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VCP - V
BCP - C

MALCOLM PIRNIE

932056A

PRELIMINARY SITE INVESTIGATION REPORT
DIBACCO NO. 1, OLD CREEK SITE, SITE NO. 932056A
MULTIPLE SITES - PRELIMINARY SITE ASSESSMENTS
WORK ASSIGNMENT D002852-21.0

Prepared For:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION/ DIVISION OF HAZARDOUS WASTE REMEDIATION

MARCH 1998

MALCOLM PIRNIE, INC.

P. O. Box 1938
Buffalo, New York 14219

0266-325/SIDR

MALCOLM PIRNIE

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PRELIMINARY SITE INVESTIGATION DRAFT REPORT
DIBACCO NO. 1 OLD CREEK SITE

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1.0 BACKGROUND

The Dibacco No. 1, Old Creek Site (Site No. 932056A), is located within the City limits of Niagara Falls, New York. Presently, the Site is designated Class 2A Hazardous Waste Disposal Site by the New York State Department of Environmental Conservation (NYSDEC). A Class 2A designation is a temporary designation used for sites for which inadequate data is available to assign the sites to one of the five classifications specified by the NYSDEC. In 1992, a Phase II Investigation of the Site was performed by Ecology and Environment, Inc. (Ecology and Environment) as an agent of the NYSDEC, and the investigation included the collection of soil and groundwater samples. Several compounds identified on the Toxicity Characteristic Leaching Procedure (TCLP) list were detected in on-site soils. As a result of the detection of these compounds, the NYSDEC has assigned Malcolm Pirnie Work Assignment Number D-002852-21 to perform a Preliminary Site Assessment to determine if hazardous waste exists in areas not previously sampled for TCLP analysis at the Site. This project is one of four Preliminary Site Assessments that were performed as part of the Work Assignment.

1.1 Site History

NYSDEC records indicate that on-site disposal of waste materials first occurred in 1977 when Apex Salvage Company disposed of demolition debris from the Carborundum Warehouse on Lendell Road, Town of Wheatfield, at the Dibacco Site. This debris included fiberfax insulation, grinding wheels, sandpaper, heating elements, and abrasives composed of a combination of silica, alumina, and silicon carbide. In addition, records indicated that Hooker Chemical disposed of an unknown quantity of fly ash and spent hexachlorocyclopentadiene (C-56) catalyst at the Site. These records indicate that the site was used as a landfill for a period of approximately one year.

As discussed in the Phase II Report, the main debris disposal area extends from the fence behind the shed to the Old Creek Bed to the south and to Cayuga Creek to the east. A 6- to 8-foot embankment separates the debris pile and the Old Creek Bed. In addition to disposal at the main debris disposal area, some waste was disposed in the Old Creek bed

Area. The main disposal area, the approximate location of the Old Creek Bed, and the extent of filling activities are shown on Figure 1. In 1978, the Town of Niagara prohibited further dumping at the site, filling activities ceased, and the area was graded and covered with clay.

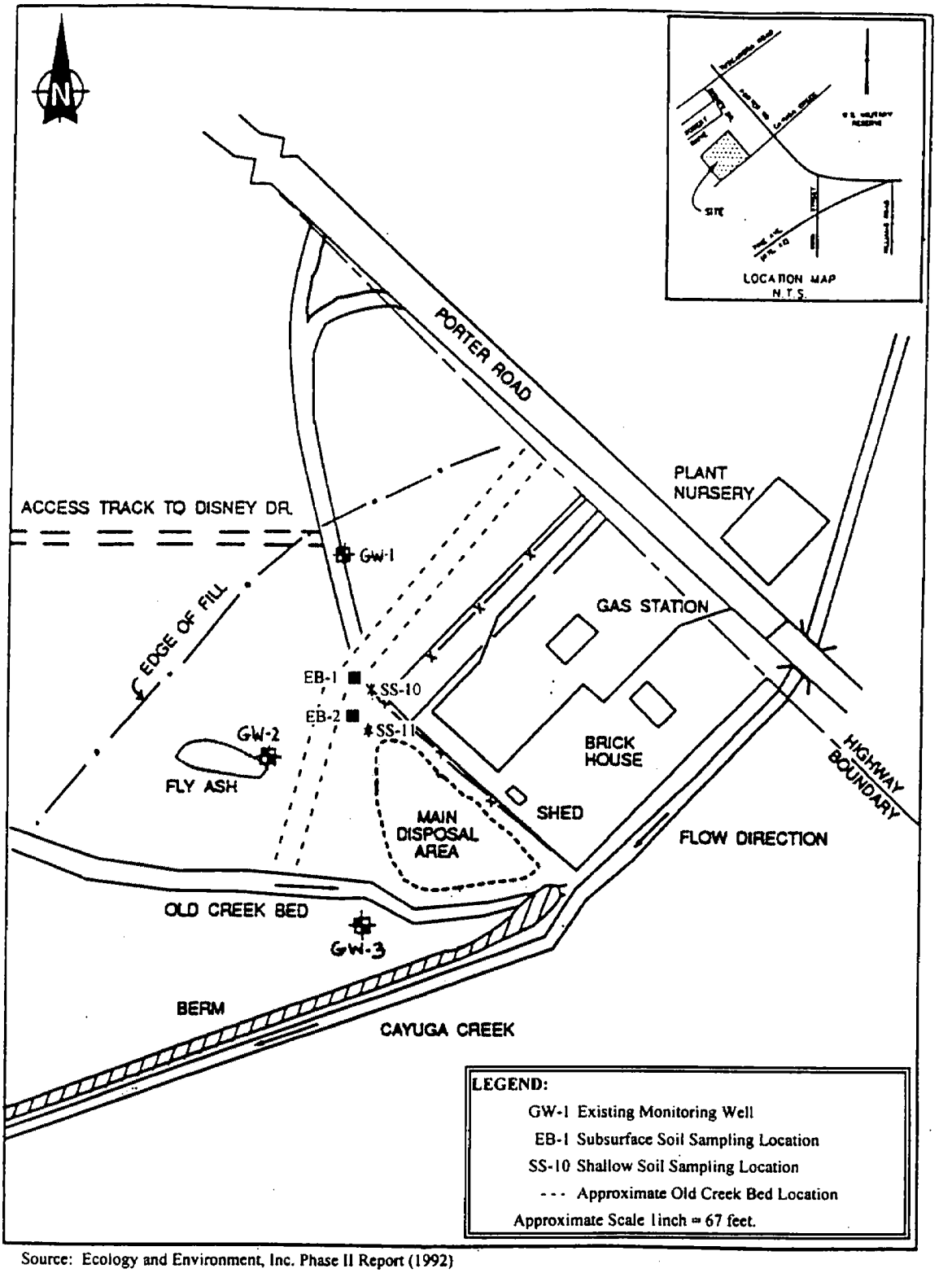
Niagara County Department of Health investigated the site in 1981 when piles of tires, concrete and other rubbish were observed on the surface at the site. The U.S. Geological Survey analyzed surface water samples from Cayuga Creek adjacent to the Site in 1982 as part of their Niagara River Study and identified the presence of low levels of copper, lead and various organic compounds. In 1984, a Phase I Site Investigation, completed by Engineering-Science, recommended the initiation of a Phase II Investigation based on the site history and analytical results to date. The Phase II Investigation was completed in 1992 by Ecology and Environment, Inc. Although hexachlorocyclopentadiene was not detected in the samples collected during the Phase II Investigation, Ecology and Environment recommended additional sampling based on the extremely poisonous nature of the compound to determine its presence or absence at the Site. A more thorough discussion of the site history is included in the Phase II Site Investigation Report.

Additional analysis of soil samples collected by the NYSDEC in June 1992 and December 1993 showed that hexachlorocyclopentadiene was present at the Site in an area of approximately five square feet at a concentration up to 13 ppb. Hexachloro-cyclopentadiene was not detected in any other sample from the Site during these sampling events or the June 1994 sampling event also conducted by the NYSDEC.

1.2 Objectives

The New York State Department of Health (NYSDOH) expressed concern that the site characterization was inadequate with respect to the newly promulgated TCLP criteria (1994) and that the site needed to be further evaluated since compounds found on the TCLP list were detected in surface soils during the 1992 investigation. Therefore, additional surface and subsurface soil samples were collected to determine whether the fill materials at the site constitute a hazardous waste. The soil sampling locations were selected by the NYSDEC in areas where previous sampling indicated the presence of TCLP compounds.

FIGURE 1



Source: Ecology and Environment, Inc. Phase II Report (1992)

Location of Old Creek Bed from Engineering Science Phase I Report (1984)

DIBACCO SITE NO. 1 SITE PLAN

If hazardous wastes are determined to be absent, the site can be removed from the NYSDEC Inactive Hazardous Waste Site List.

1.3 Scope

The scope for this investigation included:

- The collection and analysis of shallow soil/fill for full Toxicity Characteristic Leaching Procedure (TCLP) analysis.
- The collection and analysis of subsurface soil for TCLP analysis and Target Compound List (TCL) volatile organic compound (VOC) and semivolatile organic compound (SVOC) analysis.

The scope of work identified in the SSWP for the Dibacco site was based on information provided by the NYSDEC and the Project Work Plan (Malcolm Pirnie, 1997). A generic Quality Assurance Project Plan with a Field Sampling Plan (QAPP/FSP), prepared for this Site and three other sites identified in the Work Assignment, describes the quality assurance and specific field sampling procedures that were used during the performance of the site assessments. Additionally, the field activities were performed in accordance with the Site Specific Health and Safety Plan prepared for the Dibacco site.

1.4 Site Visit/Mobilization

Site reconnaissance was conducted on October 29, 1996 to verify site access and environmental sampling locations. The soil sampling program occurred on July 9, 1997. The site owner, Maureen Weber, observed the sampling program, and Michael Hinton of the NYSDEC observed the initiation of field activities. The drilling program was completed by SJB Services, Inc. of Lackawanna, New York under the direction of a Malcolm Pirnie geologist. All samples were collected by a Malcolm Pirnie geologist.

2.0 PRELIMINARY SITE ASSESSMENT RESULTS

2.1 Shallow Soil Sampling

On July 9, 1997, Malcolm Pirnie collected soil samples to determine the presence or absence of hazardous waste in areas not previously sampled at the Site. Sampling included the collection of two shallow subsurface soil samples (SS10 and SS11) using split-spoons driven to a depth of two feet below grade. The sample locations are shown on Figure 1. Geologic logs containing the soil descriptions for the samples are included as Attachment A. Measurements of organic vapors were collected from the samples using a photo-ionization detector (PID) with a 10.2 eV lamp, and this screening indicated that no volatile organic compounds were detectable in either sample. Additionally, staining was absent in the soil at the two locations.

Samples representing the upper 2-foot interval were collected from the split-spoons using decontaminated stainless steel spoons and placed in laboratory pre-cleaned sample jars. Following collection, the samples were placed in a cooler containing ice. The samples were submitted to Mitkem Corporation of Warwick, Rhode Island for TCLP analysis (USEPA Method 1311) of VOCs, pesticides, herbicides, SVOCs including hexachlorocyclopentadiene, and RCRA characteristics flash point, reactivity, and corrosivity.

The analytical results of samples SS10 and SS11 indicate that TCLP VOCs, SVOCs, pesticides, and herbicides were not detected in the surface soil at the Site. Additionally, hexachlorocyclopentadiene was not detected in either surface soil sample. Although 6 of the 8 TCLP metals were detected in at least one of the surface samples, no metals were detected at concentrations exceeding the EPA Maximum Concentration of Contaminants for Toxicity Characteristics. Analysis of the RCRA characteristics indicated that the samples were not reactive with respect to cyanide and sulfide, and were not corrosive. Sample SS11 did not have a flash point. Due to inadequate sample volume, a flash point analysis was not completed on sample SS10. A summary of the analytical results is shown in Table 1, and Table 2 shows the compounds included in the USEPA Method 1311 TCLP Analysis. The validated Form 1 analytical data sheets are included as Attachment B.

MALCOLM PIRNIE

TABLE 1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIBACCO NO. 1 OLD CREEK SITE - PRELIMINARY SITE ASSESSMENT
SUMMARY OF TCLP ANALYTICAL RESULTS

	USEPA Maximum Concentration for Toxicity Characteristics	SS10	SS11	EB1-SB1	EB2-SB1
TCLP Analysis[1] (mg/L)		0-2 Ft.	0-2 Ft.	0-2 Ft.	0-2 Ft.
Arsenic	5	0.0218 J	0.0142 J	0.0048 J	0.0173 J
Barium	100	0.777	0.484	0.705	0.906
Cadmium	1	0.0019 B	ND	ND	ND
Chromium	1	0.0027 B	0.0028 B	0.0032 B	ND
Selenium	1	0.0052 J	0.017 J	0.0258 J	0.0328
Silver	5	R	0.001 J	R	R
Hexachlorocyclopentadiene[2]	NA	UJ	UJ	ND	ND
RCRA Characteristics					
Flashpoint	NA	-[3]	NF	NF	NF
pH	2 < pH < 12.5	6.8	7.1	7.4	9.6
Reactive Cyanide (mg/kg)	500	R	UJ	R	R
Reactive Sulfides (mg/kg)	500	UJ	UJ	4.5 J	UJ

Notes:
Only compounds on TCLP list that were detected in one or more samples are included in this table.
NA - A Maximum Concentration Value does not exist at this time.
B - Indicates analyte results is between Instrument Detection Limit and Contract Required Detection Limit (CRDL).
J - Estimated due to variance from quality control limits.
ND - Compound not detected.
R - Report value is unusable and rejected due to variance from quality control limits.
UJ - The element was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance in quality control limits.
NF - No Flash
1. EPA Method 1311
2. Hexachlorocyclopentadiene is not on the standard TCLP list.
3. Not enough sample volume to analyze for flashpoint.

TABLE 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIBACCO NO. 1 OLD CREEK SITE - PRELIMINARY SITE ASSESSMENT
LIST OF COMPOUNDS INCLUDED IN TCLP ANALYSIS

Metals
Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Potassium
Selenium
Silver
Sodium
Thallium
Vanadium
Zinc

Herbicides
2,4-Dichlorophenoxyacetic Acid
2,4,5-Trichlorophenoxypropionic Acid (silvex)

VOCs
Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroform
1,2-Dichloroethane
1,1-Dichloroethene
Methyl ethyl ketone
Tetrachloroethene
Trichloroethene
Vinyl Chloride

SVOCs
Cresol
1,4-Dichlorobenzene
2,4-Dinitrotoluene
Hexachlorbenzene
Hexachloro-1,3-butadiene
Hexachloroethane
Nitrobenzene
Pentachlorophenol
Pyridine
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

Pesticides
Chlordane
Endrin
Heptachlor
Heptachlor epoxide
Lindane
Methoxychlor
Toxaphene

Notes: USEPA Method 1311.

2.2 Subsurface Soil Sampling

Two borings (EB-1 and EB-2) were completed at the Site for the purpose of collecting subsurface soil samples. The samples were collected using 2-inch diameter split-spoons and hollow-stem augers. The boring locations, shown on Figure 1, were selected by the NYSDEC in locations not previously sampled for TCLP analysis. Geologic logs containing the soil descriptions of the borings are included as Attachment A. Tan to brown silty sand was encountered in both borings from the ground surface to approximately 2.3 to 2.5 feet below grade. Native material was found underlying the silty sand, and was a light- to medium-brown clay with some rounded gravel and a few fine sand and silt interlayers. The native material extended to the bottom of the borings. The borings were advanced to depths of 14 feet below grade to ensure that the brown clay was indeed native material. The Site Specific Work Plan recommended the advancement of the borings to the shallower of 15 feet below grade or 2 feet below native material. A comprehensive discussion of local and regional geology and hydrogeology is included in Ecology and Environment's 1992 Phase II Investigation Report.

Measurements of organic vapors using a PID were immediately collected from each split-spoon, and no volatile organic compounds were detected during the screening in any sample from the borings. Following screening, samples were collected from each split-spoon in laboratory pre-cleaned bottles for possible submittal to the laboratory. Additionally, a soil sample was placed in a separate glass jar and covered with aluminum foil and a screw cap for headspace screening with the PID. This screening also indicated that no volatile organics were present in any sample from either boring. Staining was absent in the soil and no product-like wastes were encountered at the two boring locations.

The samples were collected from the split-spoons using decontaminated stainless steel spoons and placed in laboratory pre-cleaned sample jars. The Site Specific Work Plan recommended the submittal of the samples from the interval with the highest PID measurement for TCLP analysis and from the sample interval with the second highest PID measurement for analysis of TCL VOCs and SVOCs. Since no elevated PID measurements were obtained from any of the intervals and staining was absent in the soil, the samples from the interval containing only fill material were submitted for TCLP analysis. The fill material

is likely the only material at the Site that will leach significant concentrations of contaminants during the TCLP extraction. The 0 to 2 foot interval was selected for TCLP analysis because the fill material was found at depths of 0 to 2.5 feet below grade, and, therefore, the only interval containing only fill material was the 0 to 2 feet interval. The 2 to 4 foot interval also contained native material. The TCLP analysis included VOCs, pesticides, herbicides, metals, and SVOCs including hexochlorocyclopentadiene, and the RCRA characteristics ignitability, reactivity and corrosivity were also analyzed for in these soil samples.

Additionally, the samples from the 4 to 6 foot intervals were submitted for analysis of TCL VOCs and SVOCs because the 4 to 6 foot intervals were the first intervals with only native material. This interval was selected to determine if the native material has been impacted by contaminants introduced during filling activities. The sampling and analysis of native material was recommended in the April 10, 1996 portion of the NYSDEC Work Assignment for the Site.

Table 1 summarizes the analytical results of the TCLP and RCRA Characteristics analysis for soil samples EB1-SB1 and EB2-SB1. Pesticides, herbicides, VOCs, and SVOCs were not detected in the soil samples submitted for TCLP analysis. Although 4 of the 8 TCLP metals were detected in at least one of the surface soil samples, no metals were detected at concentrations exceeding the EPA Maximum Concentration of Contaminants for Toxicity Characteristics. The analysis of the RCRA Characteristics indicated that the soil in the two samples did not have a flashpoint and were not corrosive.

Sample EB2-SB1 was not reactive with respect to sulfide, and sample EB1-SB1 contained reactive sulfide at a concentration of 4.5 mg/kg. This concentration is below the EPA Maximum Concentration Value of 500 mg/kg for reactive sulfide. The reactive cyanide results were rejected during data validation due to variance from quality control limits, and will be discussed in the following section of the report.

From each boring, the sample in the 4 to 6 foot interval was submitted for analysis of TCL VOCs and SVOCs. Table 3 summarizes the analytical results. The VOC toluene was detected in sample EB1-SB3 at an estimated concentration of 0.004 mg/kg. The only SVOC detected was bis(2-ethylhexyl)phthalate at a low concentration in the sample

TABLE 3

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIBACCO NO. 1, OLD CREEK SITE - PRELIMINARY SITE ASSESSMENT
SUMMARY OF SUBSURFACE SOIL TCL RESULTS

	NYSDEC TAGM 4046 Value	Sample Location	
		DB1-SB3	DB2-SB-3
		6-8 Ft.	6-8 Ft.
Volatile Organic Compounds (mg/kg)			
Toluene	1.5	0.004 J	ND
Semivolatile Organic Compounds (mg/kg)			
Bis(2-ethylhexyl)phthalate	50	ND	0.12 J
Hexachlorocyclopentadiene	NA	UJ	UJ

Notes:
Only compounds on TCL list that were detected in one or more samples are included in this table.
ND - Denotes parameter was not detected.
J - Estimated concentration.
UJ - The compound was analyzed for, but not detected. The sample quantitation limit is an estimate due to variance in quality control limits.
NA - NYSDEC TAGM 4046 Value not available.

EB2-SB3. Hexachlorocyclopentadiene was not detected in either soil sample. No volatile organic compound or semivolatile organic compound was detected in concentrations exceeding the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 Values.

2.3 Analysis/Data Usability

The laboratory analytical package was reviewed and evaluated by an independent subcontractor, Chemworld Environmental, Inc. (Chemworld) of Rockville, Maryland, to assess compliance with the analytical method protocols described in the NYSDEC Analytical Services Protocol (ASP). A Data Usability Summary Report (DUSR) was prepared by Chemworld that compares the quality of the performance of the laboratory analyses to that described in the ASP. As discussed in the DUSR, Chemworld determined that the majority of the samples were analyzed within the bounds required in the ASP. However, a number of the analytical results included deviations from the acceptable limits for quality control, and, therefore, qualifications have been placed on the analytical results. Tables 1 and 3 include the qualifiers detailed in the DUSR.

The TCLP analysis for silver and the analysis for reactive cyanide were found to be unusable in three of the four sample analyses (SS10, EB1-SB1, and EB2-SB1) due to variance from quality control limits, and the results were therefore rejected. However, the acceptable sample results from sample SS11 indicated that silver was detected at a very low estimated concentration (0.001 mg/kg), well below the USEPA Maximum Concentration for Toxicity Characteristics of 5 mg/kg. Reactive cyanide was not detected in sample SS11, and this result was also found to acceptable during the data validation procedure. Neither silver nor cyanide is an analyte of concern at the Site, and previous sampling has shown that the only hazardous waste detected at the Site is an inconsequential amount of hexachlorocyclopentiene.

3.0 CONCLUSIONS

The analytical results of the six surface and subsurface soil samples collected in July 1997 by Malcolm Pirnie indicated that no contaminant is present in the samples from the Site in concentrations exceeding the applicable cleanup guidelines. Hexachloro-cyclopentadiene, the primary compound of concern at the Site, was not detected in any of the samples. Soil staining and product-like waste were absent in each of the borings, and PID screening measurements of the soil samples indicated the absence of VOCs in the soil.

Based on the results of this investigation, no further work at the Dibacco Site is proposed, and the site is recommended to be removed from the NYSDEC Inactive Hazardous Waste Site List.

MALCOLM PIRNIE

ATTACHMENT A

FIELD SAMPLING LOGS AND SOIL BORING LOGS

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0800 D. RIKER ONSITE FOR SAMPLING AT DIRECTED OLD CREEK SITE (SITE # 932056A) LOW 60's, RAIN/MISTING MODERATE BREEZE

LAY OUT SAMPLE LOCATIONS

0820 MAUREEN WEBER & SON JOE WEBER WEBER ONSITE FOR OBSERVATION

0825 MIKE HINTON (DEC) ONSITE

DISCUSS ACCESS
- JOE SPEAKS WITH OWNER OF AUTO REPAIR SHOP IN PORTER
- ONLY LEASES, SO WE CAN WALK THROUGH CENTER, BUT NOT WITH RIG
- MAUREEN HAD SAID LAST WEEK THAT SHE OWNED THE ACCESS ROAD, BUT SAID TODAY SHE DOESN'T
- WE'LL GO IN FROM

DISNEY ROAD WHERE THEY OWN FRONTAGE

915 CALL DRILLERS - SHOULD BE HERE

925 DRILLERS (STB) ONSITE, SET UP TO UNLOAD ON DISNEY RD

935 MAUREEN & JOE OFFSITE WILL RETURN

950 MIKE OFFSITE, NEEDS TO ATTEND MEETINGS, GAVE #'S TO REACH HIM. LIKELY WON'T RETURN TODAY -

DRILLERS - STB
ART KOSKIE
DALE

- CALIBRATE PID

1095 GET RIG BACK TO LOCATION - MUST DECON BECAUSE THEY DIDN'T AT LAST SITE - PROBLEM WITH COMPRESSOR

RIG - CME 75 MOUNTED ON A FLEXTRAC NORDWELL

1145 AFTER DECONNING RIG, MOVE TO EB-1

EB-1

0-2 3, 11, 11, 7

[redacted] 18" REC

0-10" DARK BROWN TO BLACK SAND & SILT, SOME GRAVEL AND COBBLES

10-18" LIGHT BROWN WITH RUST MOTTLING SAND & SILT WITH GRAVEL, MOIST

PID [redacted] = 0, NO ODOR

2-4 3, 4, 5, 10

14" RECOVERY 0-[redacted]": SAME AS ABOVE

4-14" [redacted]" LIGHT TO MED BROWN SILT & CLAY, MOIST, NO ODOR

PID = 0, STICKY, COHESIVE

I AM PLACING SAMPLES IN BOTTLES FOR LAB ANALYSIS, AND ALSO IN BRILLERÉ JARS FOR PID SCREENING LATER. USING 2" SPOONS, 4½' SD AUGER. THE LOCATIONS WERE MARKED USING THE LOCATIONS ON THE MAP & USING A TAPE MEASURE & COMPASS OFF OF MW-1

4-6' 22" REC 4, 6, 8, 13
SAME AS ABOVE, STICKY MOIST, NO ODOR, GRAY MOTTLING
20-22" - [redacted] LAYERS OF SAND (WHITE) IN CLAY PID: 0 → THIN LAYERS OF SILT

1215 MAUREEN ARRIVES TO OBSERVE DRILLING

6-8 17, 20, 22, 23
24" RECOVERY
0-24" LIGHT TO RED BROWN CLAY, MOIST, STICKY, MINOR GRAVEL
NO ODOR
PID=0
GRAVEL - SUBANGULAR

8-10 3, 6, 6, 8
24" RECOVERY
0-20" SAME AS ABOVE
20-24" LIGHT TO MEDIUM BROWN CLAY WITH FINE SAND (TAN & GRAY IN COLOR - MOTTLED) WITH SILT
- SAND IN LAYERS
- MOIST
PID = 0

10-12 3, 3, 5, 7
24" RECOVERY
0-24" LIGHT TO RED BROWN CLAY, MOIST, STICKY, NO ODOR
PID = 0
THIN SAND LAYERS (< 1 cm) AT 8" & 20" - FINE GRAY SAND & SILT

12-14 2, 3, 5, 4
24" RECOVERY
0-20" SAME CLAY AS ABOVE
20-24" RED. BROWN CLAY, SILT & SAND, (FINE) MOIST, STICKY

1245 END EB-1

I GO TO MS. WERNER'S TO CALL RICK FRAPPA FROM NATIVE - TCL, VOCs, SVOCs

(NOTES FROM PHONE CONVERSATION) SURFACE SOILS AT EB-1

FIRST ~~NATIVE~~ NATIVE SOIL SAMPLE FOR TCLP

0-2 TCLP

2-4 FULL TCL (1ST NATIVE)

RICK SAID TO COLLECT TCLP FROM SURFACE SAMPLE & TCL ~~METHOD~~ VOCs & SVOCs FROM FIRST SAMPLE DEFINITELY NATIVE

THEREFORE

ANALYZE EB-1 - SB1 FOR TCLP

EB1 - SB3 FOR TCL VOCs, SVOCs

1335 SS10 - SURFACE SAMPLE

0-2' 1, 4, 5, 6

12" RECOVERY

0-8" DARK BROWN TO BLACK SILTY SAND ● WITH ANGULAR

GRAVEL, NO ODOR, PID: 0

GLASS FRAGMENTS (SMALL < 1 cm)

AT 8"

8-12" MEDIUM BROWN SAND WITH SILT & GRAVEL, MOIST

AT 12" LIGHT GREEN GRAVEL-SIZED (2-3 cm DIAMETER) PIECE OF PLASTIC OR RESIN-LIKE MATERIAL COLLECT FOR TCLP

SS11 0-2' - COLLECT FOR TCLP

1, 10, 10, 8

14" RECOVERY

0-6" DARK GRAY TO BLACK VERY FINE SAND ~~AND~~ WITH SILT MOIST

6-14" ~~TAN~~ TAN TO BROWN WITH RUST MOTTLING SAND WITH ~~SILT~~ SILT & ANGULAR GRAVEL

- ALSO 2 PIECES (~1 cm DIAMETER) SLAG-LIKE MATERIAL - BLACK IN COLOR →

7/9/97

SLAG-LIKE MATERIAL IS HARD & HAS MANY VESICLES.

PID MEASUREMENTS (ppm)

1-1	0
1-2	0
1-3	0
1-4	0
1-5	0
1-6	0
1-7	0

1410 **EB-2**

5, 7, 6, 3

0-2' 14" RECOVERY

0-13" TAN-BROWN SAND W/SILT SOME ANGULAR GRAVEL BLACK IN COLOR, ALSO SLAG-LIKE MATERIAL 2 PIECES (~2 cm DIAM) BLACK, VITREOUS & FULL OF VESICLES

13-14" BROWN CLAY W/ GRAVEL, SUB TO ANGULAR MOIST,

PID = 0, NO ODOR

2-4' 3, 5, 7, 9

22" RECOVERY

0-3" TAN-BROWN SAND W/SILT W/ GRAVEL

3-22" BROWN CLAY, STICKY, MOIST COHESIVE, PID=0, NO ODOR SOME ANGULAR GRAVEL (<1cm DIAM); SOME DARK GRAY MOTTLING AT 3-10",

4-6' 3, 6, 10, 14

18" RECOVERY

0-18" MEDIUM BROWN CLAY, MINOR GRAVEL (SUBROUNDED) MOIST, COHESIVE, STICKY WITH SOME GRAY MOTTLING IN HORIZONTAL LAYERS, ALSO AT 16" FINE CLEAN SAND, SUBROUNDED PID = 0 NO ODOR

6-8" 4, 7, 10, 15

24" RECOVERY

0-24" MED. BROWN CLAY (AS ABOVE) WITH FINE SUBANGULAR TO SUBROUNDED GRAVEL

PID = 0, NO ODOR

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SAND LAYERS (FINE TO VERY FINE) AT 16" & 22"
- CLEAN SAND (GRAY TO WHITE)
-

8-10' 3, 4, 4, 8
24" RECOVERY
PID = 0
0-24" SAME CLAY AS ABOVE
- HORIZ. SAND LENSES (FINE TO V.F. SAND W/ SILT) AT 14" & 17"
- MOIST, NO ODOR, SAND LAYERS MORE MOIST

10-12' 2, 4, 5, 7
24" RECOVERY PID=0

0-24" SAME CLAY AS ABOVE
0-10" - MORE MOIST & STICKY THAN AT 10-24"
THIN (< 1 cm) FINE SAND & SILT LAYERS (HORIZONTAL) AT 14-17"

12-14' 2, 5, 7, 10
24" SAME CLAY AS ABOVE, MOIST, PID: 0
AT 12-16" VERTICAL LAYERS OF GRAY CLAY, WITH ROOTS, MOIST PID=0
END BORING
HEADSPACE

2-1
2-2
2-3
2-4
2-5
2-6
2-7

SUBMIT
EB2-SB1 FOR TCLP
EB2-SB3 FOR TCL VOCs, SVOCs

1615 FINISH DRILLING, BEGIN CLEANING UP EQUIPMENT
- MAJEED OFFSITE

& PACK SAMPLES, DRILLERS LOAD RIG, SCRAP DIRT FROM ROAD
1600 OFFSITE

FIELD BOREHOLE LOG

CLIENT NYSDEC
PROJECT DIBACCO
LOCATION NIAGARA FALLS, N.Y.
CONTRACTOR STB
METHOD OF BORING: SOIL 2" SPOONS, 4¼" AUGERS
ROCK

JOB NO. 0266325
LOGGED BY DAN RIKER
CORE DIA.

BOREHOLE NO. FB-1
STARTED 1145 M 7/8 19 87
FINISHED 1245 M 7/8 19 87
ELEVATIONS: DATUM

SAMPLE NO.	TYPE	DEPTH	BLOWS "N"	RECOVERY "	MOISTURE TIN NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain Drilling and Testing Equipment, Etc.
1		0 1 2	3 11 11 7	20 18"		0-10" DARK BROWN TO BLACK SAND & SILT, SOME SUBANGULAR GRAVEL, MOIST (COLORED) 10-18" LIGHT BROWN WITH RUST-COLORED MOTTLING SAND & SILT WITH GRAVEL, MOIST	PID = 0 PPM NO ODOR EB1-SB1 FOR TCLP + RCRA CHEM.
2		2 3 4	3 4 5 10	14"		0-4" SAME AS ABOVE (10-18') 4-14" LIGHT BROWN TO MEDIUM BROWN SILT & CLAY, STICKY, COHESIVE, MOIST	PID = 0 NO ODOR
3		4 5 6	4 6 8 13	22"		0-22" SAME AS ABOVE (CLAY) LIGHT TO MEDIUM BROWN & CLAY GRAY MOTTLING, STICKY, COHESIVE 20-22" THIN (<1 cm) SAND (FINE TO V.F.) WITH SILT LAYERS (2 LAYERS), MOIST	PID = 0 NO ODOR EB1-SB2 FOR TCL VOCs & SVOCs
4		- 7 8	17 20 22 23	24"		0-24" SAME AS ABOVE WITH MINOR SUBANGULAR GRAVEL, MOIST	PID = 0 NO ODOR
5		0 9 10	3 6 6 8	24"		0-20" SAME AS ABOVE 20-24" INTERLAYERED CLAY (AS ABOVE) WITH FINE SAND (TAN & GRAY COLOR) WITH SILT, MOIST	PID = 0 NO ODOR
6		0 11 12	3 3 5 7	24"		0-24" SAME CLAY AS 0-20" ABOVE, MOIST 8" & 10" THIN (<1 cm) SILTY FINE SAND LAYERS - SAND GRAY IN COLOR	PID = 0 NO ODOR
7		0 13 14	2 3 5 4	24"		0-20" SAME CLAY AS ABOVE 20-24" MEDIUM BROWN CLAY, SILT & FINE SAND, STICKY, MOIST	PID = 0 NO ODOR

Sheet No. ___ of ___

MALCOLM

CLIENT NYSDEC

PROJECT DIBACCO

LOCATION NIAGARA FALLS, NY

CONTRACTOR SJB

METHOD OF BORING: SOIL 2" SPLIT SPOONS

ROCK

JOB NO. 0266325

LOGGED BY DAN RIKER

CORE DIA.

FIELD BOREHOLE LOG

BOREHOLE NO. FB-2

STARTED 1410 M 7/4 19 87

FINISHED 1515 M 7/5/87 19 87

ELEVATIONS: DATUM

SAMPLE NO.	TYPE	DEPTH	BLOWS "N"	RECOVERY "	MOISTURE TIN NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain Drilling and Testing Equipment, Etc.
1		1 2	5 7 6 3	14"		0-13" TAN TO BROWN SAND WITH SILT, SOME ANGULAR GRAVEL (BLACK IN COLOR) SLAG-LIKE PIECES (~2 CM DIAMETER) MOIST 13-14" BROWN CLAY WITH SUB- TO ANNGULAR GRAVEL	PID: 0 PPM NO. ODOR FB2-SB1 FOR TCL/PCBs ONLY
2		3 4	3 5 7 9	22"		0-3" TAN - BROWN SAND W/SILT & GRAVEL 3-22" BROWN CLAY, STICKY, COHESIVE, SOME ANGULAR TO SUBANGULAR GRAVEL, DARK GRAY MOTTLING AT 3 TO 10", MOIST	PID = 0 NO ODOR
3		5 6	3 6 10 14	18"		0-18" MEDIUM BROWN CLAY, STICKY COHESIVE, MINOR SUBROUNDED TO SUBANGULAR GRAVEL, GRAY MOTTLING IN HORIZONTAL LAYERS AT 16" FINE SUBROUNDED SAND, CLEAN MOIST	PID = 0 NO ODOR FB2-SB3 FOR TCL VOCs, SVOCs
4		7 8	4 7 10 15	24"		0-24" SAME CLAY W/GRAVEL AS ABOVE 16", 22" FINE TO V.F. SAND LAYER (GRAY TO WHITE) MOIST	PID = 0 NO ODOR
5		9 10	3 4 4 81	24"		0-24" SAME CLAY W/GRAVEL AS ABOVE 14"-17" F TO V.F SAND LAYER W/SILT, MORE MOISTURE THAN IN CLAY	PID = 0 NO ODOR
6		11 12	2 4 5 7	24"		0-24" SAME CLAY W/GRAVEL AS ABOVE, MOIST 0-10" SAME LITHOLOGY, MORE MOIST THAN 10-24" 14-17" THIN (4.1 CM) FINE SAND & SILT LAYERS: HORIZONTAL	PID = 0 NO ODOR
7		13 14	2 5 7 10	24"		0-24" SAME AS ABOVE, MOIST 12-16" VERTICAL LAYERS OF GRAY CLAY AND PLANT ROOTS, MOIST	P.D = 0 NO ODOR

Sheet No. ___ of ___

MALCOLM

FIELD BOREHOLE LOG

CLIENT NYSDEC
PROJECT DIBACCO
LOCATION NIAGARA FALLS, NY
CONTRACTOR SJB
METHOD OF BORING: SOIL 2" SPOONS ROCK
JOB NO. 0266325
LOGGED BY DAN RIKER
CORE DIA.
BOREHOLE NO. SS11
STARTED 1340 M 7/7 19 97
FINISHED 1345 M 7/9 19 97
ELEVATIONS: DATUM

SAMPLE NO.	TYPE	DEPTH	BLOWS "N"	RECOVERY %	MOISTURE TIN NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain Drilling and Testing Equipment, Etc.
1			1				
		1	10	14"		0-6' DARK GRAY TO BLACK VERY FINE SAND & SILT, MOIST	PID = 0
			10				NO. 0.0
		2	9			6-14" TAN TO BROWN WITH RUST-COLORED MOTTLING MEDIUM SAND WITH SILT & ANGULAR GRAVEL	
						- 2 PIECES OF SLAG-LIKE MATERIAL (1 x 1 cm IN DIAMETER) BLACK IN COLOR	SS11 FOR TCLP & ASH CHAR.

Sheet No. ___ of ___

MALCOLM

FIELD BOREHOLE LOG

CLIENT NYS DEC
PROJECT DiBACCO
LOCATION NIAGARA FALLS, NY
CONTRACTOR SJB
METHOD OF BORING: SOIL 2" SPOONS
ROCK

JOB NO. 026325
LOGGED BY DAN RIKER
CORE DIA.

BOREHOLE NO. SS10
STARTED 1330 M 7/5 19 87
FINISHED 1335 M 7/5 19 87
ELEVATIONS: DATUM

SAMPLE NO.	TYPE	DEPTH	BLOWS "N"	RECOVERY %	MOISTURE TIN NO.	SAMPLE DESCRIPTION: Color, Texture Classification, Compactness/Consistency, Moisture Condition, Weathering/Fracturing, Inclusions, Odor, Etc.	NOTES: Boring, Testing and Sampling Procedures, Water Loss and Gain Drilling and Testing Equipment, Etc.
1		0	1	12"		0-8" DARK BROWN TO BLACK SILTY SAND WITH ANGULAR TO SUBANGULAR GRAVEL CLASS FRAGMENTS (<1cm) AT 8" MOIST	PID=0 NO ODOR
		1	4				
			5				
		2	6			8-12" MEDIUM BROWN SAND WITH SILT & GRAVEL, MOIST AT 12" LIGHT GREEN GRAVEL-SIZED (2-3 cm DIAMETER) PIECE OF PLASTIC OR RESIN-LIKE MATERIAL	SS10 FOR TCLP + RCRA CHAR.

Sheet No. ___ of ___

MALCOLM

MALCOLM PIRNIE

ATTACHMENT B

VALIDATED FORM 1 ANALYTICAL DATA SHEETS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB1-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2A9156

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: not dec. 20 Date Analyzed: 07/11/97

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	~~5~~	~~J~~ (12U)
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	~~12~~	~~U~~ UJ
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	~~8~~	~~BJ~~ (12U)
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (Total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (Total)	12	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB2-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB

Matrix: (soil/water) SOIL Lab Sample ID: D1085-06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2A9158

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: not dec. 21 Date Analyzed: 07/11/97

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	~~2~~	~~J~~
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	~~U~~ UJ
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	13	U
67-64-1	Acetone	~~5~~	~~BJ~~
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (Total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (Total)	13	U

13U

13U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB1-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0695

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 17 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	~~U~~ UJ
111-44-4	bis(-2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	~~U~~ UJ
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	~~U~~ UJ
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	400	~~U~~ UJ
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	~~U~~ UJ
105-67-9	2,4-Dimethyphenol	400	~~U~~ UJ
120-83-2	2,4-Dichlorophenol	400	~~U~~ UJ
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
111-91-1	bis(-2-Chloroethoxy)methane	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	~~U~~ UJ
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	400	~~U~~ UJ
95-95-4	2,4,5-Trichlorphenol	1000	~~U~~ UJ
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	400	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB1-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0695

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 17 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	~~U~~ UJ
100-02-7	4-Nitrophenol	1000	~~U~~ UJ
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	~~U~~ UJ
86-30-6	N-nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1000	~~U~~ UJ
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB1-SB3RE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0711

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 17 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/31/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	~~U~~ UJ
111-44-4	bis(-2-Chloroethyl)Ether	400	~~U~~ UJ
95-57-8	2-Chlorophenol	400	~~U~~ UJ
541-73-1	1,3-Dichlorobenzene	400	~~U~~ UJ
106-46-7	1,4-Dichlorobenzene	400	~~U~~ UJ
95-50-1	1,2-Dichlorobenzene	400	~~U~~ UJ
95-48-7	2-Methylphenol	400	~~U~~ UJ
108-60-1	2,2'-oxybis(1-Chloropropane)	400	~~U~~ UJ
106-44-5	4-Methylphenol	400	~~U~~ UJ
621-64-7	N-Nitroso-di-n-propylamine	400	~~U~~ UJ
67-72-1	Hexachloroethane	400	~~U~~ UJ
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	~~U~~ UJ
105-67-9	2,4-Dimethyphenol	400	~~U~~ UJ
120-83-2	2,4-Dichlorophenol	400	U UJ
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	~~U~~ UJ
111-91-1	bis(-2-Chloroethoxy)methane	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	~~U~~ UJ
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	~~U~~ UJ
95-95-4	2,4,5-Trichlorphenol	1000	~~U~~ UJ
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	400	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB1-SB3RE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0711

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 17 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/31/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	~~U~~ UJ
100-02-7	4-Nitrophenol	1000	~~U~~ UJ
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	~~U~~ UJ
86-30-6	N-nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1000	~~U~~ UJ
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	~~U~~ UJ
56-55-3	Benzo(a)anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	400	U
207-08-9	Benzo(k)fluoranthene	400	U
50-32-8	Benzo(a)pyrene	400	U
193-39-5	Indeno(1,2,3-cd)pyrene	400	U
53-70-3	Dibenzo(a,h)anthracene	400	U
191-24-2	Benzo(g,h,i)perylene	400	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB2-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0696

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(-2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethyphenol	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
111-91-1	bis(-2-Chloroethoxy)methane	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorphenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	410	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EB2-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0696

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
86-74-8	Carbazole	410	U
84-74-2	Di-n-butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	120	J
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo(b)fluoranthene	410	U
207-08-9	Benzo(k)fluoranthene	410	U
50-32-8	Benzo(a)pyrene	410	U
193-39-5	Indeno(1,2,3-cd)pyrene	410	U
53-70-3	Dibenzo(a,h)anthracene	410	U
191-24-2	Benzo(g,h,i)perylene	410	U

(1) - Cannot be separated from Diphenylamine

NYSDEC ASP

TCLP

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

EB1-SB1 ___

Lab Name: MITKEM_____ Contract: _____

Lab Code: 11522_ Case No.: _____ SAS No.: _____ SDG No.: EB1-SB

Matrix (soil/water): WATER Lab Sample ID: D1085-03

Level (low/med): MED__ Date Received: 07/10/97

% Solids: __0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.8	B	J	P
7440-39-3	Barium	705			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	0.40	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	3.2	B		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	2.0	U		P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.96	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	25.8	J		P
7440-22-4	Silver	0.80	U	R	P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
_____	Cyanide				NR
_____	_____				___

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: ___

Comments:

TCLP

NYSDEC ASP

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

EB2-SB1

Lab Name: MITKEM Contract:

ab Code: 11522 Case No.: SAS No.: SDG No.: EB1-SB

Matrix (soil/water): WATER Lab Sample ID: D1085-05

evel (low/med): MED Date Received: 07/10/97

Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	17.3	J		P
7440-39-3	Barium	906			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	0.40	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	0.60	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	5.2	U		P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.96	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	32.8			P
7440-22-4	Silver	0.80	U	R	P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NYSDEC ASP

TCLP

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

SS10

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: EB1-SB

Matrix (soil/water): WATER Lab Sample ID: D1085-01

Level (low/med): MED Date Received: 07/10/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	21.8	J		P
7440-39-3	Barium	777			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	1.9	B		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	2.7	B		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	9.3	U		P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.96	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	5.2	J		P
7440-22-4	Silver	0.80	U R		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP

NYSDEC ASP

1

INORGANIC ANALYSES DATA SHEET

NYSDEC SAMPLE NO.

SS11

Lab Name: MITKEM Contract:

Lab Code: 11522 Case No.: SAS No.: SDG No.: EB1-SB

Matrix (soil/water): WATER Lab Sample ID: D1085-02

Level (low/med): MED Date Received: 07/10/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	14.2	J		P
7440-39-3	Barium	484			P
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	0.40	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	2.8	B		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	6.8	U		P
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.96	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	17.0	J		P
7440-22-4	Silver	1.0	B	J	P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS10

Lab ID: D1085-01

Analysis Report: Volatile Organics

Analysis: Method 8240
Concentration in: ug/L

Analysis Date: 7/19/97
Dilution: 1

Analyte	Results	Reporting Limit
Benzene	ND	5
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Vinyl chloride	ND	5

QC Batch: VT0719-B1

Surrogate Recovery:	
1,2-Dichloroethane-d_4	105%
Toluene-d_8	105%
Bromofluorobenzene	104%

ND = Not Detected

010

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS11

Lab ID: D1085-02

Analysis Report: Volatile Organics

Analysis: Method 8240
Concentration in: ug/L

Analysis Date: 7/19/97
Dilution: 1

Analyte	Results	Reporting Limit
Benzene	ND	5
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Vinyl chloride	ND	5

QC Batch: VT0719-B1

Surrogate Recovery:	
1,2-Dichloroethane-d_4	108%
Toluene-d_8	104%
Bromofluorobenzene	101%

ND = Not Detected

011

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB1-SB1

Lab ID: D1085-03

Analysis Report: Volatile Organics

Analysis: Method 8240
Concentration in: ug/L

Analysis Date: 7/19/97
Dilution: 1

Analyte	Results	Reporting Limit
Benzene	ND	5
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Vinyl chloride	ND	5

QC Batch: VT0719-B1

Surrogate Recovery:	
1,2-Dichloroethane-d_4	108%
Toluene-d_8	107%
Bromofluorobenzene	104%

ND = Not Detected

012

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB2-SB1

Lab ID: D1085-05

Analysis Report: Volatile Organics

Analysis: Method 8240
Concentration in: ug/L

Analysis Date: 7/19/97
Dilution: 1

Analyte	Results	Reporting Limit
Benzene	ND	5
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Vinyl chloride	ND	5

QC Batch: VT0719-B1

Surrogate Recovery:	
1,2-Dichloroethane-d_4	107%
Toluene-d_8	105%
Bromofluorobenzene	103%

ND = Not Detected

013

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID:

Lab ID: TCLP Blank, VT0719-B1

Analysis Report: Volatile Organics

Analysis: Method 8240
Concentration in: ug/L

Analysis Date: 7/19/97
Dilution: 1

Analyte	Results	Reporting Limit
Benzene	ND	5
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Vinyl chloride	ND	5

QC Batch: VT0719-B1

Surrogate Recovery:	
1,2-Dichloroethane-d_4	106%
Toluene-d_8	103%
Bromofluorobenzene	103%

ND = Not Detected

014

D1085-MB

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS10

Lab ID: D1085-01

Analysis Report: Semivolatile Organics

Analysis: Method 8270
Concentration in: ug/L

Analysis Date: 7/22/97
Dilution: 1

Analyte	Results	Reporting Limits
Cresol, total	~~ND~~ UJ	33
1,4-Dichlorobenzene	~~ND~~ UJ	33
2,4-Dinitrotoluene	~~ND~~ UJ	33
Hexachlorobenzene	~~ND~~ UJ	33
Hexachloro-1,3-butadiene	~~ND~~ UJ	33
Hexachloroethane	~~ND~~ UJ	33
Nitrobenzene	~~ND~~ UJ	33
Pentachlorophenol	~~ND~~ UJ	83
Pyridine	~~ND~~ UJ	33
2,4,5-Trichlorophenol	~~ND~~ UJ	83
2,4,6-Trichlorophenol	~~ND~~ UJ	33
Hexachlorocyclopentadiene	~~ND~~ UJ	33

QC Batch: ST0711-B1

Surrogate Recovery:	
2-Fluorophenol	69%
Phenol-d_5	48%
2-Chlorophenol-d_4	83%
2,4,6-Tribromophenol	83%
1,2-Dichlorobenzene-d_4	84%
Nitrobenzene-d_5	76%
2-Fluorobiphenyl	88%
p-Terphenyl-d_{14}	98%

ND = Not Detected

015

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS11

Lab ID: D1085-02

Analysis Report: Semivolatile Organics

Analysis: Method 8270
Concentration in: ug/L

Analysis Date: 7/22/97
Dilution: 1

Analyte	Results	Reporting Limits
Cresol, total	~~ND~~ UJ	33
1,4-Dichlorobenzene	~~ND~~ UJ	33
2,4-Dinitrotoluene	~~ND~~ UJ	33
Hexachlorobenzene	~~ND~~ UJ	33
Hexachloro-1,3-butadiene	~~ND~~ UJ	33
Hexachloroethane	~~ND~~ UJ	33
Nitrobenzene	~~ND~~ UJ	33
Pentachlorophenol	~~ND~~ UJ	83
Pyridine	~~ND~~ UJ	33
2,4,5-Trichlorophenol	~~ND~~ UJ	83
2,4,6-Trichlorophenol	~~ND~~ UJ	33
Hexachlorocyclopentadiene	~~ND~~ UJ	33

QC Batch: ST0711-B1

Surrogate Recovery:	
2-Fluorophenol	68%
Phenol-d_5	51%
2-Chlorophenol-d_4	81%
2,4,6-Tribromophenol	77%
1,2-Dichlorobenzene-d_4	86%
Nitrobenzene-d_5	74%
2-Fluorobiphenyl	88%
p-Terphenyl-d_{14}	102%

ND = Not Detected

017

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB1-SB1

Lab ID: D1085-03

Analysis Report: Semivolatile Organics

Analysis: Method 8270
Concentration in: ug/L

Analysis Date: 7/23/97
Dilution: 1

Analyte	Results	Reporting Limits
Cresol, total	ND	33
1,4-Dichlorobenzene	ND	33
2,4-Dinitrotoluene	ND	33
Hexachlorobenzene	ND	33
Hexachloro-1,3-butadiene	ND	33
Hexachloroethane	ND	33
Nitrobenzene	ND	33
Pentachlorophenol	ND	83
Pyridine	ND	33
2,4,5-Trichlorophenol	ND	83
2,4,6-Trichlorophenol	ND	33
Hexachlorocyclopentadiene	ND	33

QC Batch: ST0711-B1

Surrogate Recovery:	
2-Fluorophenol	80%
Phenol-d_5	68%
2-Chlorophenol-d_4	84%
2,4,6-Tribromophenol	92%
1,2-Dichlorobenzene-d_4	71%
Nitrobenzene-d_5	82%
2-Fluorobiphenyl	76%
p-Terphenyl-d_{14}	94%

ND = Not Detected

018

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB2-SB1

Lab ID: D1085-05

Analysis Report: Semivolatile Organics

Analysis: Method 8270
Concentration in: ug/L

Analysis Date: 7/23/97
Dilution: 1

Analyte	Results	Reporting Limits
Cresol, total	ND	33
1,4-Dichlorobenzene	ND	33
2,4-Dinitrotoluene	ND	33
Hexachlorobenzene	ND	33
Hexachloro-1,3-butadiene	ND	33
Hexachloroethane	ND	33
Nitrobenzene	ND	33
Pentachlorophenol	ND	83
Pyridine	ND	33
2,4,5-Trichlorophenol	ND	83
2,4,6-Trichlorophenol	ND	33
Hexachlorocyclopentadiene	ND	33

QC Batch: ST0711-B1

Surrogate Recovery:	
2-Fluorophenol	76%
Phenol-d_5	64%
2-Chlorophenol-d_4	80%
2,4,6-Tribromophenol	80%
1,2-Dichlorobenzene-d_4	71%
Nitrobenzene-d_5	82%
2-Fluorobiphenyl	76%
p-Terphenyl-d_{14}	88%

ND = Not Detected

019

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID:

Lab ID: TCLP Blank, ST0711-B1

Analysis Report: Semivolatile Organics

Analysis: Method 8270
Concentration in: ug/L

Analysis Date: 7/22/97
Dilution: 1

Analyte	Results	Reporting Limits
Cresol, total	~~ND~~ UJ	33
1,4-Dichlorobenzene	~~ND~~ UJ	33
2,4-Dinitrotoluene	~~ND~~ UJ	33
Hexachlorobenzene	~~ND~~ UJ	33
Hexachloro-1,3-butadiene	~~ND~~ UJ	33
Hexachloroethane	~~ND~~ UJ	33
Nitrobenzene	~~ND~~ UJ	33
Pentachlorophenol	~~ND~~ UJ	83
Pyridine	~~ND~~ UJ	33
2,4,5-Trichlorophenol	~~ND~~ UJ	83
2,4,6-Trichlorophenol	~~ND~~ UJ	33
Hexachlorocyclopentadiene	~~ND~~ UJ	33

QC Batch: ST0711-B1

Surrogate Recovery:	
2-Fluorophenol	79%
Phenol-d_5	51%
2-Chlorophenol-d_4	93%
2,4,6-Tribromophenol	94%
1,2-Dichlorobenzene-d_4	92%
Nitrobenzene-d_5	82%
2-Fluorobiphenyl	92%
p-Terphenyl-d_{14}	104%

ND = Not Detected

020

D1085-MB

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS10

Lab ID: D1085-01

Analysis Report: Pesticides

Analysis: Method 8080
Concentration in: ug/L

Analysis Date: 7/18/97
Dilution: 1

Analyte	Results	Reporting Limits
Chlordane	ND	8.3
Endrin	ND	0.33
Heptachlor	ND	0.17
Heptachlor epoxide	ND	0.17
Lindane	ND	0.17
Methoxychlor	ND	1.7
Toxaphene	ND	17

QC Batch: PT0711-B1

Surrogate Recovery:	
2,4,5,6-Tetrachloro-m-xylene	74%
Decachlorobiphenyl	91%

021

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS11

Lab ID: D1085-02

Analysis Report: Pesticides

Analysis: Method 8080
Concentration in: ug/L

Analysis Date: 7/18/97
Dilution: 1

Analyte	Results	Reporting Limits
Chlordane	ND	8.3
Endrin	ND	0.33
Heptachlor	ND	0.17
Heptachlor epoxide	ND	0.17
Lindane	ND	0.17
Methoxychlor	ND	1.7
Toxaphene	ND	17

QC Batch: PT0711-B1

Surrogate Recovery:	
2,4,5,6-Tetrachloro-m-xylene	73%
Decachlorobiphenyl	89%

ND = Not Detected

023

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB1-SB1

Lab ID: D1085-03

Analysis Report: Pesticides

Analysis: Method 8080
Concentration in: ug/L

Analysis Date: 7/18/97
Dilution: 1

Analyte	Results	Reporting Limits
Chlordane	ND	8.3
Endrin	ND	0.33
Heptachlor	ND	0.17
Heptachlor epoxide	ND	0.17
Lindane	ND	0.17
Methoxychlor	ND	1.7
Toxaphene	ND	17

QC Batch: PT0711-B1

Surrogate Recovery:	
2,4,5,6-Tetrachloro-m-xylene	62%
Decachlorobiphenyl	76%

ND = Not Detected

024

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB2-SB1

Lab ID: D1085-05

Analysis Report: Pesticides

Analysis: Method 8080
Concentration in: ug/L

Analysis Date: 7/18/97
Dilution: 1

Analyte	Results	Reporting Limits
Chlordane	ND	8.3
Endrin	ND	0.33
Heptachlor	ND	0.17
Heptachlor epoxide	ND	0.17
Lindane	ND	0.17
Methoxychlor	ND	1.7
Toxaphene	ND	17

QC Batch: PT0711-B1

Surrogate Recovery:	
2,4,5,6-Tetrachloro-m-xylene	89%
Decachlorobiphenyl	102%

ND = Not Detected

025

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID:

Lab ID: TCLP Blank, PT0711-B1

Analysis Report: Pesticides

Analysis: Method 8080
Concentration in: ug/L

Analysis Date: 7/18/97
Dilution: 1

Analyte	Results	Reporting Limits
Chlordane	ND	8.3
Endrin	ND	0.33
Heptachlor	ND	0.17
Heptachlor epoxide	ND	0.17
Lindane	ND	0.17
Methoxychlor	ND	1.7
Toxaphene	ND	17

QC Batch: PT0711-B1

Surrogate Recovery:	
2,4,5,6-Tetrachloro-m-xylene	67%
Decachlorobiphenyl	85%

ND = Not Detected

026

D1085-MB

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS10

Lab ID: D1085-01

Analysis Report: Herbicides

Analysis: Method 8150
Concentration in: ug/L

Analysis Date: 8/11/97
Dilution: 1

Analyte	Results	Reporting Limits
2,4-D	~~ND~~ R	3.3
2,4,5-TP (Silvex)	ND	0.33

QC Batch: HT0711-B1

Surrogate Recovery:	
2,4-Dichlorophenylacetic acid	63%

ND = Not detected

R = unusable result, due to 0% recovery for the matrix spike for this compound.

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: SS-11

Lab ID: D1085-02

Analysis Report: Herbicides

Analysis: Method 8150
Concentration in: ug/L

Analysis Date: 8/11/97
Dilution: 1

Analyte	Results	Reporting Limits
2,4-D	ND	4.0
2,4,5-TP (Silvex)	ND	0.4

QC Batch: HT0711-B1

Surrogate Recovery:	
2,4-Dichlorophenylacetic acid	74%

ND = Not detected

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB1-SB1

Lab ID: D1085-03

Analysis Report: Herbicides

Analysis: Method 8150
Concentration in: ug/L

Analysis Date: 8/11/97
Dilution: 1

Analyte	Results	Reporting Limits
2,4-D	ND	3.3
2,4,5-TP (Silvex)	ND	0.33

QC Batch: HT0711-B1

Surrogate Recovery:	
2,4-Dichlorophenylacetic acid	68%

ND = Not detected

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID: EB2-SB1

Lab ID: D1085-05

Analysis Report: Herbicides

Analysis: Method 8150
Concentration in: ug/L

Analysis Date: 8/11/97
Dilution: 1

Analyte	Results	Reporting Limits
2,4-D	ND	3.3
2,4,5-TP (Silvex)	ND	0.33

QC Batch: HT0711-B1

Surrogate Recovery:	
2,4-Dichlorophenylacetic acid	88%

ND = Not detected

MITKEM CORPORATION

Toxicity Characteristic Leaching Procedure (TCLP) Analyses

Client: Malcolm Pirnie, Inc.
Client ID:

Lab ID: TCLP Blank, HT0711-B1

Analysis Report: Herbicides

Analysis: Method 8150
Concentration in: ug/L

Analysis Date: 8/11/97
Dilution: 1

Analyte	Results	Reporting Limits
2,4-D	ND	3.3
2,4,5-TP (Silvex)	ND	0.33

QC Batch: HT0711-B1

Surrogate Recovery:	
2,4-Dichlorophenylacetic acid	82%

ND = Not detected

D1085-MB

MITKEM CORPORATION

Analysis Report: Wet Chemistry Parameters

Client: Malcolm Pimle, Inc.
Client ID: SS10
Lab ID: D1085-01

Matrix: Soil

Analyte	Results	Reporting Limit	Units	Analysis Method	Analysis Date
Cyanide, reactive	~~ND~~ R	0.5	mg/kg	SW846 7.3.3.2	7/12/97
pH	6.8		S.U.	SW 846 9045 C	7/11/97
Sulfides, reactive	~~ND~~ UJ	2	mg/kg	SW846 7.3.4.2	7/12/97
Flashpoint	*				

ND = Not detected

* Unable to perform analysis due to limited sample aliquot

R = unusable; due to 0% recovery for the Lab Control Sample on page 9.

002

MITKEM CORPORATION

Analysis Report: Wet Chemistry Parameters

Client: Malcolm Pirnie, Inc.
Client ID: SS11
Lab ID: D1085-02

Matrix: Soil

Analyte	Results	Reporting Limit	Units	Analysis Method	Analysis Date
Cyanide, reactive †	~~ND~~ UJ	0.5	mg/kg	SW846 7.3.3.2	7/12/97
Flashpoint	No Flash	*	degF	SW846 1010 Mod.	7/21/97
pH	7.1		S.U.	SW 846 9045 C	7/11/97
Sulfides, reactive	~~ND~~ UJ	2	mg/kg	SW846 7.3.4.2	7/12/97

ND = Not detected

* Up to 130 deg F

† the reactive cyanide non-detectable result is qualified as 'UJ', estimated, due to low recovery of the SS-11 MS sample. This applies for reactive Sulfides, as well.

003

MITKEM CORPORATION

Analysis Report: Wet Chemistry Parameters

Client: Malcolm Pirnie, Inc.
Client ID: EB1-SB1
Lab ID: D1085-03

Matrix: Soil

Analyte	Results	Reporting Limit	Units	Analysis Method	Analysis Date
Cyanide, reactive	~~ND~~ R	0.5	mg/kg	SW846 7.3.3.2	7/12/97
Flashpoint	No Flash	*	degF	SW846 1010 Mod.	7/21/97
pH	7.4		S.U.	SW 846 9045 C	7/11/97
Sulfides, reactive	4.5 J	2	mg/kg	SW846 7.3.4.2	7/12/97

ND = Not detected

* Up to 160 deg F

R = unusable, due to 0% recovery for the Lab Control Sample on page 9.

006

D1085-03

MITKEM CORPORATION

Analysis Report: Wet Chemistry Parameters

Client: Malcolm Pirnie, Inc.
Client ID: EB2-SB1
Lab ID: D1085-05

Matrix: Soil

Analyte	Results	Reporting Limit	Units	Analysis Method	Analysis Date
Cyanide, reactive	~~ND~~ R	0.5	mg/kg	SW846 7.3.3.2	7/12/97
Flashpoint	No Flash	*	degF	SW846 1010 Mod.	7/21/97
pH	9.6		S.U.	SW 846 9045 C	7/11/97
Sulfides, reactive	~~ND~~ UJ	2	mg/kg	SW846 7.3.4.2	7/12/97

ND = Not detected

* Up to 145 deg F

R = unusable, due to 0% recovery for the Lab Control Sample on page 9.

007

MITKEM CORPORATION

Analysis Report: Wet Chemistry Parameters

Client: Malcolm Pimie, Inc.
Client ID: EB2-SB1
Lab ID: Method Blank

Matrix: Soil

Analyte	Results	Reporting Limit	Units	Analysis Method	Analysis Date
Cyanide, reactive	~~ND~~ R	0.5	mg/kg	SW846 7.3.3.2	7/12/97
Sulfides, reactive	ND	2	mg/kg	SW846 7.3.4.2	7/12/97

ND = Not detected

R = unusable, due to 0% recovery for the Lab control Sample

008

D1085-MB

ATTACHMENT B

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB1-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2A9156

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: not dec. 20 Date Analyzed: 07/11/97

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB2-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB

Matrix: (soil/water) SOIL Lab Sample ID: D1085-06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: V2A9158

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: not dec. 21 Date Analyzed: 07/11/97

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB1-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0695

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 17 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.75	640	JB N
2.	141-79-7	3-PENTEN-2-ONE, 4-METHYL-	5.49	8200	NJ
3.	123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	6.17	7200	~~NJB~~ R
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EB1-SB3RE

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-04RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0711

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 17 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/31/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.73	630	~~J~~ N
2.	141-79-7	3-PENTEN-2-ONE, 4-METHYL-	5.48	8100	NJ
3.	123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	6.16	7200	~~NJB~~ R
4.					
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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EB2-SB3

Lab Name: MITKEM CORPORATION Contract:

Lab Code: MITKEM Case No.: SAS No.: SDG No.: EB1-SB1

Matrix: (soil/water) SOIL Lab Sample ID: D1085-06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1A0696

Level: (low/med) LOW Date Received: 07/10/97

% Moisture: 18 decanted: (Y/N) N Date Extracted: 07/14/97

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/30/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.1

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.76	780	JBN
2.	141-79-7	3-PENTEN-2-ONE, 4-METHYL-	5.50	9700	NJ
3.	123-42-2	2-PENTANONE, 4-HYDROXY-4-MET	6.18	8400	~~NJB~~ R
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