~ DUPLICATE To MW-282ORGANIC TRAFFIC REPORT # EB554INORGANIC TRAFFIC REPORT # ME309SAMPLER JRM BMO

MOGM1A.WK1
DM115

TABLE TM9-20 ORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-1	MW-3	MW-4	MW-106 (Blank after MW-4)	MW-6-1	MW-6-2	MW-6-3	MW-7-3	MW-102 (Blank after MW-7-3)
Traffic Report No:	ES-243	ER-627	ES-241	ES-242	ER-625	ER-626	ER-622	ER-623	ER-624
VINYL CHLORIDE	10 u	10 u	2 J	10 u	10 u	10 u	10 u	10 u	10 u
CHLOROETHANE	10 u	10 u	1 J	10 u	10 u	10 u	10 u	10 u	10 u
METHYLENE CHLORIDE	10 uJB	71 uJB	30 uJB	10 uJB	70 uJB	70 uJB	70 uJB	70 uJB	70 uJB
ACETONE	50 uJB	33 uJB	49 B	80 uJB	50 uJB	50 uJB	50 uJB	50 uJB	50 uJB
1,1-DICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
1,1-DICHLOROETHANE	5 u	5 u	29	5 u	5 u	5 u	5 u	5 u	5 u
1,2-DICHLOROETHENE (total)	5 u	5 u	5 u	5 u	5 uJ	5 uJ	5 uJ	5 uJ	5 uJ
CHLOROFORM	5 u	5 u	5 u	2 J	5 u	5 u	5 u	5 u	1.3 J
1,2-DICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
2-BUTANONE	40 uJB	10 uR	140	45 uJB	10 uR	10 uR	10 uR	10 uR	10 uR
1,1,1-TRICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
BROMODICHLOROMETHANE	5 u	5 u	5 u	1 J	5 u	5 u	5 u	5 u	5 u
TRICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
1,1,2-TRICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
BENZENE	5 u	5 u	12	5 u	5 u	5 u	5 u	5 u	5 u
4-METHYL-2-PENTANONE	10 u	10 u	25 uJB	10 uJ	14 B	11.5 uJB	11.5 uJB	11.5 uJB	11.5 uJB
2-HEXANONE	20 uJB	10 u	45 uJB	15 uJB	18 uJB	18 uJB	18 uJB	18 uJB	18 uJB
TOLUENE	5 u	5 u	5 J	5 u	5 u	5 u	5 u	5 u	5 u
ETHYLBENZENE	5 u	5 u	19	5 u	5 u	5 u	5 u	5 u	5 u
STYRENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
XYLENE (total)	5 u	5 u	19	5 u	5 u	5 u	5 u	5 u	5 u

TABLE TM9-20 (cont.)
MOGMA1A.WK1
DM115

Sample No.	MW-1	MW-3	MW-4	MW-106 (Blank after MW-4)	MW-6-1	MW-6-2	MW-6-3	MW-7-3	MW-102 (Blank after MW-7-3)
Traffic Report No:	ES-243	ER-627	ES-241	ES-242	ER-625	ER-626	ER-622	ER-623	ER-624
PHENOL	10 u	10 u	24	10 u	10 u	10 u	10 u	10 u	10 u
2-METHYLPHENOL	10 u	10 u	10 uJ	10 uJ	10 u	10 u	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BENZOIC ACID	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u
DIETHYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
PENTACHLOROPHENOL	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u
DI-N-BUTYLPHTHALATE	10 u	10 u	3 J	10 u	10 u	10 u	10 u	10 u	10 u
BUTYLBENZYLPHTHALATE	50	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BIS(2-ETHYLHEXYL)PHTHALATE	100	89 uJB	10 u	10 u	4.7 J	5.1 J	5.1 J	10 u	10 u
HEPTACHLOR	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.

TABLE TM9-21

[illegible]

TABLE TM9-21 (cont.)
MOGMH8A.MK1
DM115

Sample No.	MW-8	MW-9	MW-10S	MW-103 (Blank after MW-10s) ER-636	MW-100	MW-11	MW-12	MW-13	MW-14S
Traffic Report No:	ES-230	ER-628	ER-635	ER-636	ER-634	ER-632	ER-633	ER-637	ER-639
PHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
2-METHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BENZOIC ACID	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ
DIETHYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
PENTACHLOROPHENOL	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u
DI-N-BUTYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BUTYLBENZYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BIS(2-ETHYLHEXYL)PHTHALATE	2.3 J	89 uJB	89 uJB	89 uJB	89 uJB	89 uJB	89 uJB	89 uJB	24 uJB
HEPTACHLOR	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to Blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.

HQHM140A.WK1
DM117

TABLE TN9-22 ORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-140	MW-155	MW-150	MW-16	DUP-2 (Duplicate of MW-16) ES-229	MW-175	DUP-3 (Duplicate of MW-175) ES-246	MW-171	MW-170
Traffic Report No:	ER-638	ER-641	ER-640	ES-220		ES-247		ES-239	ES-240
VINYL CHLORIDE	10 u	10 u	10 u	10 u	10 u	500 u	500 u	47	10 u
CHLOROETHANE	10 u	9.6 J	5.3 J	10 u	10 u	500 u	500 u	10 u	10 u
METHYLENE CHLORIDE	81 uJB	88 uJB	88 uJB	88 uJB	88 uJB	1500 uJB	1500 uJB	14 B	10 uJB
ACETONE	120 uJB	140 uJB	140 uJB	140 uJB	140 uJB	4000 uJB	4000 uJB	100 B	80 uJB
1,1-DICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	250 u	250 u	5 u	5 u
1,1-DICHLOROETHANE	5 u	19	16	5 u	5 u	31 J	35 J	9	5 u
1,2-DICHLOROETHENE (total)	5 u	1.7 J	5 u	5 u	5 u	250 u	250 u	97	5 u
CHLOROFORM	5 u	5 u	5 u	5 u	5 u	250 u	250 u	5 u	5 u
1,2-DICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	250 u	250 u	7	5 u
2-BUTANONE	100 JB	48 uJB	48 uJB	48 uJB	48 uJB	1750 uJB	1750 uJB	100	15 uJB
1,1,1-TRICHLOROETHANE	5 u	6	5 u	5 u	5 u	250 u	250 u	5 u	5 u
BROMODICHLOROMETHANE	5 u	5 u	5 u	5 u	5 u	250 u	250 u	5 u	5 u
TRICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	250 u	250 u	44	5 u
1,1,2-TRICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	250 u	250 u	12	5 u
BENZENE	5 u	5 u	5 u	5 u	5 u	250 u	10 J	1 J	5 u
4-METHYL-2-PENTANONE	10 uJB	10 u	10 u	4 J	6 J	1250 uJB	1250 uJB	96 J	12 J
2-HEXANONE	10 u	10 u	10 u	10 u	3.3 J	2000 uJB	2000 uJB	15 uJB	15 uJB
TOLUENE	5 u	5 u	5 u	5 u	5 u	500 uJB	500 uJB	77	1 J
ETHYL BENZENE	5 u	5 u	5 u	5 u	5 u	1500	1700	35	1 J
STYRENE	5 u	5 u	5 u	5 u	5 u	250 u	250 u	37	5 u
XYLENE (total)	5 u	5 uJB	5 uJB	5 uJB	5 uJB	5900	6600	95	2 J

TABLE TM9-22 (cont.)
MOGH140A.WK1
DM117

Sample No.	MW-140	MW-155	MW-150	MW-16	DUP-2 (Duplicate of MW-16) ES-229	MW-17S	DUP-3 (Duplicate of MW-17S) ES-246	MW-17I	MW-17D
Traffic Report No:	ER-638	ER-641	ER-640	ES-228	ES-229	ES-247	ES-246	ES-239	ES-240
PHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
2-METHYLPHENOL	10 u	10 u	10 u	10 u	10 u	6 J	5 J	10 u	10 u
2,4-DIMETHYLPHENOL	10 u	10 u	10 u	10 u	10 u	22	14	10 u	10 u
BENZOIC ACID	240 J	50 uJ	50 uJ	50 uJ	50 uJ	50 u	50 u	50 u	50 u
DIETHYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
PENTACHLOROPHENOL	50 u	50 u	50 u	50 u	50 u	130	44 J	50 u	50 u
DI-N-BUTYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	2 J	2 J	10 u	10 u
BUTYLBENZYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	20	10 u	10 u	10 u
BIS(2-ETHYLNEXYL)PHTHALATE	24 uJB	8.7	80 B	8.3 J	4.2 J	110	78	10 u	10 u
HEPTACHLOR	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.1	0.07	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.

NOGM118A.WK1
DM117

TABLE TM9-23 ORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1980)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-18	MW-19	DUP-1 (Duplicate of MW-19) ER-631	MW-20	MW-21	MW-105 (Blank after MW-21) ES-237	MW-23	MW-104 (Blank after MW-23) ES-233	MW-24
Traffic Report No:	ER-629	ER630	ES-231	ES-236	ES-232	ES-234			
VINYL CHLORIDE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
CHLOROETHANE	10 u	10 u	10 u	10 u	9.4 J	10 u	10 u	10 u	1.9 J
METHYLENE CHLORIDE	71 uJB	81 uJB	81 uJB	88 uJB	72 uJB	72 uJB	88 uJB	72 uJB	72 uJB
ACETONE	33 uJB	120 uJB	120 uJB	140 uJB	91 uJB	91 uJB	140 uJB	91 uJB	91 uJB
1,1-DICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	2.1 J	5 u	5 u
1,1-DICHLOROETHANE	5 u	5 u	5 u	5 u	31	5 u	7.5	5 u	28
1,2-DICHLOROETHENE (total)	5 u	5 u	5 u	5 u	1.2 J	5 u	6.6	5 u	25
CHLOROFORM	5 u	5 u	5 u	5 u	1.1 J	4.5 J	5 u	2.3 J	5 u
1,2-DICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	9
2-BUTANONE	10 uR	19.5 uJB	19.5 uJB	48 uJB	28 J	28 J	48 uJB	10 uJB	28 J
1,1,1-TRICHLOROETHANE	5 u	5 u	5 u	5 u	13	5 u	42	5 u	1.7 J
BROMODICHLOROMETHANE	5 u	5 u	5 u	5 u	5 u	2 J	5 u	1.1 J	5 u
TRICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	3.3 J	5 u	5 u
1,1,2-TRICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	1 J	5 u	5.9
BENZENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	1.9 J
4-METHYL-2-PENTANONE	10 u	10 uJB	10 uJB	10 u	10 u	10 u	10 u	10 u	10 u
2-HEXANONE	10 u	10 u	4 J	10 u	10 u	10 u	10 u	10 u	10 u
TOLUENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
ETHYL BENZENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
STYRENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
XYLENE (total)	5 u	5 u	5 u	5 uJB	5 u	5 u	5 uJB	5 u	5 u

TABLE TM9-23 (cont.)
MOGHW18A.HK1
DM117

Sample No.	MW-18	MW-19	DUP-1 (Duplicate of MW-19) ER-631	MW-20	MW-21	MW-105 (Blank after MW-21) ES-237	MW-23	MW-104 (Blank after MW-23) ES-233	MW-24
Traffic Report No:	ER-629	ER-630		ES-231	ES-236		ES-232		ES-234
PHENOL	10 u	10 u	10 u	10 u	10 u	10 u	2.6 J	10 u	10 u
2-METHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BENZOIC ACID	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ	50 uJ
DIETHYLPHthalATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	3.2 J
PENTACHLOROPHENOL	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u
DI-N-BUTYLPHthalATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BUTYLBENZYLPHthalATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
DIS(2-ETHYLHEXYL)PHthalATE	89 uJB	24 uJB	24 uJB	8.1 J	10 u	3.5 J	2.6 J	8 J	3.2 J
HEPTACHLOR	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.

MOGHW25A.WK1
DM118

TABLE MW-24 VOLATILE ORGANIC CHEMICAL DATA (GROUNDWATER)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-25	MW-25I	MW-108 (Blank after MW-25I)	MW-26	MW-107 (Blank after MW-26)	MW-27R	MW-109 (Blank after MW-30R)	MW-28R	DUP-4 (Duplicate of MW-28R)
Traffic Report No:	ES-235	ES-248	ES-249	ES-244	ES-245	EB-557	EB-556	EB-553	EB-554
VINYL CHLORIDE	10 u	1 J	10 u	10 u	10 u	10 u	10 u	10 u	10 u
CHLOROETHANE	2.8 J	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
METHYLENE CHLORIDE	72 uJB	10 uJB	10 uJB	10 uJB	10 uJB	10 uJB	10 uJB	10 uJB	10 uJB
ACETONE	91 uJB	50 uJB	50 uJB	50 uJB	50 uJB	50 uJB	50 uJB	50 uJB	50 uJB
1,1-DICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
1,1-DICHLOROETHANE	17	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
1,2-DICHLOROETHENE (total)	15	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
CHLOROFORM	5 u	5 u	4 J	1 J	5 J	5 u	4 J	5 u	5 u
1,2-DICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
2-BUTANONE	34 J	40 uJB	40 uJB	40 uJB	40 uJB	40 uJB	40 uJB	40 uJB	40 uJB
1,1,1-TRICHLOROETHANE	5.5	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
BROMODICHLOROMETHANE	5 u	5 u	2 J	1 J	2 J	5 u	2 J	5 u	5 u
TRICHLOROETHENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
1,1,2-TRICHLOROETHANE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
BENZENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
4-METHYL-2-PENTANONE	10 u	10 u	10 u	10 u	10 u	25 uJB	10 u	10 u	10 u
2-HEXANONE	10 u	20 uJB	20 uJB	20 uJB	20 uJB	20 uJB	20 uJB	20 uJB	20 uJB
TOLUENE	5 u	5 u	5 u	5 u	2 J	10 uJB	1 J	5 u	5 u
ETHYLBENZENE	5 u	5 u	5 u	5 u	5 u	5 uJB	5 u	5 u	5 u
STYRENE	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u	5 u
XYLENE (total)	5 u	5 u	5 u	5 u	5 u	20 uJB	5 u	5 u	5 u

TABLE TM9-24 (cont.)
MOGMW25A.WK1
DM118

Sample No.	MW-25	MW-251	MW-108 (Blank after MW-251)	MW-26	MW-107 (Blank after MW-26)	MW-27R +	MW-109 (Blank after MW-30R)	MW-28R	DUP-4 (Duplicate of MW-28R)
Traffic Report No:	ES-235	ES-248	ES-249	ES-244	ES-245	EB-557	EB-556	EB-553	EB-554
PHENOL	2.9 J	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
2-METHYLPHENOL	10 u	10 u	10 uJ	10 u	10 u	10 uJ	10 uJ	10 uJ	10 uJ
2,4-DIMETHYLPHENOL	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BENZOIC ACID	50 uJ	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u
DIETHYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
PENTACHLOROPHENOL	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u	50 u
DI-N-BUTYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BUTYLBENZYLPHTHALATE	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u	10 u
BIS(2-ETHYLHEXYL)PHTHALATE	3.3 J	10 u	10 u	35	10 u	10 u	10 u	10 u	10 u
HEPTACHLOR	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - rejected value due to quality control results.

MOGM30A.WK1
DM118

TABLE TM9-25 ORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No.	MW-30R	MW-31	MW-101 (Blank prior to sampling) ER-621
Traffic Report No:	EB-555	ES-238	
VINYL CHLORIDE	10 u	10 u	10 u
CHLOROETHANE	10 u	10 u	10 u
METHYLENE CHLORIDE	10 uJB	10 uJB	70 uJB
ACETONE	50 uJB	80 uJB	50 uJB
1,1-DICHLOROETHENE	5 u	5 u	5 u
1,1-DICHLOROETHANE	5 u	5 uR	5 u
1,2-DICHLOROETHENE (total)	5 u	5 u	5 uJ
CHLOROFORM	5 u	5 u	3.2 J
1,2-DICHLOROETHANE	5 u	5 u	5 u
2-BUTANONE	40 uJB	12 B	10 uR
1,1,1-TRICHLOROETHANE	5 u	5 u	5 u
BROMODICHLOROMETHANE	5 u	5 u	1.3 J
TRICHLOROETHENE	5 u	5 u	5 u
1,1,2-TRICHLOROETHANE	5 u	5 u	5 u
BENZENE	5 u	5 u	5 u
4-METHYL-2-PENTANONE	10 u	10 uJ	11.5 uJB
2-HEXANONE	20 uJB	15 uJB	18 uJB
TOLUENE	5 u	1 J	5 u
ETHYL BENZENE	5 u	5 u	5 u
STYRENE	5 u	5 u	5 u
XYLENE (total)	5 u	1 J	5 u

TABLE TM9-25 (cont.)
 HIGHWAY 30A, WK1
 DM118

Sample No.	MW-30R	MW-31	MW-101 (Blank prior to sampling)
Traffic Report No:	EB-555	ES-238	ER-621
PHENOL	10 u	10 u	10 u
2-METHYLPHENOL	10 u	10 u	10 u
2,4-DIMETHYLPHENOL	10 u	10 u	10 u
BENZOIC ACID	50 u	50 u	50 u
DIETHYLPHTHALATE	10 u	10 u	10 u
PENTACHLOROPHENOL	50 u	50 u	50 u
DI-N-BUTYLPHTHALATE	10 u	10 u	10 u
BUTYLBENZYLPHTHALATE	10 u	10 u	10 u
BIS(2-ETHYLHEXYL)PHTHALATE	10 u	10 u	4.7 J
HEPTACHLOR	0.05 u	0.05 u	0.05 u

Notes:

1. All concentrations in ug/l.
2. Chemicals which were undetected in all samples are not listed.
3. J - an estimated value.
4. u - compound was analyzed for but not detected.
5. B - analyte was found in the blank as well as the sample.
6. uJ - approximate detection limit due to quality control results.
7. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
8. R - Rejected value due to quality control results.

MICHIGAN
DM116

TABLE TN9-26

INORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MW-1	MW-3	MW-4	MW-106 (Blank after MW-4) MES-090	MW-6-1	MW-6-2	MW-6-3
Traffic Report No:	MES-091	MES-061	MES-089		MES-059	MES-060	MES-056
ALUMINUM	29.0 u	29.0 u	[34.4]	29.0 u	29.0 u	29.0 u	29.0 u
ANTIMONY	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u
ARSENIC	1.5 uJ	1.5 uJ	132	1.5 u	[7.4] J	10.0 J	11.1 J
BARIUM	[42.8]	[40.8]	323	4.0 u	[32.6]	[32.3]	[35.2]
BERYLLIUM	[1.0]	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u
CADMIUM	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u
CALCIUM	81,000	82,500	149,000	[410]	92,400	86,600	93,500
CHROMIUM	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
COBALT	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u
COPPER	5.0 u	5.0 u	5.0 u	[11.6]	5.0 u	5.0 u	5.0 u
IRON	11.0 u	[14.5]	18,700	11.0 u	1,630	1,380	1,400
LEAD	0.7 uJ	0.7 u	0.7 u	0.7 u	0.7 uJ	0.7 uJ	0.7 uJ
MAGNESIUM	29,100	32,800	68,700	121 u	33,900	31,700	34,300
MANGANESE	477.0	31.8	193.0	[3.2]	33.1	31.1	42.5
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	6.0 u	6.0 u	[13.9]	6.0 u	6.0 u	6.0 u	6.0 u
POTASSIUM	[2610]	[1,200]	70,600	176 u	[1,220]	[1,110]	[1,280]
SELENIUM	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ
SILVER	9.0 u	9.0 uJ	9.0 u	9.0 u	9.0 u	9.0 u	9.0 uJ
SODIUM	7,210	6,340	89,300	[2,330]	[3,990]	[3,790]	[4,400]
THALLIUM	1.7 uJ	1.7 u	1.7 uJ	1.7 u	1.7 u	1.7 uJ	1.7 u
VANADIUM	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
ZINC	4,170	796	6,430	76.5 uJB	48 uJB	48 uJB	48 uJB
CYANIDE	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
6. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
7. s - value determined by method of standard addition.

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TABLE TM9-27

INORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MW-7-3	MW-102 (Blank After MW-7-3)	MW-8	MW-9	MW-105	MW-103 (Blank after MW-105)	MW-100
Traffic Report No:	NES-057	NES-058	NES-078	NES-062	NES-069	NES-070	NES-068
ALUMINUM	29.0 u	[37.6]	[29.0] u	[31.4]	[32.1]	29.0 u	[30.0]
ANTIMONY	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u
ARSENIC	1.5 uJ	1.5 uJ	1.5 u	1.5 uJ	1.5 uJ	1.5 uJ	1.5 uJ
BARIUM	[40.4]	4.0 u	[36.4]	[33.3]	[26.4]	4.0 u	[34.2]
BERYLLIUM	0.9 u	0.9 u	0.9 u	0.9 u	[1.6]	0.9 u	[1.6]
CADMIUM	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u
CALCIUM	90,200	[530]	94,100	86,400	91,900	[581]	86,800
CHROMIUM	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
COBALT	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u
COPPER	5.0 u	47.7	5.0 u	5.0 u	5.0 u	37.4	5.0 u
IRON	[23.4]	[28.0]	[39.7]	[41.5]	[11.7]	[13.2]	[16.0]
LEAD	8.5	[3.7]	0.7 uJ	[1.0] J	[1.8]	[1.7]	0.7 u
MAGNESIUM	33,700	[124]	34,400	31,200	35,800	[180]	30,900
MANGANESE	3.0 u	3.0 u	27.2	18.9	[4.4]	3.0 u	3.0 u
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	[8.2]	6.0 u
POTASSIUM	[1,380]	176 u	[1,500]	[986]	[1,010]	176 u	[1,030]
SELENIUM	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ
SILVER	9.0 uJ	9.0 u	9.0 u	9.0 uJ	9.0 uJ	9.0 uJ	9.0 uJ
SODIUM	6,160	[547]	[3,500]	[2,560]	[4,500]	31,200	[4,130]
THALLIUM	1.7 u	1.7 u	1.7 u	1.7 u	1.7 u	1.7 u	1.7 u
VANADIUM	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
ZINC	48 uJB	48 uJB	76.5 uJB	590.0	1,420	175	659
CYANIDE	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
6. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
7. s - value determined by method of standard addition.

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TABLE TM9-28

INORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1980)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MW-11	MW-12	MW-13	MW-145	MW-140	MW-155	MW-150
Traffic Report No:	MES-066	MES-067	MES-071	MES-073	MES-072	MES-075	MES-074
ALUMINUM	[32.9]	[40.9]	[31.6]	[33.3]	[29.8]	[30.4]	[47.0]
ANTIMONY	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u
ARSENIC	1.5 uJ	1.5 uJ	1.5 uJ	[6.4] J	[6.1] J	[5.0]	[2.1] J
BARIUM	[41.4]	[4.2]	[63.6]	[53.8]	[42.1]	[89.8]	[56.4]
BERYLLIUM	0.9 u	[1.0]	[1.6]	[1.3]	[1.3]	0.9 u	[1.0]
CADMIUM	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u
CALCIUM	99,200	66,400	51,200	140,000	93,800	234,000	174,000
CHROMIUM	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
COBALT	7.0 u	7.0 u	7.0 u	70.4	7.0 u	7.0 u	7.0 u
COPPER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	[5.0]
IRON	[13.8]	[53.2]	[15.5]	560.0	840.0	1,640	1,120
LEAD	[0.99] J	[2.0] J	[0.88] J	[1.4]	[3.7]	0.7 u	0.7 u
MAGNESIUM	39,800	33,700	31,200	39,800	42,800	58,600	68,800
MANGANESE	3.0 u	[12.4]	116.0	149.0	1,130	79.5	76.4
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	6.0 u	6.0 u	6.0 u	260.0	[7.1]	6.0 u	6.0 u
POTASSIUM	[1,270]	[831]	[1,940]	[1,130]	[930]	[1,560]	[1,140]
SELENIUM	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ
SILVER	9.0 u	9.0 uJ	9.0 uJ	9.0 uJ	9.0 uJ	9.0 u	9.0 uJ
SODIUM	[3,780]	[3,070]	[2,900]	[3,010]	8,950	7,030	[3,380]
THALLIUM	1.7 u	1.7 u	1.7 u	1.7 u	1.7 uJ	1.7 u	1.7 u
VANADIUM	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
ZINC	368	1,130	1,260	1,470	2,590	1,040	6,190
CYANIDE	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
6. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
7. s - value determined by method of standard addition.

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TABLE TM9-29

INORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MW-16	DUP-2 (Duplicate of MW-16)	MW-175	DUP-3 (Duplicate of MW-175)	MW-171	MW-170	MW-18
Traffic Report No:	NES-076	NES-077	NES-095	NES094	NES-087	NES-088	NES-063
ALUMINUM	29.0 u	[40.4]	29.0 u	29.0 u	29.0 u	29.0 u	[38.7]
ANTIMONY	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u
ARSENIC	12.1	12.6	124.0	131.0	10.1	1.5 u	1.5 u
BARIUM	2,170	2,180	[120.0]	[111.0]	[118.0]	[29.3]	[37.2]
BERYLLIUM	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u	[1.3]
CAESIUM	3.0 u	3.0 u	3.0 u ²	3.0 u	3.0 u	3.0 u	3.0 u
CALCIUM	24,400	24,200	94,000	91,000	75,700	73,600	103,000
CHROMIUM	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
COBALT	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u
COPPER	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u	5.0 u
IRON	[15.7]	[14.3]	3,480	3,940	2,030	11.0 u	[42.1]
LEAD	0.7 uJ	0.7 u	0.7 uJ	0.7 uJ	0.7 u	0.7 uJ	[0.93] J
MAGNESIUM	46,900	47,200	33,600	33,100	30,800	29,300	39,200
MANGANESE	101.0	102.0	50.6	51.4	36.4	3.0 u	[3.9]
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	6.0 u	6.0 u	66.7	[32.8]	6.0 u	6.0 u	6.0 uJ
POTASSIUM	[2,150]	[2,240]	[4,400]	[3,660]	[2,110]	[710]	[953]
SELENIUM	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ
SILVER	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 uJ
SODIUM	8,350	8,350	18,200	18,000	11,400	3,370 u	[4,850]
THALLIUM	1.7 u	1.7 u	1.7 uJ	1.7 uJ	1.7 u	1.7 u	1.7 u
VANADIUM	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
ZINC	76.5 uJB	76.5 uJB	12,300	12,100	486	414	386
CYANIDE	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
6. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
7. s - value determined by method of standard addition.

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TABLE TN9-30

INORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1983)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	NW-19	DUP-1 (Duplicate of NW-19)	NW-20	NW-21	NW-105 (Blank After NW-21)	NW-23	NW-104 (Blank After NW-23)
Traffic Report No:	NES-064	NES-065	NES-079	NES-084	NES-085	NES-080	NES-081
ALUMINUM	[34.4]	[50.5]	29.0 u	[30.9]	29.0 u	29.0 u	29.0 u
ANTIMONY	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u
ARSENIC	1.5 uJ	1.5 uJ	1.5 u	[4.2]	1.5 u	1.5 u	1.5 u
BARIUM	[64.9]	[70.0]	[63.3]	[74.9]	4.0 u	[36.7]	4.0 u
BERYLLIUM	0.9 uJ	0.9 u	0.9 uJ	0.9 u	0.9 u	0.9 u	0.9 u
CADMIUM	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u
CALCIUM	90,800	90,100	71,800	190,000	[501]	87,100	[455]
CHROMIUM	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
COBALT	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u
COPPER	[7.3]	5.0 u	5.0 u	5.0 u	53.4	5.0 u	[22.7]
IRON	[26.4]	112.0	[31.2]	2,380	[26.7]	[15.8]	11.0 u
LEAD	[1.4]	[3.1] s	[1.4]	[1.5]	0.7 u	0.7 u	0.7 u
MAGNESIUM	39,000	42,200	31,500	59,900	121 u	34,900	121 u
MANGANESE	192.0	206.0	98.9	434.0	3.0 u	3.0 u	3.0 u
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u
POTASSIUM	[1,380]	[1,550]	[1,380]	[1,280]	176 u	[1,050]	176 u
SELENIUM	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ
SILVER	9.0 uJ	9.0 uJ	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
SODIUM	7,210	7,880	[2,700]	[3,620]	[1,050]	[4,580]	[2,490]
THALLIUM	1.7 u	1.7 u	1.7 u	1.7 u	1.7 u	1.7 u	1.7 u
VANADIUM	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
ZINC	2,250	2,430	1,830	982	76.5 uJB	404	76.5 uJB
CYANIDE	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
6. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
7. s - value determined by method of standard addition.

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TABLE TM9-31

INORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MU-24	MU-25	MU-25I	MU-108 (Blank After MU-25I) MES-097	MU-26	MU-107 (Blank After MU-26) MES-093	MU-27R
Traffic Report No:	MES-082	MES-083	MES-096		MES-092		MES-102
ALUMINUM	29.0 u	29.0 u	29.0 u	29.0 u	29.0 u	29.0 u	29.0 u
ANTIMONY	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u
ARSENIC	1.5 u	1.5 u	[2.8]	1.5 u	[3.9]	1.5 u	19.6
BARIUM	[42.1]	[68.2]	[71.7]	4.0 u	[74.2]	4.0 u	[63.0]
BERYLLIUM	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u
CADMIUM	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u
CALCIUM	119,000	161,000	64,100	[378]	102,000	[421]	56,600
CHROMIUM	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
COBALT	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u
COPPER	[9.3]	5.0 u	5.0 u	38.9	5.0 u	66.8	5.0 u
IRON	[20.8]	[27.8]	956.0	[17.9]	[29.0]	11.0 u	278.0
LEAD	[1.5]	0.7 u	0.7 uJ	0.7 uJ	[3.3]	0.7 uJ	0.7 uJ
MAGNESIUM	47,600	60,600	31,400	121 u	49,700	121 u	25,300
MANGANESE	258.0	53.0	40.8	3.0 u	852.0	[3.3]	27.0
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u
POTASSIUM	[1,270]	[1,430]	[2,460]	176 u	[2,680]	176 u	[1,720]
SELENIUM	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ
SILVER	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
SODIUM	9,340	8,790	11,600	[988]	23,100	[236]	28,700
THALLIUM	1.7 u	1.7 u	1.7 uJ	1.7 uJ	1.7 uJ	1.7 u	1.7 uJ
VANADIUM	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
ZINC	212	304	484	109	14,500	76.5 uJB	480
CYANIDE	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. uJB - revised detection limit due to blank contamination. Compounds with this flag are essentially undetected.
6. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
7. s - value determined by method of standard addition.

NUM109.WK1
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TABLE TM9-32

INORGANIC CHEMICAL DATA (GROUNDWATER, JANUARY 1988)
METAMORA LANDFILL, METAMORA TOWNSHIP, MICHIGAN

Sample No:	MW-109 (Blank After MW-27R) NES-101	MW-28R NES-098	DUP-4 (Duplicate of MW-28R) NES-099	MW-30R NES-100	MW-31 NES-086	MW-101 (Blank Prior to Sampling) NES-055
Traffic Report No:						
ALUMINUM	(34.9)	29.0 u	29.0 u	29.0 u	29.0 u	(39.8)
ANTIMONY	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u	22.0 u
ARSENIC	1.5 u	33.7	34.1	21.8	1.5 u	1.5 uJ
BARIUM	4.0 u	[124.0]	[126.0]	[115.0]	[60.1]	4.0 u
BERYLLIUM	0.9 u	0.9 u	0.9 u	0.9 u	0.9 u	(1.3)
CHROMIUM	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u	3.0 u
CALCIUM	218 u	58,600	59,000	56,200	78,800	(486)
CHROMIUM	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u
COBALT	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u	7.0 u
COPPER	78.3	5.0 u	5.0 u	5.0 u	5.0 u	74.9
IRON	11.0 u	159.0	201.0	238.0	494.0	(28.9)
LEAD	0.7 uJ	0.7 uJ	0.7 uJ	0.7 uJ	0.7 u	(2.4)
MAGNESIUM	121 u	28,000	28,200	26,600	31,900	121 u
MANGANESE	3.0 u	27.0	27.5	22.1	26.7	3.0 u
MERCURY	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
NICKEL	6.0 u	6.0 u	6.0 u	6.0 u	6.0 u	(7.3)
POTASSIUM	176 u	[1,370]	[1,460]	[1,730]	[1,290]	176 u
SELENIUM	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ	1.8 uJ
SILVER	9.0 u	9.0 u	9.0 u	9.0 u	9.0 u	9.0 uJ
SODIUM	1,300	15,200	15,200	17,500	5,630	48,200
THALLIUM	1.7 uJ	1.7 uJ	1.7 uJ	1.7 uJ	1.7 u	1.7 u
VANADIUM	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u	4.0 u
ZINC	91.5 uJB	394	397	260	518	48 uJB
CYANIDE	10.0 u	10.0	10.0 u	10.0 u	10.0 u	10.0 u

Notes:

1. All concentrations in ug/l.
2. J - an estimated value.
3. u - compound was analyzed for but not detected.
4. uJ - approximate detection limit due to quality control results.
5. uJB - reused detection limit due to blank contamination. Compounds with this flag are essentially undetected.
6. Brackets indicate that the value is greater than or equal to the detection limit but is less than the contract required detection limit.
7. s - value determined by method of standard addition.