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SITE ASSESSMENT REPORT
FOR
MCC CONSTRUCTION
CHICAGO, COOK COUNTY, ILLINOIS
TDD No.: T05-9412-003
PAN: EIL0855SAA

ecology and environment, inc.
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FOR
MCC CONSTRUCTION
CHICAGO, COOK COUNTY, ILLINOIS
TDD No.: T05-9412-003
PAN: EIL0855SAA

FEBRUARY 22, 1995

Prepared for:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency and Enforcement Response Branch
77 West Jackson Boulevard
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1. INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) tasked the Ecology and Environment, Inc. (E & E), Technical Assistance Team (TAT) to assist the U.S. EPA On-Scene Coordinator (OSC) Brad Stimple in performing a site assessment (SA) at the MCC Construction (MCC) site in Chicago, Illinois. TAT was requested under Technical Direction Document (TDD) number T05-9412-003 to prepare and implement a Health and Safety Plan, compile background information, conduct a site assessment, perform air monitoring and sampling, document on-site activities, and evaluate threats to human health and the environment for the MCC site.

2. SITE BACKGROUND

2.1 SITE DESCRIPTION

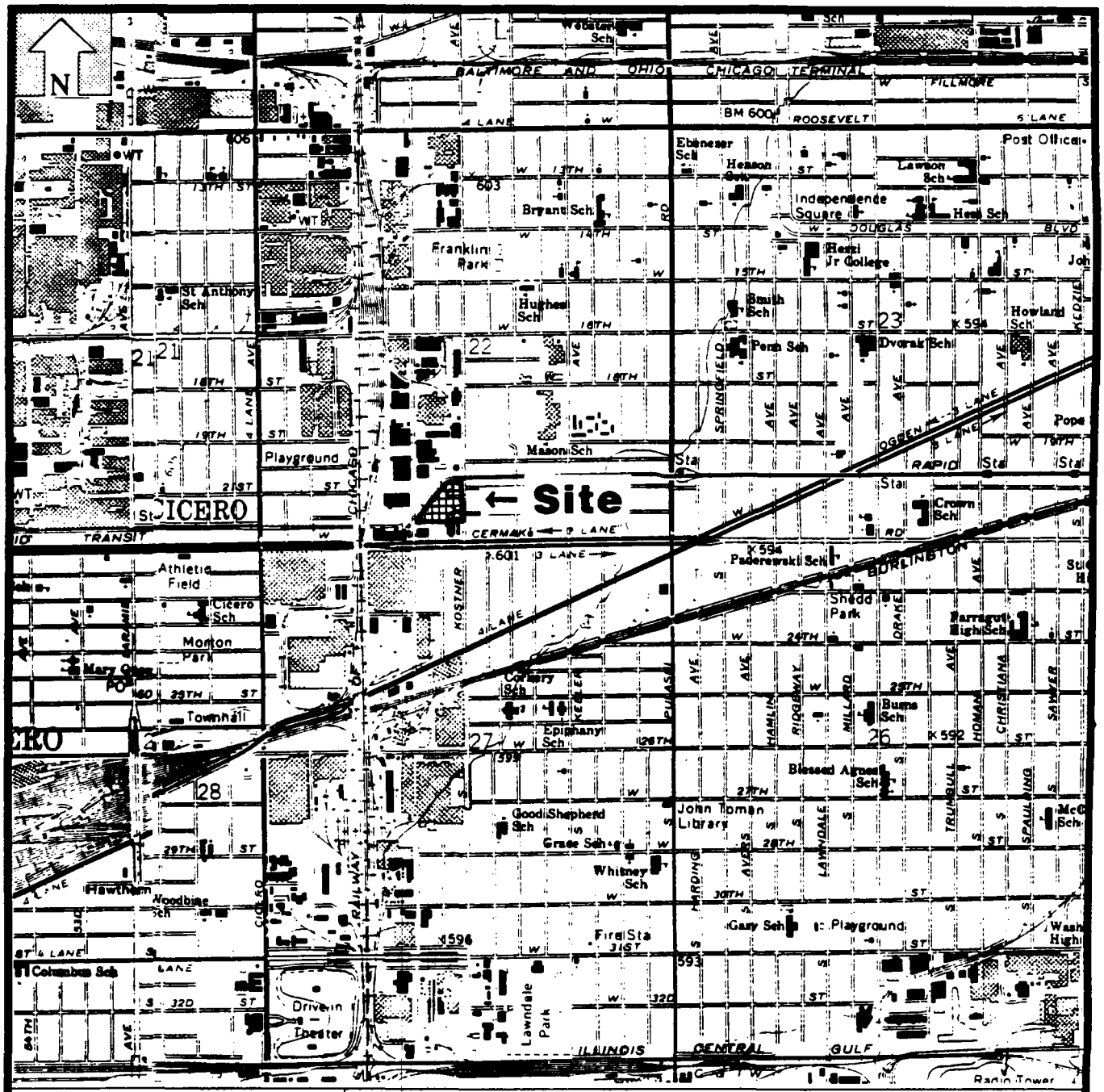
The MCC site is located at 2100 South Kostner Avenue in Chicago, Cook County, Illinois. The MCC site is an abandoned construction debris disposal site where illegal dumping of 55-gallon drums has occurred. The site is bordered on the north by the Chicago Transit Authority's O'Hare-Douglas railroad line, on the east by South Kostner Avenue, on the south by the Hawthorne Car Wash, and on the west by South Kilbourne Avenue (Figure 2-1). The area surrounding the MCC site on the north, west and south side is industrial, whereas, the east side is residential.

The site is approximately 5.5 acres in size. An open dump area comprises approximately 4 acres of the site (Figure 2-2). The other 1.5 acres of the site consists of small waste piles, three abandoned semi-trailers, an abandoned water tank truck (tanker), and 19 illegally dumped 55-gallon drums. The site is surrounded by a barbed-wire topped, chain-link fence.

2.2 SITE HISTORY

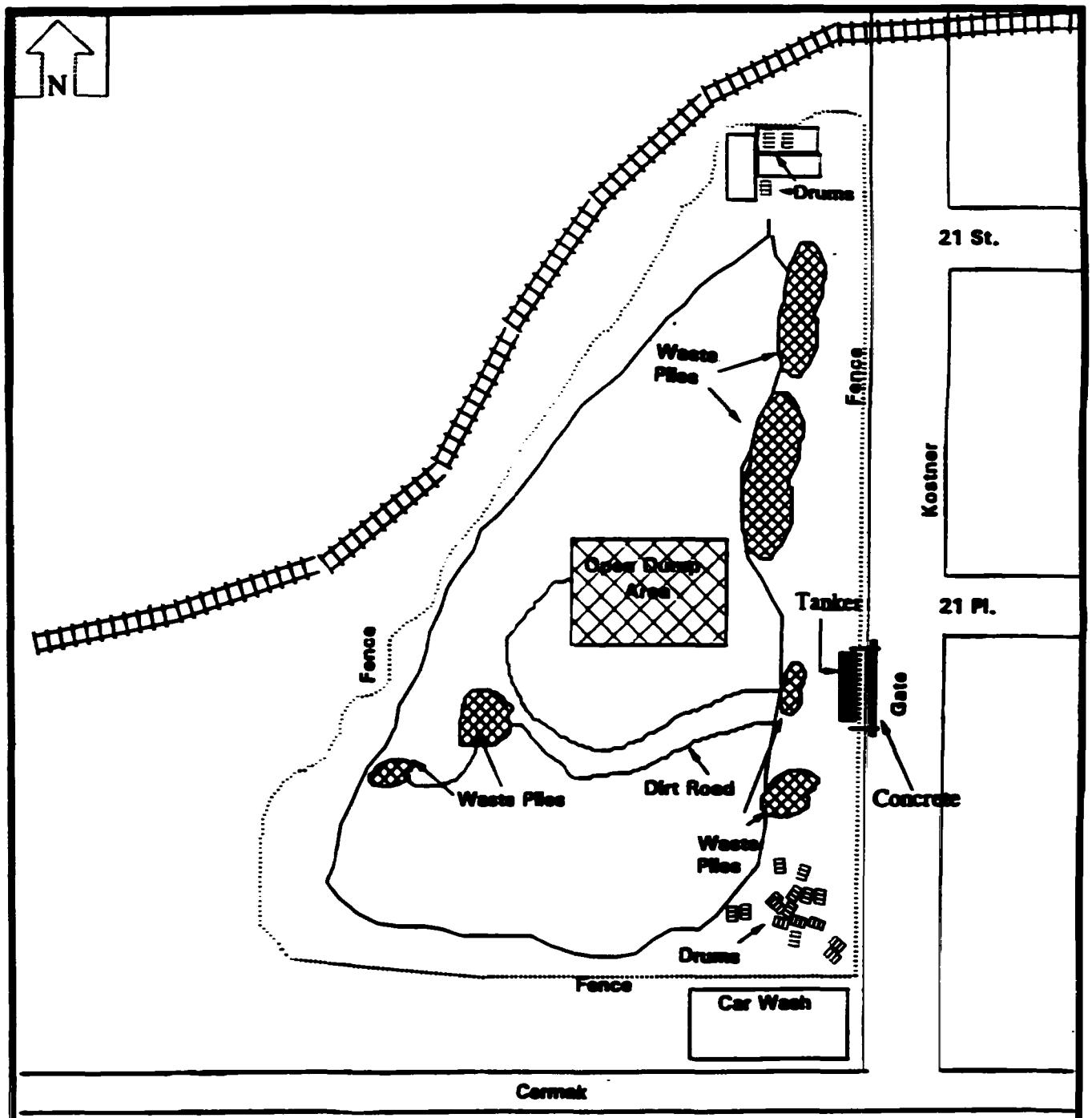
According to the Illinois Environmental Protection Agency (IEPA) file information, the site was once used by the Sparta Soccer Ball Club in the early 1900s. IEPA discovered the current owner of the site to be John Christopher, president of Krisjohn Corporation. Mr. Christopher took over the property when the MCC Company dissolved. Krisjohn Corporation has been linked to a number of open dump sites in Chicago. John Christopher is also known as: Krisjohn Construction, Marlboro Construction, and Ashley Trucking.

The City of Chicago has brought a lawsuit against John Christopher and won a judgement on May 6, 1993 (Case number 90CH6351). The judgement also included a clean-up order for the above-referenced open dump site at 2100 South Kostner. The defendants were required to remove the waste within six months from the date of the order. No waste was removed and consequently, a penalty of $1,000 per day is now accruing.



ecology and environment, inc.
Technical Assistance Team
Region V
111 W. Jackson Blvd., Chicago, Illinois 60604

TITLE Site Location Map	FIGURE # 2-1
SITE MCC Construction	SCALE 1:24,000
CITY Chicago STATE Illinois	PAN EIL0855SAA
SOURCE USGS Topographical Map, 7.5 Minute Series Englewood, IL Quadrangle	DATE 1980 REVISED 1995



Legend

- = 55-gallon steel drum
- = fence
- = waste piles
- = open dump area
- = trailer

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Technical Assistance Team
Region V
111 W. Jackson Blvd., Chicago, Illinois 60604

TITLE Site Features Map	FIGURE # 2-2
SITE MCC Construction	SCALE Not To Scale
CITY Chicago STATE Illinois	FILE EIL0855SAA
SOURCE IEPA Memorandum to Brad Stimple	DATE 10/5/94 REVISED 2/6/95

IEPA inspected the site on May 21, 1993, at the request of the State Attorney General's office. The site was brought to the attention of IEPA due to a flyer which listed a number of sites which are alleged "illegal dumps sites". This and other nearby dump sites have been the subject of much concern to area community groups and the local City of Chicago Alderman representative who have urged the city and IEPA to manage the situation. The MCC site is located near a busy intersection and in a populous area of Chicago and because of which, has prompted community groups to express concern that improperly contained, potentially hazardous substances presented a potential threat to the local population.

According to June and July 1994 inspection reports by the IEPA Maywood Region, the site contains several areas of open dumping. A dirt road leads up a hill that appears to be a mound of waste piled approximately 30 feet in height. At ground level, in the southeast corner of the site, approximately 15 drums in poor condition were abandoned. A strong odor of solvent was detected. There were no labels to identify the material in the drums or where they may have originated. There are several piles of tires and railroad ties in the same location. Three additional drums are located in the northeast corner of the lot.

On October 5, 1994, Alan Altur, U.S. EPA Site Assessment Manager, met with IEPA representatives Michelle Allen, Anna Van Orden, Vickie Moy, and Bruce Everetts at the MCC site. Access to the immediate area was restricted due to the presence of a six-foot chain-link fence and a gate that was padlocked, as well as barricaded, by a large trailer. According to Van Orden, the drums appeared to be in the same positions as she previously observed during her most recent inspection of the site in July 1994.

On October 27, 1994, Bruce Everetts, IEPA, addressed a letter to Don Bruce, Chief, Response Section II, Emergency and Enforcement Response Branch, U.S. EPA, officially recommending the MCC Construction site for a potential immediate removal action due to the presence of unidentified drums.

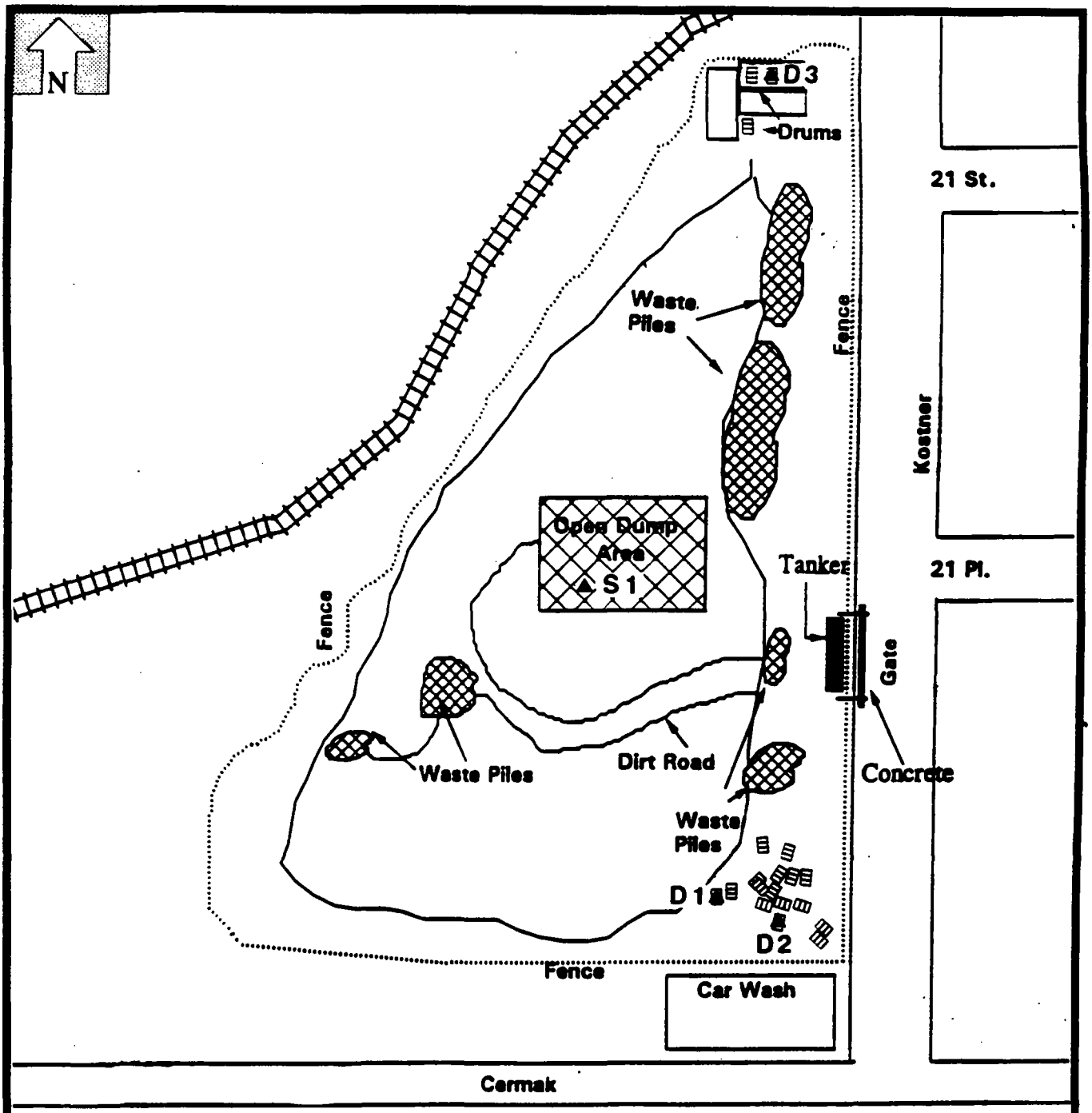
3. SITE ASSESSMENT

On December 9, 1994, two TAT members (TATMs), Karen Rydzewski and Donovan Robin, arrived at the MCC site at 1044 hours and met with U.S. EPA OSC Brad Stimple, Chicago Department of the Environment (CDOE) representative, Moses Walker, and IEPA representatives, Michelle Allen and Bruce Everetts.

After review of the Site Safety Plan, TAT proceeded to perform a site reconnaissance which included air monitoring in the vicinity of the drums. The site reconnaissance confirmed IEPA's observations from their June and July 1994 inspection. A total of 16 drums and 3 drums, all abandoned and uncontrolled, were identified in the southeast and northeast corners of the site, respectively. All drums were unmarked with the exception of one drum located in the northeast corner. This drum was labeled "SONNEBORN; Lapidolith - chemical liquid hardener for concrete, terrazzo floors; DANGER - POISON; contains acids and fluosilicates". No additional drums were observed by TAT. Air monitoring for organic vapors, oxygen levels, explosive atmosphere, and radiation in the breathing zone around the drums exhibited no readings above background levels. The headspace reading of two opened drums from the southeast corner of the site indicated 15 parts per million (ppm) and 150 ppm on the photoionization detector (PID). An unmarked steel drum in the northeast corner of the site had a headspace reading of 600 ppm on the PID when opened. No readings above background were exhibited for oxygen level, explosive atmosphere, or radiation in any of the headspace monitoring.

After the reconnaissance was completed, the OSC determined sample locations based on the air monitoring measurements. A total of three drum samples, D1 through D3, and one soil sample, S1, of the waste pile were collected (Figure 3-1).

TATM Robin collected all samples. Sample D1 was a grab sample collected from an unmarked 55-gallon steel drum located in the southeast corner of the site. Drum D1 had a headspace reading of 500 ppm on the PID and consisted of a mauve-colored, viscous liquid. Sample D2 was a



Legend	ecology and environment, inc. Technical Assistance Team Region V 111 W. Jackson Blvd., Chicago, Illinois 60604	
= 55-gallon steel drum	TITLE Sample Location Map	FIGURE # 3-1
= fence	SITE MCC Construction	SCALE Not To Scale
= waste piles	CITY Chicago STATE Illinois	PAN EIL0855SAA
= open dump area	SOURCE IEPA Memorandum to Brad Stimple	DATE 10/5/94 REVISED 2/6/95
= trailer		
▲ = sample location		

grab sample also collected from an unmarked drum in the southeast corner of the site and consisted of a metallic purple semi-solid. Drum D2 had a headspace reading of 150 ppm. Sample D3 was a grab sample collected from an unmarked drum located in a semi-trailer in the northeast corner of the site. Drum D3 had a headspace reading of 600 ppm on the PID and consisted of a clear, orange liquid. Sample S1 was a composite soil sample collected from the open dump area. Sample S1 consisted of four aliquots taken from the surface area of the dump.

All samples were taken to the E & E warehouse in Chicago where they were prepared for shipment to the laboratory. A representative from the laboratory picked up the samples from the warehouse on December 12, 1994. Chemical analysis of all samples was performed by National Environmental Testing, Inc., in Bartlett, Illinois, under analytial TDD number T05-9412-801. An Office of Solid Waste and Emergency Response (OSWER) Quality Assurance Level II was requested from the laboratory as well as a two-week verbal and three-week hardcopy turnaround time on the analytical results.

4. ANALYTICAL RESULTS

All samples were analyzed for polychlorinated biphenyls (PCBs) by U.S. EPA Solid Waste 846 (SW-846) Method 8080; total Resource Conservation and Recovery Act (RCRA) metals by U.S. EPA SW-846 Methods 6010, 7471 (for mercury analysis), Method 7740 (for selenium analysis) and Method 7760 (for silver analysis); volatile organic compounds (VOCs) by U.S. EPA SW-846 Method 8240; and semivolatile organic compounds (SVOCs) by U.S. EPA SW-846 Method 8270. Additionally, drum samples D1, D2, and D3 were analyzed for ignitability by U.S. EPA SW-846 Method 1010.

Analytical results indicated the absence of PCBs in all samples. Samples D1, D2, and D3 had flash points below 140°F. Heavy metal analysis detected low levels of lead (6,110 micrograms per gram [μg/g]), barium (140 μg/g), and chromium (1,360 μg/g). Various VOCs and SVOCs were identified above instrument detection limits in all samples (Table 4-1).

Table 4-1

SUMMARY OF ANALYTICAL DATA
MCC CONSTRUCTION, CHICAGO, ILLINOIS

DECEMBER 9, 1994

PARAMETER	SAMPLE DESIGNATION			
	D1	D2	D3	S1
Flashpoint (°F)	65	63	116	NR
Total Metals (µg/g)				
Arsenic	BDL	BDL	BDL	2.50
Barium	140	77.8	BDL	101
Cadmium	BDL	BDL	BDL	0.67
Chromium	1,360	332	BDL	12.3
Lead	6,110	1,710	BDL	173
Mercury	0.11	0.06	BDL	0.09
Selenium	BDL	0.88	BDL	BDL
Base/Neutrals (µg/kg)				
Benzo(a)-pyrene	BDL	BDL	BDL	3,500
Bis(2-ethylhexyl)phthalate	1,300,000	99,000,000	BDL	BDL
Chrysene	BDL	BDL	BDL	4,000
Di-n-butylphthalate	BDL	1,300,000	BDL	BDL
Fluoranthene	BDL	BDL	BDL	9,300
Napthalene	BDL	BDL	1,900,000	BDL
Phenanthrene	BDL	BDL	BDL	6,700
Pyrene	BDL	BDL	BDL	7,800
Volatiles (µg/kg)				
Acetone	BDL	6,040,000	BDL	BDL
2-Butanone	42,900,000	15,300,000	BDL	BDL
Ethyl Benzene	BDL	494,000	611,000	BDL
Toluene	160,000,000	65,600,000	200,000	BDL
Xylenes (Total)	7,030,000	2,630,000	2,490,000	BDL

BDL = Below Detection Limit
NR = Analysis Not Performed

Source: National Environmental Testing, Inc., Bartlett, Illinois (Analytical TDD No. T05-9412-801)

5. DISCUSSION OF POTENTIAL THREATS

Conditions at the MCC site present an imminent and substantial endangerment to human health and the environment, based upon factors set forth in paragraph (b) (2) of Part 300.415 of the National Oil and Hazardous Substances Contingency Plan (NCP). The following conditions exist at the MCC site:

- **Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants:**

Site investigations conducted by U.S. EPA, IEPA, and CDOE documented 19 full or partially full drums of hazardous waste existed on site in an uncontrolled, deteriorating, and in some cases, leaking condition. According to chemical analysis of drum samples collected during the site assessment, paint and solvent-bearing wastes containing significant concentrations of volatile organics were present in liquid and sludge drummed waste. In addition, the contents of several of the sampled unlabelled drums were determined to be RCRA hazardous wastes. Samples D1, D2, and D3 had flash points of less than 140°F. According to RCRA, 40 CFR 261.21, wastes exhibit the hazardous waste characteristic of ignitibility at a flash point of less than 140°F and; therefore, must be designated as U.S. EPA hazardous waste code D001.

Site access to trespassers, vandals, and wildlife is only somewhat restricted. Deteriorating containers of hazardous substances pose a threat of direct contact. During the site assessment, moderate automobile and pedestrian traffic was observed on Kostner Avenue and the surrounding area.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.**

Results of chemical analysis of site assessment samples revealed the presence of 2-butanone (MEK) at 42,900,000 μg/kg, toluene at 160,000,000 μg/kg, acetone at 6,040,000 μg/kg, and total xylenes at 7,030,000 μg/kg. Many of the containers of proven or potentially hazardous materials were in poor condition, leaking, or have already released most of their contents. The uncontrolled and deteriorating nature of the drums and the fact that the drums were observed to be leaking could pose a further, more significant threat of release, and allow contaminants to be transported off site into nearby soils and storm sewer systems.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.**

The 19 drums abandoned at the MCC site are exposed to varying seasonal temperatures which, if not immediately and properly dealt with, could further deteriorate and ultimately fail. This could occur through freeze/thaw cycles in which hot temperatures could increase vapor pressures of the contained material while cold temperatures may cause frozen drum contents. Conditions such as these may result in a release which would pose a public and environmental hazard.

- **Threat of fire or explosion.**

The contents of several of the sampled unlabelled drums were determined to contain flammable and combustible materials. Samples D1, D2, and D3 had flash points of 65°F, 63°F, and 116°F respectively (40 CFR 261.21, D001 - ignitibility). These materials were found in drums that are exposed to extreme weather conditions and are in close proximity to pedestrian traffic and commercial businesses.

- **The unavailability of other appropriate Federal or State response mechanisms to respond to the release.**

This factor supports the proposed actions at the facility because IEPA does not have the necessary resources to respond to the emergency situation.

6. SUMMARY

The MCC site is located in a mixed residential/industrial area. The majority of the drums on site are located within 20 feet of a pedestrian walkway and within view of the public. The contents of most of the 19 drums found on site are composed of flammable materials. Several of these drums have already released their contents. In addition, during elevated temperatures, the contents of the drums pose the potential of becoming less viscous and migrate off the site property. These drums pose a threat to human health and the environment and should be overpacked and disposed of in a proper and timely mannner.

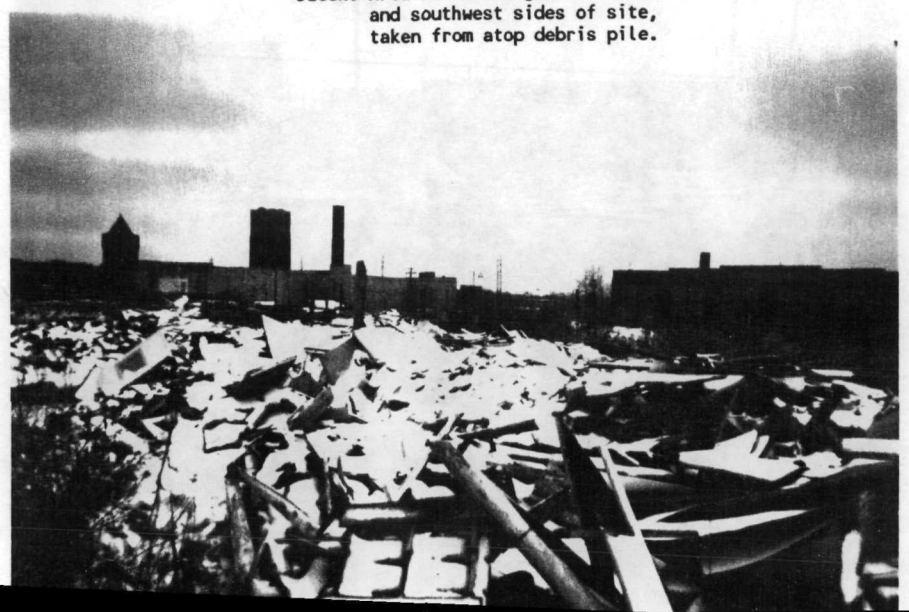
APPENDIX A

SITE PHOTOGRAPHS

SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: NE PHOTOGRAPHER: RYDZEWSKI
DESCR: Overview of northeast corner of site taken from atop the debris pile.

SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: SE PHOTOGRAPHER: RYDZEWSKI
DESCR: Area surrounding southeast corner of site, photograph from atop debris pile.

SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: SWS PHOTOGRAPHER: RYDZEWSKI
DESCR: Area surrounding site on west and southwest sides of site, taken from atop debris pile.

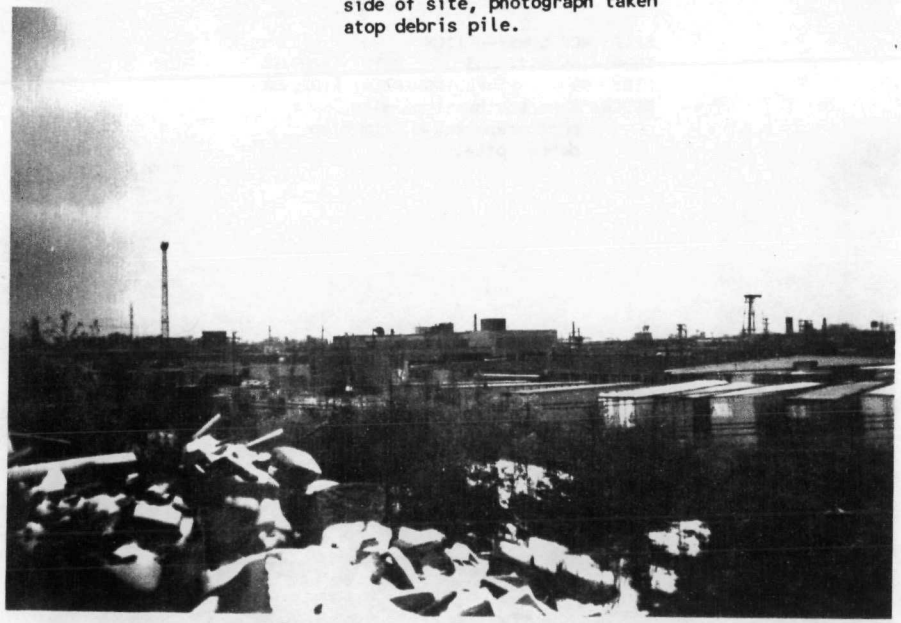


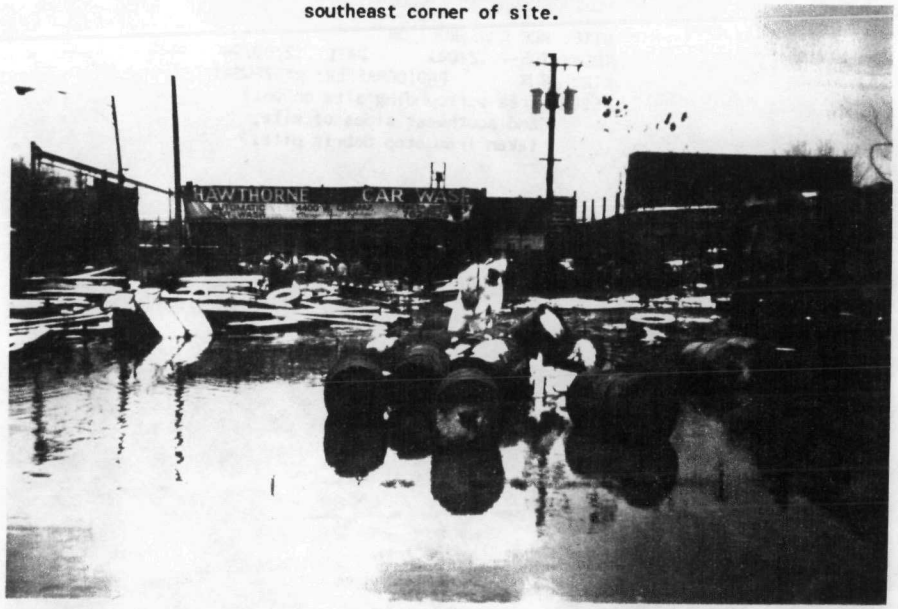
SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: SW PHOTOGRAPHER: RYDZEWSKI
DESCR: Area southwest of site, photograph taken from atop debris pile.

SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: N PHOTOGRAPHER: RYDZEWSKI
DESCR: Panoramic view of north side of site showing proximity of residential area.

SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: NNW PHOTOGRAPHER: RYDZEWSKI
DESCR: Area surrounding site on north side of site, photograph taken atop debris pile.

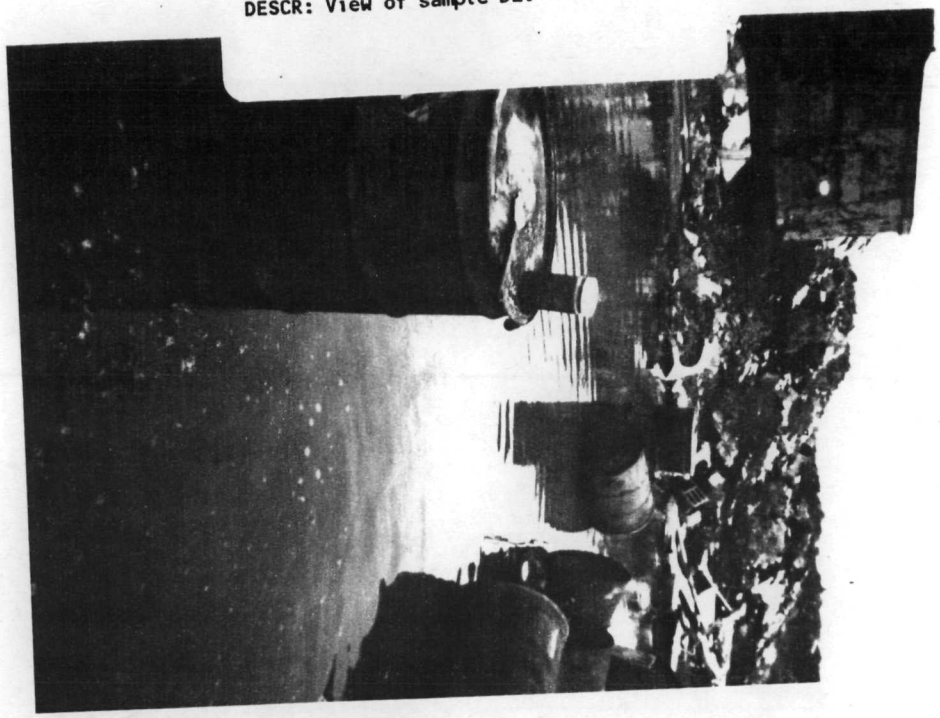
SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: S PHOTOGRAPHER: RYDZEWSKI
DESCR: View of TAT air monitoring around abandoned drums at southeast corner of site.





SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: SE PHOTOGRAPHER: RYDZEWSKI
DESCR: View of sample D1.

SITE: MCC CONSTRUCTION
TDD#: T05-9412-003 DATE: 12/09/94
DIR: NW PHOTOGRAPHER: RYDZEWSKI
DESCR: View of sample D2.



APPENDIX B
ANALYTICAL DATA PACKAGE

ecology and environment, inc.
International Specialists in the Environment

[illegible] West Jackson Boulevard
Chicago, Illinois 60604
Tel 312 663-9415 Fax 312 663-0791

M E M O R A N D U M

DATE: March 12, 1995

TO: Karen Rydzewski, TAT Project Manager, E & E, Chicago, IL

FROM: David Hendren, TAT Analytical Services Manager, E & E, Chicago, IL

THROUGH: Mary Jane Ripp, TAT QA Reports Manager, E & E, Chicago, IL

SUBJECT: General Data Quality Review for Flash Point, MCC Construction, Chicago, Cook County, IL

REFERENCE: Project TDD T05-9412-003 Analytical TDD T05-9412-801
Project PAN EIL0855SAA Analytical PAN EIL0855AAA

The data quality assurance (QA) review of three drum samples collected from the MCC Construction site is complete. The samples were collected on December 9, 1994, by the Technical Assistance Team (TAT) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET-Midwest, Bartlett, Illinois. The laboratory analyses was performed according to United States Environmental Protection Agency Solid Waste 846 Method 1010.

Sample Identification

E & E Identification No.	Laboratory Identification No.
D1	287655
D2	287656
D3	287657

Data Qualifications:

I. <u>Sample Holding Time: Acceptable</u>

The samples were collected on December 9, 1994, and analyzed on December 22, 1994. Holding time criteria does not exist for this parameter.

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II. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 9.0. Based upon the information provided, the data are acceptable for use.

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International Specialists in the Environment

[illegible] West Jackson Boulevard
Chicago, Illinois 60604
Tel 312 663-9415, Fax 312 663-[illegible]

M E M O R A N D U M

DATE: March 12, 1995

TO: Karen Rydzewski, TAT Project Manager, E & E, Chicago, IL

FROM: David Hendren, TAT Analytical Services Manager, E & E, Chicago, IL

THROUGH: Mary Jane Ripp, TAT QA Reports Manager, E & E, Chicago, IL

SUBJECT: Resource Conservation and Recovery Act (RCRA) and Toxicity Characteristic Leaching Procedure (TCLP) Metals Data Quality Review, MCC Construction, Chicago, Cook County, IL

REFERENCE: Project TDD T05-9412-003 Analytical TDD T05-9412-801
Project PAN EIL0855SAA Analytical PAN EIL0855AAA

The data quality assurance (QA) review of three drum samples and one soil sample collected from the MCC Construction site is complete. The samples were collected on December 9, 1994, by the Technical Assistance Team (TAT) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET-Midwest, Bartlett, Illinois. The laboratory analyses was performed according to United States Environmental Protection Agency Solid Waste 846 Method 1311 (TCLP) and 6010 for barium, cadmium, chromium, lead; 7060, arsenic; mercury, 7471; selenium, 7740; silver, 7760.

Sample Identification

E & E Identification No.	Laboratory Identification No.
D1	287655
D2	287656
D3	287657
S1	287658

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Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 9, 1994, and analyzed between December 19, 1994, and December 22, 1994. Holding time criteria, six months (28 days for mercury) for all analytes were met.

II. Calibration:

- Initial Calibration: Acceptable

Recoveries for the initial calibration verification were within 90% to 110% (80 to 120% for mercury), as required.

- Continuing Calibration: Acceptable

All analytes included in the continuing calibration verification standard were within 90% to 110% recoveries (80% to 120% for mercury), as required. A calibration blank was analyzed following both initial and continuing calibration verification standards, as required.

III. Blanks: Acceptable

A method blank (preparation blank) was analyzed with the samples. No target analytes were detected in the blanks.

IV. Instrument Interference Check Samples (ICS): Acceptable

The ICS samples were analyzed before and after sample analysis, as required, and were within quality control limits.

V. Overall Assessment of Data For Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April, 1990) Data Validation Procedures, Section 3.0, Metallic Inorganic Parameters. Based upon the information provided, the data are acceptable for use.

ecology and environment, inc.
International Specialists in the Environment

111 West Jackson Boulevard
Chicago, Illinois 60604
Tel (312) 663-9415 Fax (312) 663-1791

M E M O R A N D U M

DATE: February 10, 1995

TO: Karen Rydzewski, TAT Project Manager, E & E, Chicago, IL

FROM: David Hendren, TAT Analytical Services Manager, E & E, Chicago, IL

THROUGH: Mary Jane Ripp, TAT QA Reports Manager, E & E, Chicago, IL

SUBJECT: Polychlorinated Biphenyls (PCBs) Data Quality Review, MCC Construction, Chicago, Cook County, IL

REFERENCE: Project TDD T05-9412-003 Analytical TDD T05-9412-801
Project PAN EIL0855SAA Analytical PAN EIL0855AAA

The data quality assurance (QA) review of three drum samples and one soil sample collected from the MCC Construction site is complete. The samples were collected on December 9, 1994, by the Technical Assistance Team (TAT) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET-Midwest, Bartlett, Illinois. The laboratory analyses was performed according to United States Environmental Protection Agency Solid Waste 846 Method 8080.

Sample Identification

E & E Identification No.	Laboratory Identification No.
D1	287655
D2	287656
D3	287657
S1	287658

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 9, 1994, and extracted on December 15, 1994 and December 19, 1994; and analyzed on December 17, 1994 and December 20, 1994. This is within the 14-day limit from collection to extraction, and within the 40-day limit following extraction.

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II. Instrument Performance: Acceptable

Chromatographic resolution was adequate in all analyses and all chromatograms were acceptable.

III. Calibrations:

- Initial Calibration: Acceptable

A five point calibration was performed prior to analysis. The percent relative standard deviations (%RSD) between response factors were less than 20%.

- Continuing Calibration: Acceptable

The percent differences were less than 15% for three different PCB mixtures that were analyzed in the continuing calibration check standard.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the method blank.

V. Compound Identification: Not-Applicable

PCBs were not detected in the sample; therefore, confirmation analysis was unnecessary.

VI. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the sample and blank were within the laboratory established guidelines.

VII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 6.0, Pesticide/PCBs. Based upon the information provided, the data are acceptable for use.

NET NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
Bartlett, IL 60103
Tel: (708) 289-3100
Fax: (708) 289-5445

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

NET Job Number: 94.09731

IEPA Cert No. 100221
WDNR Cert No. 999447130
A2LA Cert No. 0453-01

Enclosed is the Quality Control Data and Analytical Results for the following samples submitted to NET, Inc. Bartlett Division for analysis:

Project Description: ZT3051; MCC Construction

Sample Number	Sample Description	Date Taken	Date Received
287655	D1; Grab	12/09/1994	12/13/1994
287656	D2; Grab	12/09/1994	12/13/1994
287657	D3; Grab	12/09/1994	12/13/1994
287658	S1; Grab	12/09/1994	12/13/1994

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. These results apply only to the samples analyzed. Reproduction of this report only in whole is permitted. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Procedures used follow NET Standard Operating Procedures which reference the methods listed on your report. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

This Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Approved by:

Jean-Pierre C. Rouanet
Operations Manager

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
Bartlett, IL 60103
Tel: (708) 289-3100
Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287655

NET Job No.: 94.09731

Sample Description: D1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:15
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Flashpoint	65		Degree F	12/22/1994	72	jpd		240	1010 (1)
METALS - ICP 2 Non-Aq	Complete			12/20/1994		jmt		170	6010(1) 200.7(3)
Metals-TCLP, ICP	Complete			12/22/1994		jmt		38	6010(1) 200.7(3)
TCLP Metals Extraction	leached			12/14/1994		kab		291	1311 (1)
Metals Prep, TCLP	Complete			12/22/1994		jmt	654		3010 (1)
Arsenic, GFAA	<0.5	S	ug/g	12/19/1994	0.5	mjs	330	40	7060 (1)
Barium, ICP	140		ug/g	12/20/1994	1.0	jmt	330	786	6010 (1)
Cadmium, ICP	<0.50		ug/g	12/20/1994	0.50	jmt	330	754	6010 (1)
Chromium, ICP	1,360		ug/g	12/20/1994	2.0	jmt	330	747	6010 (1)
Lead, ICP	6,110		ug/g	12/20/1994	4.0	jmt	330	916	6010 (1)
Mercury, CVAA	0.11		ug/g	12/19/1994	0.02	mic		372	7471 (1)
Selenium, GFAA	<0.5	S	ug/g	12/19/1994	0.5	mjs	330	30	7740 (1)
Silver, AA	<2.0		ug/g	12/21/1994	2.0	jmt	128	240	7760 (1)
TCLP-Chromium,ICP	<0.040		mg/L	12/22/1994	0.040	jmt	654	941	6010 (1)
TCLP-Lead, ICP	<0.080		mg/L	12/22/1994	0.080	jmt	654	1118	6010 (1)
Metals Prep, Nonaqueous	complete			12/20/1994		jmt	330		3050 (1)
Metals Prep, Hg Nonaqueous	complete			12/19/1994		jmt	268		7471 (1)
Metals Prep, Ag Nonaqueous	complete			12/20/1994		jmt	128		7760 (1)
Prep PCBs 8080 NonAqueous	extracted			12/14/1994		sdf	210		3540A (1)
PCBs 8080 NonAqueous									
PCB-1016	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1221	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1232	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1242	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1248	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1254	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1260	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1268	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
Surr: Tetrachloroxylene (TCX)	95		%	12/17/1994	31-128	seh	210	153	8080 (1)

S : Parameter analysis was sub-contracted to another NET location.

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287655

NET Job No.: 94.09731

Sample Description: D1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:15
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Surr: Decachlorobiphenyl (DCB)	34	%	12/17/1994	29-128	sah	210 153	8080 (1)
PREP, BN Nonaqueous	Extracted		12/15/1994		adl		3500 (1)
PREP, Acid Ext. Nonaqueous	Extracted		12/15/1994		adl		3500 (1)
ACID COPDS - 8270 NONAQUEOUS							
4-Chloro-3-methylphenol	<740,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2-Chlorophenol	<740,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dichlorophenol	<740,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dimethylphenol	<740,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dinitrophenol	<3,700,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
2-Methyl-4,6-dinitrophenol	<3,700,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
2-Nitrophenol	<740,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
4-Nitrophenol	<3,700,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
Pentachlorophenol	<3,700,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
Phenol	<440,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4,6-Trichlorophenol	<740,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
BASE/NEUTRALS-8270 NONAQUEOUS							
Acenaphthene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Acenaphthylene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Anthracene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzidine	<11,000 J	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
Benzo(a)anthracene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(b)fluoranthene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(k)fluoranthene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(g,h,i)perylene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(a)pyrene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzyl butyl phthalate	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Bis(2-chloroethoxy)methane	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Bis(2-chloroethyl)ether	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287655

NET Job No.: 94.09731

Sample Description: D1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:15
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Bis(2-chloroisopropyl)ether	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Bis(2-ethylhexyl)phthalate	1,300,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
4-Bromophenyl phenyl ether	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2-Chloronaphthalene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
4-Chlorophenyl phenyl ether	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Chrysene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Dibenzo(a,h)anthracene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Di-n-butyl phthalate	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
1,2-Dichlorobenzene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
1,3-Dichlorobenzene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
1,4-Dichlorobenzene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
3,3'-Dichlorobenzidine	<4,400	ug/Kg	12/20/1994	660	adl	687	8270 (1)
Diethyl phthalate	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Dimethyl phthalate	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dinitrotoluene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,6-Dinitrotoluene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Di-n-octyl phthalate	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Fluoranthene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Fluorene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachlorobenzene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachlorobutadiene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachlorocyclopentadiene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachloroethane	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Indeno(1,2,3-cd)pyrene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Isophorone	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Naphthalene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Nitrobenzene	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
N-Nitrosodimethylamine	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
N-Nitrosodi-n-propylamine	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)
N-Nitrosodiphenylamine	<2,200	ug/Kg	12/20/1994	330	adl	687	8270 (1)

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287655

NET Job No.: 94.09731

Sample Description: D1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:15
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Phenanthrene	<2,200	ug/Kg	12/20/1994	330	adt	687	8270 (1)
Pyrene	<2,200	ug/Kg	12/20/1994	330	adt	687	8270 (1)
1,2,4-Trichlorobenzene	<2,200	ug/Kg	12/20/1994	330	adt	687	8270 (1)
Surr: Phenol-d6	0	%	12/20/1994	24-113	adt	687	8270 (1)
Surr: 2-Fluorophenol	0	%	12/20/1994	25-121	adt	687	8270 (1)
Surr: Nitrobenzene-d5	0	%	12/20/1994	23-120	adt	687	8270 (1)
Surr: 2-Fluorobiphenyl	0	%	12/20/1994	30-115	adt	687	8270 (1)
Surr: Terphenyl-d14	0	%	12/20/1994	18-137	adt	687	8270 (1)
Surr: 2,4,6-Tribromophenol	0	%	12/20/1994	19-122	adt	687	8270 (1)
VOLATILES - 8240 NONAQUEOUS							
Acetone	<39,400,00	ug/Kg	12/21/1994	100	llj	662	8240 (1)
Benzene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Bromodichloromethane	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Bromoform	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Bromomethane	<3,900,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
2-Butanone (MEK)	42,900,000	ug/Kg	12/21/1994	100	llj	662	8240 (1)
Carbon disulfide	<39,400,00	ug/Kg	12/21/1994	100	llj	662	8240 (1)
Carbon tetrachloride	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Chlorobenzene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Chloroethane	<3,900,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
2-Chloroethylvinyl ether	<3,900,000 J	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Chloroform	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Chloromethane	<3,900,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Dibromochloromethane	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichlorobenzene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,3-Dichlorobenzene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,4-Dichlorobenzene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1-Dichloroethane	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichloroethane	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287655

NET Job No.: 94.09731

Sample Description: D1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:15
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
1,1-Dichloroethene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
trans-1,2-Dichloroethene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
cis-1,2-Dichloroethene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichloropropene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
cis-1,3-Dichloropropene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
trans-1,3-Dichloropropene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Ethyl benzene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
2-Hexanone	<20,000,00	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Methylene chloride	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
4-Methyl-2-pentanone (MIBK)	<20,000,00	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Styrene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,2,2-Tetrachloroethane	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Tetrachloroethene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Toluene	160,000,00	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,1-Trichloroethane	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,2-Trichloroethane	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Trichloroethene	<2,000,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Vinyl acetate	<20,000,00	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Vinyl chloride	<3,900,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Xylenes, Total	7,030,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Surr: 1,2-Dichloroethane-d4	D	%	12/21/1994	70-121	llj	662	8240 (1)
Surr: Toluene-d8	D	%	12/21/1994	81-117	llj	662	8240 (1)
Surr: Bromofluorobenzene	D	%	12/21/1994	74-121	llj	662	8240 (1)

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287656

NET Job No.: 94.09731

Sample Description: D2; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:50
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Flashpoint	63		Degree F	12/22/1994	72	jpd		260	1010 (1)
METALS - ICP 2 Non-Aq	Complete			12/20/1994		jmt		170	6010(1) 200.7(3)
Metals-TCLP, ICP	Complete			12/22/1994		jmt		38	6010(1) 200.7(3)
TCLP Metals Extraction	leached			12/14/1994		kab		291	1311 (1)
Metals Prep, TCLP	Complete			12/22/1994		jmt	654		3010 (1)
Arsenic, GFAA	<0.5	S	ug/g	12/19/1994	0.5	mjs	330	40	7060 (1)
Barium, ICP	77.8		ug/g	12/20/1994	1.0	jmt	330	786	6010 (1)
Cadmium, ICP	<0.50		ug/g	12/20/1994	0.50	jmt	330	754	6010 (1)
Chromium, ICP	332		ug/g	12/20/1994	2.0	jmt	330	747	6010 (1)
Lead, ICP	1,710		ug/g	12/20/1994	4.0	jmt	330	916	6010 (1)
Mercury, CVAA	0.06		ug/g	12/19/1994	0.02	mlc		372	7471 (1)
Selenium, GFAA	0.88	S	ug/g	12/19/1994	0.5	mjs	330	30	7740 (1)
Silver, AA	<2.0		ug/g	12/21/1994	2.0	jmt	128	260	7760 (1)
TCLP-Chromium,ICP	<0.040		mg/L	12/22/1994	0.040	jmt	654	941	6010 (1)
TCLP-Lead, ICP	<0.080		mg/L	12/22/1994	0.080	jmt	654	1118	6010 (1)
Metals Prep, Nonaqueous	complete			12/20/1994		jmt	330		3050 (1)
Metals Prep, Hg Nonaqueous	complete			12/19/1994		jmt	268		7471 (1)
Metals Prep, Ag Nonaqueous	complete			12/20/1994		jmt	128		7760 (1)
Prep PCBs 8080 Nonaqueous	extracted			12/14/1994		sdf	210		3540A (1)
PCBs 8080 Nonaqueous									
PCB-1016	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
PCB-1221	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
PCB-1232	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
PCB-1242	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
PCB-1248	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
PCB-1254	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
PCB-1260	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
PCB-1268	<50		ug/kg	12/17/1994	50	sah	210	153	8080 (1)
Surr: Tetrachloroxylene (TCX)	39		%	12/17/1994	31-128	sah	210	153	8080 (1)

S : Parameter analysis was sub-contracted to another NET location.

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287656

NET Job No.: 94.09731

Sample Description: D2; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:50
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Surr: Decachlorobiphenyl (DCB)	30	%	12/17/1994	29-128	seh	210 153	8080 (1)
PREP, BN Nonaqueous	Extracted		12/15/1994		adl		3500 (1)
PREP, Acid Ext. Nonaqueous	Extracted		12/15/1994		adl		3500 (1)
ACID CMPDS - 8270 NONAQUEOUS							
4-Chloro-3-methylphenol	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
2-Chlorophenol	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
2,4-Dichlorophenol	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
2,4-Dimethylphenol	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
2,4-Dinitrophenol	<300,000	ug/Kg	12/19/1994	1,600	adl	586	8270 (1)
2-Methyl-4,6-dinitrophenol	<300,000	ug/Kg	12/19/1994	1,600	adl	586	8270 (1)
2-Nitrophenol	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
4-Nitrophenol	<300,000	ug/Kg	12/19/1994	1,600	adl	586	8270 (1)
Pentachlorophenol	<300,000	ug/Kg	12/19/1994	1,600	adl	586	8270 (1)
Phenol	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
2,4,6-Trichlorophenol	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
BASE/NEUTRALS-8270 NONAQUEOUS							
Acenaphthene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Acenaphthylene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Anthracene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Benzidine	<300,000 J	ug/Kg	12/19/1994	1,600	adl	586	8270 (1)
Benzo(a)anthracene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Benzo(b)fluoranthene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Benzo(k)fluoranthene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Benzo(g,h,i)perylene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Benzo(a)pyrene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Benzyl butyl phthalate	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Bis(2-chloroethoxy)methane	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Bis(2-chloroethyl)ether	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
Bartlett, IL 60103
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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287656

NET Job No.: 94.09731

Sample Description: D2; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:50
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Bis(2-chloroisopropyl)ether	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Bis(2-ethylhexyl)phthalate	99,000,000	ug/Kg	12/20/1994	330	adt	687	8270 (1)
4-Bromophenyl phenyl ether	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
2-Chloronaphthalene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
4-Chlorophenyl phenyl ether	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Chrysene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Dibenzo(a,h)anthracene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Di-n-butyl phthalate	1,300,000	ug/Kg	12/20/1994	330	adt	687	8270 (1)
1,2-Dichlorobenzene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
1,3-Dichlorobenzene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
1,4-Dichlorobenzene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
3,3'-Dichlorobenzidine	<120,000	ug/Kg	12/19/1994	660	adt	586	8270 (1)
Diethyl phthalate	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Dimethyl phthalate	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
2,4-Dinitrotoluene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
2,6-Dinitrotoluene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Di-n-octyl phthalate	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Fluoranthene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Fluorene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Hexachlorobenzene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Hexachlorobutadiene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Hexachlorocyclopentadiene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Hexachloroethane	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Indeno(1,2,3-cd)pyrene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Isophorone	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Naphthalene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
Nitrobenzene	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
N-Nitrosodimethylamine	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
N-Nitrosodi-n-propylamine	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)
N-Nitrosodiphenylamine	<59,000	ug/Kg	12/19/1994	330	adt	586	8270 (1)

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287656

NET Job No.: 94.09731

Sample Description: D2; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 12:50
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Phenanthrene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Pyrene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
1,2,4-Trichlorobenzene	<59,000	ug/Kg	12/19/1994	330	adl	586	8270 (1)
Surr: Phenol-d6	D	%	12/19/1994	24-113	adl	586	8270 (1)
Surr: 2-Fluorophenol	D	%	12/19/1994	25-121	adl	586	8270 (1)
Surr: Nitrobenzene-d5	D	%	12/19/1994	23-120	adl	586	8270 (1)
Surr: 2-Fluorobiphenyl	D	%	12/19/1994	30-115	adl	586	8270 (1)
Surr: Terphenyl-d14	D	%	12/19/1994	18-137	adl	586	8270 (1)
Surr: 2,4,6-Tribromophenol	D	%	12/19/1994	19-122	adl	586	8270 (1)
VOLATILES - 8240 NONAQUEOUS							
Acetone	6,040,000 J	ug/Kg	12/21/1994	100	llj	662	8240 (1)
Benzene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Bromodichloromethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Bromoform	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Bromomethane	<190,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
2-Butanone (MEK)	15,300,000	ug/Kg	12/21/1994	100	llj	662	8240 (1)
Carbon disulfide	<1,900,000	ug/Kg	12/21/1994	100	llj	662	8240 (1)
Carbon tetrachloride	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Chlorobenzene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Chloroethane	<190,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
2-Chloroethylvinyl ether	<190,000 J	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Chloroform	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Chloromethane	<190,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Dibromochloromethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichlorobenzene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,3-Dichlorobenzene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,4-Dichlorobenzene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1-Dichloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)

OCEAN GROUP

NET NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287656

NET Job No.: 94.09731

Sample Description: D2; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
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IEPA Cert. No. 100221

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WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
1,1-Dichloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
trans-1,2-Dichloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
cis-1,2-Dichloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichloropropane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
cis-1,3-Dichloropropene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
trans-1,3-Dichloropropene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Ethyl benzene	494,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
2-Hexanone	<950,000	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Methylene chloride	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
4-Methyl-2-pentanone (MIBK)	<950,000	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Styrene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,2,2-Tetrachloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Tetrachloroethene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Toluene	65,600,000	ug/Kg	12/22/1994	5.0	llj	663	8240 (1)
1,1,1-Trichloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,2-Trichloroethane	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Trichloroethene	<95,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Vinyl acetate	<950,000	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Vinyl chloride	<190,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Xylenes, Total	2,630,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Surr: 1,2-Dichloroethane-d4	0	%	12/21/1994	70-121	llj	662	8240 (1)
Surr: Toluene-d8	0	%	12/21/1994	81-117	llj	662	8240 (1)
Surr: Bromofluorobenzene	0	%	12/21/1994	74-121	llj	662	8240 (1)

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287657

NET Job No.: 94.09731

Sample Description: D3; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:25
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Flashpoint	116		Degree F	12/22/1994	72	jpd		240	1010 (1)
METALS - ICP 2 Non-Aq	Complete			12/20/1994		jmt		170	6010(1) 200.7(3)
Arsenic, GFAA	<0.5	S	ug/g	12/19/1994	0.5	mjs		41	7060 (1)
Barium, ICP	<1.0		ug/g	12/20/1994	1.0	jmt	330	786	6010 (1)
Cadmium, ICP	<0.50		ug/g	12/20/1994	0.50	jmt	330	754	6010 (1)
Chromium, ICP	<2.0		ug/g	12/20/1994	2.0	jmt	330	747	6010 (1)
Lead, GFAA	<0.25	S	ug/g	12/16/1994	0.25	mjs		12	7421 (1)
Mercury, CVAA	<0.02		ug/g	12/19/1994	0.02	mic		372	7471 (1)
Selenium, GFAA	<0.5	S	ug/g	12/19/1994	0.5	mjs		31	7740 (1)
Silver, AA	<2.0		ug/g	12/21/1994	2.0	jmt	128	240	7760 (1)
Metals Prep, Nonaqueous	complete			12/20/1994		jmt	330		3050 (1)
Metals Prep, Hg Nonaqueous	complete			12/19/1994		jmt	268		7471 (1)
Metals Prep, Ag Nonaqueous	complete			12/20/1994		jmt	128		7760 (1)
Prep PCBs 8080 NonAqueous	extracted			12/15/1994		sdf	10		3540A (1)
PCBs 8080 Oil									
PCB-1016	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
PCB-1221	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
PCB-1232	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
PCB-1242	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
PCB-1248	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
PCB-1254	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
PCB-1260	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
PCB-1268	<1.0		ug/g	12/20/1994	1.0	seh		16	8080 (1)
Surr: Dibutylchlorendate (DBC)	73		%	12/20/1994	29-128	seh		16	8080 (1)
Tetrachloroxylene (TCX)	33		%	12/20/1994	31-128	seh		16	8080 (1)
PREP, BN Nonaqueous	extracted			12/15/1994		tls	218		3500 (1)
PREP, Acid Ext. Nonaqueous	extracted			12/15/1994		tls	218		3500 (1)

S : Parameter analysis was sub-contracted to another NET location.

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12/27/1994

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Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
ACID COMPS - 8270 NONAQUEOUS								
Benzoic acid	<5,000,000	ug/Kg	12/21/1994	1,600	adt	218	588	8270 (1)
Benzyl Alcohol	<2,000,000	ug/Kg	12/21/1994	660	adt	218	588	8270 (1)
4-Chloro-3-methylphenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
2-Chlorophenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
2,4-Dichlorophenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
2,4-Dimethylphenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
2,4-Dinitrophenol	<5,000,000	ug/Kg	12/21/1994	1,600	adt	218	588	8270 (1)
2-Methyl-4,6-dinitrophenol	<5,000,000	ug/Kg	12/21/1994	1,600	adt	218	588	8270 (1)
2-Methylphenol (o-Cresol)	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
4-Methylphenol (p-Cresol)	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
2-Nitrophenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
4-Nitrophenol	<5,000,000	ug/Kg	12/21/1994	1,600	adt	218	588	8270 (1)
Pentachlorophenol	<5,000,000	ug/Kg	12/21/1994	1,600	adt	218	588	8270 (1)
Phenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
2,4,5-Trichlorophenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
2,4,6-Trichlorophenol	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
BASE/NEUTRALS-8270 NONAQUEOUS								
Acenaphthene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Acenaphthylene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Aniline	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Anthracene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Benzidine	<5,000,000 J	ug/Kg	12/21/1994	1,600	adt	218	588	8270 (1)
Benzo(a)anthracene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Benzo(b)fluoranthene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Benzo(k)fluoranthene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Benzo(g,h,i)perylene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Benzo(a)pyrene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)
Benzo(b)pyrene	<990,000	ug/Kg	12/21/1994	330	adt	218	588	8270 (1)

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12/27/1994

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ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:25
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Benzyl butyl phthalate	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Bis(2-chloroethoxy)methane	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Bis(2-chloroethyl)ether	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Bis(2-chloroisopropyl)ether	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Bis(2-ethylhexyl)phthalate	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
4-Bromophenyl phenyl ether	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
4-Chloroaniline	<2,000,000	ug/Kg	12/21/1994	660	adl	218	588	8270 (1)
2-Chloronaphthalene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
4-Chlorophenyl phenyl ether	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Chrysene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Dibenzo(a,h)anthracene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Dibenzofuran	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Di-n-butyl phthalate	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
1,2-Dichlorobenzene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
1,3-Dichlorobenzene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
1,4-Dichlorobenzene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
3,3'-Dichlorobenzidine	<2,000,000	ug/Kg	12/21/1994	660	adl	218	588	8270 (1)
Diethyl phthalate	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Dimethyl phthalate	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
2,4-Dinitrotoluene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
2,6-Dinitrotoluene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Di-n-octyl phthalate	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Fluoranthene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Fluorene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Hexachlorobenzene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Hexachlorobutadiene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Hexachlorocyclopentadiene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Hexachloroethane	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Indeno(1,2,3-cd)pyrene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Isophorone	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287657

NET Job No.: 94.09731

Sample Description: D3; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:25
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
2-Methylnaphthalene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Naphthalene	1,900,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
2-Nitroaniline	<5,000,000	ug/Kg	12/21/1994	1,600	adl	218	588	8270 (1)
3-Nitroaniline	<5,000,000	ug/Kg	12/21/1994	1,600	adl	218	588	8270 (1)
4-Nitroaniline	<5,000,000	ug/Kg	12/21/1994	1,600	adl	218	588	8270 (1)
Nitrobenzene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
N-Nitrosodimethylamine	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
N-Nitrosodi-n-propylamine	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
N-Nitrosodiphenylamine	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Phenanthrene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Pyrene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
1,2,4-Trichlorobenzene	<990,000	ug/Kg	12/21/1994	330	adl	218	588	8270 (1)
Surr: Phenol-d6	0	%	12/21/1994	24-113	adl	218	588	8270 (1)
Surr: 2-Fluorophenol	0	%	12/21/1994	25-121	adl	218	588	8270 (1)
Surr: Nitrobenzene-d5	0	%	12/21/1994	23-120	adl	218	588	8270 (1)
Surr: 2-Fluorobiphenyl	0	%	12/21/1994	30-115	adl	218	588	8270 (1)
Surr: Terphenyl-d14	0	%	12/21/1994	18-137	adl	218	588	8270 (1)
Surr: 2,4,6-Tribromophenol	0	%	12/21/1994	19-122	adl	218	588	8270 (1)
VOLATILES - 8240 NONAQUEOUS								
Acetone	<2,300,000	ug/Kg	12/21/1994	100	llj		662	8240 (1)
Benzene	<120,000	ug/Kg	12/21/1994	5.0	llj		662	8240 (1)
Bromodichloromethane	<120,000	ug/Kg	12/21/1994	5.0	llj		662	8240 (1)
Bromoform	<120,000	ug/Kg	12/21/1994	5.0	llj		662	8240 (1)
Bromomethane	<230,000	ug/Kg	12/21/1994	10	llj		662	8240 (1)
2-Butanone (MEK)	<2,300,000	ug/Kg	12/21/1994	100	llj		662	8240 (1)
Carbon disulfide	<2,300,000	ug/Kg	12/21/1994	100	llj		662	8240 (1)
Carbon tetrachloride	<120,000	ug/Kg	12/21/1994	5.0	llj		662	8240 (1)
Chlorobenzene	<120,000	ug/Kg	12/21/1994	5.0	llj		662	8240 (1)
Chloroethane	<230,000	ug/Kg	12/21/1994	10	llj		662	8240 (1)

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287657

NET Job No.: 94.09731

Sample Description: D3; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:25
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
2-Chloroethylvinyl ether	<230,000 J	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Chloroform	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Chloromethane	<230,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Dibromochloromethane	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichlorobenzene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,3-Dichlorobenzene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,4-Dichlorobenzene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1-Dichloroethane	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichloroethane	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1-Dichloroethene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
trans-1,2-Dichloroethene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
cis-1,2-Dichloroethene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,2-Dichloropropene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
cis-1,3-Dichloropropene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
trans-1,3-Dichloropropene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Ethyl benzene	611,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
2-Hexanone	<1,200,000	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Methylene chloride	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
4-Methyl-2-pentanone (MIBK)	<1,200,000	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Styrene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,2,2-Tetrachloroethane	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Tetrachloroethene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Toluene	200,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,1-Trichloroethane	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
1,1,2-Trichloroethane	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Trichloroethene	<120,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Vinyl acetate	<1,200,000	ug/Kg	12/21/1994	50	llj	662	8240 (1)
Vinyl chloride	<230,000	ug/Kg	12/21/1994	10	llj	662	8240 (1)
Xylenes, Total	2,490,000	ug/Kg	12/21/1994	5.0	llj	662	8240 (1)
Surr: 1,2-Dichloroethane-d4	D	%	12/21/1994	70-121	llj	662	8240 (1)

OCEAN GROUP

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
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12/27/1994

Sample No. : 287657

NET Job No.: 94.09731

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ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:25
IEPA Cert. No. 100221

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WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Surr: Toluene-d8	D	%	12/21/1994	81-117	llj	662	8240 (1)
Surr: Bromofluorobenzene	D	%	12/21/1994	74-121	llj	662	8240 (1)

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287658

NET Job No.: 94.09731

Sample Description: S1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:50
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Solids, Total	77.6		%	12/19/1994	0.1	kaf		1177	2540 (4)
METALS - ICP 2 Non-Aq	Complete			12/20/1994		jmt		170	6010(1) 200.7(3)
Arsenic, GFAA	2.50	S	ug/g	12/19/1994	0.5	mjs	330	40	7060 (1)
Barium, ICP	101		ug/g	12/20/1994	1.0	jmt	330	786	6010 (1)
Cadmium, ICP	0.67		ug/g	12/20/1994	0.50	jmt	330	754	6010 (1)
Chromium, ICP	12.3		ug/g	12/20/1994	2.0	jmt	330	747	6010 (1)
Lead, ICP	173		ug/g	12/20/1994	4.0	jmt	330	916	6010 (1)
Mercury, CVAA	0.09		ug/g	12/19/1994	0.02	mic		372	7471 (1)
Selenium, GFAA	<0.5	S	ug/g	12/19/1994	0.5	mjs	330	30	7740 (1)
Silver, AA	<2.0		ug/g	12/21/1994	2.0	jmt	128	240	7760 (1)
Metals Prep, Nonaqueous	complete			12/20/1994		jmt	330		3050 (1)
Metals Prep, Hg Nonaqueous	complete			12/19/1994		jmt	268		7471 (1)
Metals Prep, Ag Nonaqueous	complete			12/20/1994		jmt	128		7760 (1)
Prep PCBs 8080 NonAqueous	extracted			12/14/1994		sdf	210		3540A (1)
PCBs 8080 NonAqueous									
PCB-1016	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1221	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1232	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1242	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1248	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1254	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1260	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
PCB-1268	<50		ug/kg	12/17/1994	50	seh	210	153	8080 (1)
Surr: Tetrachloroxylene (TCX)	64		%	12/17/1994	31-128	seh	210	153	8080 (1)
Surr: Decachlorobiphenyl (DCB)	29		%	12/17/1994	29-128	seh	210	153	8080 (1)
PREP, BN Nonaqueous	Extracted			12/15/1994		adl			3500 (1)
PREP, Acid Ext. Nonaqueous	Extracted			12/15/1994		adl			3500 (1)

S : Parameter analysis was sub-contracted to another NET location.

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12/27/1994

Sample No. : 287658

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Date Taken: 12/09/1994
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Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
ACID CMPDS - 8270 NONAQUEOUS							
4-Chloro-3-methylphenol	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2-Chlorophenol	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dichlorophenol	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dimethylphenol	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dinitrophenol	<16,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
2-Methyl-4,6-dinitrophenol	<16,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
2-Nitrophenol	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
4-Nitrophenol	<16,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
Pentachlorophenol	<16,000	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
Phenol	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4,6-Trichlorophenol	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
BASE/NEUTRALS-8270 NONAQUEOUS							
Acenaphthene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Acenaphthylene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Anthracene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzidine	<16,000 J	ug/Kg	12/20/1994	1,600	adl	687	8270 (1)
Benzo(a)anthracene	4,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(b)fluoranthene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(k)fluoranthene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(g,h,i)perylene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzo(a)pyrene	3,500	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Benzyl butyl phthalate	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Bis(2-chloroethoxy)methane	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Bis(2-chloroethyl)ether	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Bis(2-chloroisopropyl)ether	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Bis(2-ethylhexyl)phthalate	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
4-Bromophenyl phenyl ether	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2-Chloronaphthalene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)

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ANALYTICAL REPORT

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111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

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4-Chlorophenyl phenyl ether	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Chrysene	4,000	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Dibenzo(a,h)anthracene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Di-n-butyl phthalate	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
1,2-Dichlorobenzene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
1,3-Dichlorobenzene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
1,4-Dichlorobenzene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
3,3'-Dichlorobenzidine	<6,600	ug/Kg	12/20/1994	660	adl	687	8270 (1)
Diethyl phthalate	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Dimethyl phthalate	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,4-Dinitrotoluene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
2,6-Dinitrotoluene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Di-n-octyl phthalate	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Fluoranthene	9,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Fluorene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachlorobenzene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachlorobutadiene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachlorocyclopentadiene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Hexachloroethane	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Indeno(1,2,3-cd)pyrene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Isophorone	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Naphthalene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Nitrobenzene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
N-Nitrosodimethylamine	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
N-Nitrosodi-n-propylamine	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
N-Nitrosodiphenylamine	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Phenanthrene	6,700	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Pyrene	7,800	ug/Kg	12/20/1994	330	adl	687	8270 (1)
1,2,4-Trichlorobenzene	<3,300	ug/Kg	12/20/1994	330	adl	687	8270 (1)
Surr: Phenol-d6	80	%	12/20/1994	24-113	adl	687	8270 (1)

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Sample Description: S1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:50
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
Surr: 2-Fluorophenol	80	%	12/20/1994	25-121	adl	687	8270 (1)
Surr: Nitrobenzene-d5	60	%	12/20/1994	23-120	adl	687	8270 (1)
Surr: 2-Fluorobiphenyl	60	%	12/20/1994	30-115	adl	687	8270 (1)
Surr: Terphenyl-d14	80	%	12/20/1994	18-137	adl	687	8270 (1)
Surr: 2,4,6-Tribromophenol	50	%	12/20/1994	19-122	adl	687	8270 (1)
VOLATILES - 8240 NONAQUEOUS							
Acetone	<100	ug/Kg	12/20/1994	100	rla	660	8240 (1)
Benzene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Bromodichloromethane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Bromoform	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Bromomethane	<10	ug/Kg	12/20/1994	10	rla	660	8240 (1)
2-Butanone (MEK)	<100	ug/Kg	12/20/1994	100	rla	660	8240 (1)
Carbon disulfide	<100	ug/Kg	12/20/1994	100	rla	660	8240 (1)
Carbon tetrachloride	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Chlorobenzene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Chloroethane	<10	ug/Kg	12/20/1994	10	rla	660	8240 (1)
2-Chloroethylvinyl ether	<10	ug/Kg	12/20/1994	10	rla	660	8240 (1)
Chloroform	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Chloromethane	<10	ug/Kg	12/20/1994	10	rla	660	8240 (1)
Dibromochloromethane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,2-Dichlorobenzene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,3-Dichlorobenzene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,4-Dichlorobenzene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,1-Dichloroethane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,2-Dichloroethane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,1-Dichloroethene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
trans-1,2-Dichloroethene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
cis-1,2-Dichloroethene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,2-Dichloropropane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)

NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

12/27/1994

Sample No. : 287658

NET Job No.: 94.09731

Sample Description: S1; Grab
ZT3051; MCC Construction

Date Taken: 12/09/1994
Time Taken: 13:50
IEPA Cert. No. 100221

Date Received: 12/13/1994
Time Received: 09:00
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run	Analytical Method
cis-1,3-Dichloropropene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
trans-1,3-Dichloropropene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Ethyl benzene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
2-Hexanone	<50	ug/Kg	12/20/1994	50	rla	660	8240 (1)
Methylene chloride	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
4-Methyl-2-pentanone (MIBK)	<50	ug/Kg	12/20/1994	50	rla	660	8240 (1)
Styrene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,1,2,2-Tetrachloroethane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Tetrachloroethene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Toluene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,1,1-Trichloroethane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
1,1,2-Trichloroethane	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Trichloroethene	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Vinyl acetate	<50	ug/Kg	12/20/1994	50	rla	660	8240 (1)
Vinyl chloride	<10	ug/Kg	12/20/1994	10	rla	660	8240 (1)
Xylenes, Total	<5.0	ug/Kg	12/20/1994	5.0	rla	660	8240 (1)
Surr: 1,2-Dichloroethane-d4	87	%	12/20/1994	70-121	rla	660	8240 (1)
Surr: Toluene-d8	103	%	12/20/1994	81-117	rla	660	8240 (1)
Surr: Bromofluorobenzene	87	%	12/20/1994	74-121	rla	660	8240 (1)

OCEAN GROUP

ecology and environment, inc.
International Specialists in the Environment

111 West Jackson Boulevard
Chicago, Illinois 60604
Tel: (312) 663-9415, Fax: (312) 663-0791

M E M O R A N D U M

DATE: February 10, 1995

TO: Karen Rydzewski, TAT Project Manager, E & E, Chicago, IL

FROM: David Hendren, TAT Analytical Services Manager, E & E, Chicago, IL

THROUGH: Mary Jane Ripp, TAT QA Reports Manager, E & E, Chicago, IL

SUBJECT: Semivolatile Organic Data Quality Review, MCC Construction, Chicago, Cook County, IL

REFERENCE: Project TDD T05-9412-003 Analytical TDD T05-9412-801
Project PAN EIL0855SAA Analytical PAN EIL0855AAA

The data quality assurance (QA) review of three drum samples and one soil sample collected from the MCC Construction site is complete. The samples were collected on December 9, 1994, by the Technical Assistance Team (TAT) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET-Midwest, Bartlett, Illinois. The laboratory analyses was performed according to United States Environmental Protection Agency Solid Waste 846 Method 8270.

Sample Identification

E & E Identification No.	Laboratory Identification No.
D1	287655
D2	287656
D3	287657
S1	287658

Data Qualifications

I. Sample Holding Time: Acceptable

The samples were collected on December 9, 1994; extracted on December 15, 1994; and analyzed on December 20, 1994 and December 21, 1994. This is within the 14-day limit (from collection to extraction) and within the 40-day limit (from extraction to analysis).

recycled paper

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning: Acceptable

GC/MS tuning to meet ion abundance criteria using decaflourotriphenylphosphine (DFTPP) were acceptable and samples were analyzed within 12 hours of DFTPP tuning.

III. Calibrations:

- Initial Calibration: Qualified

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05, except for benzidine, which has been flagged "J". The percent relative standard deviations (%RSD) between response factors were less than 30% for all detected target compounds.

- Continuing Calibration: Acceptable

The percent differences were less than 25% for all detected compounds.

IV. Blank: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the method blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention time of the internal standard was within the 30-second control limit.

VI. Compound Identification: Acceptable

All detected target compounds were correctly identified by use of retention time and mass-spectral data.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the sample and blank were within the laboratory established guidelines.

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 4.0, BNAs by GC/MS Analysis. Based upon the information provided, the data are acceptable for use, with the above-stated qualifications.

Data Qualifiers and Definitions

J - The associated value is an estimated quantity because the reported concentration was less than the contract required detection limit or specific quality control objectives were not met.

ecology and environment, inc.
International Specialists in the Environment

111 West Jackson Boulevard
Chicago Illinois 60604
Tel (312) 663-9415, Fax (312) 663-0791

MEMORANDUM

DATE: March 12, 1995

TO: Karen Rydzewski, TAT Project Manager, E & E, Chicago, IL

FROM: David Hendren, TAT Analytical Services Manager, E & E, Chicago, IL

THROUGH: Mary Jane Ripp, TAT QA Manager, E & E, Chicago, IL

SUBJECT: Volatile Organic Data Quality Review, MCC Construction, Chicago, Cook County, IL

REFERENCE: Project TDD T05-9412-003 Analytical TDD T05-9412-801
Project PAN EIL0855SAA Analytical PAN EIL0855AAA

The data quality assurance (QA) review of three drum samples and one soil sample collected from the MCC Construction site is complete. The samples were collected on December 9, 1994, by the Technical Assistance Team (TAT) contractor, Ecology and Environment, Inc. (E & E). The samples were submitted to NET-Midwest, Bartlett, Illinois. The laboratory analyses was performed according to United States Environmental Protection Agency Solid Waste 846 Method 8240.

Sample Identification

E & E Identification No.	Laboratory Identification No.
D1	287655
D2	287656
D3	287657
S1	287658

Data Qualifications:

I. Sample Holding Time: Acceptable

The samples were collected on December 9, 1994, and analyzed on December 19, 1994 and December 21, 1994. This is within the 14-day limit for waste and soil samples.

recycled paper

II. Gas Chromatography/Mass Spectrometry (GC/MS)Tuning: Acceptable

GC/MS tuning to meet ion abundance criteria using bromofluorobenzene (BFB) were acceptable and samples were analyzed within 12 hours of BFB tuning.

III. Calibrations:

• Initial Calibration: Qualified

A five-point initial calibration was performed prior to analysis. All average response factors were greater than 0.05 except 2-chloroethylvinyl ether in the initial calibration of December 21, 1994; therefore, it has been flagged "J", as estimated in samples D1, D2, and D3. The percent relative standard deviations (%RSD) between response factors were less than 30% for all detected target compounds, except for acetone, which has been flagged "J" in sample D2.

• Continuing Calibration: Acceptable

The response factors and percent differences were acceptable.

IV. Blanks: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the method blank.

V. Internal Standards: Acceptable

The areas of the internal standards in the samples were within -50% to +100% of the associated calibration check standard. The retention time of the internal standard was within the 30-second control limit.

VI. Compound Identification: Acceptable

All target compounds were properly identified in the samples, using retention time and mass spectral data.

VII. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the sample and blank were within the laboratory established guidelines for

the soil sample. The drum samples required dilution and surrogates could not be evaluated.

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II as outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 5.0, VOAs By GC/MS analysis. Based upon the information provided, the data are acceptable for use, with the above-stated qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the contract required detection limit or quality control criteria were not met.