REMOVAL ADMINISTRATIVE RECORD FILE STRUCTURE
FINAL

1.0 FACTUAL INFORMATION/DATA
- 1.1 Preliminary Assessment
- 1.2 Site Investigation
- 1.3 POLREPs
- 1.4 Work Plan
- 1.5 Health and Safety Plan
- 1.6 Sampling Plan
- 1.7 Sampling Data/Data Summary Sheets/Chain of Custody Forms
- 1.8 Inspection Reports
- 1.9 Technical/Treatability Studies
- 1.10 Endangerment/Risk Assessments
- 1.11 Correspondence

2.0 DECISION DOCUMENTS
- 2.1 EE/CA Approval Memo and EE/CA
- 2.2 Action Memorandum & Amendments
- 2.3 Documentation of State Involvement
- 2.4 Documentation of Compliance with ARARs
- 2.5 Responses to Significant Comments
- 2.6 Record of Decision and Amendments
- 2.7 Correspondence

3.0 PUBLIC PARTICIPATION
- 3.1 Public Notice of Administrative Record Availability
- 3.2 Community Relations Plan
- 3.3 Fact Sheets
- 3.4 Public Notices of Meetings/Opportunities to Comment
- 3.5 Documentation of Public Meetings
- 3.6 Press Coverage
- 3.7 Correspondence

4.0 ENFORCEMENT DOCUMENTS
- 4.1 Notice Letters to PRPs & Responses
- 4.2 Section 104(e) Information Request Letters & Responses
- 4.3 Affidavits/Subpoenas
- 4.4 Administrative Orders/Consent Decrees
- 4.5 Correspondence

5.0 OTHER AGENCY DOCUMENTATION
- 5.1 Interagency Agreements
- 5.2 Cooperative Agreements
- 5.3 State/Federal Agency comments
- 5.4 ATSDR Health Assessments/Other Health Studies
- 5.5 Congressional Correspondence

6.0 POLICY AND GUIDANCE
- 6.1 Site- or Issue-specific Policy Memos
- 6.2 Guidance Documents
- 6.3 Technical Literature

DUFFIELD AVENUE SITE
ADMINISTRATIVE RECORD FILE
INDEX OF DOCUMENTS

FACTUAL INFORMATION/DATA

Pollution Reports

P. 1 - 3 Pollution Report Two: Site No.: Duffield Ave Trailer, 4C, prepared by Mr. Carl R. Pellegrino and Mr. John Higgins, On-Scene Coordinators, Response and Prevention Branch, Recipients: See Distribution List, January 10, 1990.

P. 4 - 6 Pollution Report One: Site No.: Duffield Ave Trailer, 4C, prepared by Mr. John P. Higgins, On-Scene Coordinator, Response and Prevention Branch, Recipients: See Distribution List, January 3, 1990.

Sampling Data/Data Summary Sheets/Chain of Custody Forms

P. 7 - 15 Report: Analytical Report, Polychlorinated Biphenyls (PCBs) (Samples: T-1 and T-2), Project Number 8336E, prepared by Mr. R.J. Schock, Mgr., ETC-Findlay Laboratory, OHM Corporation, for Mr. B. Panning and Mr. Carl Tellegrino, OSC, January 22, 1990.

P. 16 - 31 Report: TEST REPORT NO. A80357, Project: Jersey City, prepared by Mr. Michael Shmookler, Ph.D., Technical Director, AnalytiKEM, for Mr. Thomas O'Hara, OH Materials Inc., January 20, 1990.

P. 32 - 89 Report: TEST REPORT NO. A80343, Project 8336E, prepared by Mr. Michael Shmookler, Ph.D., Technical Director, AnalytiKEM, for Mr. Bruce Epley, OHM Corporation, January 17, 1990.

P. 90 - 98 Report: Analytical Report, RCRA Herbicides and Metals (Sample: P), Project Number 8336E, prepared by Mr. R.J. Schock, Mgr., ETC-Findlay Laboratory, OHM Corporation, for Mr. B. Panning and Mr. Carl Tellegrino, OSC, January 14, 1990.

Note: Company or organizational affiliation is mentioned only when it appears in the record.

Endangerment/Risk Assessments

P. 99 - 102 Dow Corning Corporation, Material Safety Data Sheet, for Dow Corning(R) 772 Water Repellent, prepared by Mr. Jack L. Sheneberger, January 8, 1990.

P. 103 - 106 Dow Corning Corporation, Material Safety Data Sheet, for Dow Corning(R) 75 Emulsion, prepared by Mr. Jack L. Sheneberger, January 8, 1990.

P. 107 - 108 Dow Corning Corporation, Material Safety Data Sheet, for Dow Corning C-600 Coupler, prepared by Mr. L. Van Volkinburg, November, 1976.

DECISION DOCUMENTS

Action Memorandum and Amendments

P. 109 - 110 Request for Ceiling Increase for the CERCLA Removal Action at the Duffield Avenue Trailer Site, in Jersey City, New Jersey - ACTION MEMORANDUM, to Mr. Constantine Sidamon-Eristoff, Regional Administrator, from Mr. John Higgins, On-Scene Coordinator, Response and Prevention Branch, through Mr. Stephen D. Luftig, Director, Emergency and Remedial Response Division, March 5, 1990.

P. 111 - 114 Request for Rapid Authorization of CERCLA Removal Action Monies for the Duffield Avenue Trailer, Jersey City, Hudson County, New Jersey - ACTION MEMORANDUM, to Mr. Stephen D. Luftig, Director, from Mr. John Higgins, On-Scene Coordinator, Response and Prevention Branch, through Mr. Richard C. Salkie, Associate Director for Removal and Emergency Preparedness Programs, January 23, 1990.

PUBLIC PARTICIPATION

Press Coverage

P. 115 Newspaper Article: "Taxpayers eat $250,000 bill for toxic truck," by Mr. Robert Hennelly, The Hudson Dispatch, January 6, 1990.

U.S. ENVIRONMENTAL PROTECTION AGENCY

POLLUTION REPORT

Date: Jan. 10, 1990

Region II
Response and Prevention Branch
Edison, New Jersey 08837

TO: C. Sidamon-Eristoff, EPA
S. Luftig, EPA
R. Salkie, EPA
J. Marshall, EPA
G. Pavlou, EPA
ERD Washington
(E-Mail)
D. Karlen, EPA
B. Metzger, EPA
B. Sprague, EPA
J. Hill, NJDCJ
J. McDonald, JCEN
J. Trela, NJDEP
LEPC
TAT

POLREP NO.: Two (2)
SITE NO.: DUFFIELD AVE TRAILER, 4C
POLLUTANT: Flammable liquids, flammable solids, pesticides
CLASSIFICATION: Major
SOURCE: Criminal Abandonment
LOCATION: Jersey City, NJ
AMOUNT: 56 55-gallon drums, 22 lab packed drums, 70 50 lb. bags
WATER BODY: Hackensack River

1. SITUATION: See Polrep No. 1

2. ACTION TAKEN:

a. 55-gallon drums

Sampling, staging, and overpacking operation of 56 drums of textile-related pigments, dyes, adhesives and surfactants commenced on Thursday, Jan. 4, and were completed on Saturday, Jan. 6. All compatibility analysis performed in the mobile lab was completed on Jan. 6 and seven waste streams were identified for composite samples to be sent for disposal analysis. PCB screening of these samples was completed on Monday, Jan. 8 and samples were composited and sent out later that day. Results are due back on Friday, 1/12.

b. Lab-packed drums

On the evening of Friday, 1/5/90, upon the staging of the 55-gallon drums mentioned above in subsection (a), twenty-two 55-gallon steel labpack drums were discovered. It is estimated that these lab packs contained 1,500 to 2,000 small glass jars of solid and liquid pesticide materials, and about 100 small bags of pesticide powders. Upon cursary inventory completed on Tuesday, 1/9, it was discovered

that 25% was readily identifiable with chemical names on the labels. Of the 75% remainder, some were labelled by trade name and some were hand-labelled by name or unfamiliar coding.

Because of the large quantity of unidentifiable materials, these could not be accepted for disposal as lab packs or repackaged into new inventoried lab packs. Treated as unknowns, these materials were crushed remotely into a bed of lime and sand. This crush operation was mobilized on Monday, 1/8 and completed on Tuesday, 1/9. The contaminated crush medium will be shipped off as one waste stream.

All of the material in the lab packs were crushed with the exception of small quantities of silvex (2-4-TP) and 2-4-D, which are dioxin formers, and various arsenic-based rodenticide which are unacceptable for incineration. These materials must be solicited for disposal.

c. Manufacturer Reclaim

On Friday, 1/6, Dow Corning was contacted for the purpose of having that company reclaim materials bearing their label that were in the trailer. These materials consist of nine 5-gallon containers of methanol-based textile adhesive, two 55-gallon drums of sodium siliconate, and one 55-gallon drum of a toluene and tetrachloroethylene-based mixture. Dow verbally agreed to accept this material and arrange for transportation. This reclamation arrangement will be certified in writing by Dow Corning.

On Wednesday, 1/10, a MEK/toluene-based solvent manufactured by Ram Chemical Co., Gardinia, CA, was shipped out to that manufacturer for recycling.

d. Other site activities

Representatives of the New Jersey Department of Criminal Justice have been on site throughout the duration of the cleanup. NJDCJ is gathering evidence in the form of drum labels and samples for their criminal investigation. Leads for this case look promising. NJDCJ will provide whatever information that EPA may require for cost recovery.

3. FUTURE PLANS AND RECOMMENDATIONS:

a. Bagged pesticide material, DDT/Toxaphene, will be drummed into 30-gallon fibers for disposal. Site debris generated to date will be drummed for disposal. This material, along with the 56 drums of sampled textile waste will be shipped to Thermalkem, Rock Hill, SC, on Monday, 1/22/90.

b. Contaminated crush medium will be sampled and packaged into steel drums on 1/11/90. This material, along with remaining site debris is scheduled to be sent to Thermalkem for disposal on Monday, 1/22/90.

c. The arsenic-based rodenticide, silvex (2-4-TP) and 2-4-D will be solicited for disposal. Region II Pesticides and Toxic Substances Section (2ES-PTS) may be contacted for assistance, as necessary.

d. Hudson County Health Department will accept the remains of a dog carcass that was found in one of the drums.

4. COST ACCOUNTING:

A. Total Project Ceiling Authorized	$247,000
B. Total Funds Authorized for Mitigation Contracting as of 1/8/90:	$202,000
C. Expenditures for mitigation contracting	
a. Amount obligated to DCN KX-0001	$202,000
b. Estimated expenditures as of 1/8/90	$ 74,000
c. Balance remaining	$128,000
D. Unobligated balance remaining	$ 0
E. Estimated total expenditures to date for mitigation contracting	$ 74,000
F. Extramural Costs	
a. TAT salary/travel as of 1/8/90	$ 2,500
G. Intramural Costs	
a. EPA salary/travel as of 1/8/90	$ 3,000
H. Total Expenditures as of 1/8/90	$ 79,500
G. % of total project ceiling	32%

FUTURE
POLREPS
FINAL POLREP_____FORTHCOMING___X__SUBMITTED BY_____

Carl R. Pellegrino
John Higgins
On-SceneCoordinator
Response and
Prevention Branch

DATE RELEASED 1/10/90

U.S. ENVIRONMENTAL PROTECTION AGENCY

POLLUTION REPORT

DATE: January 3, 1990

Region II
Response and Prevention Branch
Edison, New Jersey 08837
(201) 548-8730- Commercial and FTS
24 Hour Emergency

TO: C. Sidamon-Eristoff, EPA
W. Muszynski, EPA
S. Luftig, EPA
R. Salkie, EPA
J. Marshall, EPA
G. Pavlou, EPA
ERD, WH-548B
(E-Mail)
B. Sprague, EPA
G. Zachos, EPA
LEPC
TAT

POLREP NO.:	One (1)
SITE NO.:	4C
POLLUTANT:	Pesticides, Flammable solids, Flammable liquids
CLASSIFICATION:	Major
SOURCE:	Duffield Avenue Trailer
LOCATION:	Jersey City, New jersey
AMOUNT:	60 Drums, 12 fifty (50) pound bags, 20 eight (8) gallon containers
WATER BODY:	Hackensack River

1. SITUATION:

On December 20, 1989, Mr. Gary Allen, Field Supervisor, Region I, Bureau of Emergency Response for the New Jersey Department of Environmental Protection (NJDEP) verbally requested that the U.S. Environmental Protection Agency (EPA) conduct a removal action at the Duffield Ave. Trailer located in Jersey City, Hudson County, New Jersey. A written request for this action is forthcoming.

The Trailer is located on the west side of Duffield Ave. between Howell St. and St. Paul's Ave., in an industrial area in the northwest corner of Jersey City. The site is approximately 1000 feet east of the Hackensack River and a half-mile west of the Tonnele Traffic Circle. Traffic from this circle is merged from Route 1 and the Pulaski Skyway into the entrance road to the Holland Tunnel.

The abandoned Trailer was reported to NJDEP by the Jersey City Bureau of Engineering on December 20, 1989. The length of time the Trailer has been abandoned is generally unknown but has been variously estimated to range from two days to three weeks prior to reporting.

A joint site investigation was conducted by EPA, NJDEP, and the New Jersey Department of Criminal Justice (NJDCJ) on December 20, 1989. Inspections of the trailer contents, including labels and markings, by NJDEP and NJDCJ, revealed the following estimates:

- 50 fifty-five gallon drums of mixed pesticides, flammable liquids and flammable solids;
- 10 thirty-five gallon drums of mixed paints, pigments, and dyes;
- 20 eight gallon pails of flammable liquids and flammable solids;
- 12 fifty pound bags of pesticides (i.e., Cotton Dust)

The fifty pound bags of Cotton Dust, many of which are open, represent the most significant apparent hazard. Labels on these bags indicate that the Cotton Dust consists of 14% toxaphene and 7% DDT. Many of the drums are in deteriorated condition with rusted bottoms prevalent. Plastic bungs identified on some of the steel drums indicate that drums may have been re-filled. Therefore, the original labels may not represent present material and drum contents are virtually unknown. Also, most markings and labels on the materials in the Trailer are dated 1982.

The site investigation also revealed two Potentially Responsible Parties (PRP's). "J.P. Stevens" and "Envirochem Landscaping" were identified from drum labels.

The Duffield Ave. Trailer is the subject of a New Jersey Department of Criminal Justice (NJDCJ) criminal investigation. NJDCJ staff will be on-scene during the removal action to obtain evidence.

2. ACTION TAKEN:

On December 20, 1989, verbal approval was received from Stephen Luftig, Director of the Emergency and Remedial Response Division, for expenditures not to exceed $250,000.

On December 21, 1989, EPA contacted West Point Pepperell Inc., which had assumed partial ownership of J.P. Stevens, and they agreed to contract for site assessment and initial site security.

On December 22, 1989, West Point Pepperell decided to not participate in the removal action. Their decision was based on their claim that they did not own the textile manufacturing portion of J.P. Stevens and, therefore, were no responsible for dye-related materials found in the trailer.

On December 22, 1989, the OSC issued a Delivery Order for Emergency Response Cleanup Services (DCN KX-0001) in the amount of $45,000. This order requires the removal contractor, OH Materials Corp. (OHM) to provide 24-hour security. Two-thirds of the street has been cordoned off with police barricades and 24-hour security is provided by off-duty Jersey City policemen under

verbal contract to the removal contractor.

On December 28, 1989, DCN KX-0001 was amended to provide for sampling, analysis, transport and disposal of these materials at a RCRA approved disposal facility, at an increase in cost of $157,000 to $202,000.

On January 2, 1990, OHM mobilized at the site. Construction of the staging area commenced. Heavy equipment, overpacks, portable generator, decon/office trailer, and box trailer were delivered.

On January 3, 1990, the mobile lab and a mobile phone were delivered, and the staging area was near completion. OHM was instructed to prepare sole source justification for waste analysis and disposal. Thermalkem will be the disposal contractor. David Jones of Thermalkem arrived on-site and discussed disposal alternatives and arrangements.

On January 3, 1990, a PRP search was verbally requested of the New Jersey Compliance Branch.

3. FUTURE PLANS AND RECOMMENDATIONS:

During the remainder of the work week (1/4/90 to 1/7/90), wastes will be sampled and hazard characterization conducted. Also, drum overpacking, staging, and transferal to new box trailer should be completed. After wastes have been transferred to new trailer, the old trailer will be decontaminated and turned over to Jersey City officials.

FINAL POLREP____ FUTURE POLREPS FORTHCOMING X SUBMITTED BY John P. Higgins

John P. Higgins,
On-Scene Coordinator
Response and
Prevention Branch

DATE RELEASED January 3, 1990

OHM Corporation

Environmental Testing and Certification Corp.

ANALYTICAL REPORT

CLIENT: USEPA Region II
Duffield Avenue
Jersey City, NJ

ATTN: B. Panning
Carl Tellegrino, OSC

PROJECT NUMBER: 8336E

SAMPLE TYPE: Wipes

ANALYSIS PERFORMED:

Polychlorinated Biphenyls (PCBs)

(Samples: T-1 and T-2)

DATE COMPLETED: 1/22/90

DATE RECEIVED: 1/17/90

The analyses and data interpretation that form the basis of this report was prepared under the direct supervision and control of the undersigned who is solely responsible for the contents and conclusions therein.

Reviewed and Approved by: _____ Date: 1/23/90
R. J. Schock, Mgr., ETC-Findlay Laboratory

PROJECT 8336E

SUMMARY REPORT OF ANALYTICAL SERVICES

1. INTRODUCTION

ETC-Findlay Laboratory received 2 samples from OHM Corporation (OHMC). These samplse were acquired by their technical personnel and transferred to the laboratory complete with Chain-of-Custody Record(s), a copy of which is attached for reference. These samples were analyzed for the following:

Polychlorinated Biphenyls (PCBs) - Wipes

Sample analysis was performed according to USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 2nd edition, July 1982; Method 8080, Organochlorine Pesticides and PCBs.

2. ANALYTICAL RESULTS

The following tables detail the analytical results for samples #8336E-T-1 and #8336E-T-2.

APPENDIX A

PROJECT 8336E TABLES

JAN 22, 1990

TABLE 1: QUANTITATIVE RESULTS

TOTAL PESTICIDE/PCB COMPOUNDS - GC ANALYSIS (JR13)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Hours
JD5600	OHM CORP., NORTHEAST REGIONAL	008336E	T-1	900116		0

Compound	Results				
	Sample Concen. mg/l	MDL mg/l	Blank Data mg/l	Batch #	
Aldrin	ND	2.00	ND	QCS0269	
Alpha-BHC	.352	.100	ND	QCS0269	
Beta-BHC	ND	.100	ND	QCS0269	
Chlordane	ND	1.00	ND	QCS0269	
4,4'-DDD	1.73	.500	ND	QCS0269	
4,4'-DDE	3.12	.500	ND	QCS0269	
4,4'-DDT	62.0	2.00	ND	QCS0269	
Delta-BHC	.177	.100	ND	QCS0269	
Dieldrin	.521	.100	ND	QCS0269	
Endosulfan sulfate	ND	2.00	ND	QCS0269	
Endosulfan I	ND	.100	ND	QCS0269	
Endosulfan II	ND	.100	ND	QCS0269	
Endrin	ND	.100	ND	QCS0269	
Endrin aldehyde	ND	2.00	ND	QCS0269	
Gamma-BHC	ND	.100	ND	QCS0269	
Heptachlor	ND	.100	ND	QCS0269	
Heptachlor epoxide	ND	.100	ND	QCS0269	
Methoxychlor	ND	.100	ND	QCS0269	
Toxaphene	ND	2.00	ND	QCS0269	

TABLE 1: QUANTITATIVE RESULTS

JAN 22, 1990

TOTAL PESTICIDE/PCB COMPOUNDS - GC ANALYSIS (JR13)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time Hours
JD5601	OHM CORP., NORTHEAST REGIONAL	008336E	T-2	900116	0

Compound	Results				
	Sample Concen. mg/l	MDL mg/l	Blank Data mg/l	Batch #	
Aldrin	ND	.100	ND	QCS0269	
Alpha-BHC	ND	.100	ND	QCS0269	
Beta-BHC	ND	.100	ND	QCS0269	
Chlordane	ND	1.00	ND	QCS0269	
4,4'-DDD	.950	.500	ND	QCS0269	
4,4'-DDE	.503	.100	ND	QCS0269	
4,4'-DDT	14.1	1.00	ND	QCS0269	
Delta-BHC	ND	.100	ND	QCS0269	
Dieldrin	1.15	1.00	ND	QCS0269	
Endosulfan sulfate	ND	.100	ND	QCS0269	
Endosulfan I	ND	.100	ND	QCS0269	
Endosulfan II	ND	.100	ND	QCS0269	
Endrin	ND	.100	ND	QCS0269	
Endrin aldehyde	ND	.100	ND	QCS0269	
Gamma-BHC	.203	.100	ND	QCS0269	
Heptachlor	ND	.100	ND	QCS0269	
Heptachlor epoxide	ND	.100	ND	QCS0269	
Methoxychlor	ND	.100	ND	QCS0269	
Toxaphene	ND	2.00	ND	QCS0269	

APPENDIX B

PROJECT 8336E
QUALITY ASSURANCE DATA

TABLE 1: QUALITY ASSURANCE DATA

JAN 22, 1990

TOTAL PESTICIDE/PCB COMPOUNDS - GC ANALYSIS (JR13)

Chain of Custody Data Required for ETC Data Management Summary Reports

See Below

ETC Batch No.

Compound	QC Blank and Spiked Data			QC Matrix Spike			QC Duplicate			
	Blank Data mg/l	Concen. Added mg/l	% Recov	Unspiked Sample mg/l	Concen. Added mg/l	% Recov	First mg/l	Second mg/l	RPD	Batch #
Aldrin	ND	.400	86	-	-	-	-	-	-	QCS0269
Alpha-BHC	ND	.400	83	-	-	-	-	-	-	QCS0269
Beta-BHC	ND	.400	90	-	-	-	-	-	-	QCS0269
4,4'-DDD	ND	.400	91	-	-	-	-	-	-	QCS0269
4,4'-DDE	ND	.400	91	-	-	-	-	-	-	QCS0269
4,4'-DDT	ND	.400	105	-	-	-	-	-	-	QCS0269
Delta-BHC	ND	.400	90	-	-	-	-	-	-	QCS0269
Dieldrin	ND	.400	98	-	-	-	-	-	-	QCS0269
Endosulfan sulfate	ND	.400	98	-	-	-	-	-	-	QCS0269
Endosulfan I	ND	.400	93	-	-	-	-	-	-	QCS0269
Endosulfan II	ND	.400	89	-	-	-	-	-	-	QCS0269
Endrin	ND	.400	98	-	-	-	-	-	-	QCS0269
Endrin aldehyde	ND	.400	87	-	-	-	-	-	-	QCS0269
Gamma-BHC	ND	.400	84	-	-	-	-	-	-	QCS0269
Heptachlor	ND	.400	107	-	-	-	-	-	-	QCS0269
Heptachlor epoxide	ND	.400	88	-	-	-	-	-	-	QCS0269
Methoxychlor	ND	.388	118	-	-	-	-	-	-	QCS0269

HM Corporation

CHAIN-OF-CUSTODY RECORD

Form 0019
Field Technical Services
Rev. 08/89

No. 80459

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME: Duffield Ave.	PROJECT LOCATION: Jersey City, N.J.
PROJ. NO.: 8336E	PROJECT CONTACT: L. Guinn
PROJECT TELEPHONE NO: 607-443-2800	
CLIENT'S REPRESENTATIVE:	PROJECT MANAGER/SUPERVISOR: L. Guinn

	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS) Pesticides	REMARKS
1	T-1	1/16			X	white filter paper with clear liquid	2-8oz	X	~~wipe~~ wipe samples 100 cm² area
2									
3									
4									
5									
6									
7									
8									
9									
10									

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1	M. Hoard	Fed-X	1/16/90	
2	1	Fed-X 934373064	Gary Quick	1-17-90	1030
3					
4					

REMARKS: 14 DAY TAT

SAMPLER'S SIGNATURE: Michael J. Hoard

LAB COPY

Corporation

CHAIN-OF-CUSTODY RECORD

Field Technical Services
Rev. 08/89

No. 80460

H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

ECT NAME: Duffield Ave.	PROJECT LOCATION: Jersey City, NJ		
NO: B6E	PROJECT CONTACT: L. Gunn	PROJECT TELEPHONE NO.: 609-443-3800	
NT'S REPRESENTATIVE	PROJECT MANAGER/SUPERVISOR: L. Gunn		

SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS) Pesticides	REMARKS
T-2	1/16			X	filter paper - green calibration	2-8z	X	wipe sample 100cm²
6								
7								
8								
9								
10								

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1	M. Heard	Fed-X	1/16	
2	1	Fed-X 934578031	[signature]	1-17-90	1030
3					
4					

REMARKS: 14 DAY TAT
DSP/PST

SAMPLER'S SIGNATURE: [signature] M. Heard

LAB COPY

AnalytiKEM An American NuKEM Company

7445-02-097

AnalytiKEM Inc.
454 S. Anderson Road, BTC 532
Rock Hill, SC 29730
803 329-9690

COPY

TEST REPORT NO. A80357

January 20, 1990

Prepared for:

OH Materials Inc.
Four Research Way
Princeton, NJ 08540

Attention: Thomas O'Hara

Project: Jersey City

Date of Sample Receipt: January 12, 1990

NJ Certification No. NJ 04012

NY Certification No. NY 10815

SC Certification No. SC 94004

NC Certification No. NC 258

Reviewed & Approved by: Michael Shmookler

Name Michael Shmookler, Ph.D.

Title Technical Director

TABLE OF CONTENTS

I. Definition of Terms

Term	Definition
D	Detected; result must be greater than zero.
DI	Deionized Water
J	Compound was detected at levels below the practical quantitation limit. The level reported is approximate.
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Analysis not applicable to the sample matrix.
ND	Not Detected
NR	Not Requested
NTU	Nephelometric Turbidity Units
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
TON	Threshold Odor Number
U	Compound was analyzed for but not detected. The preceding number is the practical quantitation limit for the compound.
ppb	Parts-per-billion; may be converted to ppm by dividing by 1,000.
ppm	Parts-per-million; may be converted to ppb by multiplying by 1,000.
ug/l	Micrograms of constituent per liter of sample; equivalent to parts-per-billion.
ug/kg	Micrograms of constituent per kilogram of sample; equivalent to parts-per-billion.
ug/kg dw	Micrograms of constituent per kilogram of sample reported on a dry weight basis.
CCC	Calibration Check Compound; used to verify the precision of a GC/MS calibration curve.
SPCC	System Performance Check Compound; used to verify the correct operation of a GC/MS instrument.
PQL	Practical Quantitation Limit; the minimum level at which compounds can be dependably quantitated.

II. Sample Designation

AnalytiKEM Designation	Client Designation	Matrix	Date Sampled
A80357-1	P	Nonaqueous	1/11/90

Note: Samples will be retained for 30 days beyond the test report date unless otherwise requested.

III. Methodology

All analysis are performed in accordance with methodologies found in the following publications:

- Federal Register, Vol. 49, No. 209, October 26, 1984.
- Federal Register, Vol. 51, No. 114, June 13, 1986.
- Test Methods for Evaluating Solid Waste, USEPA, SW-846, Second Edition, July 1982.
- Test Methods for Evaluating Solid Waste, USEPA, SW-846, Third Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, American Public Health Association, 16th Edition, 1985.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, USEPA, March 1983.
- Annual Book of ASTM Standards (1980 and 1983)
- OI Corporation Model 524C TOC Analyzer Manual, January 1983.

IV. Analytical Results

Miscellaneous Parameters

AnalytiKEM Designation A80357-1

Client Designation P

Observations	Result
Number of Phases	One
Physical State	Solid
Color Density, g/mL	Golden

Solubility	Result
Water	IN
Acetone	IN
Hexane	IN
ME CL	IN

Spot Tests	Result
Warter	Neg.
Peroxide	Neg.
Oxidizer	Neg.
Bielstein	Neg.
Sulfide	Neg.
Cyanide	Neg.
Ignitability	Neg.

General Chemistry

Parameter	Result
Cyanide, total, ppm	0.25 U
Reactivity - Sulfide, ppm	50 U
Reactivity - Sulfide, ppm	50 U
Flahpoint, closed cup, °F	>180
pH, units	12.0
Oil & Grease, ppm	10,000
Water, %	0.1 U
Solids, %	96
Ash, %	87
Nitrate, ppm	220,000
Chloride, ppm	2,500
Total Organic Carbon, Nonpurgeable, ppm	2,600
Heat of Combustion, BTU/lb.	<1,000
Specific Gravity, units	1.07
Apparent Viscosity	High

ppm - parts per million

AnalytiKEM

IV. Analytical Results (Cont'd)

Volatile Organics (TCL)

AnalytiKEM Designation A80357-1

Client Designation P

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	100 U	Trichloroethene	100 U
Bromomethane	100 U	Dibromochloromethane	100 U
Vinyl Chloride	100 U	1,1,2-Trichloroethane	100 U
Chloroethane	100 U	Benzene	100 U
Methylene Chloride	150	cis-1,3-Dichloropropene	100 U
2-Propanone (Acetone)	100 U	2-Chloroethyl Vinyl Ether	100 U
Carbon Disulfide	100 U	Bromoform	100 U
1,1-Dichloroethene	100 U	4-Methyl-2-pentanone (MIBK)	100 U
1,1-Dichloroethane	100 U	2-Hexanone	100 U
trans-1,2-Dichloroethene	100 U	Tetrachloroethene	100 U
Chloroform	100 U	1,1,2,2-Tetrachloroethane	100 U
1,2-Dichloroethane	100 U	Toluene	100 U
1,1,1-Trichloroethane	100 U	Chlorobenzene	130
2-Butanone (MEK)	100 U	Ethylbenzene	1,600
Carbon Tetrachloride	100 U	Styrene	100 U
Vinyl Acetate	100 U	m-Xylene	3,200
Bromodichloromethane	100 U	o,p-Xylene	2,100
1,2-Dichloropropane	100 U	m-Dichlorobenzene	100 U
trans-1,3-Dichloropropene	100 U	o,p-Dichlorobenzene	100 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
None Detected	--

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics (TCL)

AnalytiKEM Designation A80357-1

Client Designation P

Compound	Concentration (ppm)		Compound	Concentration (ppm)	
N-Nitrosodimethylamine	10	U	Acenaphthene	10	U
Phenol	15		2,4-Dinitrophenol	50	U
Bis(2-chloroethyl) Ether	10	U	4-Nitrophenol	50	U
2-Chlorophenol	10	U	Dibenzofuran	10	U
1,3-Dichlorobenzene	10	U	2,4-Dinitrotoluene	10	U
1,4-Dichlorobenzene	34		2,6-Dinitrotoluene	10	U
Benzyl Alcohol	10	U	Diethyl Phthalate	10	U
1,2-Dichlorobenzene	10	U	4-Chlorophenyl Phenyl Ether	10	U
2-Methylphenol	10	U	Fluorene	6.5	J
Bis(2-chloroisopropyl) Ether	10	U	4-Nitroaniline	50	U
4-Methylphenol	10	U	4,6-Dinitro-2-methylphenol	50	U
N-Nitrosodipropylamine	10	U	N-Nitrosodiphenylamine	10	U
Hexachloroethane	10	U	4-Bromophenyl Phenyl Ether	10	U
Nitrobenzene	10	U	Hexachlorobenzene	10	U
Isophorone	10		Pentachlorophenol	50	U
2-Nitrophenol	10	U	Phenanthrene	10	U
2,4-Dimethylphenol	10	U	Anthracene	10	U
Benzoic Acid	50	U	Dibutyl Phthalate	10	U
Bis(2-chloroethoxy)methane	10	U	Fluoranthene	10	U
2,4-Dichlorophenol	10	U	Benzidine	100	U
1,2,4-Trichlorobenzene	10	U	Pyrene	10	U
Naphthalene	170		Butylbenzyl Phthalate	10	U
4-Chloroaniline	10	U	3,3'-Dichlorobenzidine	20	U
Hexachlorobutadiene	10	U	Benzo(a)anthracene	10	U
4-Chloro-3-methylphenol	10	U	Bis(2-ethylhexyl) Phthalate	6.0	J
2-Methylnaphthalene	270		Chrysene	10	U
Hexachlorocyclopentadiene	10	U	Dioctyl Phthalate	10	U
2,4,6-Trichlorophenol	10	U	Benzo(b)fluoranthene	10	U
2,4,5-Trichlorophenol	50	U	Benzo(k)fluoranthene	10	U
2-Chloronaphthalene	10	U	Benzo(a)pyrene	10	U
2-Nitroaniline	50	U	Indeno(1,2,3-cd)pyrene	10	U
Dimethyl Phthalate	10	U	Dibenzo(a,h)anthracene	10	U
Acenaphthylene	5.0	J	Benzo(g,h,i)perylene	10	U
3-Nitroaniline	50	U		10	U

AnalytiKEM

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80357-1

Client Designation P

Compound Name	Estimated Concentration (ppm)
Aldol	520
Ethylbenzene	190
Dimethylbenzene Isomer	520
Ethylmethlbenzene Isomer	170
Methylnaphthalene Isomer	66
Trifluralin (ACN)	66
Disulfoton	75
Parathion	250
p,p'-DDD	120
Total DDD Isomers	688
Total Unknown Polynuclear Aromatics	1,200
Total Alkanes	190
p,p'-DDT	610

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Pesticidal Compounds

AnalytiKEM Designation A80357-1

Client Designation P

Compound	Concentration (ppm)
alpha-BHC	100 U
beta-BHC	100 U
delta-BHC	100 U
gamma-BHC (Lindane)	79 J
Heptachlor	100 U
Aldrin	100 U
Heptachlor Epoxide	100 U
Endosulfan I	100 U
Dieldrin	100 U
4,4'-DDE	47 J
Endrin	100 U
Endosulfan II	100 U
4,4'-DDD	320
Endosulfan Sulfate	100 U
4,4'-DDT	610
Endrin Aldehyde	100 U
Chlordane	100 U
Toxaphene	100 U
Aroclor 1016	200 U
Aroclor 1221	200 U
Aroclor 1232	200 U
Aroclor 1242	200 U
Aroclor 1248	200 U
Aroclor 1254	200 U
Aroclor 1260	200 U

AnalytiKEM

IV. Analytical Results (Cont'd)

EP Procedure

AnalytiKEM Designation A80357-1

Client Designation P

Metals

Compound	Concentration (ppm)	
Aluminum	520	
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	2.2	
Calcium	14,000	
Chromium	16	
Cobalt	5.0	U
Copper	13	
Iron	2,100	
Lead	10	U
Magnesium	9,400	
Manganese	14	
Mercury	40	U
Nickel	4.0	U
Potassium	120	
Selenium	50	U
Silver	4.0	U
Sodium	370	
Thallium	20	U
Vanadium	5.0	U
Zinc	59	
Sulfur	2,300	
Boron	13	
Lithium	5.0	U
Molybdenum	17	
Silicon	170	
Strontium	75	
Tin	15	U
Titanium	30	
Zirconium	5.0	U

V. Quality Control Data

Miscellaneous Parameters

Matrix Spike/Matrix Spike Duplicate Recovery Data

Parameter	Sample Spiked	Amount of Spike	Recovery MS	Recovery MSD
Cyanide, total	A70695-C	50	83	89
Oil & Grease	A70678-C	50,000	91	104
Water	A80357-1	15,000	101	109
Nitrate	A80357-1	5,000	110	101
Total Organic Carbon	A80341-1	5,000	69	70
Chloride	A80357-1	10,000	126	138
Units		(ug)	(%)	(%)

AnalytiKEM

V. Quality Control Data (Cont'd)

Volatile Organics

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked A80343-6

Parameter	Amount of Spike	Recovery MS	Recovery MSD
Chloromethane	0.25	82	78
Bromomethane	0.25	69	67
Vinyl Chloride	0.25	86	80
Chloroethane	0.25	91	87
Methylene Chloride	0.25	164	160
Methylene Chloride †	0.25	83	—
2-Propanone (Acetone)	0.25	83	108
2-Propanone (Acetone) †	0.25	83	--
Carbon Disulfide	0.25	94	89
1,1-Dichloroethene	0.25	100	95
1,1-Dichloroethane	0.25	95	92
trans-1,2-Dichloroethene	0.25	98	95
Chloroform	0.25	98	94
1,2-Dichloroethane	0.25	92	90
2-Butanone (MEK)	0.25	98	112
1,1,1-Trichloroethane	0.25	98	92
Carbon Tetrachloride	0.25	99	89
Vinyl Acetate	0.25	87	87
Bromodichloromethane	0.25	95	91
1,2-Dichloropropane	0.25	99	93
trans-1,3-Dichloropropene	0.25	98	92
Trichloroethene (TCE)	0.25	100	93
Dibromochloromethane	0.25	95	91
1,1,2-Trichloroethane	0.25	99	99
Benzene	0.25	97	93
cis-1,3-Dichloropropene	0.25	101	97
2-Chloroethyl Vinyl Ether	0.25	98	97
Bromoform	0.25	86	86
4-Methyl-2-pentanone (MIBK)	0.25	97	109
2-Hexanone	0.25	97	109
Tetrachloroethene	0.25	99	100
1,1,2,2-Tetrachloroethane	0.25	98	93
Toluene	0.25	95	93
Chlorobenzene	0.25	96	92
Ethylbenzene	0.25	97	95
Styrene	0.25	93	93
m-Xylene	0.25	96	98
o,p-Xylene	0.25	93	94
m-Dichlorobenzene	0.25	91	93
o,p-Dichlorobenzene	0.25	92	95
Units	(ug)	(%)	(%)

† Spike performed on DI Water.

AnalytiKEM

V. Quality Control Data (Cont'd)

Semivolatile Organics

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked A80346-1

Parameter	Amount of Spike	Recovery MS	Recovery MSD
1,4-Dichlorobenzene	100	77	73
N-Nitrosodipropylamine	100	107	91
1,2,4-Trichlorobenzene	100	95	94
Acenaphthene	100	85	82
2,4-Dinitrotoluene	100	124	107
2,4-Dinitrotoluene †	100	103	--
Pyrene	100	105	118
Phenol	200	66	59
2-Chlorophenol	200	68	67
4-Chloro-3-methylphenol	200	81	64
4-Nitrophenol	200	170	130
4-Nitrophenol †	200	106	--
Pentachlorophenol	200	80	90
Units	(ug)	(%)	(%)

† Spike performed on DI Water.

Pesticides and Polychlorinated Biphenyls

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked A80299-8

Parameter	Amount of Spike	Recovery MS	Recovery MSD
alpha-BHC	0.2	71	76
beta-BHC	0.2	83	89
delta-BHC	0.2	79	84
Aldrin	0.2	76	85
4,4'-DDE	0.5	95	97
Endrin	0.5	60	70
4,4'-DDD	0.5	50	78
Endosulfan Sulfate	0.5	77	87
Endrin Ketone	0.5	89	96
alpha-Chlordane	0.2	80	87
gamma-Chlordane	0.2	70	76
Aroclor 1242	20	98	104
Units	(ug)	(%)	(%)

AnalytiKEM

V. Quality Control Data (Cont'd)

Metals

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked A80343-6

Parameter	Amount of Spike	Recovery MS	Recovery MSD
Alumimum	500	78	77
Antimony	500	86	82
Arsenic	500	92	100
Barium	500	82	81
Beryllium	500	82	80
Cadmium	500	85	83
Calcium	500	77	80
Chromium	500	*	*
Chromium †	500	90	--
Cobalt	500	78	77
Copper	500	86	85
Iron	500	51	55
Iron †	500	86	--
Lead	500	74	74
Lead †	500	88	--
Magnesium	500	76	78
Manganese	500	80	80
Mercury	500	85	84
Nickel	500	80	77
Potassium	500	101	105
Selenium	500	106	105
Silver	500	47	45
Silver †	500	42	—
Sodium	500	*	*
Sodium †	500	120	--
Thallium	500	71	73
Vanadium	500	80	81
Zinc	500	84	81
Sulfur	500	*	*
Sulfur †	500	101	--
Boron	500	78	76
Lithium	500	94	93
Molybdenum	500	72	74
Molybdenum †	500	80	--
Silicon	500	73	73
Silicon †	500	89	--
Strontium	500	79	81
Tin	500	101	101
Titanium	500	78	79
Zirconium	500	80	78
Units	(ug)	(%)	(%)

† Spike performed on DI Water.

* Not recovered due to high amount of analyte in sample.

80351

OHM Corporation

CHAIN-OF-CUSTODY RECORD

Form 0019
Field Technical Services
Rev. 08/89

No. 80408

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME:
PROJECT LOCATION: Jersey City, NJ
PROJ. NO.: 3336E
PROJECT CONTACT: L. Guinn
PROJECT TELEPHONE NO.: 609-443-2800
CLIENT'S REPRESENTATIVE: EPA
PROJECT MANAGER/SUPERVISOR: L. Guinn

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS): Disposal Analysis

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	Disposal Analysis							REMARKS
1	P	1/11		X		Brown solid - sand/paper/glass	1-32oz	X							crushed unknowns
2															
3															
4															
5															
6															
7															
8															
9															
10															

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	01	M. Hoard	Patsy Pope 1/12/90 from Fed Ex 10:00AM	1/11	
2					
3					
4					

REMARKS

Michael J. Hoard
SAMPLER'S SIGNATURE

AnalytiKEM *An American NuKEM Company*

AnalytiKEM Inc.
454 S. Anderson Road, BTC 532
Rock Hill, SC 29730
803 329-9690

7445-02-097

COPY

TEST REPORT NO. A80343

January 17, 1990

Prepared for:

OHM Corporation
16406 U.S. Route 224 East
Findlay , OH 45839-0551

Attention: Bruce Epley

Project: 8336E

Date of Sample Receipt: January 9, 1990

Reviewed &
Approved by: John R. Shmookler

SC Certification No. SC 46067

Name Michael Shmookler, Ph.D.

Title Technical Director

TABLE OF CONTENTS

AnalytiKEM

I. Definition of Terms

Term	Definition
D	Detected; result must be greater than zero.
DI	Deionized Water
J	Compound was detected at levels below the practical quantitation limit. The level reported is approximate.
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Analysis not applicable to the sample matrix.
ND	Not Detected
NR	Not Requested
RSD	Relative Standard Deviation
U	Compound was analyzed for but not detected. The preceding number is the practical quantitation limit for the compound.
ppb	Parts-per-billion; may be converted to ppm by dividing by 1,000.
ppm	Parts-per-million; may be converted to ppb by multiplying by 1,000.
ug/l	Micrograms of constituent per liter of sample; equivalent to parts-per-billion.
ug/kg	Micrograms of constituent per kilogram of sample; equivalent to parts-per-billion.
ug/kg dw	Micrograms of constituent per kilogram of sample reported on a dry weight basis.
PQL	Practical Quantitation Limit; the minimum level at which compounds can be dependably quantitated.
I	Insoluble
PS	Partially Soluble
S	Soluble

AnalytiKEM

II. Sample Designation

AnalytiKEM Designation	Client Designation	Matrix	Date Sampled
A80343-1	8336E-1000	Aqueous	1/8/90
A80343-2	8336E-1001	Nonaqueous	1/8/90
A80343-3	8336E-1002	Nonaqueous	1/8/90
A80343-4	8336E-1003	Aqueous	1/8/90
A80343-5	8336E-1004	Aqueous	1/8/90
A80343-6	8336E-1005	Nonaqueous	1/8/90
A80343-7	8336E-1006	Nonaqueous	1/8/90
A80343-8	8336E-1007	Aqueous	1/8/90

Note: Samples will be retained for 30 days beyond the test report date unless otherwise requested.

III. Methodology

All analysis are performed in accordance with methodologies found in the following publications:

- Federal Register, Vol. 49, No. 209, October 26, 1984.
- Federal Register, Vol. 51, No. 114, June 13, 1986.
- Test Methods for Evaluating Solid Waste, USEPA, SW-846, Second Edition, July 1982.
- Test Methods for Evaluating Solid Waste, USEPA, SW-846, Third Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, American Public Health Association, 16th Edition, 1985.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, USEPA, March 1983.
- Annual Book of ASTM Standards (1980 and 1983)
- OI Corporation Model 524C TOC Analyzer Manual, January 1983.

AnalytiKEM

IV. Analytical Results

Miscellaneous Parameters

AnalytiKEM Designation A80343-1

Client Designation 8336E-1000

Observations	Result
Number of Phases	One
Physical State	Liquid
Color	Green

Solubility	Result
Water	S
Acetone	S
Hexane	S
Methylene Chloride	IN

Spot Tests	Result
Water Reactivity	Neg.
Peroxide	Neg.
Oxidizer (H_2O)	Neg.
Bielstein	Neg.
Sulfide (H_2O)	Neg.
Cyanide (H_2O)	Neg.
Explosivity	Neg.
Ignitability	Neg.

General Chemistry

Parameter	Result	
Cyanide, total, ppm	0.97	
Reactivity - Sulfide, ppm	50	U
Reactivity - Cyanide, ppm	50	U
Flashpoint, closed cup, °F	>180	
pH, Units	7.0	
Oil & Grease, ppm	800	
Water, %	75	
Total Solids, %	9.0	
Ash, %	0.1	U
Nitrate-N, ppm	240,000	
Chloride, ppm	47,000	
Total Organic Carbon, nonpurgeable, ppm	16,000	
Heat of Combustion, BTU/lb.	1,000	U
Specific Gravity, units	0.80	

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-1

Client Designation 8336E-1000

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	10 U	Trichloroethene	10 U
Bromomethane	10 U	Dibromochloromethane	10 U
Vinyl Chloride	10 U	1,1,2-Trichloroethane	10 U
Chloroethane	10 U	Benzene	10 U
Methylene Chloride	18	cis-1,3-Dichloropropene	10 U
2-Propanone (Acetone)	23	2-Chloroethyl Vinyl Ether	10 U
Carbon Disulfide	10 U	Bromoform	10 U
1,1-Dichloroethene	10 U	4-Methyl-2-pentanone (MIBK)	10 U
1,1-Dichloroethane	10 U	2-Hexanone	10 U
trans-1,2-Dichloroethene	10 U	Tetrachloroethene	9.8 J
Chloroform	10 U	1,1,2,2-Tetrachloroethane	10 U
1,2-Dichloroethane	10 U	Toluene	10 U
1,1,1-Trichloroethane	10 U	Chlorobenzene	10 U
2-Butanone (MEK)	10 U	Ethylbenzene	10 U
Carbon Tetrachloride	10 U	Styrene	10 U
Vinyl Acetate	10 U	m-Xylene	10 U
Bromodichloromethane	10 U	o,p-Xylene	10 U
1,2-Dichloropropane	10 U	m-Dichlorobenzene	10 U
trans-1,3-Dichloropropene	10 U	o,p-Dichlorobenzene	10 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
1,1,2-Trichloro-1,2,2-trifluoroethane	23 *

* Concentration is not an estimated value, Freon is a target compound in the Calibration Curve.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-1

Client Designation 8336E-1000

Compound	Concentration (ppm)	Compound	Concentration (ppm)
N-Nitrosodimethylamine	4.0 U	Acenaphthene	4.0 U
Phenol	4.2	2,4-Dinitrophenol	20 U
Bis(2-chloroethyl) Ether	4.0 U	4-Nitrophenol	20 U
2-Chlorophenol	4.0 U	Dibenzofuran	4.0 U
1,3-Dichlorobenzene	4.0 U	2,4-Dinitrotoluene	4.0 U
1,4-Dichlorobenzene	4.0 U	2,6-Dinitrotoluene	4.0 U
Benzyl Alcohol	4.0 U	Diethyl Phthalate	4.0 U
1,2-Dichlorobenzene	23	4-Chlorophenyl Phenyl Ether	4.0 U
2-Methylphenol	4.0 U	Fluorene	4.0 U
Bis(2-chloroisopropyl) Ether	4.0 U	4-Nitroaniline	20 U
4-Methylphenol	4.0 U	4,6-Dinitro-2-methylphenol	20 U
N-Nitrosodipropylamine	4.0 U	N-Nitrosodiphenylamine	4.0 U
Hexachloroethane	4.0 U	4-Bromophenyl Phenyl Ether	4.0 U
Nitrobenzene	4.0 U	Hexachlorobenzene	4.0 U
Isophorone	4.0 U	Pentachlorophenol	15 J
2-Nitrophenol	4.0 U	Phenanthrene	4.0 U
2,4-Dimethylphenol	4.0 U	Anthracene	4.0 U
Benzoic Acid	20	Dibutyl Phthalate	4.0 U
Bis(2-chloroethoxy)methane	4.0 U	Fluoranthene	4.0 U
2,4-Dichlorophenol	4.0 U	Benzidine	40 U
1,2,4-Trichlorobenzene	4.6	Pyrene	4.0 U
Naphthalene	4.0 U	Butylbenzyl Phthalate	4.0 U
4-Chloroaniline	4.0 U	3,3'-Dichlorobenzidine	8.0 U
Hexachlorobutadiene	4.0 U	Benzo(a)anthracene	4.0 U
4-Chloro-3-methylphenol	4.0 U	Bis(2-ethylhexyl) Phthalate	10
2-Methylnaphthalene	4.0 U	Chrysene	4.0 U
Hexachlorocyclopentadiene	4.0 U	Dioctyl Phthalate	4.0 U
2,4,6-Trichlorophenol	4.0 U	Benzo(b)fluoranthene	4.0 U
2,4,5-Trichlorophenol	20 U	Benzo(k)fluoranthene	4.0 U
2-Chloronaphthalene	4.0 U	Benzo(a)pyrene	4.0 U
2-Nitroaniline	20 U	Indeno(1,2,3-cd)pyrene	4.0 U
Dimethyl Phthalate	4.0 U	Dibenzo(a,h)anthracene	4.0 U
Acenaphthylene	4.0 U	Benzo(g,h,i)perylene	4.0 U
3-Nitroaniline	20 U		

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-1

Client Designation 8336E-1000

Compound Name	Estimated Concentration (ppm)
[1,1'-Biphenyl]-2-ol	350
Nonylcyclopropane	380
Unknown Compound	640
Unknown Hydrocarbon	1,400
Unknown Polynuclear Aromatic	2,700

Note: Estimated concentration is calculated against the nearest eluting internal standard.

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-1

Client Designation 8336E-1000

Compound	Concentration (ppm)	
alpha-BHC	10	U
beta-BHC	10	U
delta-BHC	10	U
gamma-BHC (Lindane)	10	U
Heptachlor	10	U
Aldrin	10	U
Heptachlor Epoxide	10	U
Endosulfan I	10	U
Dieldrin	10	U
4,4'-DDE	10	U
Endrin	10	U
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	10	U
Endrin Aldehyde	10	U
Chlordane	10	U
alpha-Chlordane	10	U
gamma-Chlordane	10	U
Toxaphene	10	U
Aroclor 1016	2.0	U
Aroclor 1221	2.0	U
Aroclor 1232	2.0	U
Aroclor 1242	2.0	U
Aroclor 1248	2.0	U
Aroclor 1254	2.0	U
Aroclor 1260	2.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-1

Client Designation 8336E-1000

Metals

Compound	Concentration (ppm)	
Aluminum	20	U
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	1.0	U
Calcium	100	U
Chromium	5.0	U
Cobalt	5.0	U
Copper	250	
Iron	100	
Lead	10	U
Magnesium	100	U
Manganese	1.5	U
Mercury	40	U
Nickel	4.0	U
Potassium	100	U
Selenium	50	U
Silver	4.0	U
Sodium	5,200	
Thallium	20	U
Vanadium	5.0	U
Zinc	97	
Sulfur	2,300	
Boron	5.0	U
Lithium	5.0	U
Molybdenum	2.0	U
Silicon	19	
Strontium	10	U
Tin	15	U
Titanium	5.0	U
Zirconium	5.0	U

IV. Analytical Results (Cont'd)

Miscellaneous Parameters

AnalytiKEM Designation A80343-2

Client Designation 8336E-1001

Observations	Result
Number of Phases	One
Physical State	Solid
Color	Olive Green

Solubility	Result
Water	S
Acetone	IN
Hexane	IN
Methylene Chloride	IN

Spot Tests	Result
Water Reactivity	Neg.
Peroxide	Neg.
Oxidizer (H_2O)	Neg.
Bielstein	Neg.
Sulfide (H_2O)	Neg.
Cyanide (H_2O)	Neg.
Explosivity	Neg.
Ignitability	Neg.

General Chemistry

Parameter	Result	
Cyanide, total, ppm	1.6	
Reactivity - Sulfide, ppm	50	U
Reactivity - Cyanide, ppm	50	U
Flashpoint, closed cup, °F	>180	
pH, Units	9.0	
Oil & Grease, ppm	300	
Water, %	10	
Total Solids, %	87	
Ash, %	32	
Nitrate-N, ppm	17,000	
Chloride, ppm	79,000	
Total Organic Carbon, nonpurgeable, ppm	8,300	
Heat of Combustion, BTU/lb.	3,200	
Specific Gravity, units	0.92	

AnalytiKEM

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-2

Client Designation 8336E-1001

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	10 U	Trichloroethene	10 U
Bromomethane	10 U	Dibromochloromethane	10 U
Vinyl Chloride	10 U	1,1,2-Trichloroethane	10 U
Chloroethane	10 U	Benzene	10 U
Methylene Chloride	14	cis-1,3-Dichloropropene	10 U
2-Propanone (Acetone)	16	2-Chloroethyl Vinyl Ether	10 U
Carbon Disulfide	10 U	Bromoform	10 U
1,1-Dichloroethene	10 U	4-Methyl-2-pentanone (MIBK)	10 U
1,1-Dichloroethane	10 U	2-Hexanone	10 U
trans-1,2-Dichloroethene	10 U	Tetrachloroethene	43
Chloroform	10 U	1,1,2,2-Tetrachloroethane	10 U
1,2-Dichloroethane	10 U	Toluene	10 U
1,1,1-Trichloroethane	10 U	Chlorobenzene	10 U
2-Butanone (MEK)	10 U	Ethylbenzene	10 U
Carbon Tetrachloride	10 U	Styrene	10 U
Vinyl Acetate	10 U	m-Xylene	10 U
Bromodichloromethane	10 U	o,p-Xylene	10 U
1,2-Dichloropropane	10 U	m-Dichlorobenzene	10 U
trans-1,3-Dichloropropene	10 U	o,p-Dichlorobenzene	10 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
1,1,2-Trichloro-1,2,2-trifluoroethane	92 *

* Concentration is not an estimated value, Freon is a target compound in the Calibration Curve.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-2

Client Designation 8336E-1001

Compound	Concentration (ppm)		Compound	Concentration (ppm)	
N-Nitrosodimethylamine	9.2	U	Acenaphthene	9.2	U
Phenol	9.2	U	2,4-Dinitrophenol	46	U
Bis(2-chloroethyl) Ether	9.2	U	4-Nitrophenol	46	U
2-Chlorophenol	9.2	U	Dibenzofuran	9.2	U
1,3-Dichlorobenzene	9.2	U	2,4-Dinitrotoluene	9.2	U
1,4-Dichlorobenzene	9.2	U	2,6-Dinitrotoluene	9.2	U
Benzyl Alcohol	9.2	U	Diethyl Phthalate	9.2	U
1,2-Dichlorobenzene	9.2	U	4-Chlorophenyl Phenyl Ether	9.2	U
2-Methylphenol	9.2	U	Fluorene	9.2	U
Bis(2-chloroisopropyl) Ether	9.2	U	4-Nitroaniline	46	U
4-Methylphenol	9.2	U	4,6-Dinitro-2-methylphenol	46	U
N-Nitrosodipropylamine	9.2	U	N-Nitrosodiphenylamine	9.2	U
Hexachloroethane	9.2	U	4-Bromophenyl Phenyl Ether	9.2	U
Nitrobenzene	9.2	U	Hexachlorobenzene	9.2	U
Isophorone	9.2	U	Pentachlorophenol	83	
2-Nitrophenol	9.2	U	Phenanthrene	9.2	U
2,4-Dimethylphenol	9.2	U	Anthracene	9.2	U
Benzoic Acid	46	U	Dibutyl Phthalate	9.2	U
Bis(2-chloroethoxy)methane	9.2	U	Fluoranthene	9.2	U
2,4-Dichlorophenol	9.2	U	Benzidine	90	U
1,2,4-Trichlorobenzene	9.2	U	Pyrene	9.2	U
Naphthalene	9.2	U	Butylbenzyl Phthalate	9.2	U
4-Chloroaniline	9.2	U	3,3'-Dichlorobenzidine	18	U
Hexachlorobutadiene	9.2	U	Benzo(a)anthracene	9.2	U
4-Chloro-3-methylphenol	9.2	U	Bis(2-ethylhexyl) Phthalate	25	
2-Methylnaphthalene	9.2	U	Chrysene	9.2	U
Hexachlorocyclopentadiene	9.2	U	Dioctyl Phthalate	9.2	U
2,4,6-Trichlorophenol	9.2	U	Benzo(b)fluoranthene	9.2	U
2,4,5-Trichlorophenol	46	U	Benzo(k)fluoranthene	9.2	U
2-Chloronaphthalene	9.2	U	Benzo(a)pyrene	9.2	U
2-Nitroaniline	46	U	Indeno(1,2,3-cd)pyrene	9.2	U
Dimethyl Phthalate	9.2	U	Dibenzo(a,h)anthracene	9.2	U
Acenaphthylene	9.2	U	Benzo(g,h,i)perylene	9.2	U
3-Nitroaniline	46	U			

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-2

Client Designation 8336E-1001

Compound Name	Estimated Concentration (ppm)
Unknown Polynuclear Aromatics	11
Unknown Compounds	12

Note: Estimated concentration is calculated against the nearest eluting internal standard.

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-2

Client Designation 8336E-1001

Compound	Concentration (ppm)	
alpha-BHC	10	U
beta-BHC	10	U
delta-BHC	10	U
gamma-BHC (Lindane)	10	U
Heptachlor	10	U
Aldrin	10	U
Heptachlor Epoxide	10	U
Endosulfan I	10	U
Dieldrin	10	U
4,4'-DDE	10	U
Endrin	10	U
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	10	U
Endrin Aldehyde	10	U
Technical Chlordane	10	U
alpha Chlordane	10	U
gamma Chlordane	10	U
Toxaphene	10	U
Aroclor 1016	2.0	U
Aroclor 1221	2.0	U
Aroclor 1232	2.0	U
Aroclor 1242	2.0	U
Aroclor 1248	2.0	U
Aroclor 1254	2.0	U
Aroclor 1260	2.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-2

Client Designation 8336E-1001

Metals

Compound	Concentration (ppm)	
Aluminum	1,100	
Antimony	10	U
Arsenic	40	U
Barium	56	
Beryllium	0.50	U
Cadmium	1.0	U
Calcium	120	
Chromium	2,000	
Cobalt	5.0	U
Copper	28	
Iron	1,900	
Lead	10	U
Magnesium	100	U
Manganese	2.6	
Mercury	40	U
Nickel	4.0	U
Potassium	6,100	
Selenium	50	U
Silver	4.0	U
Sodium	60,000	
Thallium	20	U
Vanadium	5.0	U
Zinc	42	
Sulfur	43,000	
Boron	22,000	
Lithium	60	
Molybdenum	2.0	U
Silicon	140	
Strontium	10	U
Tin	15	U
Titanium	340	
Zirconium	5.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Miscellaneous Parameters

AnalytiKEM Designation A80343-3

Client Designation 8336E-1002

Observations	Result	Spot Tests	Result
Number of Phases	One	Water Reactivity	Neg.
Physical State	Solid	Peroxide	Neg.
Color	Dark Brown	Oxidizer (H_2O)	Neg.
		Bielstein	Neg.
Solubility	**Result**	Sulfide (H_2O)	Neg.
Water	S	Cyanide (H_2O)	Neg.
Acetone	IN	Explosivity	Neg.
Hexane	IN	Ignitability	Neg.
Methylene Chloride	IN		

General Chemistry

Parameter	Result	
Cyanide, total, ppm	0.62	
Reactivity - Sulfide, ppm	50	U
Reactivity - Cyanide, ppm	50	U
Flashpoint, closed cup, °F	>180	
pH, units	6.2	
Oil & Grease, ppm	6,300	
Water, %	18	
Total Solids, %	77	
Ash, %	19	
Nitrate-N, ppm	1,400	
Chloride, ppm	31,000	
Total Organic Carbon, nonpurgeable, ppm	37,000	
Heat of Combustion, BTU/lb.	5,600	
Specific Gravity, units	1.0	

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-3

Client Designation 8336E-1002

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	10 U	Trichloroethene	10 U
Bromomethane	10 U	Dibromochloromethane	10 U
Vinyl Chloride	10 U	1,1,2-Trichloroethane	10 U
Chloroethane	10 U	Benzene	10 U
Methylene Chloride	18	cis-1,3-Dichloropropene	10 U
2-Propanone (Acetone)	24	2-Chloroethyl Vinyl Ether	10 U
Carbon Disulfide	10 U	Bromoform	10 U
1,1-Dichloroethene	10 U	4-Methyl-2-pentanone (MIBK)	10 U
1,1-Dichloroethane	10 U	2-Hexanone	10 U
trans-1,2-Dichloroethene	10 U	Tetrachloroethene	10 U
Chloroform	10 U	1,1,2,2-Tetrachloroethane	10 U
1,2-Dichloroethane	10 U	Toluene	10 U
1,1,1-Trichloroethane	10 U	Chlorobenzene	10 U
2-Butanone (MEK)	10 U	Ethylbenzene	10 U
Carbon Tetrachloride	10 U	Styrene	10 U
Vinyl Acetate	10 U	m-Xylene	10 U
Bromodichloromethane	10 U	o,p-Xylene	10 U
1,2-Dichloropropane	10 U	m-Dichlorobenzene	10 U
trans-1,3-Dichloropropene	10 U	o,p-Dichlorobenzene	10 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
1,1,2-Trichloro-1,2,2-trifluoroethane	92 *

* Concentration is not an estimated value, Freon is a target compound in the Calibration Curve.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-3

Client Designation 8336E-1002

Compound	Concentration (ppm)	Compound	Concentration (ppm)
N-Nitrosodimethylamine	10 U	Acenaphthene	10 U
Phenol	10 U	2,4-Dinitrophenol	50 U
Bis(2-chloroethyl) Ether	10 U	4-Nitrophenol	50 U
2-Chlorophenol	10 U	Dibenzofuran	10 U
1,3-Dichlorobenzene	10 U	2,4-Dinitrotoluene	10 U
1,4-Dichlorobenzene	10 U	2,6-Dinitrotoluene	10 U
Benzyl Alcohol	10 U	Diethyl Phthalate	710
1,2-Dichlorobenzene	10 U	4-Chlorophenyl Phenyl Ether	10 U
2-Methylphenol	10 U	Fluorene	10 U
Bis(2-chloroisopropyl) Ether	10 U	4-Nitroaniline	60
4-Methylphenol	10 U	4,6-Dinitro-2-methylphenol	50 U
N-Nitrosodipropylamine	10 U	N-Nitrosodiphenylamine	26
Hexachloroethane	10 U	4-Bromophenyl Phenyl Ether	10 U
Nitrobenzene	10 U	Hexachlorobenzene	10 U
Isophorone	10 U	Pentachlorophenol	44 J
2-Nitrophenol	10 U	Phenanthrene	10 U
2,4-Dimethylphenol	10 U	Anthracene	10 U
Benzoic Acid	50 U	Dibutyl Phthalate	10 U
Bis(2-chloroethoxy)methane	10 U	Fluoranthene	10 U
2,4-Dichlorophenol	10 U	Benzidine	100 U
1,2,4-Trichlorobenzene	10 U	Pyrene	10 U
Naphthalene	10 U	Butylbenzyl Phthalate	10 U
4-Chloroaniline	10 U	3,3'-Dichlorobenzidine	20 U
Hexachlorobutadiene	10 U	Benzo(a)anthracene	10 U
4-Chloro-3-methylphenol	10 U	Bis(2-ethylhexyl) Phthalate	90
2-Methylnaphthalene	10 U	Chrysene	10 U
Hexachlorocyclopentadiene	10 U	Dioctyl Phthalate	10 U
2,4,6-Trichlorophenol	10 U	Benzo(b)fluoranthene	10 U
2,4,5-Trichlorophenol	50 U	Benzo(k)fluoranthene	10 U
2-Chloronaphthalene	10 U	Benzo(a)pyrene	10 U
2-Nitroaniline	50 U	Indeno(1,2,3-cd)pyrene	10 U
Dimethyl Phthalate	10 U	Dibenzo(a,h)anthracene	10 U
Acenaphthylene	10 U	Benzo(g,h,i)perylene	10 U
3-Nitroaniline	50 U		

AnalytiKEM

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-3

Client Designation 8336E-1002

Compound Name	Estimated Concentration (ppm)
2-Methyl-N-phenyl-2-propenamide	30
Unknown Chlorinated Arometic	57
Bisbenzofuran Isomer	66
Unknown Cyclodicane	130
Total Unknown Compounds	440
1,1-Dichloro-2,2bis (p-Chlorophenyl) ethane	590
p,p'-DDT	900
Kepone	910
Aldol	1,300
Total Unknown Polynuclear Aromatics	2,200
Total Unknown Decanoic Acid	2,600

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-3

Client Designation 8336E-1002

Compound	Concentration (ppm)	
alpha-BHC	100	U
beta-BHC	100	U
delta-BHC	100	U
gamma-BHC (Lindane)	100	U
Heptachlor	100	U
Aldrin	100	U
Heptachlor Epoxide	100	U
Endosulfan I	100	U
Dieldrin	100	U
4,4'-DDE	100	U
Endrin	1,900	
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	860	
Endrin Aldehyde	100	U
Endrin Ketone	57	
Methoxychlor	100	U
Chlordane	100	U
alpha-Chlordane	100	U
gamma-Chlordane	100	U
Toxaphene	4,200	
Aroclor 1016	20	U
Aroclor 1221	20	U
Aroclor 1232	20	U
Aroclor 1242	20	U
Aroclor 1248	20	U
Aroclor 1254	20	U
Aroclor 1260	20	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-3

Client Designation 8336E-1002

Metals

Compound	Concentration (ppm)	
Aluminum	290	
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	1.0	U
Calcium	2,900	
Chromium	18	
Cobalt	5.0	U
Copper	90	
Iron	540	
Lead	10	U
Magnesium	1,600	
Manganese	26	
Mercury	40	U
Nickel	4.0	U
Potassium	390	
Selenium	50	
Silver	4.0	U
Sodium	65,000	
Thallium	20	U
Vanadium	10	
Zinc	15	
Sulfur	42,000	
Boron	14	
Lithium	5.0	U
Molybdenum	2.0	U
Silicon	200	
Strontium	10	U
Tin	15	U
Titanium	9.9	
Zirconium	5.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Miscellaneous Parameters

AnalytiKEM Designation A80343-4

Client Designation 8336E-1003

Observations	Result	Spot Tests	Result
Number of Phases	One	Water Reactivity	Neg.
Physical State	Liquid	Peroxide	Neg.
Color	Colorless	Oxidizer (H_2O)	Neg.
		Bielstein	Neg.
Solubility	Result	Sulfide (H_2O)	Neg.
		Cyanide (H_2O)	Neg.
Water	S	Explosivity	Neg.
Acetone	S	Ignitability	Neg.
Hexane	IN		
Methylene Chloride	S		

General Chemistry

Parameter	Result	
Cyanide, total, ppm	120	
Reactivity - Sulfide, ppm	50	U
Reactivity - Cyanide, ppm	50	U
Flashpoint, closed cup, °F	>180	
pH, Units	2.0	
Oil & Grease, ppm	37,000	
Water, %	39	
Total Solids, %	59	
Ash, %	3.0	
Nitrate-N, ppm	3,400	
Chloride, ppm	240	
Total Organic Carbon, nonpurgeable, ppm	49,000	
Heat of Combustion, BTU/lb.	1,000	U
Specific Gravity, units	1.2	

AnalytiKEM

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-4

Client Designation 8336E-1003

Compound	Concentration (ppm)		Compound	Concentration (ppm)	
Chloromethane	10	U	Trichloroethene	10	U
Bromomethane	10	U	Dibromochloromethane	10	U
Vinyl Chloride	10	U	1,1,2-Trichloroethane	10	U
Chloroethane	10	U	Benzene	10	U
Methylene Chloride	5.4	J	cis-1,3-Dichloropropene	10	U
2-Propanone (Acetone)	19		2-Chloroethyl Vinyl Ether	10	U
Carbon Disulfide	10	U	Bromoform	10	U
1,1-Dichloroethene	10	U	4-Methyl-2-pentanone (MIBK)	10	U
1,1-Dichloroethane	10	U	2-Hexanone	10	U
trans-1,2-Dichloroethene	10	U	Tetrachloroethene	10	U
Chloroform	10	U	1,1,2,2-Tetrachloroethane	10	U
1,2-Dichloroethane	10	U	Toluene	10	U
1,1,1-Trichloroethane	10	U	Chlorobenzene	10	U
2-Butanone (MEK)	10	U	Ethylbenzene	10	U
Carbon Tetrachloride	10	U	Styrene	10	U
Vinyl Acetate	10	U	m-Xylene	10	U
Bromodichloromethane	10	U	o,p-Xylene	10	U
1,2-Dichloropropane	10	U	m-Dichlorobenzene	10	U
trans-1,3-Dichloropropene	10	U	o,p-Dichlorobenzene	10	U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
1,1,2-Trichloro-1,2,2-trifluoroethane	58 *
Unknown Compound	26

* Concentration is not an estimated value, Freon is a target compound in the Calibration Curve.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-4

Client Designation 8336E-1003

Compound	Concentration (ppm)		Compound	Concentration (ppm)	
N-Nitrosodimethylamine	10	U	Acenaphthene	10	U
Phenol	10	U	2,4-Dinitrophenol	50	U
Bis(2-chloroethyl) Ether	10	U	4-Nitrophenol	50	U
2-Chlorophenol	10	U	Dibenzofuran	10	U
1,3-Dichlorobenzene	10	U	2,4-Dinitrotoluene	10	U
1,4-Dichlorobenzene	10	U	2,6-Dinitrotoluene	10	U
Benzyl Alcohol	10	U	Diethyl Phthalate	10	U
1,2-Dichlorobenzene	10	U	4-Chlorophenyl Phenyl Ether	10	U
2-Methylphenol	10	U	Fluorene	10	U
Bis(2-chloroisopropyl) Ether	10	U	4-Nitroaniline	50	U
4-Methylphenol	10	U	4,6-Dinitro-2-methylphenol	50	U
N-Nitrosodipropylamine	10	U	N-Nitrosodiphenylamine	10	U
Hexachloroethane	10	U	4-Bromophenyl Phenyl Ether	10	U
Nitrobenzene	10	U	Hexachlorobenzene	10	U
Isophorone	10	U	Pentachlorophenol	50	U
2-Nitrophenol	10	U	Phenanthrene	10	U
2,4-Dimethylphenol	10	U	Anthracene	10	U
Benzoic Acid	50	U	Dibutyl Phthalate	10	U
Bis(2-chloroethoxy)methane	10	U	Fluoranthene	10	U
2,4-Dichlorophenol	10	U	Benzidine	100	U
1,2,4-Trichlorobenzene	10	U	Pyrene	10	U
Naphthalene	10	U	Butylbenzyl Phthalate	10	U
4-Chloroaniline	10	U	3,3'-Dichlorobenzidine	20	U
Hexachlorobutadiene	10	U	Benzo(a)anthracene	10	U
4-Chloro-3-methylphenol	10	U	Bis(2-ethylhexyl) Phthalate	10	U
2-Methylnaphthalene	10	U	Chrysene	10	U
Hexachlorocyclopentadiene	10	U	Dioctyl Phthalate	10	U
2,4,6-Trichlorophenol	10	U	Benzo(b)fluoranthene	10	U
2,4,5-Trichlorophenol	50	U	Benzo(k)fluoranthene	10	U
2-Chloronaphthalene	10	U	Benzo(a)pyrene	10	U
2-Nitroaniline	50	U	Indeno(1,2,3-cd)pyrene	10	U
Dimethyl Phthalate	10	U	Dibenzo(a,h)anthracene	10	U
Acenaphthylene	10	U	Benzo(g,h,i)perylene	10	U
3-Nitroaniline	50	U			

AnalytiKEM

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-4

Client Designation 8336E-1003

Compound Name	Estimated Concentration (ppm)
Nitrogenated Hydrocabon	49
Total Unknown Hydrocarbons	63
Total Unknown Alkanes	170
Total Unknown Compounds	200
2-Propanol Isomer	260
Total Unknown Polynuclear Aromatics	660

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-4

Client Designation 8336E-1003

Compound	Concentration (ppm)	
alpha-BHC	10	U
beta-BHC	10	U
delta-BHC	10	U
gamma-BHC (Lindane)	10	U
Heptachlor	10	U
Aldrin	10	U
Heptachlor Epoxide	10	U
Endosulfan I	10	U
Dieldrin	10	U
4,4'-DDE	10	U
Endrin	10	U
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	10	U
Endrin Aldehyde	10	U
Chlordane	10	U
alpha-Chlordane	10	U
gamma-Chlordane	10	U
Toxaphene	10	U
Aroclor 1016	2.0	U
Aroclor 1221	2.0	U
Aroclor 1232	2.0	U
Aroclor 1242	2.0	U
Aroclor 1248	2.0	U
Aroclor 1254	2.0	U
Aroclor 1260	2.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-4

Client Designation 8336E-1003

Metals

Compound	Concentration (ppm)	
Aluminum	20	U
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	3.8	
Calcium	100	U
Chromium	8.7	
Cobalt	5.0	U
Copper	5.0	U
Iron	10	U
Lead	89	
Magnesium	100	U
Manganese	1.5	U
Mercury	40	U
Nickel	4.0	U
Potassium	100	U
Selenium	50	U
Silver	4.0	U
Sodium	220	
Thallium	20	U
Vanadium	5.0	U
Zinc	52,000	
Sulfur	120	
Boron	5.0	U
Lithium	5.0	U
Molybdenum	17	
Silicon	42	
Strontium	10	
Tin	15	U
Titanium	6.7	
Zirconium	5.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Miscellaneous Parameters

AnalytiKEM Designation A80343-5

Client Designation 8336E-1004

Observations	Result	Spot Tests	Result
Number of Phases	One	Water Reactivity	Neg.
Physical State	Liquid	Peroxide	Neg.
Color	Tan	Oxidizer (H_2O)	Neg.
		Bielstein	Pos.
Solubility	Result	Sulfide (H_2O)	Neg.
Water	S	Cyanide (H_2O)	Neg.
Acetone	S	Explosivity	Neg.
Hexane	S	Ignitability	Neg.
Methylene Chloride	S		

General Chemistry

Parameter	Result	
Cyanide, total, ppm	0.29	
Reactivity - Sulfide, ppm	50	U
Reactivity - Cyanide, ppm	50	U
Flashpoint, closed cup, °F	>180	
pH, Units	6.0	
Oil & Grease, ppm	9,700	
Water, %	1.0	
Total Solids, %	39	
Ash, %	2.0	
Nitrate-N, ppm	18,000	
Chloride, ppm	200	
Total Organic Carbon, nonpurgeable, ppm	59,000	
Heat of Combustion, BTU/lb.	1,000	U
Specific Gravity, units	1.29	

AnalytiKEM

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-5

Client Designation 8336E-1004

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	5,000 U	Trichloroethene	5,000 U
Bromomethane	5,000 U	Dibromochloromethane	5,000 U
Vinyl Chloride	5,000 U	1,1,2-Trichloroethane	5,000 U
Chloroethane	5,000 U	Benzene	5,000 U
Methylene Chloride	470 J	cis-1,3-Dichloropropene	5,000 U
2-Propanone (Acetone)	5,000 U	2-Chloroethyl Vinyl Ether	5,000 U
Carbon Disulfide	5,000 U	Bromoform	5,000 U
1,1-Dichloroethene	5,000 U	4-Methyl-2-pentanone (MIBK)	5,000 U
1,1-Dichloroethane	5,000 U	2-Hexanone	5,000 U
trans-1,2-Dichloroethene	5,000 U	Tetrachloroethene	8,800
Chloroform	5,000 U	1,1,2,2-Tetrachloroethane	5,000 U
1,2-Dichloroethane	5,000 U	Toluene	160 J
1,1,1-Trichloroethane	5,000 U	Chlorobenzene	5,000 U
2-Butanone (MEK)	5,000 U	Ethylbenzene	5,000 U
Carbon Tetrachloride	5,000 U	Styrene	5,000 U
Vinyl Acetate	5,000 U	m-Xylene	5,000 U
Bromodichloromethane	5,000 U	o,p-Xylene	5,000 U
1,2-Dichloropropane	5,000 U	m-Dichlorobenzene	5,000 U
trans-1,3-Dichloropropene	5,000 U	o,p-Dichlorobenzene	5,000 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
None Detected	--

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-5

Client Designation 8336E-1004

Compound	Concentration (ppm)	Compound	Concentration (ppm)
N-Nitrosodimethylamine	10 U	Acenaphthene	10 U
Phenol	10 U	2,4-Dinitrophenol	50 U
Bis(2-chloroethyl) Ether	10 U	4-Nitrophenol	50 U
2-Chlorophenol	10 U	Dibenzofuran	10 U
1,3-Dichlorobenzene	10 U	2,4-Dinitrotoluene	10 U
1,4-Dichlorobenzene	10 U	2,6-Dinitrotoluene	10 U
Benzyl Alcohol	10 U	Diethyl Phthalate	10 U
1,2-Dichlorobenzene	10 U	4-Chlorophenyl Phenyl Ether	10 U
2-Methylphenol	10 U	Fluorene	10 U
Bis(2-chloroisopropyl) Ether	10 U	4-Nitroaniline	50 U
4-Methylphenol	10 U	4,6-Dinitro-2-methylphenol	50 U
N-Nitrosodipropylamine	10 U	N-Nitrosodiphenylamine	10 U
Hexachloroethane	10 U	4-Bromophenyl Phenyl Ether	10 U
Nitrobenzene	10 U	Hexachlorobenzene	10 U
Isophorone	10 U	Pentachlorophenol	50 U
2-Nitrophenol	10 U	Phenanthrene	10 U
2,4-Dimethylphenol	10 U	Anthracene	10 U
Benzoic Acid	50 U	Dibutyl Phthalate	10 U
Bis(2-chloroethoxy)methane	10 U	Fluoranthene	10 U
2,4-Dichlorophenol	10 U	Benzidine	100 U
1,2,4-Trichlorobenzene	10 U	Pyrene	10 U
Naphthalene	10 U	Butylbenzyl Phthalate	10 U
4-Chloroaniline	10 U	3,3'-Dichlorobenzidine	20 U
Hexachlorobutadiene	10 U	Benzo(a)anthracene	10 U
4-Chloro-3-methylphenol	10 U	Bis(2-ethylhexyl) Phthalate	20
2-Methylnaphthalene	10 U	Chrysene	10 U
Hexachlorocyclopentadiene	10 U	Dioctyl Phthalate	10 U
2,4,6-Trichlorophenol	10 U	Benzo(b)fluoranthene	10 U
2,4,5-Trichlorophenol	50 U	Benzo(k)fluoranthene	10 U
2-Chloronaphthalene	10 U	Benzo(a)pyrene	10 U
2-Nitroaniline	50 U	Indeno(1,2,3-cd)pyrene	10 U
Dimethyl Phthalate	10 U	Dibenzo(a,h)anthracene	10 U
Acenaphthylene	10 U	Benzo(g,h,i)perylene	10 U
3-Nitroaniline	50 U		

AnalytiKEM

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-5

Client Designation 8336E-1004

Compound Name	Estimated Concentration (ppm)
Unknown Acid	26
Unknown Alkene	59
1,1,1,2-Tetrachloroethane	82
Triethylene Glycol	150
Chlorobenzene	170
Total Unknown Polynuclear Aromatics	390
Total Unknown Compounds	650
Tetrachloroethene	3,800

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-5

Client Designation 8336E-1004

Compound	Concentration (ppm)	
alpha-BHC	100	U
beta-BHC	100	U
delta-BHC	100	U
gamma-BHC (Lindane)	100	U
Heptachlor	100	U
Aldrin	100	U
Heptachlor Epoxide	100	U
Endosulfan I	100	U
Dieldrin	100	U
4,4'-DDE	10	U
Endrin	10	U
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	10	U
Endrin Aldehyde	10	U
Chlordane	100	U
alpha-Chlordane	100	U
gamma-Chlordane	100	U
Toxaphene	10	U
Aroclor 1016	20	U
Aroclor 1221	20	U
Aroclor 1232	20	U
Aroclor 1242	20	U
Aroclor 1248	20	U
Aroclor 1254	2.0	U
Aroclor 1260	2.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-5

Client Designation 8336E-1004

Metals

Compound	Concentration (ppm)	
Aluminum	20	U
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	1.0	U
Calcium	100	U
Chromium	5.0	U
Cobalt	5.0	U
Copper	10	
Iron	100	
Lead	10	U
Magnesium	100	U
Manganese	2.0	
Mercury	40	U
Nickel	4.0	U
Potassium	620	
Selenium	50	U
Silver	4.0	U
Sodium	340	
Thallium	20	U
Vanadium	5.0	U
Zinc	32	
Sulfur	100	U
Boron	5.0	U
Lithium	5.0	U
Molybdenum	2.0	U
Silicon	15	U
Strontium	10	U
Tin	15	U
Titanium	5.8	
Zirconium	5.0	U

IV. Analytical Results (Cont'd)

Miscellaneous Parameters

AnalytiKEM Designation A80343-6

Client Designation 8336E-1005

Observations	Result
Number of Phases	One
Physical State	Solid
Color	Black

Solubility	Result
Water	S
Acetone	S
Hexane	S
Methylene Chloride	IN

Spot Tests	Result
Water Reactivity	Neg.
Peroxide	Neg.
Oxidizer (H_2O)	Neg.
Bielstein	Neg.
Sulfide (H_2O)	Neg.
Cyanide (H_2O)	Neg.
Explosivity	Neg.
Ignitability	Neg.

General Chemistry

Parameter	Result	
Cyanide, total, ppm	0.40	
Reactivity - Sulfide, ppm	50	U
Reactivity - Cyanide, ppm	50	U
Flashpoint, closed cup, °F	>180	
pH, Units	7.4	
Oil & Grease, ppm	2,000	
Water, %	11	
Total Solids, %	92	
Ash, %	50	
Nitrate-N, ppm	22,000	
Chloride, ppm	49,000	
Total Organic Carbon, nonpurgeable, ppm	54,000	
Heat of Combustion, BTU/lb.	4,100	
Specific Gravity, units	0.37	

AnalytiKEM

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-6

Client Designation 8336E-1005

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	10 U	Trichloroethene	10 U
Bromomethane	10 U	Dibromochloromethane	10 U
Vinyl Chloride	10 U	1,1,2-Trichloroethane	10 U
Chloroethane	10 U	Benzene	10 U
Methylene Chloride	55	cis-1,3-Dichloropropene	10 U
2-Propanone (Acetone)	23	2-Chloroethyl Vinyl Ether	10 U
Carbon Disulfide	10 U	Bromoform	10 U
1,1-Dichloroethene	10 U	4-Methyl-2-pentanone (MIBK)	10 U
1,1-Dichloroethane	10 U	2-Hexanone	10 U
trans-1,2-Dichloroethene	10 U	Tetrachloroethene	20
Chloroform	10 U	1,1,2,2-Tetrachloroethane	10 U
1,2-Dichloroethane	10 U	Toluene	10 U
1,1,1-Trichloroethane	10 U	Chlorobenzene	10 U
2-Butanone (MEK)	10 U	Ethylbenzene	10 U
Carbon Tetrachloride	10 U	Styrene	10 U
Vinyl Acetate	10 U	m-Xylene	10 U
Bromodichloromethane	10 U	o,p-Xylene	10 U
1,2-Dichloropropane	10 U	m-Dichlorobenzene	10 U
trans-1,3-Dichloropropene	10 U	o,p-Dichlorobenzene	10 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
None Detected	--

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-6

Client Designation 8336E-1005

Compound	Concentration (ppm)		Compound	Concentration (ppm)	
N-Nitrosodimethylamine	10	U	Acenaphthene	10	U
Phenol	10	U	2,4-Dinitrophenol	50	U
Bis(2-chloroethyl) Ether	10	U	4-Nitrophenol	50	U
2-Chlorophenol	10	U	Dibenzofuran	10	U
1,3-Dichlorobenzene	10	U	2,4-Dinitrotoluene	10	U
1,4-Dichlorobenzene	10	U	2,6-Dinitrotoluene	10	U
Benzyl Alcohol	10	U	Diethyl Phthalate	10	U
1,2-Dichlorobenzene	10	U	4-Chlorophenyl Phenyl Ether	10	U
2-Methylphenol	10	U	Fluorene	10	U
Bis(2-chloroisopropyl) Ether	10	U	4-Nitroaniline	50	U
4-Methylphenol	10	U	4,6-Dinitro-2-methylphenol	50	U
N-Nitrosodipropylamine	10	U	N-Nitrosodiphenylamine	10	U
Hexachloroethane	10	U	4-Bromophenyl Phenyl Ether	10	U
Nitrobenzene	10	U	Hexachlorobenzene	10	U
Isophorone	10	U	Pentachlorophenol	50	U
2-Nitrophenol	10	U	Phenanthrene	10	U
2,4-Dimethylphenol	10	U	Anthracene	10	U
Benzoic Acid	50	U	Dibutyl Phthalate	10	U
Bis(2-chloroethoxy)methane	10	U	Fluoranthene	10	U
2,4-Dichlorophenol	10	U	Benzidine	100	U
1,2,4-Trichlorobenzene	10	U	Pyrene	10	U
Naphthalene	10	U	Butylbenzyl Phthalate	10	U
4-Chloroaniline	10	U	3,3'-Dichlorobenzidine	20	U
Hexachlorobutadiene	10	U	Benzo(a)anthracene	10	U
4-Chloro-3-methylphenol	10	U	Bis(2-ethylhexyl) Phthalate	6.3	J
2-Methylnaphthalene	10	U	Chrysene	10	U
Hexachlorocyclopentadiene	10	U	Dioctyl Phthalate	10	U
2,4,6-Trichlorophenol	10	U	Benzo(b)fluoranthene	10	U
2,4,5-Trichlorophenol	50	U	Benzo(k)fluoranthene	10	U
2-Chloronaphthalene	10	U	Benzo(a)pyrene	10	U
2-Nitroaniline	50	U	Indeno(1,2,3-cd)pyrene	10	U
Dimethyl Phthalate	10	U	Dibenzo(a,h)anthracene	10	U
Acenaphthylene	10	U	Benzo(g,h,i)perylene	10	U
3-Nitroaniline	50	U			

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-6

Client Designation 8336E-1005

Compound Name	Estimated Concentration (ppm)
Total Unknown Polynuclear Aromatics	240
Total Unknown Hydrocarbons	310
Total Unknown Compounds	440
Aldol	930

Note: Estimated concentration is calculated against the nearest eluting internal standard.

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-6

Client Designation 8336E-1005

Compound	Concentration (ppm)	
alpha-BHC	10	U
beta-BHC	10	U
delta-BHC	10	U
gamma-BHC (Lindane)	10	U
Heptachlor	10	U
Aldrin	10	U
Heptachlor Epoxide	10	U
Endosulfan I	10	U
Dieldrin	10	U
4,4'-DDE	10	U
Endrin	10	U
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	10	U
Endrin Aldehyde	10	U
Chlordane	10	U
alpha-Chlordane	10	U
gamma-Chlordane	10	U
Toxaphene	10	U
Aroclor 1016	2.0	U
Aroclor 1221	2.0	U
Aroclor 1232	2.0	U
Aroclor 1242	2.0	U
Aroclor 1248	2.0	U
Aroclor 1254	2.0	U
Aroclor 1260	2.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-6

Client Designation 8336E-1005

Metals

Compound	Concentration (ppm)	
Aluminum	20	U
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	1.0	U
Calcium	190	
Chromium	37,000	
Cobalt	5.0	U
Copper	31	
Iron	240	
Lead	10	U
Magnesium	100	U
Manganese	2.2	
Mercury	40	U
Nickel	26	
Potassium	100	U
Selenium	50	U
Silver	4.0	U
Sodium	140,000	
Thallium	20	U
Vanadium	5.0	U
Zinc	17	
Sulfur	100,000	
Boron	5.0	U
Lithium	5.0	U
Molybdenum	2.0	U
Silicon	58	
Strontium	10	U
Tin	15	U
Titanium	6.9	
Zirconium	5.0	U

IV. Analytical Results (Cont'd)

Miscellaneous Parameters

AnalytiKEM Designation A80343-7

Client Designation 8336E-1006

Observations	Result
Number of Phases	One
Physical State	Solid
Color	Orange

Solubility	Result
Water	S
Acetone	IN
Hexane	IN
Methylene Chloride	PS

Spot Tests	Result
Water Reactivity	Neg.
Peroxide	Neg.
Oxidizer (H_2O)	Neg.
Bielstein	Neg.
Sulfide (H_2O)	Neg.
Cyanide (H_2O)	Neg.
Explosivity	Neg.
Ignitability	Neg.

General Chemistry

Parameter	Result	
Cyanide, total, ppm	0.25	
Reactivity - Sulfide, ppm	50	U
Reactivity - Cyanide, ppm	50	U
Flashpoint, closed cup, °F	>180	
pH, Units	2.7	
Oil & Grease, ppm	16,000	
Water, %	0.1	U
Total Solids, %	99	
Ash, %	47	
Nitrate-N, ppm	19,000	
Chloride, ppm	390,000	
Total Organic Carbon, nonpurgeable, ppm	70,000	
Heat of Combustion, BTU/lb.	5,600	
Specific Gravity, units	0.63	

AnalytiKEM

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-7

Client Designation 8336E-1006

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	10 U	Trichloroethene	10 U
Bromomethane	10 U	Dibromochloromethane	10 U
Vinyl Chloride	10 U	1,1,2-Trichloroethane	10 U
Chloroethane	10 U	Benzene	10 U
Methylene Chloride	53	cis-1,3-Dichloropropene	10 U
2-Propanone (Acetone)	58	2-Chloroethyl Vinyl Ether	10 U
Carbon Disulfide	10 U	Bromoform	10 U
1,1-Dichloroethene	10 U	4-Methyl-2-pentanone (MIBK)	10 U
1,1-Dichloroethane	10 U	2-Hexanone	10 U
trans-1,2-Dichloroethene	10 U	Tetrachloroethene	22
Chloroform	10 U	1,1,2,2-Tetrachloroethane	10 U
1,2-Dichloroethane	10 U	Toluene	10 U
1,1,1-Trichloroethane	10 U	Chlorobenzene	10 U
2-Butanone (MEK)	10 U	Ethylbenzene	10 U
Carbon Tetrachloride	10 U	Styrene	10 U
Vinyl Acetate	10 U	m-Xylene	10 U
Bromodichloromethane	10 U	o,p-Xylene	10 U
1,2-Dichloropropane	10 U	m-Dichlorobenzene	10 U
trans-1,3-Dichloropropene	10 U	o,p-Dichlorobenzene	10 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
None Detected	--

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-7

Client Designation 8336E-1006

Compound	Concentration (ppm)	Compound	Concentration (ppm)
N-Nitrosodimethylamine	10 U	Acenaphthene	10 U
Phenol	10 U	2,4-Dinitrophenol	50 U
Bis(2-chloroethyl) Ether	10 U	4-Nitrophenol	50 U
2-Chlorophenol	10 U	Dibenzofuran	10 U
1,3-Dichlorobenzene	10 U	2,4-Dinitrotoluene	10 U
1,4-Dichlorobenzene	10 U	2,6-Dinitrotoluene	10 U
Benzyl Alcohol	10 U	Diethyl Phthalate	10 U
1,2-Dichlorobenzene	10 U	4-Chlorophenyl Phenyl Ether	10 U
2-Methylphenol	10 U	Fluorene	50 U
Bis(2-chloroisopropyl) Ether	10 U	4-Nitroaniline	50 U
4-Methylphenol	10 U	4,6-Dinitro-2-methylphenol	10 U
N-Nitrosodipropylamine	10 U	N-Nitrosodiphenylamine	10 U
Hexachloroethane	10 U	4-Bromophenyl Phenyl Ether	10 U
Nitrobenzene	10 U	Hexachlorobenzene	10 U
Isophorone	10 U	Pentachlorophenol	50 U
2-Nitrophenol	10 U	Phenanthrene	10 U
2,4-Dimethylphenol	10 U	Anthracene	10 U
Benzoic Acid	50 U	Dibutyl Phthalate	10 U
Bis(2-chloroethoxy)methane	10 U	Fluoranthene	10 U
2,4-Dichlorophenol	10 U	Benzidine	100 U
1,2,4-Trichlorobenzene	10 U	Pyrene	10 U
Naphthalene	10 U	Butylbenzyl Phthalate	10 U
4-Chloroaniline	10 U	3,3'-Dichlorobenzidine	20 U
Hexachlorobutadiene	10 U	Benzo(a)anthracene	10 U
4-Chloro-3-methylphenol	10 U	Bis(2-ethylhexyl) Phthalate	5.5 J
2-Methylnaphthalene	10 U	Chrysene	10 U
Hexachlorocyclopentadiene	10 U	Dioctyl Phthalate	10 U
2,4,6-Trichlorophenol	10 U	Benzo(b)fluoranthene	10 U
2,4,5-Trichlorophenol	50 U	Benzo(k)fluoranthene	10 U
2-Chloronaphthalene	10 U	Benzo(a)pyrene	10 U
2-Nitroaniline	50 U	Indeno(1,2,3-cd)pyrene	10 U
Dimethyl Phthalate	10 U	Dibenzo(a,h)anthracene	10 U
Acenaphthylene	10 U	Benzo(g,h,i)perylene	10 U
3-Nitroaniline	50 U		

AnalytiKEM

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-7

Client Designation 8336E-1006

Compound Name	Estimated Concentration (ppm)
2-Methoxynaphthalene	20
Unknown Compound	55
Phthalic Anhydride	87
Aldol	890
Total Unknown Polynuclear Aromatics	1,600
Unknown Furan Isomer	2,400

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-7

Client Designation 8336E-1006

Compound	Concentration (ppm)	
alpha-BHC	10	U
beta-BHC	10	U
delta-BHC	10	U
gamma-BHC (Lindane)	10	U
Heptachlor	10	U
Aldrin	10	U
Heptachlor Epoxide	10	U
Endosulfan I	10	U
Dieldrin	10	U
4,4'-DDE	10	U
Endrin	10	U
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	10	U
Endrin Aldehyde	10	U
Chlordane	10	U
alpha-Chlordane	10	U
gamma-Chlordane	10	U
Toxaphene	10	U
Aroclor 1016	2.0	U
Aroclor 1221	2.0	U
Aroclor 1232	2.0	U
Aroclor 1242	2.0	U
Aroclor 1248	2.0	U
Aroclor 1254	2.0	U
Aroclor 1260	2.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-7

Client Designation 8336E-1006

Metals

Compound	Concentration (ppm)	
Aluminum	20	U
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	1.0	U
Calcium	160	
Chromium	130	
Cobalt	5.0	U
Copper	160	
Iron	770	
Lead	10	U
Magnesium	100	U
Manganese	11	
Mercury	40	U
Nickel	68	
Potassium	100	U
Selenium	50	U
Silver	4.0	U
Sodium	170,000	
Thallium	20	U
Vanadium	5.0	U
Zinc	28	
Sulfur	44,000	
Boron	5.0	U
Lithium	5.0	U
Molybdenum	2.0	U
Silicon	22	
Strontium	10	U
Tin	15	U
Titanium	6.1	
Zirconium	5.0	U

IV. Analytical Results (Cont'd)

Miscellaneous Parameters

AnalytiKEM Designation A80343-8

Client Designation 8336E-1007

Observations	Result
Number of Phases	One
Physical State	Liquid
Color	Golden Yellow

Solubility	Result
Water	S
Acetone	S
Hexane	S
Methylene Chloride	S

Spot Tests	Result
Water Reactivity	Neg.
Peroxide	Neg.
Oxidizer (H_2O)	Neg.
Bielstein	Neg.
Sulfide (H_2O)	Neg.
Cyanide (H_2O)	Neg.
Explosivity	Neg.
Ignitability	Neg.

General Chemistry

Parameter	Result
Cyanide, total, ppm	0.25 U
Reactivity - Sulfide, ppm	50 U
Reactivity - Cyanide, ppm	50 U
Flashpoint, closed cup, °F	>180
pH, Units	4.0
Oil & Grease, ppm	96,000
Water, %	0.1 U
Total Solids, %	99
Ash, %	1.0
Nitrate-N, ppm	13,000
Chloride, ppm	55
Total Organic Carbon, nonpurgeable, ppm	49,000
Heat of Combustion, BTU/lb.	13,000
Specific Gravity, units	0.88

AnalytiKEM

IV. Analytical Results (Cont'd)

Volatile Organics

AnalytiKEM Designation A80343-8

Client Designation 8336E-1007

Compound	Concentration (ppm)	Compound	Concentration (ppm)
Chloromethane	20 U	Trichloroethene	20 U
Bromomethane	20 U	Dibromochloromethane	20 U
Vinyl Chloride	20 U	1,1,2-Trichloroethane	20 U
Chloroethane	20 U	Benzene	20 U
Methylene Chloride	100	cis-1,3-Dichloropropene	20 U
2-Propanone (Acetone)	200	2-Chloroethyl Vinyl Ether	20 U
Carbon Disulfide	20 U	Bromoform	20 U
1,1-Dichloroethene	20 U	4-Methyl-2-pentanone (MIBK)	28
1,1-Dichloroethane	20 U	2-Hexanone	110
trans-1,2-Dichloroethene	20 U	Tetrachloroethene	15 J
Chloroform	20 U	1,1,2,2-Tetrachloroethane	20 U
1,2-Dichloroethane	20 U	Toluene	2,600
1,1,1-Trichloroethane	20 U	Chlorobenzene	20 U
2-Butanone (MEK)	20 U	Ethylbenzene	20 U
Carbon Tetrachloride	20 U	Styrene	20 U
Vinyl Acetate	20 U	m-Xylene	20 U
Bromodichloromethane	20 U	o,p-Xylene	20 U
1,2-Dichloropropane	20 U	m-Dichlorobenzene	20 U
trans-1,3-Dichloropropene	20 U	o,p-Dichlorobenzene	20 U

EPA/NIH/NBS Nontargetted Library Search - Volatiles

Compound Name	Estimated Concentration (ppm)
None Detected	--

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Semivolatile Organics

AnalytiKEM Designation A80343-8

Client Designation 8336E-1007

Compound	Concentration (ppm)	Compound	Concentration (ppm)
N-Nitrosodimethylamine	10 U	Acenaphthene	10 U
Phenol	10 U	2,4-Dinitrophenol	50 U
Bis(2-chloroethyl) Ether	10 U	4-Nitrophenol	50 U
2-Chlorophenol	10 U	Dibenzofuran	10 U
1,3-Dichlorobenzene	10 U	2,4-Dinitrotoluene	10 U
1,4-Dichlorobenzene	10 U	2,6-Dinitrotoluene	10 U
Benzyl Alcohol	10 U	Diethyl Phthalate	10 U
1,2-Dichlorobenzene	10 U	4-Chlorophenyl Phenyl Ether	10 U
2-Methylphenol	10 U	Fluorene	10 U
Bis(2-chloroisopropyl) Ether	10 U	4-Nitroaniline	50 U
4-Methylphenol	10 U	4,6-Dinitro-2-methylphenol	50 U
N-Nitrosodipropylamine	10 U	N-Nitrosodiphenylamine	10 U
Hexachloroethane	10 U	4-Bromophenyl Phenyl Ether	10 U
Nitrobenzene	10 U	Hexachlorobenzene	10 U
Isophorone	10 U	Pentachlorophenol	50 U
2-Nitrophenol	10 U	Phenanthrene	10 U
2,4-Dimethylphenol	10 U	Anthracene	10 U
Benzoic Acid	50 U	Dibutyl Phthalate	10 U
Bis(2-chloroethoxy)methane	10 U	Fluoranthene	10 U
2,4-Dichlorophenol	10 U	Benzidine	100 U
1,2,4-Trichlorobenzene	10 U	Pyrene	10 U
Naphthalene	10 U	Butylbenzyl Phthalate	10 U
4-Chloroaniline	10 U	3,3'-Dichlorobenzidine	20 U
Hexachlorobutadiene	10 U	Benzo(a)anthracene	10 U
4-Chloro-3-methylphenol	10 U	Bis(2-ethylhexyl) Phthalate	10 U
2-Methylnaphthalene	10 U	Chrysene	10 U
Hexachlorocyclopentadiene	10 U	Dioctyl Phthalate	10 U
2,4,6-Trichlorophenol	10 U	Benzo(b)fluoranthene	10 U
2,4,5-Trichlorophenol	50 U	Benzo(k)fluoranthene	10 U
2-Chloronaphthalene	10 U	Benzo(a)pyrene	10 U
2-Nitroaniline	50 U	Indeno(1,2,3-cd)pyrene	10 U
Dimethyl Phthalate	10 U	Dibenzo(a,h)anthracene	10 U
Acenaphthylene	10 U	Benzo(g,h,i)perylene	10 U
3-Nitroaniline	50 U		

AnalytiKEM

IV. Analytical Results (Cont'd)

EPA/NIH/NBS Nontargetted Library Search - Semivolatiles

AnalytiKEM Designation A80343-8

Client Designation 8336E-1007

Compound Name	Estimated Concentration (ppm)
2-Hexanone	560
Total Unknown Alkenes	690
Total Unknown Compounds	730
1,3,5-Cycloheptatriene	2,800
Total Unknown Polynuclear Aromatics	2,800

Note: Estimated concentration is calculated against the nearest eluting internal standard.

AnalytiKEM

IV. Analytical Results (Cont'd)

Pesticidal Compounds and Polychlorinated Biphenyls

AnalytiKEM Designation A80343-8

Client Designation 8336E-1007

Compound	Concentration (ppm)	
alpha-BHC	10	U
beta-BHC	10	U
delta-BHC	10	U
gamma-BHC (Lindane)	10	U
Heptachlor	10	U
Aldrin	10	U
Heptachlor Epoxide	10	U
Endosulfan I	10	U
Dieldrin	10	U
4,4'-DDE	10	U
Endrin	10	U
Endosulfan II	10	U
4,4'-DDD	10	U
Endosulfan Sulfate	10	U
4,4'-DDT	10	U
Endrin Aldehyde	10	U
Chlordane	10	U
alpha-Chlordane	10	U
gamma-Chlordane	10	U
Toxaphene	10	U
Aroclor 1016	2.0	U
Aroclor 1221	2.0	U
Aroclor 1232	2.0	U
Aroclor 1242	2.0	U
Aroclor 1248	2.0	U
Aroclor 1254	2.0	U
Aroclor 1260	2.0	U

AnalytiKEM

IV. Analytical Results (Cont'd)

Metals

AnalytiKEM Designation A80343-8

Client Designation 8336E-1007

Metals

Compound	Concentration (ppm)	
Aluminum	20	U
Antimony	10	U
Arsenic	40	U
Barium	20	U
Beryllium	0.50	U
Cadmium	1.0	U
Calcium	100	U
Chromium	5.0	U
Cobalt	5.0	U
Copper	5.0	U
Iron	10	U
Lead	10	U
Magnesium	100	U
Manganese	1.5	U
Mercury	40	U
Nickel	5.7	
Potassium	100	U
Selenium	50	U
Silver	5.5	
Sodium	220	
Thallium	20	U
Vanadium	5.0	U
Zinc	4.7	
Sulfur	88,000	
Boron	5.0	U
Lithium	5.0	U
Molybdenum	22	
Silicon	15	U
Strontium	10	U
Tin	15	U
Titanium	8.9	
Zirconium	5.0	U

AnalytiKEM

V. Quality Control Data

Miscellaneous Parameters

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked A80343-4

Parameter	Amount of Spike	Recovery MS	Recovery MSD
Cyanide †	50	98	126
Oil & Grease	50,000	85	100
Water †	25,000	126	127
Nitrate-N	2,000	129	129
Total Organic Carbon	5,000	59	69
Chloride	5,000	106	112
Units	(ug)	(%)	(%)

† Spike was performed on sample A80343-5.

AnalytiKEM

V. Quality Control Data (Cont'd)

Volatile Organics

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked - A80303-4

Parameter	Amount of Spike	Recovery MS	Recovery MSD
Chloromethane	0.25	74	73
Bromomethane	0.25	68	67
Vinyl Chloride	0.25	80	78
Chloroethane	0.25	86	87
Methylene Chloride	0.25	90	92
2-Propanone (Acetone)	0.25	110	113
Carbon Disulfide	0.25	84	86
1,1-Dichloroethene	0.25	93	93
1,1-Dichloroethane	0.25	90	91
trans-1,2-Dichloroethene	0.25	90	94
Chloroform	0.25	94	93
1,2-Dichloroethane	0.25	91	92
2-Butanone (MEK)	0.25	110	108
1,1,1-Trichloroethane	0.25	96	95
Carbon Tetrachloride	0.25	90	96
Vinyl Acetate	0.25	99	99
Bromodichloromethane	0.25	94	97
1,2-Dichloropropane	0.25	100	100
trans-1,3-Dichloropropene	0.25	95	96
Trichloroethene (TCE)	0.25	95	97
Dibromochloromethane	0.25	99	95
1,1,2-Trichloroethane	0.25	99	102
Benzene	0.25	95	94
cis-1,3-Dichloropropene	0.25	96	100
2-Chloroethyl Vinyl Ether	0.25	94	95
Bromoform	0.25	94	95
4-Methyl-2-pentanone (MIBK)	0.25	94	101
2-Hexanone	0.25	93	91
Tetrachloroethene	0.25	110	111
1,1,2,2-Tetrachloroethane	0.25	95	92
Toluene	0.25	90	94
Chlorobenzene	0.25	92	93
Ethylbenzene	0.25	94	95
Styrene	0.25	92	92
m-Xylene	0.25	98	94
o,p-Xylene	0.25	95	95
m-Dichlorobenzene	0.25	91	94
o,p-Dichlorobenzene	0.25	94	93
Units	(ug)	(%)	(%)

V. Quality Control Data (Cont'd)

Semivolatile Organics

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked ~~A80058-1~~ A80399-8

Parameter	Amount of Spike	Recovery MS	MSD
1,4-Dichlorobenzene	100	42	51
N-Nitrosodipropylamine	100	45	44
1,2,4-Trichlorobenzene	100	60	70
Acenaphthene	100	57	58
2,4-Dinitrotoluene	100	45	31
Pyrene	100	39	35
Phenol	200	49	48
2-Chlorophenol	200	55	56
4-Chloro-3-methylphenol	200	49	45
4-Nitrophenol	200	54	44
Pentachlorophenol	200	77	80
Units	(ug)	(%)	(%)

† Spike performed on DI Water.

V. Quality Control Data (Cont'd)

Pesticides and Polychlorinated Biphenyls

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked - A20690-6

Parameter	Amount of Spike	Recovery MS	Recovery MSD
alpha-BHC	0.2	165	154
beta-BHC	0.2	121	154
gamma-BHC	0.2	157	157
Aldrin	0.2	141	138
4,4'-DDE	0.5	115	114
Endrin	0.5	114	118
4,4'-DDD	0.5	118	110
alpha-Chlordane	80	140	141
gamma-Chlordane	80	132	132
Aroclor 1242 †	20	99	102
Units	(ug)	(%)	(%)

† Spike performed on sample A20569-6.

AnalytiKEM

V. Quality Control Data (Cont'd)

Metals

Matrix Spike/Matrix Spike Duplicate Recovery Data

Sample Spiked A80343-6

Parameter	Amount of Spike	Recovery MS	Recovery MSD
Alumimum	500	78	77
Antimony	500	86	82
Arsenic	500	92	100
Barium	500	82	81
Beryllium	500	82	80
Cadmium	500	85	83
Calcium	500	77	80
Chromium	500	*	*
Chromium †	500	90	—
Cobalt	500	78	77
Copper	500	86	85
Iron	500	51	55
Iron †	500	86	—
Lead	500	74	74
Lead †	500	88	--
Magnesium	500	76	78
Manganese	500	80	80
Mercury	500	85	84
Nickel	500	80	77
Potassium	500	101	105
Selenium	500	106	105
Silver	500	47	45
Silver †	500	42	--
Sodium	500	*	*
Sodium †	500	120	—
Thallium	500	71	73
Vanadium	500	80	81
Zinc	500	84	81
Sulfur	500	*	*
Sulfur †	500	101	--
Boron	500	78	76
Lithium	500	94	93
Molybdenum	500	72	74
Molybdenum †	500	80	--
Silicon	500	73	73
Strontium	500	79	81
Tin ††	500	101	101
Titanium	500	78	79
Zirconium	500	80	78
Units	(ug)	(%)	(%)

† Spike performed on DI Water.
†† Spike performed on sample A80343-5.

* Not recovered due to high amount of analyte in sample.

OHM Corporation

Environmental Testing and Certification Corp.

T445-00-097

COPY

ANALYTICAL REPORT

CLIENT: USEPA Region II
Jersey City, NJ

ATTN: B. Panning
Carl Tellegrino, OSC

PROJECT NUMBER: 8336E **SAMPLE TYPE:** Solid

ANALYSIS PERFORMED:

RCRA Herbicides and Metals

(Sample: P)

DATE COMPLETED: 1/14/90 **DATE RECEIVED:** 1/12/90

The analyses and data interpretation that form the basis of this report was prepared under the direct supervision and control of the undersigned who is solely responsible for the contents and conclusions therein.

Reviewed and Approved by: R. J. Schoek

R. J. Schoek, Mgr., ETC-Findlay Laboratory

Date: 1/15/90

16406 U.S. Route 224 East ■ P.O. Box 1404 ■ Findlay, Ohio 45839-1404 ■ 419-423-3526

PROJECT 8336E

SUMMARY REPORT OF ANALYTICAL SERVICES

1. INTRODUCTION

ETC-Findlay Laboratory received 1 sample from OHM Corporation (OHMC). This sample was acquired by their technical personnel and transferred to the laboratory complete with Chain-of-Custody Record(s), a copy of which is attached for reference. This sample was analyzed for the following:

Herbicides

Solid sample leachates were analyzed for herbicides according to Standard Methods for the Examination of Water and Wastewater, 16th edition, 1985; Method 509B.

Metals

Samples were prepared and analyzed according to USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW-846, 2nd edition, July 1982. Samples were prepared by Method 3010, 3030, 3050, or 1310 as appropriate for the following metal: arsenic. Sample analyses for this metal was performed according to Method 6010, Inductively Coupled Plasma Method (SW-846 Proposed Sampling and Analytical Methodologies, 1984).

2. ANALYTICAL RESULTS

The following tables detail the analytical results for sample #8336E-P.

APPENDIX A

PROJECT 8336E TABLES

93

TABLE 1: QUANTITATIVE RESULTS

JAN 15, 1990

RCRA/TCLP Herbicide Compounds - GC Analysis (JR33)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Hours
JD5390	OHM CORP., NORTHEAST REGIONAL	008336E	S P	900111		0

Compound	Results				
	Sample Concen. mg/kg	MDL mg/kg	Blank Data mg/kg	Batch #	
2,4,5-TP (Silvex)	ND	9.76	ND	QCS0260	
2,4-D	165	9.76	.457	QCS0260	

JAN 13, 1990

TABLE 1: QUANTITATIVE RESULTS

METALS ANALYSIS (JR07)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Hours
JD5390	OHM CORP., NORTHEAST REGIONAL	008336E	S P	900111		0

Compound	Results				
	Sample Concen. mg/kg	MDL mg/kg	Blank Data mg/kg	Batch #	
Arsenic	126	5.00	ND	Q921	

APPENDIX B

PROJECT 8336E
QUALITY ASSURANCE DATA

NOTE: The matrix spike and matrix spike duplicate were diluted due to the elevated level of 2,4-D present in the unspiked sample.

TABLE 1: QUALITY ASSURANCE DATA

JAN 15, 1990

RCRA/TCLP Herbicide Compounds - GC Analysis (JR33)

Chain of Custody Data Required for ETC Data Management Summary Reports

See Below

ETC Batch No.

Compound	QC Blank and Spiked Data			QC Matrix Spike			QC Duplicate			
	Blank Data mg/kg	Concen. Added mg/kg	% Recov	Unspiked Sample mg/kg	Concen. Added mg/kg	% Recov	First mg/kg	Second mg/kg	RPD	Batch #
2,4,5-TP (Silvex)	ND	.833	115	ND	.817	0	ND	ND	0	QCS0260
2,4-D	.457	.980	67	165	.961	0	80.2	136	51	QCS0260

TABLE 1: QUALITY ASSURANCE DATA

METALS ANALYSIS (JR07)

JAN 13, 1990

Chain of Custody Data Required for ETC Data Management Summary Reports

See Below

ETC Batch No.

Compound	QC Blank and Spiked Data			QC Matrix Spike			QC Duplicate			
	Blank Data mg/kg	Concen. Added mg/kg	% Recov	Unspiked Sample mg/kg	Concen. Added mg/kg	% Recov	First mg/kg	Second mg/kg	RPD	Batch #
Arsenic	ND	50.0	89	7.13	50.0	73	43.6	43.5	.2	Q921

OHM Corporation

CHAIN-OF-CUSTODY RECORD

Form 0019
Field Technical Services
Rev. 08/89

No. 80406

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME:	PROJECT LOCATION: Jersey City, NJ
PROJ. NO.: 8336E	PROJECT CONTACT: Lonnie Gunn
PROJECT TELEPHONE NO.: 609-443-2500	
CLIENT'S REPRESENTATIVE: EPA	PROJECT MANAGER/SUPERVISOR: Lonnie Gunn

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	Arsenic Content	Silvex (Pesticide)							REMARKS
1	P	1/11/90		X		Brown solid sand/paper/glass	1-32oz	X								screened unknowns
2																
3																
4																
5																
6																
7																
8																
9																
10																

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	01	M Heard	Fed-X	1/11	
2	1	Fed-ex 4609460???	[signature]	1-12-90	1100
3					
4					

REMARKS

Michael J. Heard
SAMPLER'S SIGNATURE

LAB COPY

DOW CORNING CORPORATION
MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 772 WATER REPELLENT
EMERGENCY TELEPHONE NO. (517) 496-5900

SECTION I - GENERAL INFORMATION

MANUFACTURER'S NAME: DOW CORNING CORPORATION
ADDRESS: SOUTH SAGINAW ROAD, MIDLAND MI 48686

PROPER SHIPPING NAME(49CFR 172.101): ALKALINE CORROSIVE LIQUID, N.O.S.
D.O.T. HAZARD NAME(49CFR 172.101): SODIUM SILICONATE
D.O.T. ID NO(49CFR 172.101): NA 1719
D.O.T. HAZARD CLASS(49CFR 172.101): CORROSIVE MATERIAL
RCRA HAZARD CLASS(40CFR 261)(IF DISCARDED): CORROSIVE (D002)
E.P.A. PRIORITY POLLUTANTS(40CFR 122.53): NONE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION - 704
HEALTH (NFPA): 3 FLAMMABILITY (NFPA): 0 REACTIVITY (NFPA): 0
CAS NO: MIXTURE DOW CORNING WARNING CODE: NOT USED
GENERIC DESCRIPTION: SODIUM SILICONATE IN WATER

SECTION II - HAZARDOUS INGREDIENTS AS DEFINED IN 29 CFR 1910.1200 (CARCINOGENS IDENTIFIED WITH AN ASTERISK *)

CAS NO.	INGREDIENT	WT.%	EXPOSURE LIMITS
016589438	SODIUM SILICONATE	32	DOW CORNING RECOMMENDS SAME LIMITS AS FOR SODIUM HYDROXIDE. OSHA PEL: TWA 2 MG/M3. ACGIH TLV: 2 MG/M3 CEILING

SECTION III - EFFECTS OF OVEREXPOSURE

EYE: DIRECT CONTACT BURNS EYES WITH POSSIBLE PERMANENT INJURY, EVEN BLINDNESS.

SKIN: BURNS SEVERELY UPON SHORT PERIODS OF CONTACT. OVEREXPOSURE MAY INJURE INTERNALLY IF ABSORBED.

INHALATION: MIST MAY IRRITATE NOSE AND THROAT SERIOUSLY, DEPENDING ON CONCENTRATION AND DURATION OF EXPOSURE, EVEN CAUSE DEATH.

ORAL: SMALL AMOUNTS TRANSFERRED TO THE MOUTH BY FINGERS DURING USE ETC., SHOULD NOT INJURE. SWALLOWING LARGE AMOUNTS MAY INJURE SERIOUSLY.

COMMENTS: NO KNOWN ADVERSE CHRONIC HEALTH EFFECTS, BUT UNNECESSARY EXPOSURE TO ANY CHEMICAL SHOULD BE AVOIDED.
THIS PRODUCT, AS WITH ANY CHEMICAL, MAY ENHANCE ALLERGIC CONDITIONS ON CERTAIN PEOPLE. WE DO NOT KNOW OF ANY MEDICAL CONDITIONS THAT MIGHT BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

DOW CORNING CORPORATION
MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 772 WATER REPELLENT

SECTION IV - EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH IMMEDIATELY WITH WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.

SKIN: FLUSH IMMEDIATELY WITH WATER FOR 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.

INHALATION: REMOVE TO FRESH AIR. GET IMMEDIATE MEDICAL ATTENTION. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

ORAL: GET IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING.

COMMENTS: TREAT SAME AS FOR SODIUM HYDROXIDE.

SECTION V - FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): OPEN/CLOSED - NONE
AUTOIGNITION: NOT DETERMINED
FLAMMABILITY LIMITS IN AIR : LOWER:N.A. UPPER:N.A.

EXTINGUISHING MEDIA: WATER WATER FOG CO2 DRY CHEMICAL FOAM OTHER *

SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE - DOES NOT BURN.

COMMENTS: N.A. - NOT APPLICABLE. *EXTINGUISHING MEDIA NOT APPLICABLE.

SECTION VI - PHYSICAL DATA

BOILING POINT(AT 760 MM HG): 212F/100C
SPECIFIC GRAVITY (AT 77 DEG F/25 DEG C): 1.2
MELTING POINT: NOT DETERMINED
VAPOR PRESSURE (AT 77 DEG F/25 DEG C): 24 MM (WATER)
VAPOR DENSITY (AIR = 1 AT 77 DEG F/25 DEG C): THAT OF MOIST AIR
PERCENT VOLATILE BY WEIGHT (%): 68 (WATER)
EVAPORATION RATE (ETHER = 1): LESS THAN 1
SOLUBILITY IN WATER(%): 100
ODOR, APPEARANCE, COLOR: "CAUSTIC" ODOR, LIQUID, SOME COLOR

NOTE: THE ABOVE INFORMATION IS NOT INTENDED FOR USE IN PREPARING PRODUCT SPECIFICATIONS. CONTACT DOW CORNING BEFORE WRITING SPECIFICATIONS.

DOW CORNING CORPORATION
MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 772 WATER REPELLENT

SECTION VII - REACTIVITY DATA

STABILITY: STABLE

INCOMPATABILITY(MATERIAL TO AVOID): OXIDIZING MATERIAL CAN CAUSE A REACTION.

CONDITIONS TO AVOID: NOT APPLICABLE

HAZARDOUS DECOMPOSITION PRODUCTS: SODIUM COMPOUNDS, SILICON DIOXIDE, CARBON DIOXIDE, AND TRACES OF INCOMPLETELY BURNED CARBON PRODUCTS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NOT APPLICABLE

COMMENTS: NONE

SECTION VIII - SPILL, LEAK, MAINTENANCE/REPAIR AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: USE ABSORBENT MATERIAL TO COLLECT AND CONTAIN FOR SALVAGE OR DISPOSAL.

PROTECTIVE EQUIPMENT:
EYES: USE CHEMICAL WORKER GOGGLES.

SKIN: AVOID CONTACT BY USING IMPERVIOUS PROTECTIVE CLOTHING: RUBBER OR PLASTIC GLOVES, APRONS, BOOTS, ETC. USE PROTECTIVE GLOVES AS A MINIMUM AND WASH IMMEDIATELY UPON ANY DETECTABLE CONTACT.

INHALATION: USE RESPIRATORY PROTECTION UNLESS LOCAL EXHAUST VENTILATION IS ADEQUATE OR AIR SAMPLING DATA SHOW EXPOSURES ARE WITHIN TLV AND PEL GUIDELINES.

WASTE DISPOSAL METHOD: DOW CORNING SUGGESTS THAT ALL LOCAL, STATE AND FEDERAL REGULATIONS CONCERNING HEALTH AND POLLUTION BE REVIEWED TO DETERMINE APPROVED DISPOSAL PROCEDURES. CONTACT DOW CORNING IF THERE ARE ANY DISPOSAL QUESTIONS.

D.O.T. (49CFR 171.8)/E.P.A. (40CFR 117) SPILL REPORTING INFORMATION
HAZARDOUS SUBSTANCE: NONE REPORTABLE QUANTITY: NOT APPLICABLE
CONCENTRATION OF HAZARDOUS SUBSTANCE: NOT APPLICABLE
REPORTABLE QUANTITY OF PRODUCT: NOT APPLICABLE

COMMENTS: NONE

DOW CORNING CORPORATION
MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 772 WATER REPELLENT

SECTION IX - ROUTINE HANDLING PRECAUTIONS

PROTECTIVE EQUIPMENT:
EYES: USE CHEMICAL WORKER GOGGLES.

SKIN *: AVOID CONTACT BY USING IMPERVIOUS PROTECTIVE CLOTHING: RUBBER OR PLASTIC GLOVES, APRONS, BOOTS, ETC. USE PROTECTIVE GLOVES AS A MINIMUM AND WASH PROMPTLY UPON ANY DETECTABLE CONTACT.

INHALATION: USE RESPIRATORY PROTECTION UNLESS LOCAL EXHAUST VENTILATION IS ADEQUATE OR AIR SAMPLING DATA SHOW EXPOSURES ARE WITHIN TLV AND PEL GUIDELINES.

VENTILATION:
LOCAL EXHAUST: RECOMMENDED IF SPRAY OR MIST IS CREATED.
MECHANICAL (GENERAL): RECOMMENDED

SUITABLE RESPIRATOR: DUST TYPE.

THESE PRECAUTIONS ARE FOR ROOM TEMPERATURE HANDLING; USE AT ELEVATED TEMPERATURES, OR AEROSOL/SPRAY APPLICATIONS, MAY REQUIRE ADDED PRECAUTIONS.
* GOOD PRACTICE REQUIRES THAT GROSS AMOUNT OF ANY CHEMICAL BE REMOVED FROM THE SKIN AS SOON AS PRACTICAL, ESPECIALLY BEFORE EATING OR SMOKING.
COMMENTS: AVOID ALL CONTACT. DO NOT BREATHE MISTS. DO NOT TAKE INTERNALLY.

SECTION X - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: MATERIAL IS VERY CORROSIVE TO HUMAN TISSUE. USE EXTREME CARE. HANDLE LIKE STRONG CAUSTIC SOLUTION.

OTHER PRECAUTIONS: NONE KNOWN TO DOW CORNING.
COMMENTS: NONE

THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

PREPARED BY: JACK L. SHENEBERGER
LAST REVISION DATE: MAY 10, 1988
PREVIOUS REVISION DATE: OCTOBER 20, 1986
DATE: JANUARY 08, 1990

(R) INDICATES REGISTERED OR TRADEMARK OF THE DOW CORNING CORPORATION.

DOW CORNING CORPORATION
MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 75 EMULSION

EMERGENCY TELEPHONE NO. (517) 496-5900

SECTION I - GENERAL INFORMATION

MANUFACTURER'S NAME: DOW CORNING CORPORATION
ADDRESS: SOUTH SAGINAW ROAD, MIDLAND MI 48686

PROPER SHIPPING NAME(49CFR 172.101): FLAMMABLE LIQUID NOS
D.O.T. HAZARD NAME(49CFR 172.101): TOLUENE, TETRACHLOROETHYLENE
D.O.T. ID NO(49CFR 172.101): UN 1993
D.O.T. HAZARD CLASS(49CFR 172.101): FLAMMABLE LIQUID
RCRA HAZARD CLASS(40CFR 261)(IF DISCARDED): IGNITABLE (D001), F002, F005.
E.P.A. PRIORITY POLLUTANTS(40CFR 122.53): TOLUENE, TETRACHLOROETHYLENE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION - 704
HEALTH (NFPA): 1 FLAMMABILITY (NFPA): 3 REACTIVITY (NFPA): 0
CAS NO: MIXTURE DOW CORNING WARNING CODE: NOT USED
GENERIC DESCRIPTION: SILICONE EMULSION

SECTION II - HAZARDOUS INGREDIENTS AS DEFINED IN 29 CFR 1910.1200 (CARCINOGENS IDENTIFIED WITH AN ASTERISK *)

CAS	INGREDIENT	WT.%	EXPOSURE LIMITS
000108883	TOLUENE	3	OSHA PEL: TWA 200 PPM, CEIL. 300 PPM MAX. 500 PPM ACGIH TLV: TWA 100 PPM, STEL 150 PPM
000127184	*TETRACHLOROETHYLENE	1	OSHA PEL: TWA 100 PPM, CEIL. 200 PPM MAX. 300 PPM ACGIH TLV: TWA 50 PPM, STEL 200 PPM
063148572	METHYLHYDROGEN POLY-SILOXANE	24	NOT ESTABLISHED

SECTION III - EFFECTS OF OVEREXPOSURE

EYE: DIRECT CONTACT MAY CAUSE TEMPORARY DISCOMFORT WITH MILD REDNESS AND DRYNESS SIMILAR TO WINDBURN.

SKIN: A SINGLE RELATIVELY SHORT EXPOSURE CAUSES NO KNOWN ADVERSE EFFECT. SEVERAL REPEATED PROLONGED EXPOSURES (24 TO 48 HOURS MAY IRRITATE.

INHALATION: SHORT VAPOR EXPOSURE MAY CAUSE DROWSINESS AND IRRITATE NOSE AND THROAT. VAPORS MAY INJURE BLOOD, LUNGS, LIVER, KIDNEYS, AND NERVOUS SYSTEM. DEGREE OF EFFECTS DEPENDS ON CONCENTRATION AND LENGTH OF EXPOSURE.

ORAL: SMALL AMOUNTS TRANSFERRED TO THE MOUTH BY FINGERS DURING USE, ETC., SHOULD NOT INJURE. SWALLOWING LARGE AMOUNTS MAY INJURE SLIGHTLY.

COMMENTS: TOXICOLOGY STUDIES WITH LABORATORY ANIMALS HAVE SHOWN EVIDENCE OF CANCER IN RATS AND MICE EXPOSED TO PERCHLOROETHYLENE VAPORS AT 100 TO 400 PPM CONCENTRATIONS FOR PROLONGED TIMES.
PROLONGED TOLUENE OVEREXPOSURES MAY INJURE BLOOD, LUNGS, LIVER, KIDNEYS, AND NERVOUS SYSTEM, AND MAY AGGRAVATE EXISTING EYE, SKIN, AND RESPIRATORY DISORDERS.

MATL NAME: DOW CORNING(R) 75 EMULSION

SECTION IV - EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH WITH WATER.

SKIN: WIPE OFF AND FLUSH WITH WATER.

INHALATION: REMOVE TO FRESH AIR. GET MEDICAL ATTENTION IF ILL EFFECTS PERSIST.

ORAL: GET MEDICAL ATTENTION IF LARGE QUANTITIES SWALLOWED. DO NOT INDUCE VOMITING.

COMMENTS: IF VOMITING OCCURS, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO LUNGS.

SECTION V - FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): CLOSED CUP 90F/32C
AUTOIGNITION: NOT DETERMINED
FLAMMABILITY LIMITS IN AIR : LOWER:N.D. UPPER:N.D.

EXTINGUISHING MEDIA: WATER WATER FOG X CO2 X DRY CHEMICAL X FOAM X OTHER

SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS

UNUSUAL FIRE AND EXPLOSION HAZARDS: SPONTANEOUS COMBUSTION MAY OCCUR FROM CONTACT WITH HOT ABSORBENT MATERIAL SUCH AS PIPE OR OVEN INSULATION.

COMMENTS: N.D. - NOT DETERMINED. HAZARDOUS CHLORINE COMPOUNDS FORM DURING COMBUSTION.

SECTION VI - PHYSICAL DATA

BOILING POINT(AT 760 MM HG): APPROX. 212F/100C
SPECIFIC GRAVITY (AT 77 DEG F/25 DEG C): 1.0
MELTING POINT: APPROX. 32F/0C
VAPOR PRESSURE (AT 77 DEG F/25 DEG C): NOT DETERMINED
VAPOR DENSITY (AIR = 1 AT 77 DEG F/25 DEG C): NOT DETERMINED
PERCENT VOLATILE BY WEIGHT (%): APPROX. 75 (INCLUDES WATER)
EVAPORATION RATE (ETHER = 1): LESS THAN 1
SOLUBILITY IN WATER(%): GREATER THAN 90%
ODOR, APPEARANCE, COLOR: SOME ODOR, LIQUID, WHITE COLOR

NOTE: THE ABOVE INFORMATION IS NOT INTENDED FOR USE IN PREPARING PRODUCT SPECIFICATIONS. CONTACT DOW CORNING BEFORE WRITING SPECIFICATIONS.

MATERIAL SAFETY DATA SHEET

MATL NAME: DOW CORNING(R) 75 EMULSION

SECTION VII REACTIVITY DATA

STABILITY: STABLE

INCOMPATABILITY(MATERIAL TO AVOID): OXIDIZING MATERIAL CAN CAUSE A REACTION. ALUMINUM AND ALUMINUM ALLOYS.

CONDITIONS TO AVOID: ACIDIC OR BASIC MATERIALS AND MANY METALS OR METALLIC COMPOUNDS, WHEN IN CONTACT WITH PRODUCT, LIBERATE FLAMMABLE HYDROGEN GAS.

HAZARDOUS DECOMPOSITION PRODUCTS: CHLORINE COMPOUNDS, SILICON DIOXIDE, CARBON DIOXIDE, AND TRACES OF INCOMPLETELY BURNED CARBON PRODUCTS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NOT APPLICABLE

COMMENTS: EXPOSURE TO OPEN FLAMES, WELDING ARCS CAN CAUSE THERMAL DECOMPOSITION PRODUCING HYDROGEN CHLORIDE AND PHOSGENE.

SECTION VIII - SPILL, LEAK, MAINTENANCE/REPAIR AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: USE ABSORBENT MATERIAL TO COLLECT AND CONTAIN FOR SALVAGE OR DISPOSAL. REMOVE ALL SOURCES OF IGNITION AND WEAR PROPER PROTECTION EQUIPMENT.

PROTECTIVE EQUIPMENT:
EYES: USE PROPER PROTECTION -- SAFETY GLASSES, AS A MINIMUM.

SKIN: WASHING AT MEALTIME AND END OF SHIFT IS ADEQUATE.

INHALATION: USE RESPIRATORY PROTECTION UNLESS LOCAL EXHAUST VENTILATION IS ADEQUATE OR AIR SAMPLING DATA SHOW EXPOSURES ARE WITHIN TLV AND PEL GUIDELINES.

WASTE DISPOSAL METHOD: DOW CORNING SUGGESTS THAT ALL LOCAL,STATE AND FEDERAL REGULATIONS CONCERNING HEALTH AND POLLUTION BE REVIEWED TO DETERMINE APPROVED DISPOSAL PROCEDURES. CONTACT DOW CORNING IF THERE ARE ANY DISPOSAL QUESTIONS.

D.O.T. (49CFR 171.8)/E.P.A. (40CFR 117) SPILL REPORTING INFORMATION
HAZARDOUS SUBSTANCE: SEE BELOW REPORTABLE QUANTITY: SEE BELOW
CONCENTRATION OF HAZARDOUS SUBSTANCE: SEE BELOW
REPORTABLE QUANTITY OF PRODUCT: SEE BELOW

COMMENTS:

HAZ. SUBST.	REP. QTY.	CONC.	R.Q. OF PRODUCT.
TOLUENE	1000 LBS.	3%	33,330 LBS.
TETRACHLOROETHYLENE	1 LB.	1%	100 LBS.

RELEASES OF REPORTABLE QUANTITIES OF THE ABOVE HAZARDOUS SUBSTANCES BEYOND FACILITY BOUNDARIES MAY BE REPORTABLE TO STATE OR LOCAL EMERGENCY RESPONSE AUTHORITIES UNDER TITLE III OF "SARA," THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986. SEE 40CFR, PART 300, SUBPART I - EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW.

MATL NAME: DOW CORNING(R) 75 EMULSION

SECTION IX - ROUTINE HANDLING PRECAUTIONS

PROTECTIVE EQUIPMENT:
EYES: USE PROPER PROTECTION -- SAFETY GLASSES, AS A MINIMUM.

SKIN *: WASHING AT MEALTIME AND END OF SHIFT IS ADEQUATE.

INHALATION: USE RESPIRATORY PROTECTION UNLESS LOCAL EXHAUST VENTILATION IS ADEQUATE OR AIR SAMPLING DATA SHOW EXPOSURES ARE WITHIN TLV AND PEL GUIDELINES.

VENTILATION:
LOCAL EXHAUST: RECOMMENDED
MECHANICAL (GENERAL): RECOMMENDED

SUITABLE RESPIRATOR: ORGANIC VAPOR TYPE.

THESE PRECAUTIONS ARE FOR ROOM TEMPERATURE HANDLING; USE AT ELEVATED TEMPERATURES, OR AEROSOL/SPRAY APPLICATIONS, MAY REQUIRE ADDED PRECAUTIONS.
* GOOD PRACTICE REQUIRES THAT GROSS AMOUNT OF ANY CHEMICAL BE REMOVED FROM THE SKIN AS SOON AS PRACTICAL, ESPECIALLY BEFORE EATING OR SMOKING.
COMMENTS: SEE SEC. X OTHER PRECAUTIONS AND COMMENTS. AVOID BREATHING VAPORS. USE ONLY WITH ADEQUATE VENTILATION.

SECTION X - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP FROM FREEZING. KEEP CONTAINER CLOSED AND AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

OTHER PRECAUTIONS: UNCATALYZED OR CATALYZED SOLUTIONS OF PRODUCT EVOLVE MINUTE QUANTITIES OF HYDROGEN GAS. DON'T REPACKAGE OR STORE IN UNVENTED CONTAINERS. VENTILATE WORK AREA TO PREVENT THE ACCUMULATION OF GAS OR SOLVENT VAPORS.
COMMENTS: THE CHLORINATED SOLVENT IN DOW CORNING(R) 75 EMULSION MAY REACT CHEMICALLY WITH ALUMINUM IN CONFINED SPACE CREATING A POTENTIAL EXPLOSION HAZARD. ALUMINUM SHOULD NOT BE USED AS A MATERIAL OF CONSTRUCTION FOR EQUIPMENT SUCH AS PUMPS, VALVES, LINES, SPRAY EQUIPMENT AND TANKS.

THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

PREPARED BY: JACK L. SHENEBERGER
LAST REVISION DATE: MARCH 14, 1988
PREVIOUS REVISION DATE: NOVEMBER 23, 1987
DATE: JANUARY 08, 1990

(R) INDICATES REGISTERED OR TRADEMARK OF THE DOW CORNING CORPORATION.

Form Approved
Budget Bureau No. 44-R1387
Approval Expires April 30, 1971

DOW CORNING

Form No. LSB-005-4
May 1968

Update 11/76

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME: DOW CORNING CORPORATION	EMERGENCY TELEPHONE NO.: (517) 496-5900
ADDRESS (Number, Street, City, State, and ZIP Code): South Saginaw Rd., Midland, Michigan 48640	
CHEMICAL NAME AND SYNONYMS:	TRADE NAME AND SYNONYMS: DOW CORNING® C-600 Coupler
CHEMICAL FAMILY:	FORMULA:

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Methanol	≈30	200PPM

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	150	SPECIFIC GRAVITY (H_2O=1)	≈1.0
VAPOR PRESSURE (mm Hg.)	100	PERCENT VOLATILE BY VOLUME (%)	>50
VAPOR DENSITY (AIR=1)	>1	EVAPORATION RATE (Ether =1)	<1
SOLUBILITY IN WATER	>50		

APPEARANCE AND ODOR: Liquid. "Alcohol" odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): Closed cup ≈60°F	FLAMMABLE LIMITS	Lel: 6.0	Uel: 36.5

EXTINGUISHING MEDIA: CO_2 or foam

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

C-600

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
200 PPM

EFFECTS OF OVEREXPOSURE
May cause slight anesthesia, headaches, etc. May cause death or blindness if swallowed

EMERGENCY AND FIRST AID PROCEDURES
Inhalation - remove to fresh air. Obtain medical attention. Skin and eyes - flush with water. Oral - swallowed, induce vomiting. Obtain medical attention.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY (Materials to avoid)
Oxidizing Material

HAZARDOUS DECOMPOSITION PRODUCTS
Nitrogen products, SiO_2, CO_2 and traces of incompletely burned carbon products

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Mop, wipe or soak up with absorbent material using proper protective equipment.

WASTE DISPOSAL METHOD
Can be burned in accordance with local regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)
Organic vapor type

VENTILATION	LOCAL EXHAUST		SPECIAL
	MECHANICAL (General)	X	OTHER

PROTECTIVE GLOVES Rubber or plastic	EYE PROTECTION Safety glasses

OTHER PROTECTIVE EQUIPMENT
As required to protect skin and eyes.

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Same as for any flammable product. Use reasonable care.

OTHER PRECAUTIONS

108

PREPARED BY L. VanVolkinburg

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: MAR 5 1990

SUBJECT: Request for Ceiling Increase for the CERCLA Removal Action at the Duffield Avenue Trailer Site, in Jersey City, New Jersey
ACTION MEMORANDUM

FROM: John Higgins, On-Scene Coordinator
Response and Prevention Branch

TO:
Constantine Sidamon-Eristoff
Regional Administrator

THRU: Stephen D. Luftig, Director K. Callahan
Emergency and Remedial Response Division

This will authorize an increase in Trust Fund monies for the removal action at Duffield Avenue Trailer in Jersey City, New Jersey. I request an increase of $40,000.00 to the mitigation contracting ceiling. This will raise the total project ceiling for this project to $300,000.00. Attached is the original Action Memorandum approved by Stephen D. Luftig on January 23, 1990.

An increase in funding for this project is needed for additional costs that would be incurred for the dismantling and disposal of DDT-contaminated floor boards of the abandoned trailer. Upon completion of site activities, the inside walls and floors of the trailer were decontaminated and wipe samples had been taken for analysis. Analytical results revealed elevated levels of 4-4 DDT. Such disposal activities would include the tearing of the floor boards and side walls from the trailer, shredding these on-site for maximum drum capacity efficiency, and incineration for disposal.

Additional costs, above original anticipated ceiling amounts, resulted from the discovery of lab-packed drums in the trailer early in the operation. The labor-intensive handling and treatment of these materials required site activities to be extended for a one week period. Additionally, unanticipated costs were incurred by the inability of the disposal facility to accept four drums of hazardous waste material found in this trailer.

The original ceilings on this project were as follows:

Mitigation Ceiling	$202,000
Intramural & TAT Costs	$ 45,000
Total Project Ceiling	$247,000

The new project ceilings are modified as follows:

Mitigation Ceiling	$270,000
Intramural & TAT Costs	$ 30,000
Total Project Ceiling	$300,000

This site is not listed on the National Priorities List (NPL).

Please indicate your approval and authorization of additional funding for the Duffield Avenue Trailer Site, Jersey City, New Jersey, per your authority pusuant to Assistant Administrator J. Winston Porter's May 25, 1988, Redelegation Memorandum, Delegation Number R-14-1-A.

Attachment

Approved: _____ Date: 3/7/90

Disapproved: _____ Date: _____

cc: (After approval is obtained)

S. Luftig, 2ERR
K. Callahan, 2ERR-DD
R. Salkie, 2ERR-ADREPP
B. Sprague, 2ERR-RPB
J. Frisco, 2ADNJP
J. Marshall, 2OEP
D. Karlen, 2ORC-NJSUP
R. Gherardi, 2OPM-FIN
H. Crump, OS-210
A. Farro, NJDEP
C. Moyik, 2ERRD-PS
L. Guarneiri, OS-210
D. Henne, TATL
P. McKechnie, 2IG
J. Rosianski, 2OEP
S. Anderson, PM-214F (Express Mail)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: JAN 23 1990

SUBJECT: Request for Rapid Authorization of CERCLA Removal Action Monies for the Duffield Avenue Trailer, Jersey City, Hudson County, New Jersey - ACTION MEMORANDUM

FROM: John Higgins, On-Scene Coordinator
Response and Prevention Branch

TO: Stephen D. Luftig, Director
Emergency and Remedial Response Division

THRU: Richard C. Salkie, Associate Director for
Removal and Emergency Preparedness Programs

Background

On December 20, 1989, Mr. Gary Allen, Field Supervisor, Region I, Bureau of Emergency Response for the New Jersey Department of Environmental Protection (NJDEP) verbally requested that the U.S. Environmental Protection Agency (EPA) conduct a removal action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), at the Duffield Ave. Trailer located in Jersey City, Hudson County, New Jersey. A written request for this action is forthcoming.

EPA responded to this incident and confirmed the threat posed by the high potential for release of hazardous substances. Field representatives of NJDEP again requested removal activities under Superfund. EPA agreed that an imminent threat was posed by the abandonment of this trailer and that a removal action would be considered. Jersey City police officers guarded the trailer.

On December 21, EPA contacted a Potentially Responsible Party (PRP) whose identity was ascertained from markings on some of the containers present. This PRP agreed to investigate the incident further and entered into contract with an environmental consultant to assess the abandonment. The PRP also agreed to immediately initiate 24-hour security of the trailer.

On December 22, upon debriefing with their contractor, this PRP denied accepting responsibility and subsequently withdrew their active involvement in the removal of these materials. At that time, the On-Scene Coordinator (OSC), with verbal concurrence received on December 21, 1989, by Stephen D. Luftig, Director, Emergency and Remedial Response Division, initiated a removal action under his OSC authority. An initial Delivery Order was issued for a mitigation ceiling of $45,000.

This Action Memorandum recommends that a removal action be conducted pursuant to CERCLA in the form of removal and disposal of the hazardous substances contained in the trailer. The revised total project ceiling for this removal action would be $247,000, of which $202,000 is for mitigation contracting.

The trailer is located on the west side of Duffield Ave. between Howell St. and St. Paul's Ave., in an industrial area in the northwest corner of Jersey City, NJ. The site is approximately 1000 feet east of the Hackensack River and a half-mile west of the Tonnele Traffic Circle. Traffic from this circle is merged from Route 1 and the Pulaski Skyway into the entrance road to the Holland Tunnel.

The abandoned trailer was reported to NJDEP by the Jersey City Bureau of Engineering on December 20, 1989. The length of time the trailer had been abandoned is generally unknown, but has been estimated to range from two days to three weeks prior to reporting.

A joint site investigation was conducted by EPA, NJDEP, and the New Jersey Department of Criminal Justice (NJDCJ) on December 20, 1989. Inspections of the trailer contents, including labels and markings, by NJDEP and NJDCJ, revealed the following estimates of materials:

- 50 fifty-five gallon drums of mixed pesticides, flammable liquids and flammable solids;
- 10 thirty-five gallon drums of mixed paints, pigments, and dyes;
- 20 eight gallon pails of flammable liquids and flammable solids;
- 12 fifty pound bags of pesticides (i.e., Cotton Dust)

The fifty pound bags of Cotton Dust, four of which are open, represent the most significant imminent hazard. Labels on these bags indicate that the Cotton Dust consists of 14 percent toxaphene and 7 percent DDT. Many of the drums are in deteriorated condition with rusted bottoms. Plastic bungs identified on some of the steel drums indicate that drums may have been re-filled. Therefore, the original labels may not represent present material. Most markings and labels on the materials in the trailer are dated 1982.

Verbal approval was received On December 21, 1989, from Stephen D. Luftig, Director, Emergency and Remedial Response Division, for expenditures not to exceed $250,000.

Threat

Based upon walk-through inspections of the trailer, pesticides, flammable liquids and flammable solids were identified from labels and markings. At this point, a specific hazardous substance, "Cotton Dust, 14% toxaphene/7% DDT", has been identified from labels on the 12 fifty pound bags of pesticides. Toxaphene and DDT are hazardous substances as defined in CERCLA, hazardous wastes as defined in RCRA, priority toxic pollutants as defined in the CWA, and are known carcinogens. In addition, further use of DDT in the United Sates was banned by the EPA in December 1972.

Assuming that flammable labels are indicative of present contents, there is a potential threat of fire and explosion. This potential threat to the public is significantly mitigated by preventing access from the public to the site.

Proposed Action

The proposed action is intended to mitigate or remove the potential threats posed by the substances contained in the trailer. The estimated cost of mitigation contracting for sampling, analysis, transport, and disposal of these materials at a RCRA approved disposal facility is $202,000. Intramural and TAT costs are estimated at $15,000. The total estimated project ceiling is $247,000.

Enforcement

The Duffield Ave. Trailer is the subject of a NJDCJ criminal investigation. NJDCJ staff will be on-scene during the removal action to obtain evidence.

Some drums bear labels identifying PRP's. Initial efforts taken by the OSC to provide for PRP cleanup did not materialize. On January 3, 1990, a PRP search was verbally requested of the New Jersey Compliance Branch.

Recommendation

It is recommended that you approve this proposed removal action as detailed above. This site meets the criteria for a removal action under 40 CFR §300.65(b)(2) of the National Oil and Hazardous Substances Contingency Plan (NCP)in that there exists:

a) Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chain (40 CFR §300.65(b)(2)(i));

b) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release (40 CFR §300.65(b)(2)(iii));

c) Threat of fire or explosion (40 CFR §300.65(b)(2)(vi)).

This removal action is consistent with the Section 104(b)(2) of CERCLA, as amended by SARA, in that it will contribute to the efficient performance of any long-term remedial measures which may be authorized at the site.

Therefore, I recommend your approval of this CERCLA removal funding request. The estimated project ceiling for this site is $247,000, of which $202,000 is for mitigation contracting.

The estimated costs of this project are within the Regional Advice of Allowance for FY'90. Please indicate your approval and authorization of funding for the Duffield Avenue Trailer site per current Delegation(s) of Authority by signing below.

Approval: Joseph D. Cuffy Date 1/23/90

Disapproval: _____ Date _____

cc: (After Approval is obtained)

K. Callahan, 2ERR-DD
R. Salkie, 2ERR-ADREPP
B. Sprague, 2ERR-RPB
J. Frisco, 2DNJP
J. Marshall, 2OEP
D. Karlen, 2ORC-NJSUP
R. Gherardi, 2OPM-FIN
S. Anderson, PM-214F (EXPRESS MAIL)
T. Fields, OS-210
A. Farro, NJDEP
C. Moyik, 2ERRD-PS
L. Guarneiri, OS-210
D. Henne, 2TATL
P. McKechnie, 2IG
J. Rosianski, 2OEP

BSP 2/16 John

Mystery dumper

(FRONT PAGE)

Taxpayers eat $250,000 bill for toxic truck

By ROBERT HENNELLY
The Hudson Dispatch

JERSEY CITY — The taxpayers will get the $250,000 bill for cleaning up a mystery toxic trailer abandoned at the end of St. Pauls Avenue, an Environmental Protection Agency official said yesterday.

John Higgins, EPA's on-scene coordinator, said federal taxpayers must pay because authorities can't discover who produced most of the poisons, and who dumped them here.

The trailer and its toxic cargo was discovered near the old PSE&G gas works shortly before Christmas by a Hudson County Incinerator Authority inspector on a routine patrol of the vacant industrial complex. The truck held open bags of the banned pesticide DDT and toxaphene.

Of great concern to the cleanup crew that began work Tuesday was the fact the barrels merely were labeled "mixed pesticides."

The entire site is encased in a large plastic membrane, and the 10 workers who are actually unpacking and repacking the toxic substances must wear "moon suits" and respirators while working in the enclosure.

During their initial investigation, EPA representatives thought they might tie the load — and the cleanup bill — to a private concern when labels from the J.P. Stevens Co. were found on some of the containers. Stevens is a textile manufacturer.

But the conglomerate that now owns Stevens — West Point Pepperell of West Point, Ga. — sent up field engineers and, Higgins said, they determined that the barrels belonged to a division of Stevens

Please see BILL Page 6

HUDSON DISPATCH
UNION CITY, NJ
D - 32,905
JAN 6 1990

BILL

CONTINUED FROM PAGE 1

that their firm had not purchased.

The only name investigators now have to go on is J.P. Stevens Textile Group. Higgins said the name had not produced any leads yet.

"So rather than go on some wild goose chase, we decided to get going with the cleanup with our contractor," Higgins said.

The state Attorney General's Office is handling the criminal investigation. Officials said that the high cost of hazardous-material disposal is a strong incentive to dump and abandon highly toxic chemicals.

Higgins said that nine five-gallon pails of a Dow Chemical Co. product were discovered, and that company was on site removing the product. Dozens of 55-gallon drums, as well as large plastic bags, were found packed into the trailer that was stripped of all its markings.

The toxics will be disposed of at Thermal-Kem, a hazardous-materials handling company in South Carolina.