2021 Hazardous Waste Scanning Project

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Occidental Chemical Corporation

WASTE CHARACTERIZATION SAMPLING REPORT

PHASE III INTERIM REMEDIAL PROGRAM

10500 CAYUGA DRIVE
NIAGARA FALLS, NEW YORK

Occidental Chemical Corporation

WASTE CHARACTERIZATION SAMPLING REPORT

PHASE III INTERIM REMEDIAL PROGRAM

10500 CAYUGA DRIVE

NIAGARA FALLS, NEW YORK

JUNE 1992

REFERENCE NO. 3307 (20)

CONESTOGA-ROVERS & ASSOCIATES

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1.0 INTRODUCTION

On April 13, 1992, in preparation for the Phase III Interim Remedial Program, 10500 Cayuga Drive, Niagara Falls, New York soil samples were collected from the rear yards at 1331 and 1335 104th Street.

The purpose of this sampling program was twofold:

i) characterization of the soils to be excavated during the remediation to determine an appropriate disposal facility; and

ii) investigation of the northwest area of the rear yard of 1335 104th Street to determine whether Occidental Chemical Corporation (OxyChem) chemicals are present in the soil.

2.0 SAMPLE COLLECTION

Samples were collected at the locations shown on Figure 1. At locations 1331-TCLP and 1335-TCLP samples were collected from depths of 0 to 4.0 feet below ground surface (BGS) and submitted for analysis of the TCLP parameters.

At 1331 104th Street, two adjacent boreholes were required to obtain sufficient sample volume. The soils encountered are briefly described in the following:

Depth (BGS)	*Soil Description*
0 to 0.7 feet	Brown SAND, little silt, vegetation, dry to moist, topsoil.
0 to 1.5 feet	Red-brown with gray CLAY, some silt, dry to moist.
1.5 to 3.0 feet	Black CINDERS, little brick and coal, no odor, moist.
3.0 to 4.0 feet	Brown and gray SILT, some clay, little sand, moist.

At location 1335-TCLP, two boreholes were installed approximately 12 feet apart (see Figure 1). No waste material was observed at either location. The soils collected were composited for the analytical sample. The general stratigraphy of these boreholes is described as:

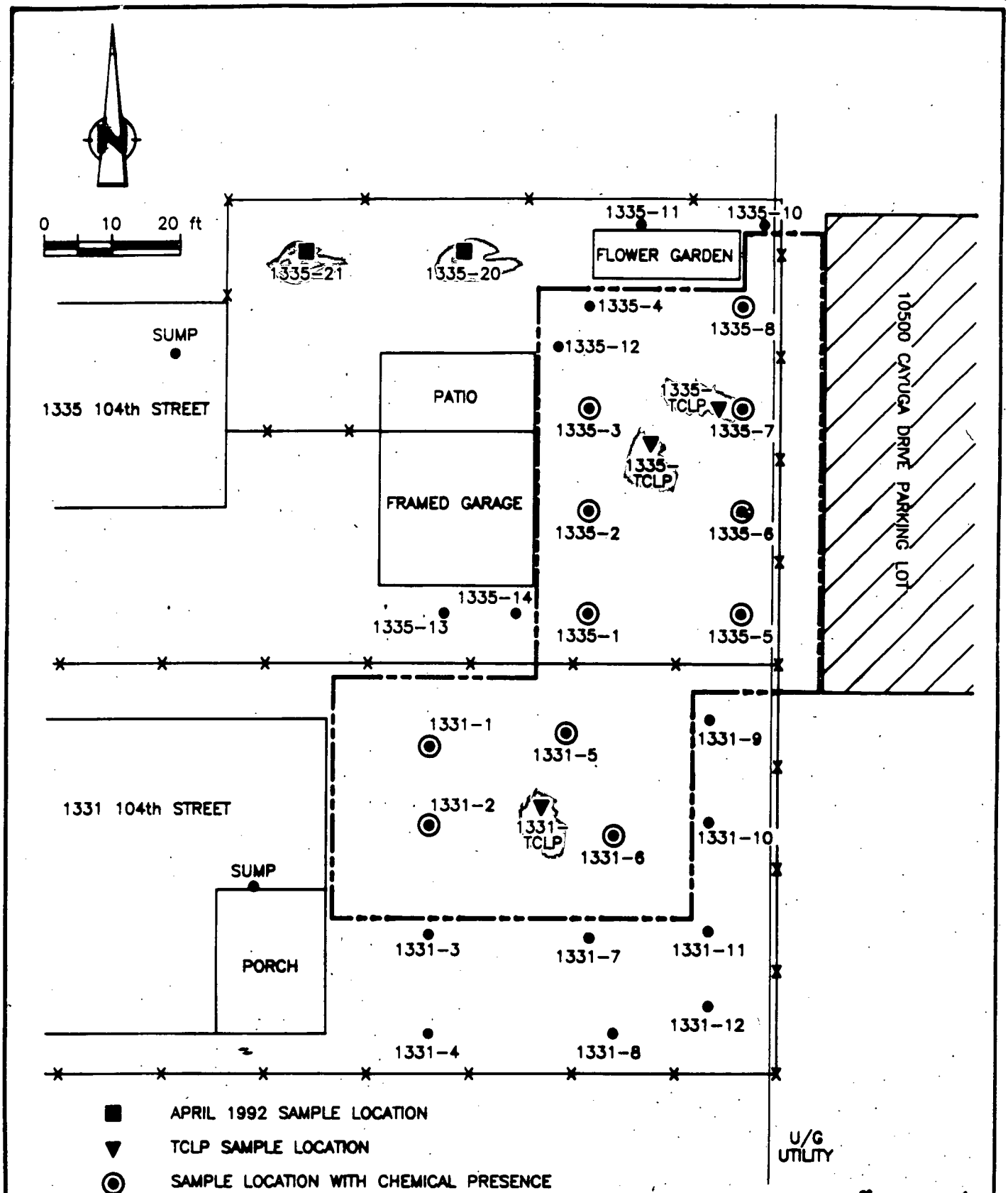

figure 1

TCLP AND APRIL 1992 SAMPLE LOCATIONS 10500 CAYUGA DRIVE

Occidental Chemical Corporation

3307-01/05/92-(NF)-L (P-01)

Depth (BGS)	*Soil Description*
0 to 0.5 feet	Brown SAND, some silt, vegetation, dry to moist, topsoil.
0.5 to 2.7 feet	Light brown SILT, some sand and clay, dry to moist.
2.7 to 4.0 feet	Gray CLAY, trace silt, moist.

The owner of the property at 1335 104th Street requested that samples be collected from an area of his yard where vegetative growth was observed to be sparse. Two samples (1335-20 and 1335-21) were collected from this area and analyzed for the OxyChem Indicator Parameters.

The stratigraphy encountered at location 1335-20 is described as follows:

Depth (BGS)	*Soil Description*
0 to 1.0 feet	Brown SAND, some silt, moist vegetation, numerous earthworms, topsoil (moist to wet below 0.5 feet).
1.0 to 2.8 feet	Brown and red-brown with gray CLAY, some silt, trace medium gravel, moist.
2.8 to 4.0 feet	Brown and red-brown CLAY, some silt, laminated, moist.

A sample was collected from 0 to 4.0 feet BGS.

At 1335-21, the stratigraphy was found to be as described below:

Depth (BGS)	*Soil Description*
0 to 0.8 feet	Brown SAND, some silt, numerous earthworms, vegetation, moist topsoil.
0.8 to 2.7 feet	Red-brown CLAY, some silt, trace coal and fine gravel, moist.
2.7 to 3.0 feet	Brown and gray CLAY, laminated, moist, dense and hard (spoon refusal).

A sample was collected from 0 to 3.0 feet BGS.

All sampling was performed using precleaned split spoon samplers driven by hand.

3.0 ANALYTICAL RESULTS

The analytical results are listed on Table 1. Data has been thoroughly reviewed as described in Section 4.0 and judged to be acceptable with the specific qualifications noted.

As shown on Table 1, all TCLP analytical data are below the regulatory level indicating a hazardous waste. The material to be excavated, therefore, does not exhibit the characteristic of toxicity. In addition, since the material to be disposed consists of lightly contaminated soils it also is not expected to exhibit any of the other characteristics of a hazardous waste (ignitability, corrosivity or reactivity).

The samples analyzed for the OxyChem Indicator Parameters showed no detected levels of any of the analytes. The deficient vegetative growth in this area of the yard of 1335-104th Street is therefore not due to any OxyChem-related chemistry.

4.0 QUALITY ASSURANCE/QUALITY CONTROL REVIEW

Analytical services for Occidental Chemical Corporation (OxyChem) were provided by Recra Environmental, Incorporated (Recra).

Seven (7) samples were collected and submitted to the laboratory for one or more of the following analyses:

Site Specific Parameter List (SSPL)	USEPA SW-846 Method 8240 Modified Occidental Chemical Corporation Low Boiler Method - GC/FID Modified Occidental Chemical Corporation High Boiler Method - GC/ECD
Toxicity Characteristic Leaching Procedure (TCLP)	40 CFR, Appendix II to Part 261, Method 1311 USEPA SW-846 Method 8240 USEPA SW-846 Method 8270 USEPA SW-846 Method 8080 USEPA SW-846 Method 8150 USEPA SW-846 Method 6010/7000 Series

Methods 8240, 8270, 8080, 8150, and 6010/7000 Series have been referenced from "Test Methods for Evaluating Solid Waste, USEPA SW-846, 3rd Edition", September 1986. Method 1311 has been referenced from 40 CFR, Appendix II to Part 261, June 1990. The OxyChem Modified High Boiler and Low Boiler methods have been modified from Methods 3540 and 8120, "Test Methods for Evaluating Solid Waste, USEPA SW-846, 3rd Edition", September 1986.

4.1 HOLDING TIMES

Based on the criteria outlined in the relevant methods, the following sample holding times have been established for soil samples:

SSPL VOCs	14 days from collection to analysis
SSPL BNAs	14 days from collection to extraction 40 days from extraction to analysis
TCLP VOCs	14 days from collection to TCLP extraction 14 days from TCLP extraction to analysis
TCLP BNAs TCLP Pesticides, Herbicides	14 days from collection to TCLP extraction 7 days from TCLP extraction to preparation extraction 40 days from preparation extraction to analysis
TCLP Metals	180 days from collection to TCLP extraction 180 days from TCLP extraction to analysis

Comparison of the collection dates of all samples (from the notation appearing on the Chain of Custody documents) with the reported dates of extraction and/or analysis showed that all samples were extracted and analyzed within the required holding times.

Table 2 presents the holding time information for each sample.

4.2 SURROGATE SPIKE RECOVERIES

Laboratory performance on individual samples was assessed on the basis of surrogate spike recoveries. Table 3 presents the surrogate spike data.

4.2.1 SSPL VOCs and TCLP VOCs

In accordance with Method 8240, the surrogate compounds toluene-d_8, bromofluorobenzene, and 1,2-dichloroethane-d_4 were added to those samples submitted for SSPL VOC analyses prior to analysis, and for TCLP VOC analyses after TCLP extraction. The surrogate compounds were added to monitor laboratory performance on an individual sample basis.

All investigative samples showed surrogate spike recoveries within the method control limits. This indicated that satisfactory laboratory performance was achieved on an individual sample basis during these analyses.

4.2.2 TCLP BNAs

In accordance with Method 8270, the following surrogate compounds were added to those samples submitted for TCLP BNA analyses after TCLP extraction, but prior to analysis: nitrobenzene-d_5,

2-fluorobiphenyl, terphenyl-d_{14}, phenol-d_5, 2-fluorophenol and 2,4,6-tribromophenol.

All investigative samples showed surrogate spike recoveries within the method control limits. This indicated that satisfactory laboratory performance was achieved on an individual basis during these analyses.

4.2.3 TCLP Pesticides

In accordance with Method 8080, samples submitted for TCLP pesticide analyses were spiked with the surrogate compound dibutylchlorendate (DBC) prior to sample analysis. DBC was added to samples submitted for TCLP pesticide analyses after TCLP extraction.

All investigative samples showed surrogate spike recoveries within the laboratory control limits. This indicated that satisfactory laboratory performance was achieved on an individual sample basis during these analyses.

4.2.4 TCLP Herbicides

Due to a laboratory oversight the surrogate compound 2,4-diphenoxybutyric acid for herbicides was not added to the samples.

Therefore laboratory performance could not be evaluated on the basis of surrogate spike recoveries.

4.3 METHOD BLANK ANALYSES

The purpose of assessing the results of method blank analyses was to determine the existence and magnitude of sample contamination. Method blanks were analyzed at a minimum frequency of one per 20 investigative samples.

A leachate blank was analyzed with the TCLP samples. The leachate blank and all method blanks showed non-detected concentrations of the analytes of interest. This indicated that the potential for laboratory contamination attributable to laboratory conditions and/or procedures was minimal during these analyses.

Table 4 presents method blank results.

4.4 BLANK SPIKE ANALYSES

As the blank spike analyses were independent of potential matrix effects, these analyses gave a true indication of analytical accuracy achieved by the laboratory. Blank spike analyses were performed at a frequency of one per 20 investigative samples. Blank spike analyses were performed for SSPL VOCs and SSPL BNAs.

All blank spike analyses yielded recoveries within the laboratory control limits. This indicated that acceptable laboratory accuracy was achieved among these analyses.

Blank spike results are presented in Table 5.

4.5 MATRIX SPIKE ANALYSES

The recoveries of matrix spike analyses were used to assess the analytical accuracy on an individual sample basis. Matrix spike analyses were performed at a minimum frequency of one per 20 investigative samples. Sample 1335-21 was analyzed as MS sample for SSPL VOCs and SSPL BNAs.

All SSPL VOCs matrix spike samples showed recoveries within the laboratory control limits.

However two SSPL BNA compounds yielded outlying recoveries as shown below:

Sample ID	*Parameter*	*Compound*	*Percent MS Recovery*	*Percent Control Limits*
1335-21 (0-3 ft.)	GC-ECD High Boiler	2,4 Dichlorophenol	146	51-135
1335-21 (0-3 ft.)	GC-ECD High Boiler	1,2,3-Trichlorobenzene	129	43-123

The outlying MS results showed a high bias in results and the associated samples showed non-detected quantities of 2,4-dichlorophenol and 1,2,3-trichlorobenzene. Therefore, qualification of these compounds in samples 1335-20, 1335-21 and 1335-22 was not required on this basis.

4.6 MATRIX SPIKE ANALYSIS (BIAS CORRECTION TCLP ANALYSIS)

In accordance with 40 CFR Part 261, samples submitted for TCLP analysis require matrix spike for potential bias correction. A matrix spike was performed on sample 1335-TCLP for TCLP VOCs, TCLP BNAs, TCLP Pesticides/Herbicides and TCLP metals. The TCLP matrix spike results are presented in Table 6. The following compounds yielded outlying TCLP matrix spike recoveries.

Sample ID	*Parameter*	*Analyte*	*Percent Outlying MS Recovery*	*Percent Laboratory Control Limits*
1335-TCLP (0-4 ft.)	TCLP VOCs	Carbon Tetrachloride	58	70-100
1335-TCLP (0-4 ft.)	TCLP VOCs	Trichloroethene	58	71-100
1335-TCLP (0-4 ft.)	TCLP BNAS	Pyridine	107	40-100
1335-TCLP (0-4 ft.)	TCLP Pesticides/ Herbicides	Endrin	132	30-100
1335-TCLP (0-4 ft.)	TCLP Pesticides/ Herbicides	2,4-D	10	40-100
1335-TCLP (0-4 ft.)	TCLP Pesticides/ Herbicides	2,4,5-TP (silvex)	1	40-100
1335-TCLP (0-4 ft.)	TCLP Metals	Total Lead	65	75-100

1335-TCLP (0-4 ft.)	TCLP Metals	Total Selenium	0	75-100
1335-TCLP (0-4 ft.)	TCLP Metals	Total Silver	0	75-100

As the outlying MS results for endrin and pyridine showed a high bias in results and the associated samples showed non-detected quantities of these compounds qualification was not required in the associated samples.

The remaining outlying matrix spike recoveries yielded low recoveries indicating a low bias in sample results. Qualification of the affected sample data is presented as follows:

Sample ID	*Parameters*	*Spiking Compound*	*Qualified Sample Conc. (mg/L)*
1331-TCLP	TCLP VOCs	Carbon Tetrachloride	.05 UJ
1335-TCLP	TCLP VOCs	Carbon Tetrachloride	.05 UJ
1331-TCLP	TCLP VOCs	Trichloroethene	.05 UJ
1335-TCLP	TCLP VOCs	Trichloroethene	.05 UJ
1331-TCLP	TCLP Pesticides/ Herbicides	2,4-D	.0002 UJ
1335-TCLP	TCLP Pesticides/ Herbicides	2,4-D	.0002 UJ
1331-TCLP	TCLP Pesticides/ Herbicides	2,4,5-TP	.0002 UJ
1335-TCLP	TCLP Pesticides/ Herbicides	2,4,5-TP	.0002 UJ
1331-TCLP	TCLP Metals	Total Lead	.014 J
1335-TCLP	TCLP Metals	Total Lead	.009 J

UJ The associated detection limit is estimated and may indicate a potential low bias in results.
J The associated value is estimated and may indicate a potential low bias in results.

Selenium and silver yielded matrix spike recoveries of zero percent. This indicated a problem with the analysis of these compounds in the associated samples. Therefore it is recommended that non-detected

results for selenium and silver for samples 1331-TCLP and 1335-TCLP be qualified as unusable (data qualifier R).

Sample ID	*Parameters*	*Spiking Compound*	*Qualified Sample Concentration (mg/L)*
1331-TCLP	TCLP metals	Selenium	.005 UR
1335-TCLP	TCLP metals	Selenium	.005 UR
1331-TCLP	TCLP metals	Silver	.01 UR
1335-TCLP	TCLP metals	Silver	.01 UR

U Non-detected at the associated detection limit.
R The associated value is unusable due to zero percent matrix spike recoveries.

4.7 INTERNAL STANDARDS PERFORMANCE SSPL VOCS, TCLP VOCS, AND TCLP BNAS

In order to ensure that GC/MS sensitivity and response are stable during each analytical sequence, the internal standard performance criteria established by Methods 8240 and 8270 and the "Guidelines" have been evaluated for the analysis of VOCs and BNAs.

Internal standard area counts must not vary by more than a factor of two (-50 percent to + 100 percent) from the associated calibration standard.

All samples yielded satisfactory internal standard area counts. Therefore, qualification of the sample data was not required on this basis.

TABLES

TABLE 1

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Sample Date:			*4/13/92*	*4/13/92*	*4/13/92*
Sample Description:			*1335-20*	*1335-21*	*1335-22**
	Units:	*Method Detection Limit:*			
Volatiles					
Benzene	µg/kg	100	ND	ND	ND
Toluene	µg/kg	100	ND	ND	ND
Trichloroethylene	µg/kg	100	ND	ND	ND
Tetrachloroethylene	µg/kg	100	ND	ND	ND
Monochlorobenzene	µg/kg	100	ND	ND	ND
2-Monochlorotoluene	µg/kg	100	ND	ND	ND
4-Monochlorotoluene	µg/kg	100	ND	ND	ND
2-Chlorobenzotrifluoride	µg/kg	100	ND	ND	ND
4-Chlorobenzotrifluoride	µg/kg	100	ND	ND	ND
1,2-Dichlorobenzene	µg/kg	100	ND	ND	ND
1,4-Dichlorobenzene	µg/kg	100	ND	ND	ND
2,4-Dichlorotoluene	µg/kg	100	ND	ND	ND
2,5-Dichlorotoluene	µg/kg	100	ND	ND	ND
2,6-Dichlorotoluene	µg/kg	100	ND	ND	ND
3,4-Dichlorotoluene	µg/kg	100	ND	ND	ND
2,4-Dichlorobenzotrifluoride	µg/kg	100	ND	ND	ND
3,4-Dichlorobenzotrifluoride	µg/kg	100	ND	ND	ND
Semi-Volatiles					
1,2,3-Trichlorobenzene	µg/kg	100	ND	ND	ND
1,2,4-Trichlorobenzene	µg/kg	100	ND	ND	ND
1,2,3,4-Tetrachlorobenzene	µg/kg	100	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	µg/kg	100	ND	ND	ND
Pentachlorobenzene	µg/kg	100	ND	ND	ND
Hexachlorobenzene	µg/kg	100	ND	ND	ND
Alpha-Hexachlorocyclohexane	µg/kg	100	ND	ND	ND
Beta-Hexachlorocyclohexane	µg/kg	100	ND	ND	ND
Gamma-Hexachlorocyclohexane	µg/kg	100	ND	ND	ND
Delta-Hexachlorocyclohexane	µg/kg	100	ND	ND	ND
2,5-Dichlorophenol	µg/kg	100	ND	ND	ND
2,4-Dichlorophenol	µg/kg	100	ND	ND	ND
2,4,5-Trichlorophenol	µg/kg	100	ND	ND	ND
2,4,6-Trichlorophenol	µg/kg	100	ND	ND	ND
Hexachlorobutadiene	µg/kg	100	ND	ND	ND
Hexachlorocyclopentadiene	µg/kg	100	ND	ND	ND
Octachlorocyclopentene	µg/kg	100	ND	ND	ND
Perchlorocyclopentadecane (Mirex)	µg/kg	100	ND	ND	ND

*Duplicate of sample 1335-20.

TABLE 1

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Sample Date: / *Sample Description:*	*Units:*	*Method Detection Limit:*	*Regulatory Level**	*4/13/92 1331-TCLP*	*4/13/92 1335-TCLP*
TCLP Volatiles					
Benzene	mg/L	0.05 500ppb	0.5	ND	ND
Carbon Tetrachloride	mg/L	0.05	0.5	ND	ND
Chlorobenzene	mg/L	0.05	100	ND	ND
Chloroform	mg/L	0.05	6.0	ND	ND
1,2-Dichloroethane	mg/L	0.05	0.5	ND	ND
1,1-Dichloroethylene	mg/L	0.05	0.7	ND	ND
Methyl Ethyl Ketone	mg/L	0.1 100 ppb	200	ND	ND
Tetrachloroethene	mg/L	0.05	0.7	ND	ND
Trichloroethene	mg/L	0.05	0.5	ND	ND
Vinyl Chloride	mg/L	0.1	0.2	ND	ND
TCLP Semi-Volatiles					
O-Cresol	mg/L	0.03 30 ppb	200	ND	ND
m/p-Cresol	mg/L	0.03	200	ND	ND
1,4-Dichlorobenzene	mg/L	0.03	7.5	ND	ND
2,4-Dinitrotoluene	mg/L	0.03	0.13	ND	ND
Hexachlorobenzene	mg/L	0.03	0.13	ND	ND
Hexachlorobutadiene	mg/L	0.03	0.52	ND	ND
Hexachloroethane	mg/L	0.03	3.0	ND	ND
Nitrobenzene	mg/L	0.03	2.0	ND	ND
Pentachlorophenol	mg/L	0.2	100	ND	ND
Pyridine	mg/L	0.03	5.0	ND	ND
2,4,5-Trichlorophenol	mg/L	0.2	400	ND	ND
2,4,6-Trichlorophenol	mg/L	0.03	2.0	ND	ND
TCLP Pesticides/Herbicides					
Chlorodane	mg/L	0.0017	0.03	ND	ND
Endrin	mg/L	0.0003	0.02	ND	ND
Heptachlor	mg/L	0.0002	0.008	ND	ND
Heptachlor epoxide	mg/L	0.0002	0.008	ND	ND
Lindane	mg/L	0.0002	0.4	ND	ND
Methoxychlor	mg/L	0.0007	10.0	ND	ND
Toxaphene	mg/L	0.0067	0.5	ND	ND
2,4-D	mg/L	0.0002	10.0	ND	ND
2,4,5-TP	mg/L	0.0002	1.0	ND	ND
TCLP Metals					
Total Arsenic	mg/L	0.005	5.0	ND	ND
Total Barium	mg/L	0.03	100.0	0.75	0.77
Total Cadmium	mg/L	0.01	1.0	0.02	0.024
Total Chromium	mg/L	0.01	5.0	0.016	0.023
Total Lead	mg/L	0.003	5.0	0.014J	0.009J
Total Mercury	mg/L	0.0002	0.2	ND	ND
Total Selenium	mg/L	0.005	1.0	ND	ND
Total Silver	mg/L	0.01	5.0	ND	ND

J - The associated value is estimated indicating a low bias.
* - Maximum concentration for the Toxicity Characteristic, 40 CFR 261.24.

TABLE 2

HOLDING TIMES
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Collection Date	*Sample ID*	*Analyses*	*Extraction Date*	*Analysis Date*	*Number of Days Exceed*
04/13/92	1335-20 (0 - 4 Ft.) Soil	GC - VOCs High - Boiler		04/15/92	0
		GC - ECD Low - Boiler	04/20/92	05/01/92	0
		GC - FID	04/20/92	04/29/92	0
04/13/92	1335-21 (0 - 3 Ft.) Soil	GC - VOCs High - Boiler		04/15/92	0
		GC - ECD Low - Boiler	04/20/92	05/01/92	0
		GC - FID	04/20/92	04/29/92	0
04/13/92	1335-22 (0 - 4 Ft.) Soil	GC - VOCs High - Boiler		04/15/92	0
		GC - ECD Low - Boiler	04/20/92	05/01/92	0
		GC - FID	04/20/92	04/29/92	0

Collection Date	*Sample ID*	*Analyses*	*TCLP Extraction Date*	*Preparation Extraction*	*Analysis Date*	*Number of Days Exceed*
04/13/92	1335-TCLP (0 - 4 Ft.) Soil	TCLP - VOCs	04/15/92		04/16/92	0
		TCLP BNAs	04/15/92	04/16/92	04/17/92	0
		TCLP Pesticides/Herbcides	04/15/92	04/16/92	04/21/92	0
				04/16/92	04/21/92	0
		TCLP Total Metals	04/15/92	04/17/92	04/16/92	0
04/13/92	1331-TCLP (0 - 4 Ft.) Soil	TCLP - VOCs	04/15/92		04/16/92	0
		TCLP BNAs	04/15/92	04/16/92	04/17/92	0
		TCLP Pesticides/Herbcides	04/15/92	04/16/92	04/21/92	0
				04/16/92	04/21/92	0
		TCLP Total Metals	04/15/92	04/17/92	04/16/92	0

TABLE 3

SURROGATE SPIKE RECOVERIES
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Date Sampled	*4/13/92*	*4/13/92*	*04/13/92*	*4/13/92*	*4/13/92*	*4/13/92*	*4/13/92*	*4/13/92*	*4/13/92*
Date Analyzed	*4/16/92*	*4/16/92*	*04/15/92*	*4/15/92*	*4/15/92*	*4/17/92*	*4/17/92*	*4/21/91*	*4/21/91*
Surrogates	*1331-TCLP**	*1335-TCLP**	*1335-20*	*1335-21*	*1334-22*	*1331-TCLP*	*1335-TCLP*	*1335-TCLP*	*1335-TCLP*
P-Bromoflurobenzene	96	97	97	101	107				
1,2-Dichloroethane-d4	112	112	85	82	87				
Toluene-d8	101	101	115	107	105				
2-Fluorophenol						41	36		
Phenol-d5						40	37		
2,4,6-Tribromophenol						47	45		
Nitrobenzene-d5						101	103		
2-Fluorobiphenyl						87	91		
Terphenyl-d14						77	58		
Dibutylchloroendate								114	92

Control Limits:

Bromofluorobenzene	(74 - 121)
1,2-Dichloroethane-d4	(70 - 121)
Toluene-d8	(81 - 117)
2-Fluorophenol	(25 - 121)
Phenol-d5	(24 - 113)
2,4,6-Tribromophenol	(19 - 122)
Nitrobenzene-d5	(23 - 120)
2-Fluorobiphenyl	(30 - 115)
Terphenyl-d14	(18 - 137)
Dibutylchlorendate	(20 - 150)

*Dilution factor of 10 was performed on this sample.

TABLE 4

METHOD BLANK
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Blank ID			*VBLK-21*	*TCLP Blank*
Date Analyzed			*4/16/92*	*4/16/92*
	Units	*Method Detection Limits*		
VOCs Compounds				
Benzene	mg/L	0.05	ND	ND
Carbon Tetrachloride	mg/L	0.05	ND	ND
Chlorobenzene	mg/L	0.05	ND	ND
Chloroform	mg/L	0.05	ND	ND
1,2-Dichloroethane	mg/L	0.05	ND	ND
1,1-Dichloroethylene	mg/L	0.05	ND	ND
Methyl Ethyl Ketone	mg/L	0.1	ND	ND
Tetrachloroethene	mg/L	0.05	ND	ND
Trichloroethene	mg/L	0.05	ND	ND
Vinyl Chloride	mg/L	0.1	ND	ND

Blank ID			*SBLK-59*	*TCLP-Blank*
Date Analyzed			*4/17/92*	*4/17/92*
Semi-Volatiles Compounds				
o-Cresol	mg/L	0.03	ND	ND
m/p-Cresol	mg/L	0.03	ND	ND
1,4-Dichlorobenzene	mg/L	0.03	ND	ND
2,4-Dinitrotoluene	mg/L	0.03	ND	ND
Hexachlorobenzene	mg/L	0.03	ND	ND
Hexachlorobutadiene	mg/L	0.03	ND	ND
Hexachloroethane	mg/L	0.03	ND	ND
Nitrobenzene	mg/L	0.03	ND	ND
Pentachlorophenol	mg/L	0.2	ND	ND
Pyridine	mg/L	0.03	ND	ND
2,4,5-Trichlorophenol	mg/L	0.2	ND	ND
2,4,6-Trichlorophenol	mg/L	0.03	ND	ND

TABLE 4

METHOD BLANK
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Blank ID *Date Analyzed*	*Units*	*Method Detection Limits*	*Method Blank-1* *4/21/91*	*Extraction Blank-1* *4/21/91*
Pesticides Compound				
Chlordane	mg/L	0.0017	ND	ND
Endrin	mg/L	0.0003	ND	ND
Heptachlor	mg/L	0.0002	ND	ND
Heptachlor epoxide	mg/L	0.0002	ND	ND
Lindane	mg/L	0.0002	ND	ND
Methoxychlor	mg/L	0.0007	ND	ND
Toxaphene	mg/L	0.0067	ND	ND
2,4-D	mg/L	0.0002	ND	ND
2,4,5-TP	mg/L	0.0002	ND	ND

Blank ID *Date Analyzed*			*Method Blank-1* *4/16/92*	*Extraction Blank-1* *4/16/92*
Metals Compound				
Total Arsenic	mg/L	0.005	ND	ND
Total Barium	mg/L	0.03	ND	ND
Total Cadium	mg/L	0.01	ND	ND
Total Chromium	mg/L	0.01	ND	ND
Total Lead	mg/L	0.003	ND	ND
Total Mercury	mg/L	0.0002	ND	ND (0.0004)
Total Selenium	mg/L	0.005	ND	ND
Total Silver	mg/L	0.01	ND	ND

TABLE 4

METHOD BLANK
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Blank ID			*Method Blank-1*
Date Analyzed			*4/15/92*
	Units	*Method Detection Limits*	
VOCs			
Benzene	µg/kg	100	ND
2-Chlorobenzotrifluoride	µg/kg	100	ND
4-Chlorobenzotrifluoride	µg/kg	100	ND
1,2-Dichlorobenzene	µg/kg	100	ND
1,4-Dichlorobenzene	µg/kg	100	ND
Monochlorobenzene	µg/kg	100	ND
2-Monochlorotoluene	µg/kg	100	ND
4-Monochlorotoluene	µg/kg	100	ND
Tetrachloroethene	µg/kg	100	ND
Toluene	µg/kg	100	ND
Trichloroethene	µg/kg	100	ND

Blank ID			*Method Blank-1*
Date Analyzed			*4/30/92*
High Boiler			
2,4-Dichlorophenol	µg/kg	100	ND
2,5-Dichlorophenol	µg/kg	100	ND
Hexachlorobenzene	µg/kg	100	ND
Hexachlorobutadiene	µg/kg	100	ND
Hexachlorocyclopentadiene	µg/kg	100	ND
Octachlorocyclopentene	µg/kg	100	ND
Perchlorocyclopentadecane (Mirex)	µg/kg	100	ND
Pentachlorobenzene	µg/kg	100	ND
1,2,3,4-Tetrachlorobenzene	µg/kg	100	ND
1,2,4,5-Tetrachlorobenzene	µg/kg	100	ND
1,2,3-Trichlorobenzene	µg/kg	100	ND
1,2,4-Trichlorobenzene	µg/kg	100	ND
2,4,5-Trichlorophenol	µg/kg	100	ND
2,4,6-Trichlorophenol	µg/kg	100	ND
alpha-BHC	µg/kg	100	ND
beta-BHC	µg/kg	100	ND
delta-BHC	µg/kg	100	ND
gamma-BHC	µg/kg	100	ND

TABLE 4

METHOD BLANK
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Blank ID			*Method Blank-1*
Date Analyzed			*4/29/92*
	Units	*Method Detection Limits*	
Lower Boiler			
2,4-Dichlorotoluene	µg/kg	100	ND
2,5-Dichlorotoluene	µg/kg	100	ND
2,6-Dichlorotoluene	µg/kg	100	ND
3,4-Dichlorotoluene	µg/kg	100	ND
2,4-Dichlorobenzotrifluoride	µg/kg	100	ND
3,4-Dichlorobenzotrifluoride	µg/kg	100	ND

TABLE 5

BLANK SPIKE RESULTS
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Compound	*Laboratory Control Limits*	*Blank Spike VOCs*	*Blank Spike SSPL VOCs*	*Blank Spike SSPL BNAs*
Benzene	(80-117)	97	NA	NA
1,2-Dichlorobenzene	(27-180)	110	NA	NA
Toluene	(80-118)	89	NA	NA
Trichloroethene	(79-120)	96	NA	NA
1,4-Dichlorobenzene	(44-150)	108	NA	NA
Monochlorobenzene	(84-114)	99	NA	NA
2-Monochlorotoluene	(56-145)	95	NA	NA
4-Monochlorotoluene	(44-155)	93	NA	NA
2-Chlorobenzotrifluoride	(41-144)	99	NA	NA
4-Chlorobenzotrifluoride	(51-143)	102	NA	NA
Tetrachloroethane	(73-122)	101	NA	NA
2,4-Dichlorotoluene	(55-133)	NA	56	NA
3,4-Dichlorotoluene	(43-123)	NA	76	NA
2,4-Dichlorobenzotrifluoride	(46-136)	NA	60	NA
2,4-Dichlorophenol	(51-135)	NA	NA	121
2,4,5-Trichlorophenol	(12-146)	NA	NA	74
1,2,3-Trichlorobenzene	(43-123)	NA	NA	108
1,2,3,4-Tetrachlorobenzene	(42-122)	NA	NA	96
Pentachlorobenzene	(56-118)	NA	NA	97
Gamma-BHC	(47-125)	NA	NA	95
Mirex	*	NA	NA	134

Notes:

NA - Not Analyzed
* No laboratory control limit for this compound

TABLE 6

MATRIX SPIKE RESULTS
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Compound	*Laboratory Control Limits (%)*	*1335-21 (0 - 3 Ft.) (MS%)*
High Boiler		
2,4-Dichlorophenol	51 - 135	146 G
2,4,5-Trichlorophenol	12 - 146	61
1,2,3-Trichlorobenzene	43 - 123	129 G
1,2,3,4-Tetrachlorobenzene	42 - 122	108
Pentachlorobenzene	56 - 118	113
gamma-BHC	47 - 125	114
Mirex	*	162
Lower Boiler		
2,4-Dichlorotoluene	55 - 133	77
3,4-Dichlorotoluene	43 - 123	88
2,4-Dichlorobenzotrifluoride	46 - 136	82
VOCs		
Benzene	80 - 117	84
1,2-Dichloroethane	27 - 181	63
Toluene	80 - 118	75
Trichloroethene	79 - 120	80
1,4-Dichlorobenzene	44 - 150	64
Monochlorobenzene	84 - 114	78
2-Monochlorotoluene	56 - 145	69
4-Monochlorotoluene	44 - 155	61
2-Chlorobenzotrifluoride	41 - 144	76
4-Chlorobenzotrifluoride	51 - 143	80
Tetrachloethene	73 - 122	77

TABLE 6

MATRIX SPIKE RESULTS
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Compound	*Laboratory Control Limits (%)*	*1335-TCLP (0 - 4 Ft.) (MS%)*
TCLP VOCs		
Vinyl chloride	10 - 100	48
1,1-Dichloroethene	10 - 100	46
Chloroform	51 - 100	62
1,2-Dichloroethane	49 - 100	79
2-Butanone	10 - 100	72
Carbon Tetrachloride	70 - 100	58F
Trichloroethene	71 - 100	58F
Benzene	37 - 100	73
Tetrachloroethene	64 - 100	64
Chlorobenzene	37 - 100	65
TCLP BNAs		
o-Cresol	30 - 100	44
m/p-Cresol	30 - 100	51
1,4-Dichlorobenzene	20 - 100	84
2,4-Dinitrotoluene	37 - 100	93
Hexachlorobenzene	10 - 100	88
Hexachlorobutadiene	24 - 100	75
Hexachloroethane	40 - 100	82
Nitrobenzene	35 - 100	67
Pyridine	40 - 100	107G
Pentachlorophenol	14 - 100	18
2,4,6-Trichlorophenol	37 - 100	59
2,4,5-Trichlorophenol	35 - 100	70
TCLP Pesticides/Herbicides		
Endrin	30 - 100	132 G
Lindane	32 - 100	100
Methoxychlor	10 - 100	92
Heptachlor	34 - 100	70
Heptachlor epoxide	37 - 100	90
2,4-D	40 - 100	10F
2,4,5-TP	40 - 100	1F

TABLE 6

MATRIX SPIKE RESULTS
PHASE III INTERIM REMEDIAL PROGRAM
10500 CAYUGA DRIVE

Compound	*Laboratory Control Limits (%)*	*1335-TCLP (0 - 4 Ft.) (MS%)*
TCLP Total Metals		
Total Arsenic	75 - 125	93
Total Barium	75 - 125	104
Total Cadium	75 - 125	100
Total Chromium	75 - 125	75
Total Lead	75 - 125	65F
Total Mercury	75 - 125	76F
Total Selenium	75 - 125	0F
Total Silver	75 - 125	0F

Notes:

* Laboratory control limits have not been established for this compound.
F - The TCLP matrix spike recovery was lower than thet lower limit of the analtyical method.
G - The TCLP matrix spike recovery was greater than the upper limit of the analytical method.